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EMERGENCY MANAGEMENT TRAINING PROGRAM

CASE STUDIES

COLLECTED BY THE
DISASTER MANAGEMENT CENTER
UNIVERSITY OF WISCONSIN - MADISON

GUIDE TO THE CASE STUDY NOTEBOOK

Introduction

A case study can be a powerful tool to teach or learn about a subject. It is both a concise history of an event and a technique to learn from it. A case study is an important form of institutional memory.

In the literature of refugee protection or assistance there are relatively few true case studies. Many of the entries in this notebook are articles about an experience rather than an actual case study. Nevertheless, they each provide useful examples of specific occurrences that can be used as the basis of a case study. In each entry in this notebook there are lessons learned which are illustrated or which can be drawn out of the account rendered.

How to use the notebook

This notebook is not intended to be a fixed or final document. Rather it should be a constantly updated repository of case study type material to which UNHCR can readily add new examples or remove out-of-date entries.

The uses of the notebook include

- a reference source
- resource for preparing training events
- use in training modules
- use in classroom or workshop.

The notebook is organized roughly the same as the UNHCR Handbook for Emergencies. The case studies are assigned one of the sectorial or administrative headings. However, many of case studies relate to several other topics so the user should review case studies in related subject areas as well.

Note: Many of the sources of case studies are listed from EMTP Madison. These are case studies presented by participants at the UNHCR Emergency Management Training Programme workshops held at the Disaster Management Center in Madison Wisconsin. They are typically 1-3 pages of notes summarizing the participants' presentation on the topics.

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2. Preparation of
Case Studies

GUIDELINES FOR WRITING UP YOUR EXPERIENCES IN THE MANAGEMENT OR OBSERVATION
OF DISASTER RELIEF OR RECONSTRUCTION ASSISTANCE

Disaster relief and reconstruction aid organisations are beginning to recognise the importance of training in the highly complex business of decision making for emergency response. Yet although the activity itself is well established, study and documentation of the process is not. To advance our collective stock of knowledge in this area, to help you to crystallise some of your own thoughts and experience, and to help in our mutual training effort, you have been asked to prepare a document for use in a forthcoming training course or seminar. These notes are intended to help you in the process.

Form Of The Document

The document may take the form of a descriptive report, an evaluation study or a commentary on some aspect of disaster preparedness, relief or reconstruction. Generally, your report should focus on the work of the organisation with which you are associated for disaster purposes (for example, as an employee, volunteer or committee member). However, if you are lucky enough to be able to take a more Olympian view, you may compare and contrast the experiences of different organisations, or perhaps the same organisation reacting at different times or in different places.

If you have had first hand experience of a disaster - either as a victim or as an organiser of aid - draw on your personal knowledge as much as you are able. One moment of direct experience is worth more than a decade of conjecture.

In so far as it is practicable try to write up the material which you have so that it can be shared with people who work for organisations other than your own. In other words, try to bring out the essential truth of the events or circumstances which you describe, but do so in a way which ought not to threaten those whose status appears to make them responsible for the events which you report. In general, omit the names of individuals. If necessary, you may invent fictitious names to give human personality to your report.

Select Your Topic

Large scale disasters have an impact on many aspects of human experience. You are not expected to cover them all. In the first instance you should choose one sector to write about. For example, this may be any of the following:

- Emergency rescue
- Agriculture
- Nutrition and the distribution of food
- Medical needs, supplies and services
- Shelter and housing
- Environmental sanitation
- Clothing and other material resource aid
- Public information
- Social welfare
- Etc.

Alternatively, you might choose a theme which would run across several of these sectors, for example:

- Materials handling and logistics
- Financial control
- Personnel recruitment and management
- Use of volunteers
- Communications
- Co-ordination with other agencies (including government)
- Technology and its appropriateness
- Media coverage and treatment
- Political dimensions
- Etc.

Do not be afraid to tackle more than one area, but try to do so systematically, rather than jumping from one topic to another.

Select Your Viewpoint

Our knowledge and interpretation of what goes on in a disaster varies according to what position we occupy. When writing your report be careful to mention from whose point of view the observations come. Eg. are you reporting views from a donor government far away from the site of the disaster; from a private voluntary organisation (PVO) based overseas; from a local (national) government; from a local PVO; from the community leaders; or from the more humble victims of a disaster? You will often find that a comparison of views on the same topic but from different quarters is very illuminating.

Establish A Context

Unless you are sure that your fellow course or seminar participants will all come from the same organisation as your own, you will need to paint in some institutional background. What kind of organisation are you writing about? What are its stated goals and objectives (and, if different - its real ones); and where do the characters or events in your report fit in to the organisational tradition?

Similarly, an outline of the disaster phenomenon itself (cyclone, earthquake, flood, drought, etc.) will be necessary in order to understand why certain things were done and when. Remember to include all important information which a stranger to the place, time and people will require in order to understand the points which you make in your report.

Select A Problem Question(s) Or Issue(s) To Be Raised

A straight narrative description of events can be made much more interesting and more educational if you can arrange the material which you

have so that it poses a question or several inter-related questions. It is not necessary that you provide a definitive answer to the question asked, merely that the information which you present gives some indication of the direction in which lessons for the future may lie.

Examples of the kind of question which can help structure your report are as follows:

- What was done and why? Often, the obvious answer (eg. that "the need existed") does not constitute the full story
- Where were which decisions made? (How much influence, power or choice, for example, did the victims have?)
- When were important decisions made and why were they made at that time (not earlier or later, etc.)?
- What else might have been done but was not? (It may be useful to compare organisations for ideas on what else could have been done.)
- Of the options which were not pursued: which ones were considered and rejected - and why; and which ones were not even considered - and why?
- Did decision makers have enough or the right kind of information at their disposal to be able to make decisions which were appropriate?
- What results were achieved by the action embarked upon?
- What unintended consequences followed from the actions?
- What do those (people/institutions) who were responsible for making the decisions know of the results of their efforts? Is this different from what the victims or other observers knew?

- What assumptions were underlying the decisions or plans of action as they emerged? Which of these assumptions were proven sound and which false?

What conclusions can be drawn on the basis of the experience? These should benefit others in a similar position, i.e. the same organisation at some future time, or in another organisation now or in the future.

Three short Annexes are attached which set out some more precise questions in each of three sectors. However, it must be pointed out that these were prepared for the purpose of exciting discussion of a specific disaster which took place in a specific place. In relation to your own disaster experience, these questions may or may not be relevant. In any case, you are probably far better equipped to ask your own questions now that hindsight has suggested some answers.

ALAN J. TAYLOR

15 July 1982.

ANNEX 1: SHELTER & HOUSING

- What types of assistance were provided by helping agencies in (a) the provision of emergency shelter, and (b) for the construction of more permanent houses? Were whole housing units provided, or materials only, or technical advice, or credit, or land, or all the necessary components?
- Did the housing assistance which was provided conform to local and traditional patterns? If not, how are the differences explained?
- Who designed the houses constructed after the disaster and who built them? How do the answers to these questions compare with the procedures by which houses are normally designed and built in the area? If there are differences between normal procedures and those used after the disaster, how are the differences explained?
- Were distinctions made by (a) the victims themselves, and (b) the helping agencies, as between temporary and permanent housing? What results were obtained?
- Was housing aid given away free to beneficiaries or were charges made for the materials and service provided?
- Was education in disaster resistant construction techniques offered by helping agencies? What is known of the effectiveness of this education?
- To what extent were local materials employed in post-disaster housing, and to what extent were materials imported? If materials were imported, why was this done?
- How were houses laid out (in relation to one another) in post-disaster reconstruction projects? Did the layouts used correspond with traditional patterns for the dwellings?
- Did the existence of different types of housing in any one village, or between villages, cause any problems for the communities served?
- What proportion of the post-disaster housing construction was undertaken by the victims themselves, and what proportion by the helping agencies?
- Did the housing organised by the agencies make provision for water supply and/or sanitation facilities?
- To what extent did the intended beneficiaries have the opportunity to participate in decision making about the type, size, materials, siting, and timing of construction of the dwellings provided with the assistance of the agencies?

- What professional advice did helping agencies have in planning and managing their housing programmes?
- How were the size of housing aid programmes decided upon? How was the need for housing assessed?
- Did the helping agencies which were concerned with housing have previous experience in this field? For any which did not, what special problems were encountered?

ANNEX 2: THE SOCIAL ASPECTS OF FEEDING AND OTHER MATERIAL RESOURCES
DISTRIBUTION PROGRAMMES

- What kinds of feeding programmes were undertaken by helping agencies after the disaster? Why and how was it decided to embark on these programmes?
- How did the victims feed themselves or obtain food after the disaster? In what way did the disaster prevent people from doing this in the normal way?
- How were feeding programmes organised? What improvements could have been made in the methods employed?
- How were food rations distributed? Did people queue? Were alternative systems tried, and with what results?
- What were the objectives of the feeding programmes? What was the target group?
- Is anything known of the nutritional state of the recipients before and/or after the food was distributed?
- Was provision of water to victims considered as important as the provision of food? If not, why not?
- Was food aid distributed as dry rations or cooked? If both methods were used, what were the advantages and limitations of each?
- What foods were found to be appropriate as aid?
- To what groups were goods distributed? How was it decided that some groups should receive material help and not others?
- Is there any evidence that animosities were produced between those individuals and/or groups which received help and those who did not?
- What was the balance of benefits against any negative social impacts which might have been obtained from the distribution of material resources?
- What social groups were especially badly affected by the disaster? What provision was made within the community to care for such people (eg. the old, the infirm, widows, orphans, the mentally ill, etc.) and what provision was made by the helping organisations?
- Did the help given by outside organisations to especially disadvantaged groups correspond with local custom and/or the best interests of the victims?

- What is known of the psychological needs of the victims? Was any assistance provided by relief agencies and/or others in the field of post-disaster mental health?
- Is anything known about the effect of the introduction of food aid on the local farm economy?
- Was there a need for clothing and/or blankets among the victims? Did relief agencies distribute these commodities? Which type of commodity was most relevant to the needs and which was not?
- How equitably were relief commodities distributed (a) between affected communities and (b) among individual victims?
- Was money distributed by the Government and/or by other helping agencies? How was this done? What problems were encountered, and what were the benefits obtained? How were decisions made as to who should receive help in cash?
- What was done by helping agencies in relation to orphans? What were the advantages and limitations attached to each of the different policies pursued?

ANNEX 3: RESCUE & MEDICAL

- How did the relief organisations know what the nature and magnitude of the post-disaster problems were? On whom did they rely for their information and/or an assessment of the situation?
- How did news of the need for help get through to the outside world?
- When did the helping agencies arrive on the scene? How did this timing relate to the emergence or existence of the needs addressed?
- What criteria were used to assess the medical need and to decide in which cases help should be given and when not?
- Was the physical rescue of victims necessary? If so, who did this and when?
- Did the medical help reach the remote areas?
- What kind of injuries and/or sickness were reported by victims to medical personnel? When did these manifest themselves?
- How did people manage in areas where no medical assistance was given?
- What medical assistance was provided?
- Did different kinds of helping organisations provide different kinds of medical aid?
- What kind of organisation was best equipped to provide what kind of assistance?
- Did mortality and morbidity patterns (numbers of people dying or getting sick from various causes) change after the disaster compared with the patterns existing before?
- During the period after the disaster, did mortality and morbidity patterns change? If so, how?
- Which type of medical personnel were most useful after the disaster, and which were less appropriate?
- Were foreign medical personnel used in relief operations? If so, was their presence of value? What extra difficulties or limitations did foreign personnel suffer over those encountered by nationals or very local personnel?
- What medical procedures or practices were employed in the post-disaster period (eg. immunization, distribution of medicines, surgery, counselling, etc.)? What was known of the efficacy or worth of such procedures in post-disaster situations?

- Where were the decisions made (in which organisation or at what level within organisations) that certain procedures (eg. immunization) should be embarked upon?
- What attention was given to preventative health measures after the disaster?
- Was epidemiological surveillance organised after the disaster to monitor the incidence of disease?
- Were any comparisons made of the costs and benefits to be obtained from alternative courses of medical and/or preventive action?
- Was there adequate water for drinking immediately after the disaster for humans and for animals?
- What efforts were directed towards reinstating the communities' supply of potable water? How successful were these efforts? When were the benefits obtained?
- How did the special health provisions after the disaster compare with the type and level of health provision which existed before? Did the difference, if any, have any effect on the management of the on-going health services or on the level of expectations among the local population?
- Did the arrival, purchase and/or delivery of medical supplies correspond with the need?
- How were dead bodies disposed of? How best was this done?
- Was there a need for first aid after the disaster? To what extent was this need met, and by whom? Did any unmet needs in first aid result in avoidable deaths?
- Of what value were the local village health centres for the purposes of giving first aid?
- What was the relationship between any mobile medical teams and the local hospitals? Did they complement one another or conflict in any way?
- Was the need for potable water seen as a priority early enough?

WRITING MINI-CASE STUDIES
FOR UNHCR TRAINING MODULES

Experience is often the best teacher - but it is not always the most practical method of teaching. Of the many substitutions for real life experience, studying them through the case study method is one that can be very successful. For UNHCR, including case studies in its training programme has the added benefit of documenting its experience (institutional memory) and transmitting it to others in the organization.

For these reasons the Training Service is encouraging all of the authors contributing to the development of the training modules to include case studies in their material. This paper is a guide to the preparation of case studies that will be appropriate to our modules.

What is a case study?

The definition of a case study starts with the definition of a case. A case is a short description, in words and numbers, of an actual management situation. A good case almost puts the student into the position of the real-world manager, facing the challenge to make a decision and prepare a plan of action. The case should stop short of presenting all of the actions taken by the manager in the real-world situation. They thus leave open to the student the selection of actions which should be taken.

Approach to writing the case.

There are some basic rules about writing a case study. For example you should write about a case that you are familiar with but not as a principle actor. There is too great a chance of built-in bias that would affect your objective description.

You will need to obtain permission to use the case from the supervisors of the UNHCR work unit or agency involved. This should not be difficult when there is an understanding that the case is to be used for training purposes and that the identity of the individuals involved could be disguised and kept confidential if necessary.

The situation should be described with specific detail, not abstractions or generalizations. As the writer you will probably need to interview people who were directly involved in the situation. You must discover what happened to whom, when it happened and where, all basic questions of descriptive research. If your respondents have ideas about why things happened, you will need to keep track of their opinions. You must, lastly, understand how the decision was made.

Even though you may feel it would enhance the learning value of a case you should not invent any facts regarding the situation. You cannot be sure of the effect it will have on the students.

Conventions of case writing

Anything you consider to be a "true fact", beyond challenge by the student, you should state as a declaratory sentence.

Opinions of your interviewees must be preserved as opinions and the students given the opportunity to evaluate or challenge them.

Always write the case in the past tense, even if it is currently an ongoing situation.

Describe the situation in chronological order if at all possible.

Avoid inserting your conclusion in the case. The purpose of a teaching case is to give students the experience of analyzing and judging situations. A fundamental aspect of analysis is the discovery of hidden cause-effect relationships. If you plainly state a cause-effect relationship, you must realize that you have taken out of the students' hands the whole line of reasoning that led up to the discovery of the relationship. The same precept is true of your biases regarding "right" and "wrong" solutions to case problems. Students must learn how to develop judgment and they can best do it as they study an unbiased case.

A useful format for a case is shown below.

Opening: (first paragraph)	Name and title of responsible manager Name, location and service of organization Date Synopsis of decision or problem setting
Case body	Organization history, if relevant Environmental facts, if relevant Expanded description of the decision or problem situation Organizational relationships Other case characters Project or services Relevant financial data Human interaction facts
Closing (last paragraph or two)	Scenario to establish a sense of urgency about the problem or decision

The key to the format is the opening section, which often is as short as a single paragraph. In simple prose it should set the scene for the students. By quickly introducing the responsible manager by name and title, it tells the students what role they are to play. By giving a specific date it establishes an environmental context. By identifying the organization it quickly tells the students whether they have much or little previous experience that will be relevant in the analysis. Finally, by stating the decision or problem setting, at least as seen by the manager, it helps students prepare for their analysis of what is to follow.

Cut off point. Each case should have a definite cut-off point. Logically, this is the date or time when the problem arises or the decision must be made.

A sense of urgency is often interjected in the last paragraph of a case. This is one of the few places where some invention enters into field cases, the intent is to get the student to sense the need to take action.

Questions are sometimes printed at the end of cases to direct students' attention to various types of analysis. The fundamental question is, "what would you do in^v place and why?"
the manager's

The subject of the case should be selected to enhance the teaching of the main subjects of the module. The case can be very brief, a "mini-case study." The case should be able to be used as either an individual reading the module on his or her own or as the basis of a group discussion. Your case should be accompanied with a brief sequel describing what action was in fact taken, and what the consequences were.

For further reference see Case Method in Management Development by John Reynolds, available in English and French in the UNHCR Training Service library.

Attached is an example of two case studies. Typically we would prefer shorter texts than Example B. You may find it possible to make them shorter by linking the case with the text.

You are welcome to write longer case studies such as Example B if it becomes central to the teaching of that particular subject.

EXAMPLE A : Asylum For Mrs. C

John Aury was the protection officer in the UNHCR Branch Office in Surimia. In October of 1986 he interviewed an applicant who asked to be classified as a refugee. The following summarizes his report.

Tired of the economic restrictions imposed by the regime in power, Mrs. C. wanted to find a more clement economic climate. She obtained a passport and an exit visa valid for three weeks and left her country. Once she arrived in Surimia, she joined a compatriot, Ms. D., an old school friend who had left their country because of political problems. Ms. D. was accorded refugee status in Surimia where she continued her political activities against the regime in her country of origin. She quickly convinced Mrs. C. to participate in these activities. Mrs. C. took part in several public demonstrations directed against the authorities in her country.

After passing three months in Surimia, she requested asylum, saying that the fact that she had engaged in political activities while in Surimia would cause her serious problems if she returned to home. She added that inasmuch as she had not returned to her country within the three week period stipulated in her exit visa, she would doubtless be sentenced to several months' imprisonment.

As a UNHCR protection officer in Surimia how should John Aury respond to Mrs. C's request for asylum?

EXAMPLE B: Case Study In Refugee Nutrition:

Nutritional Needs and Activities, Refugee Camp, Western Havenland

The objectives of this Case Study are to provide a forum for discussion of:

1. methods of assessment of nutritional status and needs in refugee settings.
2. uses and limitations of data and data sources in assessing nutritional needs in a refugee setting.
3. components of an appropriate response to nutritional needs in a refugee setting.

During a mass refugee influx in February of 1982, UNHCR assigned Maria Fewes to be the field officer at Khumara refugee camp. She was assigned to do an assessment of the primary needs of the refugees. The refugee camp was a large "reception center" in western Havenland. Refugees came from several regions of their home country and were generally of the same ethnic/tribal groups, but were of two major religious groups -- Moslem and Christian. The first arrivals came 6 weeks before the arrival of Ms. Fewes and the camp swelled rapidly to an official population of 75,000. New arrivals came each day or every other day with numbers varying from 200 - 3000 per day. No population census had been done and three groups reported numbers of new arrivals (the host country government camp coordinator, the refugee elders group and the medical team) and none of the numbers agreed exactly. There was no initial plan for organizing the camp, so spontaneous dense settlement had occurred; the new arrivals became organized into various "sections" of the camp. The camp was far from major population densities in the host country, and roads were bad, and unpassable in the rainy season (coming in 3 months).

A camp commander (a lesser government official on the rise) and his staff were in "in charge" of the camp, and because it was a border area, there were a number of military personnel living in the camp and responsible for refugee movement from the border to the camp. The refugees had a group of elders which provided coordination of refugee - host country activities such as camp planning, food distribution systems, etc. There were three newly arrived foreign private voluntary agencies (PVOs) working in the health sector.

The three medical teams involved divided the responsibilities. Team A did adult care and opened a hospital and an outpatient clinic. Team B did child care and opened a large outpatient service and a small in-patient service for day patient care (patients go home at night because there were not enough personnel to supervise the facility around the clock). Three supplemental feeding centers were opened and two more were being built, and more were planned. Team C worked on water and sanitation and screening of new arrivals.

Ms. Fewes had much to learn about the new setting, but the regional director was very concerned about the nutrition / malnutrition problem in the camp as numerous verbal reports came from the medical teams stating that mortality and malnutrition was widespread. Fewes was asked to make an initial assessment of the nutrition situation and report back as soon as possible.

Fews was able to obtain the following information:

The camp population as mentioned was listed at 75,000. That was based on an estimated count of people 4 weeks previous (38,790) and additions from new arrivals. If Fews used the reported new arrivals from the three mentioned sources, she found that the population estimate ranged from 69,000 (from the medical team) to 85,000 (from the refugee elders). The medical teams admitted that refugees probably entered the camps at night and were not counted.

Deaths were reported by 12 hour grave yard watching. The grave watchers recorded: name, age, sex, cause of death: measles, dysentery, diarrhea, cough, malaria, other. This system began 10 days before Fews came. Before that, the public health team only knew that there were 980 graves counted and 612 were "short graves", suggesting young children. There may have been double burials - more than one body to a grave. Death rates have ranged from 8.8 to 6.1 / 10,000 population / day. Fifty percent of the deaths were in children < 5 years old and measles, diarrhea/dysentery, malaria, and "malnutrition related" were the common causes given.

The nutrition survey started the week Fews arrived; the data suggested that 30% of children <110 cm were < 80% weight for height and 9% were < 70% weight for height, but only 120 children were included in this sample. Vitamin A deficiency had been observed in new arrivals at the screening center. Other vitamin deficiencies had not been diagnosed but the pediatrician admitted to limited experience with diagnosis of vitamin deficiencies.

QUESTION(S):

1.

A refugee leader had sent word to Fews that his people were receiving less food this month than before and that his people were starving because of this. How should Fews have evaluated this?

What pieces of information did she need?

How would Fews obtain this information? Who should Fews have asked? What could Fews have expected in terms of completeness and accuracy of the information?

Section II

Fews found out that the population increased slightly (from 75,000 to 85,000), but that the more important problem was that some food supplies were directed to another large camp because of acute shortages there. Calorie needs were not evaluated when the food was diverted. The refugee diet was:

Grain: 250 grams
Oil: 10 grams
DSM: 30 grams
(per person per day)

There were no pulses (lentils) in the camp and the nearest local market was 10 km away.

QUESTIONS:

1. How adequate was this diet?

2. How should Fews approach changing this regimen, i.e. what should she have included or excluded from the present diet?

CASE STUDY: UNHCR SHORT-TERM AND LONGER-TERM LEGAL PROTECTION

Peter Dragon was UNHCR Representative in Iflandia. In October 1986, Peter was telephoned from the Iflandia Airport by Mr M, an African national, who had just arrived via a flight which was arriving from India. While Iflandia authorities were threatening to deport Mr M, or return him to India, Mr M had requested asylum. However, airport officials were informed by their liaison contact in the Iflandia Ministry of Foreign Affairs (MFA) that, "due to sensitive geo-political and economic reasons", Iflandia "could not at this time grant asylum to any persons from (Mr M's country of origin)". Therefore, the MFA concurred in the decision to deport Mr M.

UNHCR opened its Iflandia office in 1975. Iflandia protocol insisted that any UNHCR contact with Iflandia ministries and departments (such as the Ministry of Justice and its immigration office) be routed in writing through the Ministry of Foreign Affairs. Despite this formal requirement, UNHCR had established informal working arrangements with top officials useful to the work of UNHCR in Iflandia. While these contacts and linkages were known and tolerated by the MFA, they were also resented. The MFA wanted to make every decision itself relating to asylum and refugees, and to keep the local UNHCR office dependent on it for information and decisions.

Iflandia's immigration law, including statutory language on asylum and refugee matters, dated from 1945. Although "flawed" from the UNHCR international perspective, existing Iflandia immigration law recognized the right of a person (unless on a list of specified "excludable nationalities") to seek asylum, and established a refugee determination procedure for reviewing and then granting asylum. The legislation provided that persons granted asylum would be given work permits, and would be authorized to access government subsidized medical care.

Iflandia's 1945 immigration law specified that "temporary" asylum for persons from "non-excludable nationalities" could be considered by filing: a statement of reasons for requesting refugee status, a letter of intent to eventually return (Iflandia law did not recognize any right to "permanent asylum"), and an affidavit of support from someone in Iflandia pledging "full and complete" financial support. After receipt of an advisory opinion from the Ministry of Foreign Affairs giving its assessment of the asylum-seeker's need for refuge, an application for asylum was then considered in a hearing by a panel from the Ministry of Justice. The asylum-seeker could, at his/her own expense, be represented by Iflandia recognized legal counsel.

In 1981, Iflandia -- not previously noted for its scrupulous adherence to international standards of human rights -- became the first country in the region to accede -- after much national and international publicity and fanfare -- to the 1951 Convention relating to the Status of Refugees and its 1967 Protocol. Despite

the existence of the 1945 asylum procedures, they had never been used, nor had anyone been granted formal asylum in Iflandia. Since 1981, and despite repeated UNHCR entreaties to "corrective" action, Iflandia had refused to adopt any new legislation more fully reflecting and implementing this accession.

In the interim, whenever UNHCR had enquired about using even the existing 1945 procedures, the MFA said they were not to be used. Whenever UNHCR noted that this non-use was contrary to the responsibilities Iflandia had accepted by acceding to the Convention and Protocol, Iflandia MFA officials would threaten privately to withdraw their accession.

In this setting, and despite the lack of a mutually agreed-upon basis for the treatment of asylum seekers and the protection of refugees, the Government of Iflandia was far more relaxed in its unofficial dealings with UNHCR and refugees than its official posture would suggest. Asylum-seekers had sought and been granted recognition as refugees by the UNHCR office in Iflandia. Once recognized by UNHCR, Iflandia officials allowed these UNHCR-mandate refugees to remain as long as they did not cause trouble, were supported with UNHCR or other private financial assistance, and their eventual resettlement out of Iflandia informally was "guaranteed" by UNHCR. However, being in the country with no legal standing whatsoever, they were not able to work, nor access government medical care. Without proper identifying documents, they were unable to travel outside Iflandia, and were constantly aware of the possibility of arrest and deportation. While the UNHCR branch office in Iflandia had Supplementary Assistance funds available for aiding individual refugees for specified periods of timing pending implementation of a more durable solution, and at times had found countries of resettlement for some UNHCR-recognized refugees, UNHCR was not able to formally or even informally "guarantee" the financial support and external resettlement of all mandate refugees in Iflandia.

Mr M's arrival at the Iflandia Airport must thus be seen in light of the above. In addition, for a variety of reasons stemming from recent Iflandia experiences with other arrivals from Mr M's country of origin, Iflandia authorities were anxious to deport him, or send him back to India, as soon as possible.

1. What should UNHCR do in the immediate short-term to respond to the telephone call of Mr M and his request to Iflandia authorities for asylum?
2. What, if anything more, should UNHCR do if and when Mr M is found to be -- in the eyes of UNHCR -- a bona fide refugee?
3. How could UNHCR use this case to accomplish more strategic legal protection objectives establishing procedures more in conformity with international instruments?

Case Study



The issues at stake, both for the asylum seeker and those making the refugee status determination, are made more apparent through the illustration of a case study. The following is an example of the types of questions and dilemmas which you may confront in making an eligibility determination.

Case Study A

Mr. H, a farmer with no political opinions, belonged to an ethnic minority, many members of which wanted more autonomy compared with the ethnic majority governing the country. In support of their ideas certain members of the minority undertook guerrilla activities. Each time one of these guerrilla actions took place Mr. H., because of his ethnic origin, was threatened by some of his neighbors belonging to the ethnic majority. He asked the authorities, composed of people from both ethnic groups, for protection; however, they were so overcome by the events they could not grant the protection

requested. In addition, Mr. H. also received threats from extremist members of his own ethnic groups who blamed him for not taking their side.

Tension grew in the country, provoking the deaths of many citizens. Following the murder of three members of his family living in the same village without the perpetrators being identified, Mr. H. obtained a passport, left his country of origin by plane and arrived in a third country where he requested asylum.



As a person charged with making a recommendation on this case, what would you identify as the main issues regarding the determination of eligibility as a refugee that are portrayed in this case?

What would you recommend to a refugee determination board?

For an analysis of Case Study A, see page 40.

Read the following individual cases: set out the main eligibility issues involved and your recommendation on each case.

(CASE A appears earlier in this chapter. The analyses of the case studies begin on page 40.)



Case B

Tired of economic restrictions imposed by the government in her country, Mrs. C decided to seek bluer skies. She left her country after obtaining a passport and exit visa valid for 3 months and travelled to country X. In country X, she met an old friend who had fled her country because of political problems and who had received refugee status in X. Her friend continued her political activities against her country and soon convinced Mrs. C. to participate in them.

Mrs. C. took part in several public demonstrations against her government. After remaining in X for four months she claimed refugee status, indicating that her photo had been taken during a recent demonstration and had appeared on the front page of the local paper. Even without this, she said that the authorities had been made aware of her political activities outside the country. She also added that she would be imprisoned for six months to one year for having overstayed her visa.



This case raises questions which relate to the situation of refugees "surplace." What are these questions?

Does Mrs. C qualify as a refugee?

What other issue does this case raise?



Case C

Mr. K. just turned 18. In order to avoid doing his military service of two years, he fled his country. He did not want to do his service because his country is now at war and, as a member of the opposition party, he would have to go to the front. He has nothing against military service or fighting a war, but he does not believe in this war. It is being fought against country Z. The political party in power in this country is closely associated with his party and he does not want to kill his "brothers."



Which eligibility issue does this case raise?

What would you seek to establish in preparing this case?



Case D

A member of a group opposed to the regime governing his country, Mr. R. clandestinely distributed pamphlets in the factory where he worked calling for an uprising of the people against the regime. Surprised in the act of distributing these tracts, he was arrested and condemned to five years' imprisonment. After two years he managed to escape, however, during his escape he wounded one of the prison guards who will be seriously handicapped for the rest of his life.

After a long and complicated journey Mr. R. managed to leave his country and request asylum in S.



On what grounds might this application be excluded from refugee status?

What elements need to be taken into consideration in examining this case?

What would you recommend to a refugee determination board?



Case E

Mr. Y. was a member of the armed forces in his country. He did not like the totalitarian regime which governed his country and soon joined a small group of like-minded officers. The group decided to make some sort of public demonstration against the government. Unable to legally demonstrate against the government within the country, they decided to hijack an air force plane, fly it to a neighbouring country, and make a press statement there, condemning the human rights abuses of their government. It was decided that Mr. Y would choose the plane to be hijacked, as he worked in the radio tower. The leader of the group would embark on the plane and hijack it. Although the leader would be armed, it was decided that there should be no violence.

The hijacking was a failure. No one knows exactly what happened but the plane crashed and all aboard died. The government learned



Which issues does this case raise?

What aspects of the crime need to be considered?

What would you recommend to a refugee determination board?



Case F

Mrs. X, an asylum-seeker from Ruritania, approached the UNHCR Office in Refugania. She asked to see the Representative, indicating that she feared the authorities would arrest her and send her back to her country of origin.

In the absence of the Representative, Mrs. X was interviewed by the Protection Officer who had been with UNHCR for 6 months. He had little difficulty understanding her, but after about an hour concluded the interview. Being unfamiliar with the situation in Ruritania, he sent a telex to Headquarters which provided basic data about Mrs. X and summarized her reasons for leaving her country of origin in the following fashion: "IC (Individual Case) belonged to the dissident MMM Party. She was not a leader but simply distributed tracts. She was told by a friend that the authorities had discovered her involvement so she fled".

The case was examined by the relevant Headquarters Officer who advised the Field Office that distributing tracts would not result in persecution and therefore Mrs. X was not a refugee. On being informed of this she wrote a letter to Headquarters, asking that the case be reviewed, but not adding any new elements. The same officer reconsidered the case at Headquarters, but decided that as there were no new facts, the first decision should stand. He so informed Mrs. X.



What are the various procedural issues raised by this case?

What is your view of each of these issues?



Case G

The Kingdom of Atlantis acceded to the 1951 Convention and the 1967 Protocol relating to the Status of Refugees in 1973. Shortly after accession, it established a Refugee Determination Board (RDB) and a Refugee Appeals Board (RAB). UNHCR attended all RDB meetings as an observer/adviser. Negative decisions of the RDB were appealed on their merits to the RAB, an independent board of appeal. The RDB heard about 3,000 cases a year.

Last year, the number of asylum-seekers rose to 9,000. The Government is now considering legislation which would change the determination procedure in the Kingdom. The major proposals follow:

- 1) All applications must be made at the border, or at the latest within 48 hours of entering the country. Applications made outside the time limit will not be admissible.
- 2) Likewise, applications will not be admissible if:
 - a) The applicant was previously in a country which respects the principle of non-refoulement, and would not have returned the asylum-seeker to the country of origin
 - b) The application is obviously manifestly unfounded or abusive.
- 3) Decisions on whether cases are admissible will be made by the border police. Persons whose claims are not admissible will be immediately expelled from the country. No appeal against this decision is possible.
- 4) If the case is admissible, the applicant will be interviewed by an Immigration Officer, who will send a summary of the interview, along with comments on credibility, to the RDB.
- 5) The RDB will base its decision on the basis of the Immigration Officer's interview report. The RAB will be disbanded, and appeals on the merits of the application will be stopped. An appeal on a question of law may be made to the Administrative Court.

The Government has requested UNHCR's comments on the draft legislation.

The analyses of the case studies begin on page 40.



What comments would you make on the existing legislation?

Review the proposed changes, and give your opinion on each clause.

Analysis of Case Studies



Case A

This case raises the following issues: well-founded fear; persecution and for reasons of race, religion, nationality, membership of a particular social group, or political opinion.

Chapter 1 Definition of a Refugee

Well founded fear

(Handbook paras. 37–50)

Fear

- This is the *subjective element* of the definition.
- To assess whether it is present or not, it is important to interview in depth—to obtain all possible information about the applicant's background.
- Do not forget that two persons, in the same "objective" situation, may react differently; for example, the inability to practice one's religion may make life intolerable for one individual, but not for another of the same religion. (Handbook paras. 40, 42)

In this case, fear is clearly present.

Well-founded

- Fear alone is not enough. It must be well-founded. This *objective element* must exist in each case.
- This poses the question: how can we measure whether fear is really well-founded? Does it imply a balance of probabilities (i.e. presentation is more probable than not)? Let's take an example. One-third of the members of a religious minority have been killed by a Government. The chances of being killed on return will therefore be only one in three. This example demonstrates that the probabilities test is not appropriate. All would agree that the fear is well-founded.
- Well-founded therefore means "reasonably likely," or a "serious or reasonable possibility."

In this case, the objective element clearly exists.

Persecution

(Handbook paras. 351-53)

Persecution

- Persecution is not defined in any international instrument. It is a violation of fundamental human rights. These form a continuum starting with the right to life, right to freedom from torture, right to work, freedom of movement. (*see Universal Declaration of Human Rights*)
- Some violations of human rights (e.g. killing or torture) are obvious acts of persecution.
- Others may also amount to persecution, depending on the circumstances. Let us take the example of the right to work: unemployment may not be persecution, whereas preventing a person from working may be persecution.
- Discrimination may, on cumulative grounds, amount to persecution.

In this case, the applicant fears persecution.

Agents of persecution

- Persecution may not always come from the Government. If the Government is unwilling or unable to protect its citizens, the action may be considered as persecution, and those who carry it out as agents. (*Handbook para. 65*)

This is the case here.

Possession of valid passport

- This is not *evidence* of absence of persecution valid passport and does not disqualify a person from refugee status. (*see Handbook paras. 47-50*)

For reasons of race, religion, nationality, membership of a particular social group, or political opinion

Handbook paras. 66-86

Reasons

- Persecution must relate to one or more reasons given in the definition. (*Handbook para. 66*)

In this case, there are several reasons.

Race, nationality

- Evident here due to ethnic group.

Particular social group

- The term "social group" is not defined. It normally comprises persons of similar background, habits or social status.
- The family is a particular social group.

Political opinion

- Although the applicant does not have a particular political opinion this reason may still be relevant.
- The fact of *not* holding a political opinion may in certain circumstances be considered as a political opinion *per se* as recognized in a recent U.S. case. This is also the case here
- Being *wrongly attributed* a political opinion may also lead to persecution. A person may be wrongly suspected of being a dissident, for example.



Case B

Mrs. C was obviously not a refugee when she left her country of origin. Her case now raises two issues:

1. Refugee "*sur place*" (through participation in demonstrations).
2. Penalties for overstaying or illegal departure.

Refugee "*sur place*"
(Handbook paras. 94-96)

Assuming that the activities she has engaged in will cause problems on return, should the applicant be disqualified because the events took place *after* leaving the country, or because *she chose* to take part in an activity which might place her in danger on return?

The answer is no to both.

- There is no requirement in the definition that the event or activities take place *before* leaving the country (the definition speaks of a well-founded fear of being persecuted, not a well-founded fear of being persecuted before leaving one's country).
- Secondly, a person should not be disqualified on grounds that he or she *willingly* put him or herself in danger. If one adopted this reasoning, it would follow that willingly expressing a political opinion or joining an opposition group in some countries would lead to disqualification.
- It is true, however, that expressing a political opinion solely for the purpose of obtaining refugee status, when the political belief is no *genuinely* held, should lead to disqualification. This is frequently very difficult to demonstrate.
- If Mrs. C is in fact liable to severe penalties for having overstayed, her recognition as a refugee is justified if the reasons for leaving or remaining abroad are related to one or more of the five reasons in the Convention definition.

Penalties for
overstaying or
illegal departure
(Handbook, para. 61)

In this case, more information would be needed on this aspect.

- In determining the presence of one or more reasons in the definition, some authorities focus less on the individual's reason for leaving, as on the State's motives in applying the punishment. The relevant laws are thus considered by some determination bodies as *political laws* and the applicant is judged to have a well-founded fear for reasons of *political opinion*. Others see the State's action of punishment as a *political act* against a person perceived as a dissident. Such persons, sometimes described as having "voted with their feet," are therefore considered as meeting the requirements of the definition.



Case C

Draft evasion
(Handbook paras. 167-174)

This case raises the problem of draft evasion.

This issue is one of conflicting rights: the right of the state to conscript versus the right of the individual to religious belief or personal conscience.

- The right of the state is a legitimate one, but must take into account the right of the individual.
- Many states have done this through alternative, non-military service, in which case it is difficult to qualify for refugee status.

Where alternative service is not available, as here, the following issues must be examined:

- Will there be discrimination or persecution within the armed services?
- Will there be disproportionate punishment for draft evasion on the basis of race, religion, etc.?
- Is the military action contrary to genuine political, religious or moral convictions, or to valid reasons of conscience?
- Has the military activity been condemned by the international community?

In this case, additional information is needed on these various aspects.



Case D

This case raises two issues: that of eligibility for refugee status (inclusion) and that of the application of the exclusion clauses.

Inclusion clauses

- Always consider these first to get a complete picture of the case, before considering the exclusion elements; if one concludes that the applicant does not qualify, it will not be necessary to examine the exclusion aspects.

In this case, it is clear that the applicant qualifies for refugee status.

(Handbook paras. 140-163, in particular 151-161)

- These must always be interpreted *restrictively*.

Ask the following questions:

- Is the crime political or non-political?
- Is it serious?
- Is it a crime?

In this case, the crime is obviously both *non-political* and *serious*.

The next step is to strike a *balance* between the *nature of the offence* presumed to have been committed, and the *degree of persecution* feared. The gravity of the offence must outweigh the persecution feared if there is to be exclusion. In evaluating the offence, one must have regard to *all the circumstances*, including mitigating and aggravating circumstances.

Here, it appears that the crime was committed in order to escape persecution. With this in mind, and weighing the offence versus the persecution, the exclusion clause probably does not apply. Would it be different if the violence had been gratuitous? (Handbook paras. 156, 158)



Case E

This case again raises issues of inclusion and exclusion.

- Does he fear persecution or prosecution? (see Handbook paras. 56-60)
- Fifteen years may be considered appropriate punishment for the crime (prosecution) but summary execution may be seen as persecution. In this case the punishment would appear excessive

Inclusion

and linked to the applicant's political views. It could be concluded that he has a well-founded fear of persecution and qualifies as a refugee

- The question of illegal departure could also be raised (see remarks under Case B).
- In general see remarks under Case D.

Exclusion

In this case, the crime could well be classified as *political*. The exclusion clause would not apply (see *Handbook para. 152*).

- The crime is obviously *serious*. If it were considered to be *non-political*, one would pass to the next stage which would be the balancing test. On the one hand the character of the applicant and all the relevant factors surrounding the crime would have to be assessed (background, motives, lack of intention to take life, etc.). Against these would be weighed the likely consequences of return (here it is death).
- In this difficult task of balancing the consequences of a return and the nature of the act, the balance may be even. Should such be the case, *the benefit of doubt* must prevail and the applicant should *not be excluded* from refugee status.



Case F

The case of Mrs. X raises the following questions:

- Whether the Protection Officer was trained in interviewing applicants for refugee status.
- The Protection Officer's level of experience.
- The use and choice of an interpreter. (Remember that it is always preferable, although sometimes very difficult, to have an interpreter who is *not a refugee*, and is *not a national* of the applicant's country of origin).
- The adequacy of the Protection Officer's telex. In this case it does not contain enough information for an informed decision to be reached. More relevant information is needed, listed in chronological order;
- Whether to appeal against a decision. Appeals should not be rejected merely because new facts are not presented. Appeal systems exist because of the serious consequences of wrong decisions. An appeal is in order in Mrs. X's case.
- Who should review an appeal? An appeal should always be reviewed by a person or persons other than the original decision-maker(s).

Chapter 2 Procedures



Case G

The first observation is that *the existing procedure in Atlantis is a good one*, and provides all the necessary safeguards. Rather than undertaking revisions which will lower those standards considerably, and put *bona fide* asylum-seekers at risk, the authorities should be encouraged to increase the resources in their system. Experience has shown that an increase in staffing is cost effective when compared with the financial assistance costs of excessively long determination processes.

Comments on specific aspects of the new legislation.

Clause (1)

on time limits should be challenged. The Executive Committee's Conclusion No. 15 (XXX) on Refugees without an Asylum Country states specifically in para (i) that "while asylum-seekers may be required to submit their asylum request within a certain minimum time limit, failure to do so, or the non-fulfillment of other formal requirements, should not lead to an asylum request being excluded from consideration".

Clause (2) (a)

is not complete. Asylum-seekers can only be sent back to a "country of first asylum" in certain circumstances. The fact that the country concerned respects the principle of non-refoulement is not enough. In particular, there must be prior agreement by the authorities to re-admit the person; the applicant should have access to determination procedures; be ensured humanitarian treatment, and be assisted in identifying a suitable long-term solution.

Clause (2)(b)

should define clearly "unfounded or abusive." While it is normal that there should be provisions in case of manifestly unfounded or abusive claims, a clear definition of terms is essential. Executive Committee Conclusion No. 30 (XXXIV) (para (d)) states that "unfounded or abusive" means "clearly fraudulent or not related to the criteria for the granting of refugee status laid down in the 1951 United Nations Convention relating to the Status of Refugees nor to any other criteria justifying the granting of asylum".

Clause (3)

on decisions on whether cases are admissible should be deleted or amended. Conclusion No. 30 clearly states that the decision in these matters is of a substantive character. The decision as to whether a case is manifestly unfounded or abusive should be taken by the authority normally competent to determine refugee status (para. (e)(ii)). Negative decisions should be reviewed before rejection at the frontier or forcible removal from the territory (para. (e)(iii)).

Clause (4) concerning the role of the Immigration Officer, could create problems for the RDB. According to this clause, the Board will need to make decisions on the basis of his interview report, whereas it would make a better decision if it could ask its own questions, and could judge for itself whether the claimant has presented a credible account. Assessing credibility is very important, and it is best done through a personal interview. Executive Committee Conclusion No. 30 (para. (e)(i)) thus states:

"as in the case of all requests for the determination of refugee status or the grant of asylum, the applicant should be given a complete personal interview by a fully qualified official and, whenever possible, by an official of the authority competent to determine refugee status."

Clause (5) on disbanding the Refugee Appeals Board should be deleted. Paragraph (e)(vi) of Conclusion No. 8 (XXVIII) on the Determination of Refugee Status states clearly that applicants who are not recognized "should be given a reasonable time to appeal for a formal reconsideration of the decision, either to the same or to a different authority, whether administrative or judicial, according to the prevailing system". An appeal on *the merits of the case*, not just on questions of law, is absolutely essential in any refugee determination procedure.

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Emergency Protection
2. Country/Region: Singapore, South-East Asia
3. Problem Description:
 - illegal arrival, without passports or visas, of secessionists from neighbouring country
 - pressure to return asylum-seekers to country of origin, where execution likely for some
 - concurrent example of negative reaction from other neighbouring state where other members of same group have arrived [with expulsion of HCR representative to follow as direct result]
 - concern of government also on immigration grounds
 - challenge: to prevent arrest of asylum-seekers and possible deportation, and arrange quick resettlement and solve problem "on the quiet" before situation gets out of control
4. What was Learned:
 - A. One can deflect threats to central goals (physical safety of refugees, etc.) by focusing on inessentials and agreeing to less vital demands.
 - B. Governments can serve protection causes if persuaded it is in their own interest and causes less embarrassment to solve a problem than to compound it.
 - C. Open, informal, personalized approaches work better than formal positions even in defence of established principles.
5. Special Comments:

My action (to permit immigration interrogation in presence of HCR staff and on HCR premises, thereby avoiding police involvement; to seek urgent resettlement opportunities and arrange departures without permission; to raise problem first in a theoretical manner in an informal situation, in order to prepare the ground and gauge potential problems; to resist connection with the situation in the other

asylum country, etc.) was undoubtedly facilitated by the flexibility and understanding shown by my principal interlocuter in the Singapore government. The advantage of building a careful, constructive and mutually supportive relationship over a period of time is often most apparent and useful in an emergency.

[*The description of the solution to the problem is not provided for in this sheet and will be given orally in the course.]

Protection emergency situation cases

Case I

1. Following a coup d'etat in X - a low-lying prosperous agricultural country - large numbers of asylum-seekers have been arriving in Y - a mountainous country of small resources. Of the total of some 40,000 asylum-seekers, nearly all except a few hundred are of lowland small farmer background. The traditional enemies of the lowlanders are the Y mountain people who inhabit an area of from 10-20 kilometers width within the frontier of country Y from which, in the past, they used to pillage the X lowland farms. The raids have ceased in recent years, but the traditional animosity between the two peoples remains.

2. There have been several incidents of open hostility, harassment and robbery against the asylum-seekers when they have tried to cross the Y mountain territory to the inland provinces where the inhabitants are well disposed to them.

3. There are frontier posts in the Y mountain territory at A, B, C and D (at each post there is a detachment of 10 police under the command of a corporal). The territory is under military administration - an army major with his headquarters at F, some 15 kilometers back from the frontier. Motorised army patrols pass regularly up and down the only road in the territory but do not normally go along the rough tracks through the villages along which the asylum-seekers mostly pass.

4. Amongst this influx, it is likely that there will be a small number of highly placed officials of the former Government (ministers, military and police commanders).

You are the UNHCR Representative in country Y. What protection orientated action would you be considering in this situation?

1. You are the UNHCR Representative in Y - a country with an established liberal tradition -- where there has for several years been a group of some 40,000 refugees from X (a neighboring country with a repressive dictatorial regime). There has been a coup d'etat in country Y resulting in a government in which the predominate element (represented in particular in the Ministry of the Interior) is known to be keen to cultivate friendly relations with the government of X, largely with internal security considerations in mind. It is thus embarrassed to have a large and hitherto vocal group of refugees from X on its territory, especially as the Government of X has let it be known that it wants the refugees in Y (or at least their leaders) to be returned.
2. On the other hand, the relatively less influential Foreign Ministry is mindful of the damage which refoulement of refugees to country X would have on the new regime's reputation internationally. Moreover, some liberal elements are still in positions of influence, notably in the judiciary (which remains proud of its relative independence of the executive over the years), the Churches (both Roman Catholic and Protestant) which in recent years have frequently taken courageous stands on human rights issues and two voluntary agencies, both of which are effectively staffed with committed workers in the capital (but not always in the provinces where there are also considerable concentrations of refugees - some 5,000 8,000 and 7,000 respectively in provinces A, B, and C - the remaining 2,000 are in the capital).
3. The new Government in Y is highly sensitive about the position which UNHCR might take on this matter and is monitoring closely all communications between the Field Office and Headquarters. The embassies of most countries which have normally supported UNHCR programmes in Y are either not very keen to help because of sensitive bilateral issues or do not have direct communications with their capitals.

What protection orientated action should you be considering?

Case III

1. You are the UNHCR Representative in Z, a relatively prosperous developing country with a healthy ratio of population to resources. There has been a military coup d'etat in Y - a neighboring island republic within several hours sailing of the southern coastal province of Meridion.
2. Constitutionally, Z is a unitary state in which Meridion, along with other provinces, has no more than provincial status. The political reality is, however, that relations between the central government in the capital, Centra, and the local authorities in the provincial headquarters, Meridiona, are delicate. Historically, there was a separate Kingdom of Meridion, which several hundred years ago came to be linked with the then Kingdom of Z by dynastic marriages of their ruling families. Eventually such links resulted in increasingly close political association of the two states to the extent that, early this century, a unified state was proclaimed. The distinctive identity of Meridion has, however, remained. Ethnically, its inhabitants are of different origin to most other Z nationals. Socio-economically, they are much less prosperous and, at the same time, proud that they have retained respect for traditional values and have a tendency to be contemptuous of their materially more prosperous compatriots in the hinterland.
3. Several small boats carrying from 20 to 60 asylum-seekers have been landing along the Meridional coast in recent weeks where they have on occasions been treated roughly by the local militia and interned on a small island where shelter is scarce and food and drinking water are in short supply. Some Meridional provincial officials talk aggressively of refusing to permit future arrivals to land, although there have not been any actual push-offs to date.
4. You have had a number of high level meetings in Centra at the Ministries of Foreign Affairs, the Interior and Defense. Although all are more or less aware of international protection obligations, there has been significant difference in attitude at each Ministry. Moreover, you have the assurance of the competent General in the Ministry of Defense that instructions have been given to the local militia commander in Meridiona that asylum-seekers arriving by boat are to be permitted to land and to be treated in accordance with international standards. But incidents of harassment continue to be reported. Your contacts with the local militia commander although formally courteous, appear to be fruitful.
5. The Government of Z is demanding immediate international assistance on a massive scale.

What protection orientated action would you be considering?

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Protection of an individual case
2. Country/Region: India
3. Problem Description:

I.C. was student leader in Malaysia in late '60's and fled after serious student riots. At time of interview his lawyer was still in prison. I.C. sought refuge in several subsequent countries for he could not find a durable solution. He entered India illegally and was threatened with deportation to Thailand (due to [false] Thai passport) or Malaysia. Strong pressure from country of origin brought to bear on Indian Government.
4. What was Learned:
 - A. Apply national legislation through lawyer. Stay deportation, contact authorities, prison and judiciary. Don't be afraid, they think you're important!
 - B. Find country of asylum, contacts with embassies, resettlement section Geneva.
 - C. Act swiftly (stay of deportation), stand by your case, even if others lose interest.
5. Special Comments:

Independence of judiciary is essential in the above described approach.

Pierre-Michel Fontaine

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Protection/Durable Solutions Emergency
2. Country/Region: Thailand, Southeast Asia
3. Problem Description:
Some 200 Laotians (lowland) who had previously been resettled in China, decided to leave that country and headed south to Thailand, their first asylum country from which they had gone to China. They crossed into Burma and were pushed into Thailand which sent them off into Laos which sent them back into Thailand. They were eventually stranded on a small, disappearing island in the Mekong River. In time, Thailand agreed to take them back on condition of rapid resettlement (3 months) by UNHCR.
4. What was Learned:
 - A. More attention should be devoted to the choice of resettlement country.
 - B. It is important to monitor resettlement conditions in order to be able to be aware of maladjustments and forecast potential crises.
 - C. A durable solution is one which entails effective reinsertion of a refugee into a national community. It must not be overwhelmed by other objectives.
5. Special Comments:
This case illustrates a problem which, by virtue of its mandate, UNHCR is able to do very little about, that is, what happens to a refugee after he has been resettled. In this case, failure to integrate into the new national society led to a reverse exodus back to the country of first asylum. This raised the question whether these people were still refugees and therefore still in need of asylum and even whether they had been effectively resettled and therefore whether still eligible for resettlement. Two complicating factors:
 - a) Thai policy calls for resettlement as the only durable solution outside the country of origin;
 - b) there were more than 2000 more waiting in China ready to leave if the first group succeeded. All the resettlement countries demurred, as these people had already been resettled. It has been about 4 years and these people are still in Thailand.

UNHCR MANAGEMENT CASE NO. 1
BRIEFING SHEET

Your group is asked to take on the role of a Crisis Management Committee at UNHCR Headquarters which is meeting on the emergency evacuation of a UNHCR Office in Bukla, a city about to fall to a right-wing guerilla army. In the compound of the UNHCR Office in Bukla are four refugees - Individual Cases who also require evacuation. The only means of evacuation is by a small helicopter which, in addition to the pilot, can sit only one passenger. Six separate trips are therefore required to be made by the helicopter to rescue the six persons described below. Since the guerillas are advancing, there is a real risk that six trips cannot safely be completed. The guerillas have denounced the United Nations for giving aid and comfort to the "enemies of the revolution", and attacked the existing Government's decision to give asylum to "Godless Marxists". Should some persons fail to be rescued, severe reprisals against them cannot be ruled out.

Your group has to decide upon the order of rescue and radio your decision to Bukla within 50 minutes, when the first landing is scheduled. The only information you have available is drawn from the files and reproduced in the summary below. You may use any criteria you think fit to help you make a decision.

PERSONS

1. Jason

Jason is the UNHCR Chargé de Mission, 44 years old, a bachelor. As head of the UNHCR Office in Bukla he is most closely identified with assistance to refugees in the country. However he is a national of the country which has been supplying the guerilla army with money and weapons. Jason's career has stagnated for some time and he was sent to Bukla when no one else wanted the assignment. After evacuation he would certainly become a "floater". Jason is the only child of a crippled mother, aged 78, whom he supports at an Old People's Home in his home country.

2. Sally

Sally is the International Secretary, 23. She had volunteered for a field mission to Bukla after just one year at Headquarters and has rapidly proved to an efficient, cheerful, problem-solving staff member. She is good-looking, athletic and had been known to set tongues wagging in Bukla for her "liberated ways". An outspoken atheist, Sally has no dependents and is no longer in contact with her parents. In the course of the last week she has developed an intimate relationship with Zaki (see below) whose evacuation she has declared to be her greatest priority.

3. Zaki

Zaki is 33, bearded, a leader of an outlawed Marxist Party in a neighbouring state. He has been a strong advocate of the Bukla Government and denounced the "imperialist attacks" of the guerillas. He is lame in one leg from a bullet injury and his body bears the scars of repeated torture in his home country. A Ph.D. from the Sorbonne, Zaki is considered a hero by large sections of his countrymen, whose exile groups have sent messages and cables to UNHCR Headquarters seeking assurance about his safety. Your group alone knows, from a confidential medical report, that Zaki is dying of cancer and has at most three months to live.

4. Hima

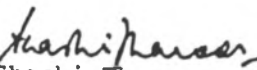
Hima, 31, is Zaki's wife. She is the mother of two children, aged 4 and 6, who have been left behind with her parents in their home country. During their exile Zaki and she have quarrelled frequently and Hima has already indicated her preference for voluntary repatriation rather than resettlement with Zaki. Following her discovery of Zaki's relationship with Sally, she has been hysterical and difficult to control. She alternates between threats to kill Sally and threats to kill herself. She screams that she does not want to be evacuated if it means leaving Zaki and Sally together. In her present state there is even a risk she might attack the pilot if she is placed on board against her will, thus jeopardising the safety of the entire operation.

5. Neel

Neel is a boy of 18 and very frightened. He is from a neighbouring state and had sought asylum in Bukla after having run away from one of the guerilla units that was trying to conscript him in a border village. He has no political views and does not care whether the right-wingers come to power in Bukla or not, but he is terrified that they might discover he had run away from them. His parents and others have written to UNHCR to anxiously request his return home.

6. Gordon

Gordon is an erratic character of 43 who has been occupying the compound for the last few days despite having been turned down in his application for refugee status. In order to reinforce his claims he made some extravagant statements against the "tyranny of the right-wing" which have been widely reported in the pro-guerilla press. A gifted violinist, considered one of the best in the world, he had left his country in disgust at having been passed over for a state honour, and sought asylum unsuccessfully in Bukla. The leading musicians, composers and conductors of the day have issued a joint statement calling for his safe return to the stage. Just before the evacuation crisis, your group had confirmed BO Bukla's determination that he is not a refugee. A few minutes ago, his wife, an eminent journalist, has telephoned the High Commissioner (whom she had interviewed for the New York Times last year) asking for UNHCR's help to save him.


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March 1989

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: An Emergency Preparedness of Mozambique 1987
2. Country/Region: Mozambique, Africa
3. Problem Description:

Approximately 400 refugees were in Mozambique at the end of 1986: some 150 from South Africa, 143 Chileans, some 50 from East Timor, and approximately 40 Malawians, with the remainder from various countries. The majority of South African refugees are in transit through Mozambique, and are resettled in other African countries.

Due to continuing war situation in Mozambique, a good number of the population have taken refuge in neighbouring countries. Some of these externally displaced persons have chosen to return to Mozambique and steady return is expected to continue.

Number of externally displaced persons as from February 1987 are as follows:

Malawi	189,941 (16/4/87)
Zambia	25,000
Zimbabwe	60,000
Other African countries	<u>100,000</u>
Total	374,941 =====

4. What was learned?
 - A. Lack of basic needs/food supplies and water.
 - B. Lack of medical equipment and drugs.
 - C. High rate of malnutrition up to 50% has been increased.
 - D. High incidence of anemia, infant diarrhoea, scabies and malaria among children.
5. Special Comments:

Since the situation is becoming worse there is a need for HCR to discuss the issue with Mozambique. The emergency relief should start and not wait until the situation has become worse. Since there are also some returnees who are returning back to their country of origin, the protection issue should be taken in consideration.

EARLY WARNING CASE STUDY:
THE 1984-85 INFLUX OF
TIGRAYANS INTO EASTERN SUDAN
(WORKING PAPER #2)

Lance Clark
March 1986

This working paper has been written as part of ongoing Refugee Policy Group studies of early warning of mass refugee flows. The funding for the research on which this paper is based, was provided by the International Commission on International Humanitarian Issues, based in Geneva.

The information collected for this case came from over 35 personal interviews carried out in 1985-86, and through the review of both confidential and public documents. Much of this information was not for attribution, and specific sources are therefore not cited for much of the information presented. Information was provided by:

Cultural Survival
Euro-Action Accord
Intertect
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London School of Tropical Medicine (Famine Emergencies
Research Unit)
Medecins sans Frontieres (France)
Oxfam (U.K.)
Relief Society of Tigray
Save the Children (U.K.)
Save the Children (U.S.)
United Nations High Commissioner for Refugees
United States Government
Bureau for Refugee Programs
Centers for Disease Control
World Food Program

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INTRODUCTION

After every refugee influx emergency there is another call for more effective refugee early warning. There are many reasons why these calls have not led to greater improvements in the refugee early warning capability. While many of these relate to political and bureaucratic issues, there are also fundamental questions raised concerning:

- o Can mass refugee influxes be predicted?
- o What practical steps can be taken to improve our existing early warning capability?
- o What difference could improved early warning actually make in practice?

The present case study explores these questions in terms of the mass influx of Tigrayans into eastern Sudan in 1984-85. This influx, and that of Eritreans which occurred at the same time, overwhelmed the refugee assistance system in eastern Sudan. The horrific conditions in these refugee camps in their early months was a grim reminder that much remains to be done to improve the refugee relief system.

The present paper is divided into two sections. Section I provides the reader with background information concerning the origins of the influx, the capacity of the assistance system to deal with it, and the course of events surrounding the influx. Section II then provides a discussion of early warning issues and analyses. For the convenience of readers who have some familiarity with this case, and who therefore do not require a more detailed background briefing, a short summary of the key events of the influx is given below.

Summary of the Influx

The Sudan has had a history since 1967 of receiving substantial numbers of refugees from Ethiopia. However, the 1984-85 influx of approximately 300,000 persons was unprecedented in its size. Of this influx, approximately half were Tigrayans, a group that had appeared in only small numbers in previous influxes. These Tigrayan refugees left Ethiopia after years of attempting to cope with a lack of agricultural production which had reached the point of mass famine. This was due to a combination of bad weather (mainly drought, but also hail and badly timed rains), insect infestation, and central government actions which hindered their ability to produce crops and to use alternative coping mechanisms.

The key events which triggered the flight of the Tigrayans were:

- o the failure of the 1984 harvest, which became apparent during September 1984 (primarily due to lack of rain and an infestation of army worms); and
- o the decision of the Relief Society of Tigray (REST), the humanitarian assistance arm of the Tigray Peoples Liberation Front (TPLF) to open a "pipeline" to conduct people from TPLF controlled areas to eastern Sudan.

REST itself expected a reasonable harvest even as late as early September. By mid-October, REST was predicting the arrival of 50-60,000 persons by Christmas. Within a few weeks, this estimate was revised upward to several hundred thousand.

While warnings of possible mass influxes from Ethiopia had been heard for several years, these influxes had not materialized. In retrospect this appears due to the extraordinary resilience of the famine victims in Tigray. However, this contributed to a credibility problem for early warnings in general.

The mass influx of Tigrayans began in November, several weeks after the beginning of the mass influx of Eritreans. Collectively the two groups quickly overwhelmed the assistance system. The peak influx month for the two groups combined came in December, 1984, when approximately 90,000 refugees arrived. A key event was the shifting of the REST "pipeline" southwards in December, resulting in the arrival of over 50,000 persons within a few weeks in the new Wad Kowlie camp. This occurred even as the number of new Eritrean refugees was rapidly mounting in the Wad Sherife camp further north.

The United Nations High Commissioner for Refugees (UNHCR) had begun 1984 with an agenda of phasing down assistance to the older refugee settlements in eastern Sudan. This may have contributed to some initial slowness at its eastern Sudan sub-office to recognize the signs of an impending influx, as may have the

distractions surrounding the removal of the Falasha to Israel. Contingency planning was limited, and was not based on anything like the numbers which eventually materialized. Calls for help from the UNHCR/Khartoum office were not quickly responded to in Geneva. The slowness of the World Food Program in recognizing the disaster and acting on it was also a major problem.

The mass relief operation did not get under way until late December, after considerable pressure from major donors such as the United States government. An estimated 10,000-15,000 refugees died before the emergency was brought under control. These deaths were mainly attributable to a lack of food and water, and a major measles epidemic. Logistics was a key problem, and was related to the problems of site selection. Many of the refugees were subsequently moved to new sites.

In March-April, 1985, over 50,000 Tigrayans returned home (even as significant numbers of Eritreans continued to enter the camps). Eritrean, and to a lesser extent, Tigrayan refugees have continued to arrive since then, but these much lower numbers have been absorbed without too much difficulty into the infrastructure now in place.

I. BACKGROUND OF THE INFLUX

A. Tigray - History and Geography

Within the present borders of Ethiopia, the much smaller area historically known as Abyssinia is populated by two main groups--the Amharras and the Tigrayans. This area is located in the central and north-central part of the country. For centuries, power in Abyssinia shifted back and forth between the two groups, which are ethnically related.

In 1899, Amharric Prince Menelik came to power, and Amharras have remained the dominant group since that time. In subsequent decades, Amharric rulers expanded the empire through conquering neighboring peoples. These included the Oromo's (who make up the majority of the country's population), the Eritreans, and the Somalis. (The Amharras constitute approximately 15% of the population of Ethiopia today.)

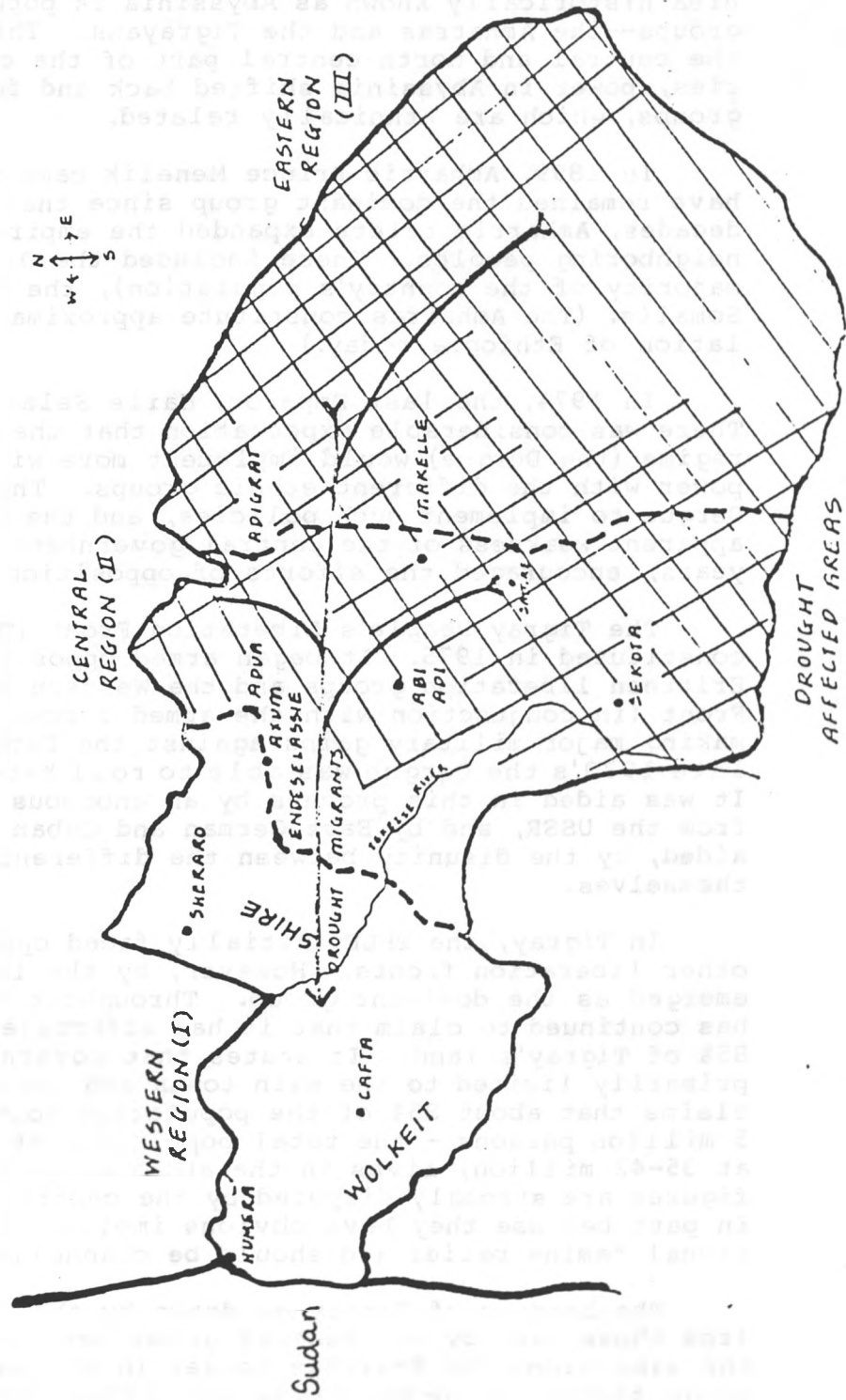
In 1974, the last Emperor, Haile Selassie, was overthrown. There was considerable expectation that the new, radical Marxist regime (the Dergue) would implement more widespread sharing of power with the different ethnic groups. The failure of the Dergue to implement such policies, and the internal chaos and apparent weakness of the central government in the following years, encouraged the efforts of opposition groups.

The Tigray People's Liberation Front (TPLF) was formally constituted in 1975. It began armed opposition even as the Eritrean liberation groups and the Western Somali Liberation Front (in conjunction with the armed forces of Somalia) were making major military gains against the Dergue. However, by the late 1970's the Dergue was able to roll back most of these gains. It was aided in this process by an enormous importation of arms from the USSR, and by East German and Cuban troops. It was also aided, by the disunity between the different liberation fronts themselves.

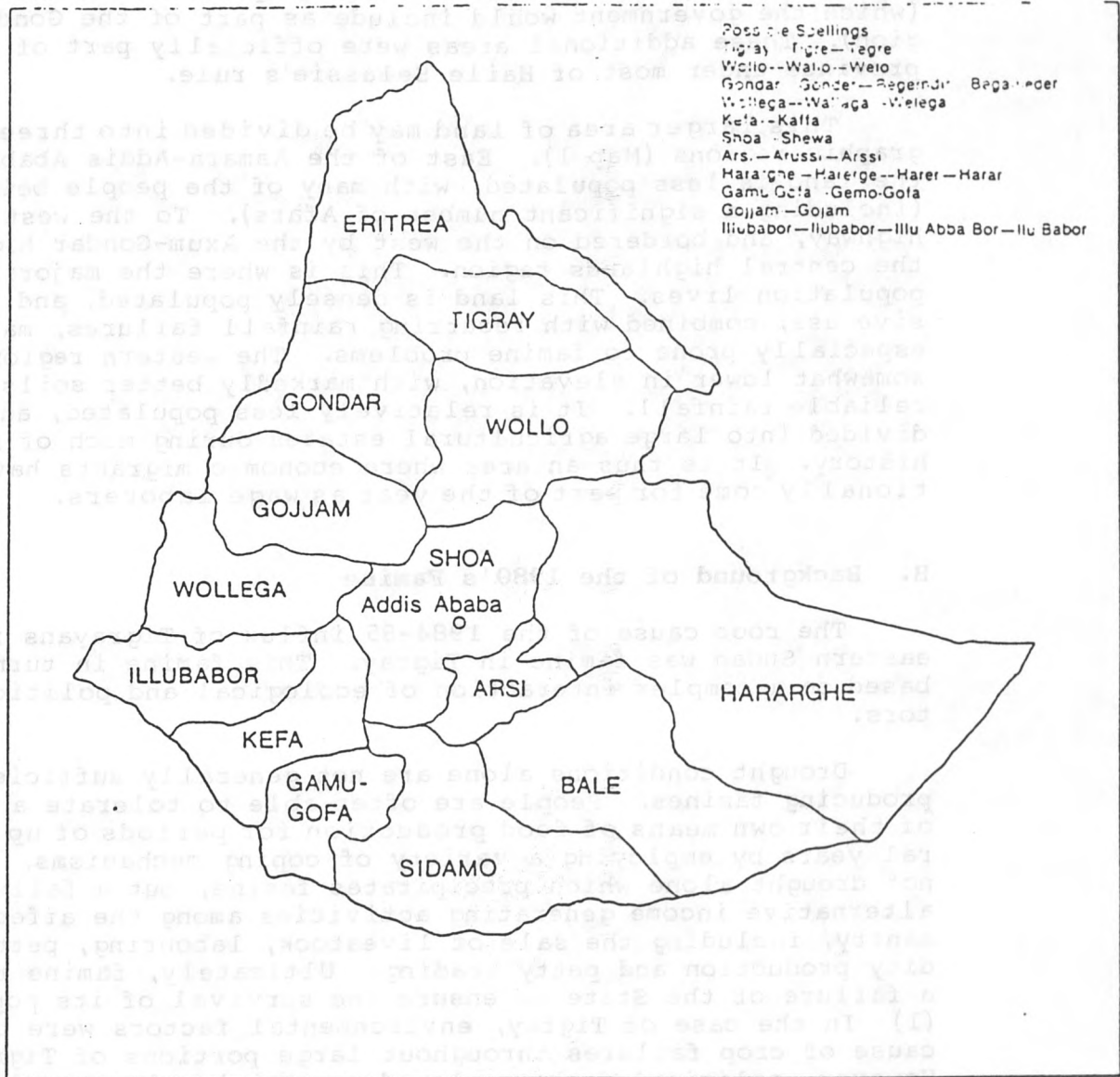
In Tigray, the TPLF initially faced opposition from several other liberation fronts. However, by the late 1970's it had emerged as the dominant group. Throughout the 1980's the TPLF has continued to claim that it has effective control over about 85% of Tigray's land. It states that government control is primarily limited to the main towns and roads. The TPLF also claims that about 85% of the population (out of a total of 4.5 to 5 million persons - the total population of Ethiopia is estimated at 35-42 million) lives in the areas which it controls. These figures are strongly disputed by the central government. This is in part because they have obvious implications for whom international famine relief aid should be channelled through.

The borders of Tigray as drawn by the TPLF (Map 1) differ from those used by the central government (Map 2). The lines are the same along the Eritrean border in the north and east, and along that with the Wollo region in the south. However, the TPLF

TIGRAY
MAP I



M A P 2



ADMINISTRATIVE REGIONS OF ETHIOPIA

would include additional areas in the south and west, and the area of Wolkeit in the west extending up to the Sudanese border (which the government would include as part of the Gondar region). These additional areas were officially part of Tigray province under most of Haile Selassie's rule.

This larger area of land may be divided into three geographic regions (Map 1). East of the Asmara-Addis Ababa highway the land is less populated, with many of the people being nomadic (including a significant number of Afars). To the west of this highway, and bordered on the west by the Axum-Gondar highway, is the central highlands region. This is where the majority of the population lives. This land is densely populated, and its intensive use, combined with recurring rainfall failures, makes it especially prone to famine problems. The western region is somewhat lower in elevation, with markedly better soils and more reliable rainfall. It is relatively less populated, and has been divided into large agricultural estates during much of its recent history. It is thus an area where economic migrants have traditionally come for part of the year as wage laborers.

B. Background of the 1980's Famine

The root cause of the 1984-85 influx of Tigrayans into eastern Sudan was famine in Tigray. This famine in turn was based on a complex interaction of ecological and political factors.

Drought conditions alone are not generally sufficient for producing famines. People are often able to tolerate a failure of their own means of food production for periods of up to several years by employing a variety of coping mechanisms. "It is not drought alone which precipitates famine, but a failure of alternative income generating activities among the affected peasantry, including the sale of livestock, labouring, petty commodity production and petty trading. Ultimately, famine represents a failure of the State to ensure the survival of its population." (1) In the case of Tigray, environmental factors were the main cause of crop failures throughout large portions of Tigray. However, political factors played a crucial role in undermining and limiting the capacity of the population to deal with these shortages.

The present famine has its recent origin in severe drought conditions that began in many parts of Tigray in 1980. By 1981 and 1982, many people were eating some of their livestock, or more often, selling them to raise cash. This soon led to decreased prices for animals. At the same time the scarcity of grains led to increased grain prices. Thus, the male members of many families were forced to leave home to search for wage labor.

1. Peter Cutler, The Use of Economic and Social Information in Famine Prediction and Response, p. 31 (London: Relief and Development Institute, 1985)

Larger than normal numbers made their way into the western region of Tigray, and to the agricultural schemes in eastern Sudan.

In 1982, REST reported severe famine in many areas of Tigray, especially in the central and eastern regions. REST also reported that numerous persons had died from famine or famine-related diseases. Reported increases in the sale of oxen represented an act of last resort for a farmer who was thus giving up an essential means of producing any more food. REST and the TPLF claimed that the central government had little interest or capacity to meet the food needs of people living in TPLF-controlled areas. They therefore pressed their appeals for aid to expand cross-border transport of food from eastern Sudan into Tigray. These appeals produced some limited response in Europe (although little in the U.S.), primarily from Protestant church groups.

1983 saw a continuation of drought conditions in the central and eastern portions of Tigray. The Ethiopian government reported populations of 4,500 at the Ibnat relief camp and 12,000 at Korem (both in the central region). Meanwhile, REST reported massive, orderly movements of people into the western regions, giving estimates of 350-400,000 persons making the journey. Most of these persons were reported to have shared the lodging and food of the local population, further straining these resources. REST claims to have supported many of these people through the purchase of grain from pockets which were producing surpluses in the west. Approximately 80% of these persons were reported by REST to have returned home by the planting season (May-June) in hopes of getting a crop. REST documents published in late 1983 recorded approximately 4,400 famine and famine-related deaths in the six-month period ending in May, 1983. In addition, over 400,000 head of livestock died as well.

In understanding the influx of 1984-85 and the events leading up to it, it is important to remain aware of the key points within the agricultural cycle of most of Tigray:

THE AGRICULTURAL CYCLE OF TIGRAY

March	
April	Short Rains
May	Plowing Begins
June	Plowing and Planting
July	Annual Rains
August	Annual Rains
September	Annual Rains
October	Harvest Begins
November	Harvesting and Threshing
December	Harvesting and Threshing
January	Harvesting and Threshing End
February	

Within Tigray a "hungry season" often occurs during the months of August and September, during the rainy season. This

happens because the crops are still in the field, but are not yet ready for harvest. At this time, reserves from the previous crop are at their lowest point. The other key period is the time before the main rains begin, when the ground must be prepared for planting. This occurs in most of Tigray in May and June.

The general failure of the annual rains in central and eastern Tigray in July-September 1983, led to a recurrence of movement into western Tigray in massive numbers. However, the labor market in the west was now becoming saturated, caused "...partly by the rise in numbers of migrants seeking work, and partly because of the reduction of yields in food surplus regions as the drought deepened and as military action disrupted agricultural activities." (2) This apparently forced even more men than in the previous year to seek wage labor in eastern Sudan.

Thus, as 1984 began, Tigray had experienced repeated and widespread failure of rains in the central and eastern regions for up to four years, and a relentless eroding of the resources available to the peasants to cope with it. Movements of people were occurring on a massive scale. These kinds of movements were often acts of last resort, or what famine researchers call "terminal migrations", as survivors sought direct relief at possible food distribution sites.

Some people were travelling to sites along known "famine roads" where government relief trucks were likely to pass. The greater number appear to have been internally displaced within TPLF-controlled areas. This in turn put an especially severe strain on the limited reserves of the western region.

The role of the Ethiopian government regarding the famine, and efforts to alleviate it, has been controversial. Many expatriates who have worked closely with the government's Relief and Rehabilitation Commission praise its humanitarian efforts. However, the view expressed by virtually all of those Tigrayans interviewed in refugee camps in the Sudan was that the government was intent on crushing the opposition in Tigray through whatever means it had at its disposal.

The most systematic effort at such interviews was conducted by Jason Clay of Cultural Survival, a U.S.-based research organization. Clay interviewed random samples of refugees in eastern Sudan in the Wad Kowlie and Fau II camps. (3) These persons described the central government as contributing to the famine in two ways: 1) by actions that directly contributed to loss of crop production, and 2) by actions that limited the ability of the people to cope with the loss of crops.

2. Cutler, op. cit., p. 54

3. Jason Clay, Politics and the Ethiopian Famine--1984-85, (Cambridge: Cultural Survival Report #20, 1986)

The first category includes charges of burning food storage buildings and their contents, burning crops in the field, and the killing or confiscation of livestock. According to these refugees, the government's objective was to punish villagers for their suspected support of the TPLF and to diminish the resources available to its fighters. A less obvious impact on crop production was reported to come from the implementation of agricultural policies that discouraged production of crops beyond that needed for personal consumption.

The second category includes the alleged forced collection of taxes, as well as the collection of "contributions" for various government services which these persons described as never having received (e.g. literacy programs). Government military offensives, such as that in 1983, also produced large numbers of displaced persons who had to be assisted by other peasants and/or REST. The reported bombing and burning of numerous villages would have had obvious consequences for the ability of peasants to put the needed labor into agriculture.

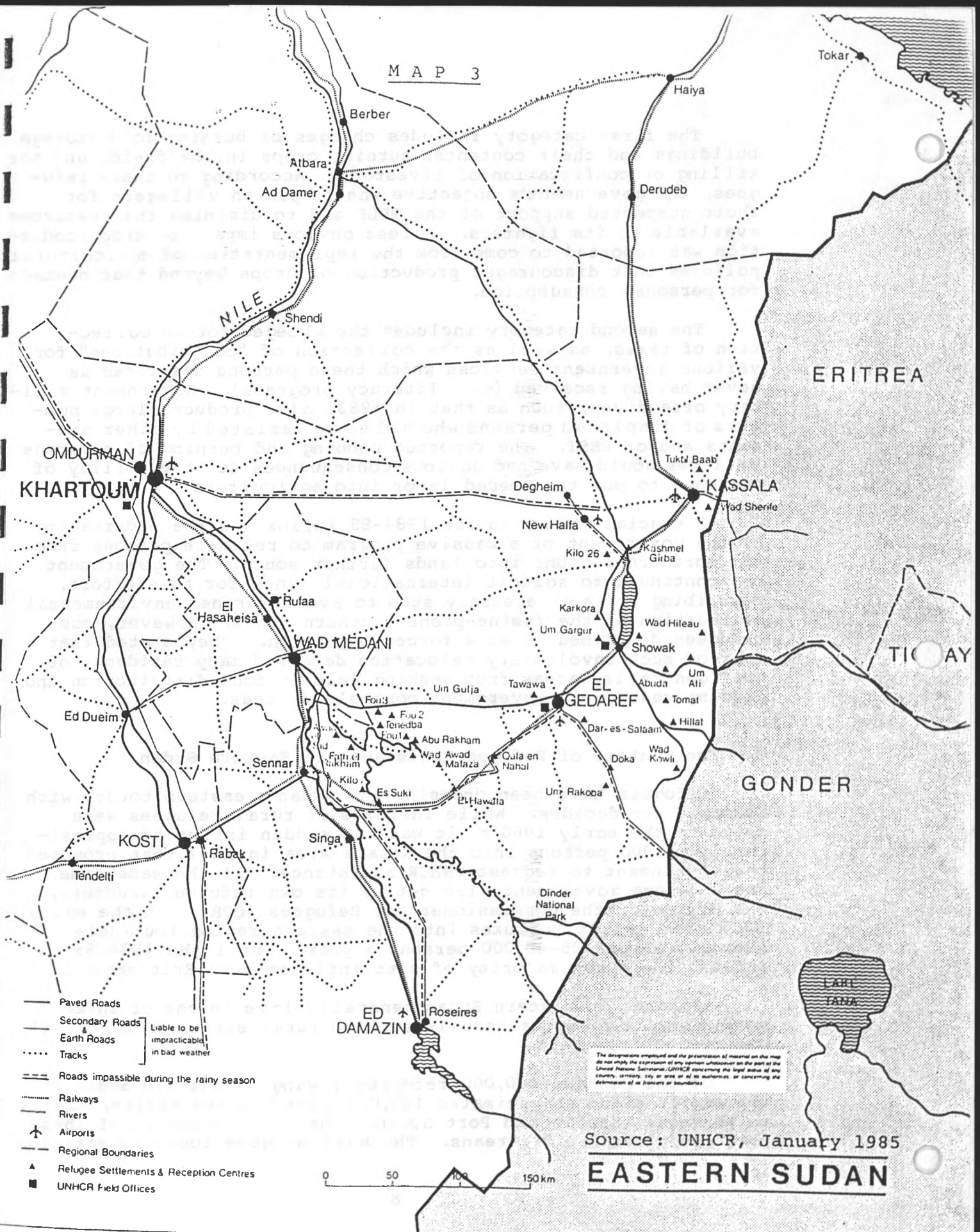
A crucial factor in the 1984-85 influx was the undertaking by the government of a massive program to relocate persons from the northern regions into lands further south. The government has continued to solicit international funds for this effort, describing it as a necessary step to avoid further environmental degradation of the famine-prone northern areas. However, most refugees described it as a forced migration. They stated that fear of such involuntary relocation deterred many residents of TPLF controlled areas from seeking help at food distribution and feeding centers in government controlled areas.

C. The Context of Refugee Assistance in Eastern Sudan

Refugees have been crossing the Sudan's eastern border with Ethiopia for decades. While influxes of rural refugees were noted in the early 1960's, it was the sudden influx of approximately 46,000 persons into the Kasala area in 1967 that prompted the government to request UNHCR assistance. At the same time, the Sudanese government also set up its own refugee structure, the Office of the Commissioner for Refugees (COR). In the early 1980's the yearly influxes into the eastern region routinely averaged around 25-40,000 persons a year. Until the 1984-85 influx, the great majority of most influxes were Eritreans.

Refugees in eastern Sudan generally live in one of three settings: urban, spontaneously settled rural sites, or officially assisted settlements.

Of the perhaps 400,000 refugees living in eastern Sudan at the end of 1983, an estimated 185,000 lived in the cities, mostly in Khartoum, Kasala and Port Sudan. The great majority of these urban refugees are Eritreans. The Muslims have found integration



- Paved Roads
 - - - Secondary Roads
 - - - Earth Roads
 - Tracks
 - - - Roads impassible during the rainy season
 - Railways
 - Rivers
 - ✈ Airports
 - - - Regional Boundaries
 - ▲ Refugee Settlements & Reception Centres
 - UNHCR Field Offices
-] Liable to be impracticable in bad weather

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the United Nations Secretariat, UNHCR concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Source: UNHCR, January 1985

EASTERN SUDAN

0 50 100 150 km

much easier than have the Christians. These Christians made up an increasing percentage of the later arrivals, and have generally remained a distinct and unassimilated population.

Much less is known about those persons who have spontaneously settled in rural areas. They may constitute about a third of the total refugee population, and have had a major impact on the limited resources of the eastern region. The assumption of most refugee aid officials in the early 1980s was that the majority of any new influx would still be Muslim. Therefore, most could be expected to spontaneously settle in urban or rural areas, with only a minority requiring official assistance.

UNHCR and COR assistance in the years before the 1984-85 influx was primarily directed towards those living in the official refugee settlements. These included approximately 130,000 persons residing in 24 official settlements (1984 figures). In most of these settlements, refugees farmed their own land. A few were set up near large Sudanese agricultural schemes to provide wage laborers for them. UNHCR, along with the World Food Program (which handles food supplies for these settlements), was particularly concerned that the settlements become self-sufficient, and that outside assistance to them be systematically phased out.

The numbers of Tigrayans who existed within the total refugee population of eastern Sudan by early 1984 is difficult to estimate. While some had entered the cities and towns, probably the larger proportion were involved in agricultural labor. As noted earlier, many of these people were seasonal migrants. However, a substantial number were also residents of the official settlements such as Tawawa, where 15-20,000 refugees provided labor for nearby Sudanese farms. The overwhelming majority of Tigrayans, including those in eastern Sudan, are Coptic Christians.

Overall, the human resources which were in place at the beginning of 1984 to deal with a possible mass influx were thin. UNHCR's Branch Office in Khartoum had a staff of eleven professionals. Three more were located in the Gedaref sub-office and one in the Port Sudan sub-office. The Khartoum staff also oversaw the work of the Juba sub-office in southern Sudan where approximately 165,000 Ugandans were registered as refugees, and many others were spontaneously settled.

The COR had a larger staff, with sub-offices in the east in Port Sudan, Showak, Kasala, and Gedaref. However, most of its experience as a program implementor was with running settlements, not with massive relief operations. The 20 or so private voluntary organizations working in the east were generally small and similarly lacking in relief experience. The World Food Program had few staff in the country. The U.S. government, the major donor to the UNHCR, was involved primarily through the office of its Refugee Coordinator in the U.S. embassy.

In summary, the organizational infrastructure which existed to deal with an influx consisted of a thin line of government and expatriate staff who generally had little experience with major relief operations, and were focussed on the issues relating to winding down outside aid to the settlements.

D. The Tigrayan Influx of 1984-85

To understand the Tigrayan influx, and the response to it, it is also important to know something of the parallel but separate mass influx of Eritreans which took place at more or less the same time. The limited information which exists indicates that most were from former Eritrean Liberation Front areas since taken over by the Eritrean People's Liberation Front (EPLF). Their reasons for leaving are not well documented, but appear to have been a mixture of drought, lack of access to resources to deal with drought-based famine, and continued EPLF-Ethiopian government warfare. Their eventual numbers would rival those of the Tigrayan refugee influx. However, there were few reports of early warning signs of the imminent arrival of such an unusually large number of persons, and little systematic analysis of their reasons for coming.

The influx of Eritrean refugees had several negative impacts on the adequacy of the assistance given to the Tigrayans. The fact that the Eritrean influx began somewhat earlier may initially have distracted attention and resources from the Tigrayans. The continued arrival of both groups throughout November 1984-April 1985 meant that the assistance system, which might have been marginally able to handle one influx, was totally overwhelmed by the two of them. Lastly, many aid officials had drawn conclusions from the pattern of earlier Eritrean influxes that were counterproductive in dealing with the simultaneous 1984-85 influxes. These included the belief that it was not useful to spend a great deal of effort examining early warning signs as refugee influxes were very difficult to predict.

Signs of the coming Tigrayan influx could be seen in eastern Sudan as early as 1983. As noted previously, unusually large numbers of Tigrayans entered eastern Sudan in 1983 looking for work and food. In addition, among those persons officially registered as refugees between August, 1983 and March 1984, the majority gave "drought", or less frequently, "looking for work" as their reason for leaving Ethiopia. This contrasted with earlier groups, for whom warfare or political persecution were the primary reasons given.

By early 1984, the majority of new registrants with UNHCR were coming from Tigray province, rather than from Eritrea which was the traditional norm. Around May, 1984, a substantial number of Tigrayans were reported to have returned to Tigray in anticipation of the planting season. Overall, UNHCR estimated that by the end of the first six months of 1984, approximately 20,000

new refugees had entered the official assistance system in eastern Sudan.

By July, the overall refugee influx rate began to increase noticeably. However, at this point there was a shift back to the majority now coming from Eritrea. Between July and October 1984, perhaps 12,000 Eritreans moved into the older transit center of Wad Sherife, near Kasala. Thousands of others moved to the Um Rokuba and Wad Hileau transit centers, or joined relatives in the older settlements.

During August and September, 1984, UNHCR recorded about 10,600 new arrivals from Tigray. A key group among them were several thousand Ethiopian Jews, or Falashas. While their numbers were relatively small, the impact of this group was major. Considerable energies were expended to spirit them out of Sudan to Israel. This may have diverted some refugee staff from noticing and investigating early warning signs of the building mass influx. However, it was media accusations of widespread suffering of these Falasha refugees that first brought significant international attention to the situation in eastern Sudan, especially by UNHCR/Geneva and the U.S. government.

Meanwhile, during September two critical events took place in Tigray which would directly trigger mass movements of refugees into the Sudan:

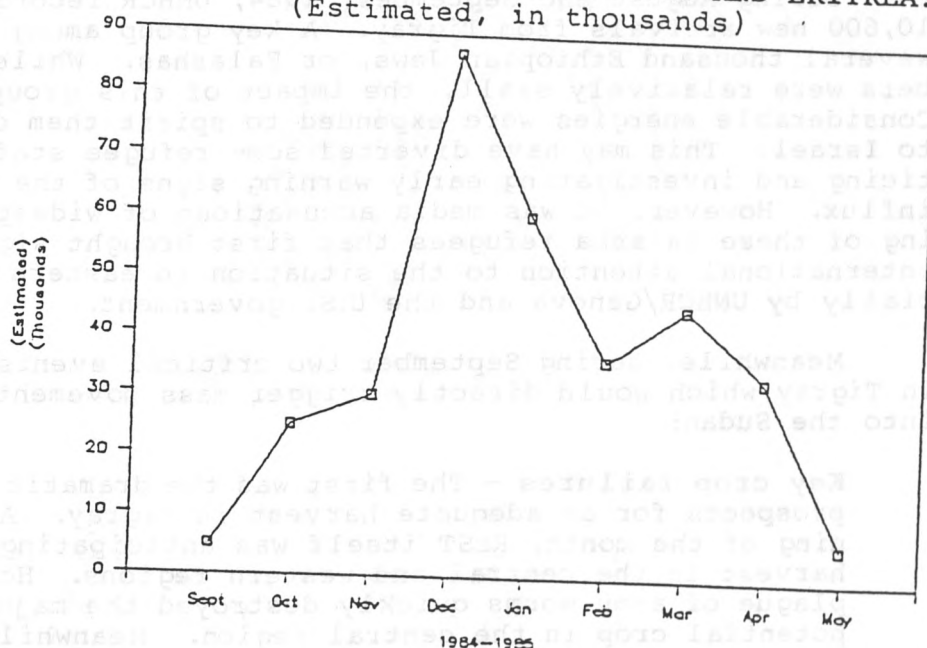
Key crop failures - The first was the dramatic change in the prospects for an adequate harvest in Tigray. At the beginning of the month, REST itself was anticipating a moderate harvest in the central and western regions. However, a plague of army worms quickly destroyed the majority of the potential crop in the central region. Meanwhile, the premature ending of the annual rains which had fallen in the west through early August eliminated over half of the harvest in this key area.

The REST "pipeline" - At the end of September, REST and the TPLF decided to create a "pipeline" to conduct refugees into eastern Sudan. According to REST, this decision was based on its own survey of the number of seriously affected persons and its recognition that with the loss of most of the crop in the western region, the resources to assist this population were inadequate. As described in more detail in Section II, this "pipeline" was essential in overcoming the barriers to international refugee flight (e.g. the need for guides and for adequate food supplies en route). It was also the size of this "pipeline", as ultimately decided by REST, that determined what proportion of the severely affected population would eventually come to eastern Sudan.

It is unclear whether REST was aware that the Tigrayan influx numbers would reach their eventual level (of approximately 150,000) at the time they first informed UNHCR, COR, and the U.S. government of their decisions to create the "pipeline." UNHCR

sources describe this warning, which occurred at the beginning of October, as predicting the arrival of 50-70,000 persons by Christmas. Such sources note October 27 as the date on which REST revised these estimates up to a possible 400,000 persons. REST representatives in Washington state that they eventually placed a ceiling of approximately 150,000 persons on the numbers of refugees that they would escort into eastern Sudan. This ceiling was said to be chosen primarily based on political considerations regarding the possible negative response of the Sudanese government to even larger numbers.

UNHCR ASSISTED NEW ARRIVALS FROM TIGRAY AND ERITREA: 1984-85
(Estimated, in thousands)



For the refugee assistance system in eastern Sudan, October marked the beginning of the major crisis. The existing settlements were already facing severe food shortages. The arrival of increasing numbers of Eritreans in the Wad Sherife area was overwhelming the existing resources. During this month, Tigrayan refugees also continued to arrive, but in relatively small numbers.

The first significant numbers of Tigrayans refugees coming via the REST "pipeline" began to arrive in early November, after approximately four weeks of travel. Their arrival point was about 20 kilometers northeast of Kasala, at a place called Tukul Baab. This was further north than was normal for Tigrayan arrivals, reportedly due to the need to avoid areas of possible fighting along parts of the border. Within a few days there were an estimated 12,000 Tigrayans at this site. The Sudanese government's security concerns delayed the ability of UNHCR staff and others from bringing much assistance to this site for an initial two weeks.

Overall the total refugee influx reached its peak during the month of December. The numbers of Eritreans at Wad Sherife continued to climb to a total of 60-70,000 by the end of the month. In early December the REST "pipeline" shifted southwards. Initially, perhaps 4,500 Tigrayans appeared at the Safawa site southeast of Gedaref. Then thousands began to arrive at the Wad Kowlie site. Meanwhile, before the influx of Tigrayans into Tukul Baab ceased by the end of December, some 40,000 had arrived there as well.

Ironically, perhaps, the Tigrayans at Wad Kowlie may have suffered during December because of the belated international recognition of the refugee crisis in eastern Sudan. High-level missions to assess the situation and a sizeable wave of media attention converged on eastern Sudan during the month. However, the existing transportation and communications infrastructure was quite limited. Thus, the focussing of attention on the Kasala area meant that general recognition of the exploding population of Wad Kowlie was delayed until after Christmas.

The overall influx numbers (i.e. Eritreans and Tigrayans together) dropped somewhat in January, but still reached a staggering 60,000 persons. Food for many of the refugees began to run out by the end of December, and reached a crisis in January. The situation in Wad Kowlie was horrific, with the the river drying up at the site, and the population continuing to increase. However, by the end of the month, the relief operation had begun to gear up to the capacity required while the influx curve itself began to drop.

During February there was a distinct pause in the influx pattern for both groups (Eritreans and Tigrayans). In March, the rate of new arrivals increased again (but at markedly below the earlier peak) before declining in April. While April saw a particularly large influx of Eritreans into Wad Sherife, it also marked the beginning of the movement of Tigrayans back home. This movement was begun spontaneously by the refugees themselves, in order to prepare land for the coming planting season. This repatriation included an estimated 8,500 persons in April, and peaked at perhaps 44,000 persons in May. In the latter part of 1985, and early 1986, there was some further moderate level influxes of Tigrayans, in part consisting of men returning to pick up family members to take them back to Tigray.

II. EARLY WARNING: ISSUES AND ANALYSES

Discussion of early warning regarding the 1984-85 influx of Tigrayans into eastern Sudan may be usefully divided into four areas:

- o predicting the influx;
- o constraints on early warning of the influx;
- o the link between more effective early warning and more effective relief assistance; and
- o the link between more effective early warning and the possibilities of alleviating the causes of the flow.

A. Predicting the Influx

One of the basic constraints to more effective early warning of mass refugee flows is the ability to make accurate and credible predictions of the influx. Certainly not all influxes can be predicted. However, famine migrations based heavily on drought are probably much easier to predict than movements generated by many other causes. This is because the onset of the famine is a slow one, whose spread can be tracked through a variety of indicators. These include not only physical measurements such as crop assessments, but also observable patterns of human behavior as people attempt to cope with the worsening situation. A major difficulty which faces refugee early warning in such cases is determining what proportion of the famine-affected population will leave the country as a way of dealing with the famine.

Refugee flows are most often described as if they were a single tidal wave, or sometimes a series of smaller waves, striking the receiving country. This of course reflects the viewpoint of those assisting the refugees in the receiving country. Such flows look rather different if one focusses instead on events in the sending country. From this perspective, it is more useful to think of a series of interconnected water tanks. Water thus moves from one tank to another, until some of it finally exits via a pipe from the last tank. The international refugee assistance system in the receiving country must deal with the flow from that pipe.

Continuing with this analogy, in predicting a flow it is important to consider three main concepts--push factors, intervening factors, and triggering events. Push factors are the specific ways that the root causes of a movement (e.g., racial conflict) are expressed (e.g., through acts of persecution directed towards a certain group of people). These push factors often take a certain pattern, moving people from one tank to the next as they are increasingly affected by these problems. Thus, the

water in the last tank represents the most severely affected group.

Intervening factors can then play a key role in determining the rate at which water (people) flows from this tank, if at all. An investigation of possible intervening factors would include exploring what alternatives (e.g., internal displacement) and obstacles (e.g., fighting along possible exodus routes) exist to leaving one's country. It would also include an analysis of the possible reception which the refugees might expect to receive in the host country (e.g., whether adequate assistance would be provided) and seasonal factors which might effect the timing and numbers of the flow (e.g., the agricultural cycle in the home areas of the refugees).

Triggering events are those that lead directly to a major increase in the exodus of people. They may be expressed as a specific push factor or as a change in one of the intervening factors. Examples of push factors would be a sudden cataclysmic event (e.g., a government decreed expulsion) or a "last straw" event which pushed many people beyond the point of being able to cope with their problems (e.g., a physical attack on some of the group's members). The most common example of a change in an intervening factor which represents a triggering event is the removal of a major obstacle to flight.

Within this context, an early warning analysis of possible refugee flows from Tigray would have begun by identifying the root cause(s) of a potential flow. In this case, the root cause of the influx was famine. This in turn was based on an inter-relationship between ecological and political factors, as described in more detail in Section I.

One would then have sought to identify the affected population and the patterns of how specific portions of this population could likely become progressively more severely affected. The analysis would also have focused on the likely sequence of coping mechanisms which the affected population would employ to deal with the drought given the cultural, economic, and political context of Tigray. A study of famine behavior in general, as well as of the history of past Tigrayan movements and of the serious constraints to exodus, would have led to the recognition that a mass exodus would most likely occur only after a major portion of the population had exhausted their other options, and only if the constraints to mass exodus into eastern Sudan could be minimized.

It is important to note that simply identifying the number of persons seriously affected by famine would have been of limited use in predicting the eventual number of refugees. The Tigrayan influx figure of perhaps 150,000 persons represented only a minority of the total severely affected population in the areas where these refugees came from, which reached several million.

By the end of 1983, one could have observed indications of a worsening disaster inside Tigray. Increasing numbers of men were leaving their homes to seek wage labor. The increasing sale of assets, such as livestock and personal possessions, accompanied by dropping livestock prices and increased grain prices in some areas, were further indicators. Significant numbers of persons had already reached the final stages of coping via the use of their own immediate resources and had sold their means of production, including oxen and plows. Reports of the deaths of thousands of people, and of hundreds of thousands of livestock were clear signs of widening devastation.

An especially important part of such an analysis would have been to study the patterns of movement of the affected population. In the Sudan, an usually large number of single men had come during 1983 to seek wage labor. Moreover, "famine" had replaced fear of fighting or of political persecution as the primary reason new refugee arrivals were giving for leaving Ethiopia. The central government in Ethiopia was reporting thousands of persons, many of them in family units, coming to towns such as Korem in a last, desperate search for food.

The most critical movement may have been the one least directly observed by international assistance officials, that of hundreds of thousands of persons from central and eastern Tigray into the TPLF-controlled sections of western Tigray. This movement meant that the harvest in the western region now represented the last reserve for much of the population of Tigray. It also indicated the likelihood that many, and perhaps the majority of the affected population in Tigray would turn to the TPLF instead of to the Ethiopian government for aid as the situation worsened.

An analysis of intervening factors would have reinforced the likelihood that any mass migrations, either within Ethiopia or into the Sudan, would probably begin around October, when harvesting would normally begin. It would also have observed that many people were exhausting their coping mechanisms. The analysis would have described a rapidly increasing severely affected population, but one that was "bottled up" in terms of the viability of international flight to the Sudan. This reflected the fact that flight to the Sudan required logistics (e.g., a guide, food supplies, and expertise in avoiding being observed by Ethiopian government warplanes) that was beyond the capacity of most of this affected population.

It is in this context that two events in September, 1984 triggered the mass influx. The first was the failure of the crops in key areas of Tigray. The failure of the rains in the western region, and the destruction wrought by the army worms in the central region, critically changed the resources available in Tigray. The second was the decision by REST and the TPLF to open a "pipeline" to escort people to eastern Sudan. At this point (the end of September, 1984), the only doubts possible regarding the likelihood of a mass influx would have been due to:

1. questions about the capability of REST to live up to its stated intentions;
2. an unlikely major change in the politics of providing food to the TPLF-controlled areas (such as a major increase in the cross-border operation from eastern Sudan, or a safe passage agreement to bring in food from the government side); or
3. some event which would have closed off the border, such as intensive fighting or a decision by the Sudanese government to change its asylum policy to one of forcibly turning back new refugees from Ethiopia.

The creation and operation of the REST "pipeline" played a critical role in determining the composition, numbers, and timing of the influx. Through his survey of Tigrayan refugees in eastern Sudan, Jason Clay of Cultural Survival estimated that all but 2% of the refugees came from TPLF-controlled areas. Over 75% reported that the TPLF had held meetings in their home village to explain what they believed the peoples' options to be. The TPLF reportedly explained that of the much larger affected population, it sought to limit the "pipeline" to those able-bodied persons who would be capable of making the 4-5 week journey. According to Clay, the refugees reported that no effort was made to prevent people from seeking help at government centers. REST representatives in Washington claim that the recognition of REST's own limitations led its leadership to encourage people to seek help wherever they could find it.

85% of those interviewed by Clay reported that a TPLF guide had accompanied them from their village, and all eventually had a TPLF guide along the way. The TPLF and REST organized food and water daily along the route. They also timed the movements and limited their size, to minimize the danger of government air attacks. As noted earlier, REST representatives in Washington claim that the size of the influx was directly related to their decision to place a limit on the number of persons whom they would escort into eastern Sudan. This was said to be due to political considerations regarding the possible negative response of the Sudanese government to even larger numbers.

The role of REST was also important in providing an early warning of the mass influx, although one with little lead time. This was true not only regarding the possibility of a mass influx, but just as important, of the point at which the influx numbers would shift from those which might potentially be managed by the existing system to those which would clearly overwhelm it. For assistance officials, determining this point was complicated by the simultaneous mass influx of Eritreans. However, REST's statements at the end of October that the influx numbers would be several hundred thousand, rather than the 50-70,000 discussed some weeks earlier, was a clear warning of the need to "shift gears" in the relief operation in a major way.

B. Observed Constraints to More Effective Early Warning

Early warning of international refugee movements includes the steps of:

- o collecting and verifying information;
- o analyzing and interpreting the information; and
- o effectively communicating the early warning(s).

In the present case, a number of obstacles to carrying out these steps were observed, which should constitute "lessons learned" for possible future situations. These include:

1. The Inability to Recognize Crisis Information Because of Job Description Blinders and Lack of Experience

Information regarding a potential mass influx was much more widely available in eastern Sudan than was generally appreciated. This was in part because key refugee assistance staff in the field understood their job to be one of dealing with the issues of phasing out assistance to the older settlements. As this already required considerable time and attention, and as they were not trained, experienced, or directed to monitor early warning signs, they paid inadequate attention to them. They also may have not felt confident enough to in effect, alter their job description, without orders to do so from their supervisors. The lesson may be that unless the need to be aware of such information is made part of the job description of such persons, and is reinforced by messages from their supervisors, these persons may simply not receive full information from the field.

2. The Use of Incorrect Conceptual Frameworks for Understanding Early Warning

Many persons continue to regard early warning, and the prediction of refugee flows, in overly simplistic terms. There is also the dangerous tendency to fail to explore the processes leading up to the flow. In this case, many persons interviewed spoke of receiving some form of early warnings of famine-related movements for two years preceding the influx. As the mass flows did not soon materialize, their conclusion was that such warnings were not very credible.

The sad explanation why the predicted influxes in this case did not materialize earlier was not due to lack of suffering within Tigray, but rather to the extraordinary capacity of the population to absorb such suffering. If one's view of the process was limited to observations of whether people did or did not arrive in refugee camps in eastern Sudan, one would not have recognized that events within Tigray were steadily moving towards the kind of triggering event which could lead to a mass exodus.

A significant portion of these credibility problems may be overcome if those providing the early warnings convey more sophisticated messages. The messages should include the range of possible influxes, some discussion of the odds of their occurring, and an explanation of the underlying assumptions determining the possible scenarios.

3. Making Incorrect Generalizations From Previous Influxes

A pattern of yearly influxes into the Sudan, primarily from Eritrea, had apparently developed a false confidence in the ability of the existing systems to absorb such flows with little preparation. Ironically a major problem was not that officials were unaware of the likelihood of an influx--they were, but for the wrong type. The reality was that rather than the expected 25-50,000 persons, 300,000 came. Further, instead of the majority of the new refugees spontaneously settling, as had been the norm in most earlier influxes, the great majority had to be accommodated in official relief camps. This all occurred in a host country which itself was beset by a major famine, entailing a major relief operation of its own.

4. The Need to Clearly State an Early Warning

A number of staff in the field from a range of institutions indicated that they had conveyed early warnings of the influx to their headquarters which were subsequently ignored. While this was often true, a review of several of the documents in question indicates that one possible reason why such warnings were not responded to is that they were not very clear in the first place. Often such information was buried in the midst of other data, and was not accompanied by recommendations of the kinds of action steps which would reinforce a sense of importance and urgency. The lack of a conceptual, or coding system for identifying levels of potential crises and their probability meant that valuable data was sometimes edited out as information was passed up the line. International organizations also face the related problem that narrative information can be interpreted quite differently by those from different cultures, many of whom are communicating in a second language.

5. The Special Problems of Flows from Liberation Front Controlled Areas

The overwhelming majority of Tigrayan refugees came from areas outside of the control of the central government. Certain liberation fronts world-wide have gained United Nations recognition (e.g. SWAPO) or have powerful international patrons (e.g. the Afghan resistance groups). However, the lack of such standing for the TPLF was a major obstacle to gaining an effective hearing for their early warnings, and in obtaining the level of cross-border food aid that might have prevented the flow from occurring at all. Their efforts at drawing international atten-

tion to the worsening conditions in Tigray were generally stymied by the inability of UN agencies to deal with them directly through official channels, the ambivalence of some in the U.S. government about dealing with a Marxist group, the reluctance of many private (and government) groups to jeopardize humanitarian assistance efforts directed through the Ethiopian government, and the sensitivity of the Sudanese government about its relations with the Ethiopian government.

While skepticism about the credibility of information from any political entity is probably warranted, hindsight shows that such liberation front information was essential to recognizing the severity of the problems in Tigray, and the imminent influx of refugees into eastern Sudan. A number of persons interviewed felt that the problem of information exchange was probably even worse for the EPLF than for the TPLF, especially with the UN agencies.

C. Early Warning and Emergency Relief

By April, 1985, the refugee relief operation in eastern Sudan was functioning relatively well. However, it experienced severe problems in the preceding months. The capacity of the assistance system to adequately assist both the new arrivals and the pre-existing refugee population was totally overwhelmed. An estimated 10,000-15,000 refugees died in the eastern Sudan refugee camps in the period of October, 1984 - April, 1985.

Part of reason for these high death rates lies in the poor health of many of the arriving refugees. Most had suffered years of chronic and increasing malnutrition, and had just completed an arduous 4-5 week trek to the Sudan. Within this context, perhaps 80% of the refugee deaths can be ascribed to the effects of three factors:

Measles - As early as 1983, REST had warned that measles was being reported in TPLF controlled areas of Tigray. Failures in medical planning and coordination in the relief effort meant that effective immunization programs were not undertaken in the camps in the early months. Many of those who died of measles were incubating the disease prior to arrival. However, it is estimated that an effective immunization program would have saved one third to one half of those who died.

Inadequate Water - The sites where the Tigrayan refugees arrived were not selected by UNHCR or COR. Rather, they were the locations where the refugees happened to come across the border. The tens of thousands of new arrivals soon exhausted the existing water supplies. Additional time was required to identify alternative sites and to gain Sudanese government acceptance for them. These delays, together with major problems with the water sector programs, meant that most refugees received inadequate water for several months.

Inadequate Food - The major drought in the Sudan meant that food had to be brought in for the existing refugee population as well as for the new arrivals. Initial food delivery to the new arrivals was plagued by logistics and management problems. By the end of December, UNHCR and WFP were running out of food, a situation that was not brought under control until February.

A good deal of energy has gone into seeking to assign blame for the problems encountered. In fact, the refugee relief effort was certainly no worse than average for UNHCR, and probably better than average. In this situation, however, a much better than average effort was needed to overcome the immense number of obstacles which faced the relief effort. These included:

Three simultaneous refugee crises - In addition to the influx of Eritreans and Tigrayans in the east, the UNHCR Branch Office was also dealing with an influx of Chadians in the West, which required a major relief operation of its own. It was also attempting to maintain aid to the refugees from Uganda in southern Sudan, an area now being affected by a resurgent civil war.

Drought in the host country - The major drought in the Sudan meant that many previously spontaneously settled refugees moved into the settlements, and into Wad Sherife, in order to obtain relief aid. The massive famine relief operation mounted within Sudan itself also came into competition with the refugee relief operation on several occasions due to the limited resources available within the country. Local purchase of food within Sudan to cover needs until new shipments would arrive from overseas was limited by the drought as well.

Great logistics difficulties - The aged and limited logistical infrastructure of Sudan (in comparison with that of Thailand for example) created major obstacles in receiving and distributing aid coming from outside of the country.

Two simultaneous influxes into eastern Sudan - Eastern Sudan received not one, but two massive influxes at the same time. While the Tigrayan influx could and should have been predicted, the Eritrean influx was much more difficult to predict in terms of timing and numbers.

The refugee relief crisis in eastern Sudan exposed a number of systemic weaknesses within the assistance system, especially within UNHCR. Many of these weaknesses relate to responding more quickly and effectively once the decision to launch a relief effort has been made. They thus lie outside of the scope of the present study of early warning. However, several key improvements can be identified which relate directly to improved early warning. These deal mainly with improved contingency planning and shortening the time required to reach the decision to undertake a major relief effort. They also include identifying the key steps that need to be taken early in a relief program to "stay ahead of the curve" of a potentially accelerating influx. It may be useful to review these points within the context of a wider discussion of the relationship of early warning, to improved relief efforts.

Defining Early Warning in the Context of Emergency Relief

Two important questions to consider in thinking about the role of early warning in terms of emergency relief are:

What is being warned of?

When should the warnings take place?

A recurring statement often heard regarding this case, and most others as well, is that "It should have been obvious to anyone that an influx was going to occur." While this is generally true, the statement is too simple. The reality in most instances, and certainly in this one, is that those in positions of authority in the field are aware of the possibility of an influx. The problem is, an influx of what level? Predicting actual numbers is much more complicated than simply predicting that "some refugees" will appear.

For potential refugee relief efforts, it is also critical to know whether the various influx scenarios can be handled within the capacities at hand in the host country, or will require extraordinary efforts. Most influxes are of low or moderate levels. In most such cases, there are enough resources close at hand, or available with some additional effort in the host country, to adequately assist the newly arriving refugees. Once this capacity is exceeded, the nature and scale of the effort required to help additional refugees changes greatly. If the capacity is 50,000 new arrivals, an influx of 150,000 does not require simply expanding the existing system. It requires hiring new staff, creating new sites, bringing in food and relief supplies from international locations, etc.. In addition to greater expense and the creation of new systems, there are generally markedly longer lead times required. Thus, while early warnings should be given for the full range of possible influx scenarios, there is a special importance in providing warnings of a "mass influx emergency." This is the arrival of major numbers of refugees (a quantity which of course may differ from one situation to another) which overwhelms the capacity of the local system to adequately assist them.

In summary, for an early warning analysis to be useful in terms of improved emergency relief, it must include:

- o predictions about the scale of possible influxes, and their probability, and;
- o a calculation of the resources at hand in the receiving country which exist to deal with an influx.

The answer to the second question, "When should early warning occur?" is that it should first take place when an influx is possible. It should also take place when estimates of a mass influx emergency shift between the following categories:

- o possible
- o probable
- o beginning
- o accelerating beyond original estimates

These categories reflect the fact that refugee influxes are rarely sudden, unitary events. Rather, as in this case, they may begin with a small number of arrivals from whom key information can be gleaned about the possible rate of future arrivals. The first two categories are fairly straightforward. The third reflects the need for those in the assistance system to receive verification that a predicted crisis has already begun. This is needed in order to commit adequate resources to deal with the emergency if they have not already done so. The last category reflects the fact that many inadequacies in past relief operations were the result of an inability to "shift gears" quickly when the influx rate accelerated rapidly in the middle of an already major flow. While an influx of 50,000 persons is already large, dealing with an influx of 500,000 requires another whole type and scale of response.

In the Tigrayan case, there was an awareness as early as 1983 within UNHCR and many other of the key players of the possibility of a potential influx. UNHCR/Sudan itself began 1984 looking at three potential emergencies in the eastern region within the coming year:

- o the need for relief aid to the older settlements if the drought in the Sudan proceeded as expected;
- o the possibility of an influx of up to 50,000 persons; and
- o the possibility of a more massive influx.

During the first half of the year, two additional reception centers were planned and created to assist new arrivals. In addition, there was a clear understanding of the need to support efforts to increase the cross-border movement of food into Ethiopia. As the year progressed, and as the numbers of new arrivals increased, there appears to have been an awareness that an influx of perhaps 50,000 persons had now shifted from possible to probable. Indeed, members of the UNHCR Emergency Unit from Geneva came to Sudan in September 1984, in part to assess the potential emergency in the eastern region. Even at this time, the problems with the existing system were obvious (e.g., poor medical planning and coordination, problems with obtaining and distributing

adequate food, etc.). By September, the two new reception centers had already reached capacity, and the Emergency Unit members called for two more immediately.

These are examples of positive response and recognition of the need to mount an emergency relief operation in eastern Sudan. However, there were two key weaknesses reflected in these efforts.

The first was the repeated lack of recognition that an influx of hundreds of thousands, and not just tens of thousands, was a very real possibility. All of the key players (e.g., UNHCR, COR, the voluntary agencies, the U.S. government refugee staff in the Sudan) appear to have failed to recognize that the affected population in Tigray was in the millions, not the hundreds of thousands. This in turn led to a failure to foresee and plan for the possibility of a Mass Influx Emergency.

The second weakness was in the lack of a contingency plan to deal with such a Mass Influx Emergency. Many in the assistance system, and especially in UNHCR, under-estimate the value of contingency planning, and over-estimate the political risks involved in doing it. Contingency planning requires an understanding of the quantity and types of resources required to handle different levels of possible influxes. In the process of doing this, information is collected about such things as possible sites, food availability, and probable logistics bottlenecks, as well as potential staffing needs. A key product of this exercise is the framework of a flexible plan, around which an actual relief program can be built as necessary.

The contingency plans that were drawn up by UNHCR in October, 1984, were for the 50,000 persons scenario. They were described by staff as being more a list of questions than a flexible plan for action. Subsequently efforts were made to develop a program plan for the relief operation once it got under way. However, this process soon bogged down amidst the desire of various sections of UNHCR to become involved. Ironically, the plan therefore did not appear in final form until May, 1985--at the point at which the influx emergency was basically already over.

The lack of such prior planning and information collection seriously hampered the actual refugee relief operation once it began in a tremendous variety of ways. For example, inexperienced staff found themselves overwhelmed by the scale and rate of the new arrivals, and many decisions were made "on the run." The existence of a reasonably detailed and well-thought out contingency plan would have been an invaluable aid as a starting point from which further refinements and changes could be made as needed. (It should also be noted that a review of the level and type of response that was eventually required to deal with this crisis should be detailed. This then needs to be translated into some benchmarks which staff in the field can use in calculating

the response required for different scenarios, and in arguing persuasively for such resources if they are required.)

In addition to providing a basis for a better organized and more efficient relief effort, a contingency plan would also have likely led to a quicker response.

By late October, 1984, one could verify that the moderate-large influx of 50,000 persons was actually occurring. Almost simultaneously, the early warnings of a "probable" Mass Influx Emergency could be heard. This was the point at which REST predictions changed from estimates of tens of thousands of new refugees arriving in the months to come to hundreds of thousands.

By early November, the continuing influx of Eritreans, plus the arriving Tigrayans were already overwhelming the capacity at hand to deal with them. Thus, it was necessary to mount a large-scale relief operation in eastern Sudan in order to deal with the Mass Influx Emergency which was already beginning. This was recognized by UNHCR/Sudan, which now called for such an operation. However, it was not until mid-December before the general recognition of the crisis penetrated through to the requisite levels in Geneva, and the required decisions were made.

Many reasons are advanced to explain this delay, including political, bureaucratic, and psychological ones. However, it is clear that for UNHCR, WFP, and to some extent the U.S. government as well, it was necessary to have new, high-ranking officials from headquarters travel to the Sudan to assess the situation first-hand before full recognition of the crisis, and a corresponding level of response, actually began. Some have claimed that this relief response, and UNHCR's in particular, would not have occurred even at this point had it not been for pressure from the media and from major donor countries. Whether this is true or not, 5-6 weeks to recognize an assistance crisis is not exemplary.

A significant part of the delay has been attributed to difficulties in communicating the realities in the field to decision-makers in headquarters. This difficulty was in part due to the time and energy required for the receivers to re-orient their mindset about the Sudan situation. The development of a contingency plan for a Mass Influx Emergency would have sensitized these headquarters level decision-makers to this possibility. They would thus have been better able to recognize what they were being warned of, and been more aware of the level and complexity of response required of them. An effective early warning at the "probable" and "possible" stages might have usefully sensitized top decision-makers to the possibility of the coming crisis before the point at which the major influx began. Information about the influx could then have been correctly interpreted as final verification that the crisis was at hand, allowing for a quicker consensus on the need to mount a major relief operation.

A key aspect of a contingency plan for a Mass Influx Emergency into eastern Sudan would have been to identify the lead times required to obtain key inputs. A crucial example would be food rations. Obtaining food from via the World Food Program from outside of the the country requires a minimum of 2-3 months under the best of circumstances. By January, 1985, the refugee relief operation was running out of food. To have met this need via international procurement would have meant making a decision by late October at the latest. Given this reality, once a Mass Influx Emergency became even "possible," planning for alternative options was required.

There is still some controversy over how viable the most obvious option, a local purchase of grain, was in practice. However, clearly there was a need for other options as well. What this points out is the lack of information for decision-makers about what kinds of "reversible", or at least "partially reversible" options exist for dealing with needs that have such crucial lead times. The concept of a "reversible" option is a choice that once made, can be altered in the future at minimal cost to the organization. Thus, ordering additional food aid for the eastern region would not have committed UNHCR and WFP to writing off the cost of this food if the Mass Influx Emergency did not materialize. The food could have been stored, and used for supplying the needs of the older settlements. Even this storage cost might have been avoided if it had been resold to the famine relief effort under way inside the Sudan.

Considerable work needs to be done to identify these "reversible options" in more detail, especially in terms of their actual costs. To commit resources and monies in advance of the actual arrival of refugees means sticking one's neck out. These options would not eliminate the risk, but would keep one's neck from sticking out quite so far. In doing so, it could help increase the timeliness and effectiveness of relief. Within UNHCR, the obvious choice for undertaking such studies would be the Emergency Unit.

More effective early warning thus has a role to play in generating a quicker, better organized, and efficient relief operation.

D. Alleviating the Causes of the Influx

One possible role for early warning of mass refugee movements is in promoting actions to alleviate the conditions which may cause the flight. In the present case, a number of different actions were possible. These nature of these actions depended on whether one saw the famine problem primarily in terms of one or more of the following factors:

- o a lack of food;
- o the destructive effects of a civil war; or
- o environmental degradation.

Addressing the last two factors is certainly crucial to assuring that such famines do not re-occur in the future during the inevitable periods of drought. However, it is very hard to find anyone who expresses much optimism about the possibility of negotiating an end to the wars between the Ethiopian government and the variety of liberation fronts opposing it. Whether one side or another will emerge victorious in the near future also seems unlikely. At best, one might hope for some moderating of the excesses of the competing forces.

Efforts to deal with environmental degradation as a cause of the famine have become extremely controversial. There is general agreement by both the TPLF and the Ethiopian government that resettlement of people out of the crowded highland regions would help to alleviate environmental degradation. However, there is serious doubt as to whether the government's current program to do this is alleviating the suffering of the affected populations or increasing it.

The government is presently in the early stages of a massive resettlement program to move people from the northern regions to less populated sections in the southwest of the country. This is especially focused those living in Tigray and Wollo, and to some extent, Eritrea. Opponents of the program (most notably Medecins sans Frontieres and Cultural Survival, who have issued special reports on the program) contend that it is driven by political rather than humanitarian motives. They argue that the main objective of the program is to drain away the population base from which resistance groups draw support. The resettlement program has received increasing international criticism for allegedly splitting up families, and for causing the death of many of those resettled, mainly through forcibly moving weakened persons into sites with inadequate food and site preparation. It is also alleged that the program has used famine relief centers as a lure to bring people into locations from which they might be captured and forcibly resettled.

There were three potential options in terms of moving food aid into the most severely affected areas to reach the people who eventually became refugees: 1) to provide additional food

through distribution centers in government controlled areas, 2) to negotiate a safe passage agreement to bring food into the TPLF, and contested areas via government controlled areas, or 3) to step up the cross-border operation from the Sudan.

Each of these options had its serious limitations. The first would have faced the same problems as did other efforts to provide food aid in government controlled areas. These included the initial lack of international appreciation and interest in the problem (especially by the U.S. government), tremendous logistical difficulties once mass food shipments began to arrive in Ethiopia, and concerns by donors about the possible diversion of food aid by the government. Perhaps a greater obstacle was the unwillingness of many residents of TPLF controlled areas to go to centers in government controlled areas. Reports of discrimination against those coming from TPLF controlled areas, and of forcible resettlement, apparently deterred many from coming. Ensuring that such actions did not occur in the field, and convincing the rural peasantry in TPLF controlled areas of this, would have been possible if the will to do so existed in the government. This significant improvement in food distribution would still have not been a viable option for those unable to make the arduous trek from the more remote TPLF controlled areas.

The second option, a safe passage agreement, would have required successful negotiations between the TPLF and the government about a limited cease-fire. This would have allowed relief trucks to transit both the government and the TPLF areas safely, and to subsequently distribute this relief food within areas controlled by both sides. The distribution could have been handled primarily by third parties, such as the International Committee of the Red Cross, with government and liberation front assistance in their respective areas.

This idea was first proposed formally by the TPLF in June, 1983 (with a similar version later proposed by the EPLF for Eritrea as well). For the TPLF, this proposal carried risks, such as the opportunity it would give the government to gather intelligence in areas normally not accessible to it. However, for the government it would have meant publicly admitting that it did not control major portions of Tigray. It would also have meant acknowledging that those who did control these areas were not simply "bandits", but in fact formal entities whom international organizations would now be treating as co-equals to the government. In order to convince the central government to change its position would have required a major joint effort by some combination of the United Nations agencies, foreign governments (especially those less adversarial to the central government than the U.S.), international NGO's, and the media. It was unlikely that such a coalition of interests could have been put together. Further, lacking some major change of heart by the Dergue, it is not clear that even such a coalition would have had the desired effect.

The third choice, that of increasing the cross-border operation, was probably the option with the greatest viability. In part this was because there were fewer political obstacles. The Sudanese government had expressed a strong interest in doing what it could to limit the number of refugee arrivals, and saw putting more food into Tigray as a way to do this. This support, however, required that such an increase would be handled in a discreet fashion, rather than with the kind of media circus that often accompanies big relief efforts. The Sudanese have generally followed a line of quiet support for the liberation fronts, allowing them to operate with a relatively low profile, but periodically forcing them to lower these profiles during times when relations with the Ethiopian government have improved.

The other advantage of this cross-border option was that it could have been funded and supplied through the support of a few entities alone, rather than requiring a major consortium of interests. The U.S. government, as the major patron of the Sudanese government in 1984, clearly had the potential resources to carry out the bulk of this role by itself.

One major constraint to this approach may have been the capacity of REST to handle the logistics involved. This would have required such inputs as additional trucks, fuel, spare parts, and maintenance as well as road improvements within Tigray. Clearly this would have been problematic. However, obstacles of this magnitude have been overcome in similar situations (e.g. the refugee relief operation in Somalia in the early 1980s).

Perhaps a greater obstacle was fear of possible repercussions from the Ethiopian government. Many of the U.N. agencies, international voluntary agencies, and donors with a potential interest in a cross-border operation felt the need to balance this against the possible loss of their operations within Ethiopia. Many of them concluded that it did not make sense to jeopardize these operations, given the staggering scale of the needs within government controlled areas of Ethiopia, and the inability of the relief operation to meet even these needs, much less additional ones.

A number of European voluntary agencies (notably Protestant church groups) did become involved with the cross-border efforts. However, the major U.S. voluntary agencies, including those who had major programs in Ethiopia such as CARE, Catholic Relief Services, World Vision, and Save the Children (U.S.), did not. The U.S. government did eventually significantly increase its low-profile cross-border assistance. This included funding both for the purchase of grain within Tigray (in early 1985) as well as for logistical support. However, these U.S. government efforts took valuable time to come into being. They were also quite limited in comparison to such efforts made via the Ethiopian government, where the U.S. was the major source of famine assistance. U.S. officials indicate that one reason for these limitations was concern about the capacity of the liberation

fronts to be able to handle even this level of aid efficiently. However, there was also the limitation that the U.S. aid not become so large as to be conspicuously visible to outside observers. This was thought necessary in order to avoid triggering any retaliatory action by the Ethiopian government. There was also concern that higher visibility might make the cross-border program a target of those in the right wing of the Reagan administration and in Congress who might view this as "aid to Marxist liberation fronts."

It appears in retrospect that the Tigrayan refugee influx did play a major role in promoting these limited increases in support to the cross-border operation. For example, the visits of Senator Edward Kennedy and of Vice President Bush were not to locations inside liberation front controlled areas of Tigray, but rather to the refugee camps in eastern Sudan. Certainly media access was much greater to these camps than to most of the affected areas of Tigray. Ironically, had the refugee relief effort been more successful, perhaps the story of the problems within liberation front controlled areas of Tigray and Eritrea would not have received even this limited attention.

A credible and effective early warning of the refugee influx might have increased the political pressure on the U.S. government, and possibly other western governments and private agencies, to be more energetic about support for the cross-border operation. However, this optimism must be tempered by the observed lessening of attention now being given to the Tigray situation, as some refugees have returned and no new major influx has occurred. The situation inside Tigray continues to be one of widespread suffering. Further, the margin which exists to cope with new crop failures is probably even less now than in 1984-85.

Refugees are generally an important information source about problems within the sending country. By creating an international incident by their presence, they often draw international attention which can then be transferred back to events in the sending country. However, their arrival in massive numbers, especially in famine cases, is an indication that the crisis has already occurred in the sending country, not an early warning of it. It is therefore important that early warning information and analysis be used to draw attention to these problems earlier. One can hope that this will occur in the future, especially in the famines which are likely to reoccur in Ethiopia in the coming years.

EARLY WARNING CASE STUDY:
THE 1985-86 INFLUX INTO
NORTHWEST SOMALIA
(WORKING PAPER # 1)

Lance Clark

June 1988

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INTRODUCTION TO THE 1988 PUBLICATION

This report is based primarily on information collected during twelve working days in Somalia over a three-week period from April 2-23, 1986. One week was spent in the northwest, including three days in Tug Wajale "B", the holding center for the new arrivals. The second week was spent primarily in Mogadishu, the capital of Somalia. The information base includes personal interviews with refugees and Government of Somalia sources [e.g., the National Refugee Commission (NRC), the Refugee Health Unit (RHU), and the National Security Service (NSS)], United Nations High Commissioner for Refugees (UNHCR) and other United Nations staff, staff of the embassies of several western donor countries, and staff from those non-governmental organizations (NGOs) who have been active regarding this influx.

The objectives of this study were to:

1. Record the history of the current influx of refugees from Ethiopia into northwest Somalia;
2. Explore the reasons for the flight of these refugees;
3. Identify the factors which may affect the future rate of exodus of these refugees; and
4. Identify obstacles to alleviating the problems which are causing the flow.

The information contained in the original May, 1986 report forms the body of this paper. It has been basically left unchanged, although it has been modestly edited in 1988 to make the information easier to digest. Following a brief summary of the influx, the text is broken into four sections corresponding to the objectives listed above.

Two appendices have been added as of June, 1988. Appendix One summarizes several types of information relevant to this case study which have come to light since May, 1986. This includes a listing of key events affecting the refugees at Tug Wajale, a summary of some of the points made in the Cultural Survival study of the refugees in Tug Wajale (which was undertaken shortly after the present study), and some bits of information concerning the situation in 1988 in some of the areas of the Hararghe region where these refugees had come from. Appendix Two comments briefly on methodological questions regarding interviewing refugees.

This study is part of an ongoing Refugee Policy Group program of research on early warning of refugee flows. The original study was funded by the Independent Commission on International Humanitarian Issues. It represented one of our first efforts at gathering early warning data in the field in the midst of a flow. Gathering such data, evaluating it, and making predictions based on the incomplete, blurry, and even contradictory data available in such situations is difficult. However, it is more important that we improve our capacity to work effectively in such situations than that we develop sharper "20-20 hindsight."

SUMMARY OF THE INFLUX

Beginning in December of 1985 and continuing through the time of my site visit (mid-April, 1986) Somalia has been receiving a major influx of new refugees into the northwest section of the country. This influx is distinct from previous ones into Somalia both in its composition and in the reasons why the refugees are coming. These new refugees are primarily Muslim Oromos from farming backgrounds. Most are from the highland areas around Harar in the Hararghe province of Ethiopia (i.e., the awarjas of Gursum, Harar and Jijiga). Most state that they are fleeing the implementation of government policies of villagization and forced collectivization of land and other assets. They also report problems of religious persecution and forced conscription on top of a history of heavy taxation and of government retribution against certain villages for activities of the Oromo Liberation Front in their area. Sexual abuse of women is widely and vehemently reported as well.

Predictions about the future influx rate are complicated by difficulties in interpreting events to date. The actual registration figure for Tug Wajale "B", the holding centre for the new refugees, is generally conceded to be inflated by the registration of some undetermined numbers of Somali nationals and refugees from other camps in Somalia. Further, it is not clear whether the areas where most of the refugees have come from are subject to especially heavy-handed government treatment, or whether the fact that the refugees tend to come from a somewhat limited area more reflects the inability of those from other areas to overcome obstacles to flight. Lastly, if the villagization program is in fact being slowed down during the current key agricultural period in the Hararghe highlands one might expect some diminishing of the flow rates into Somalia.

There is some danger that the flow may become smaller not through solving the problems which are driving such flight, but rather because people will be deterred by increased obstacles to flight or because the government of Somalia lessens its hospitality to new refugees. This leads to concern that the story of the refugees be heard as soon and as widely as possible. Clarification is needed about what is happening within Ethiopia. This should come both through more intensive interviewing of the new refugees as well as through seeking out more information within Ethiopia. Those studying the situation inside Ethiopia should be careful to also assess the limitations which may exist on their ability to collect solid data and also actively seek to relay their information to those working with refugees in Somalia (and vice versa).

I. REVIEW OF THE INFLUX TO DATE (MAY, 1986)

A. Relationship to the 1984-85 Influx

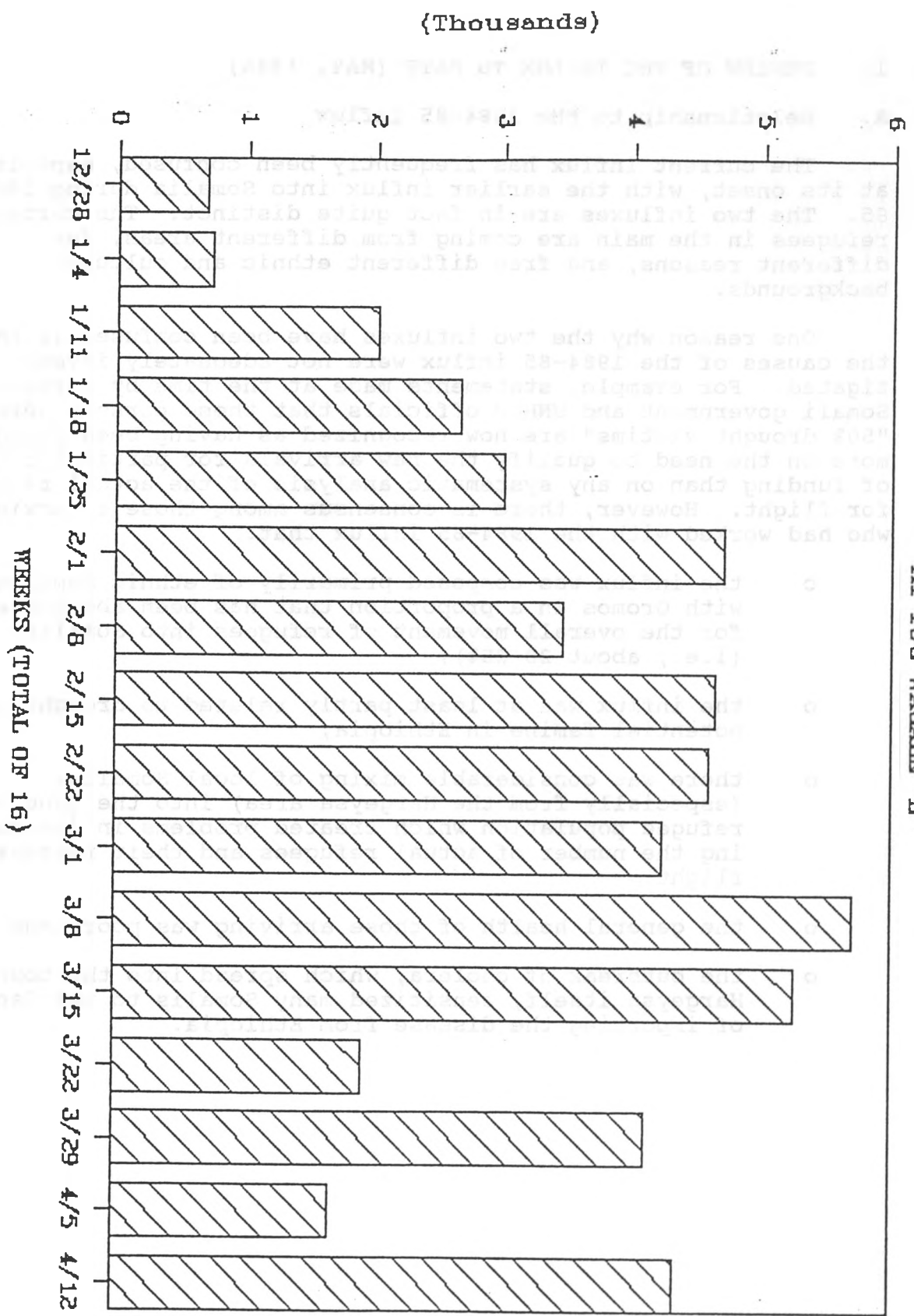
The current influx has frequently been confused, especially at its onset, with the earlier influx into Somalia during 1984-85. The two influxes are in fact quite distinct. The current refugees in the main are coming from different areas, for different reasons, and from different ethnic and cultural backgrounds.

One reason why the two influxes have been confused is that the causes of the 1984-85 influx were not adequately investigated. For example, statements made at the time by certain Somali government and UNHCR officials that these persons were "50% drought victims" are now recognized as having been based more on the need to qualify the new arrivals for particular types of funding than on any systematic analysis of the actual reasons for flight. However, there is consensus among those interviewed who had worked with the 1984-85 influx that:

- o the influx was composed primarily of ethnic Somalis, with Oromos in a proportion that has been about average for the overall movement of refugees into Somalia (i.e., about 20-25%);
- o the influx was at least partly related to drought and potential famine in Ethiopia;
- o there was considerable mixing of local Somalis, (especially from the Hargeysa area) into the genuine refugee population which created problems in determining the number of actual refugees and their reasons for flight;
- o the general health of those arriving was poor; and
- o the outbreak of cholera, which spread into the town of Hargeysa itself, sensitized many Somalis to the dangers of importing the disease from Ethiopia.

WEEKLY REGISTRATION

AT TUG WAGALE "B"



B. The Current Influx: The Timing and Pattern of Arrivals

From mid-1985 through early November 1985, a somewhat regular, low-level influx continued into northwestern Somalia via the reception center which had been kept open at Tug Wajale. Although figures for this period are difficult to ascertain, an average of 200 new arrivals per week seems reasonable. Most were ethnically Somalis.

In late November 1985, a voluntary agency official who happened to be at the Tug Wajale reception center that day noted the arrival of about 150 refugees. These refugees were unusual because they had arrived in a large group, complete with some pack animals. Even more unusual was the fact that they were all Oromos, and none of them spoke good Somali. Further, their reasons for leaving were different from those of earlier arrivals. They stated that they had fled because of the new Ethiopian government policy of villagization. Unfortunately, this voluntary agency official did not give a great deal of thought at the time to the possibility of a new influx. This was in part, he now states, because he had heard no information (especially from his counterparts in Ethiopia) which would have alerted him to be on the lookout for the beginning of a new influx.

By early December 1985, the numbers of new arrivals had become more noticeable. One source quotes a Somali military official at this time as predicting the arrival of 60,000 persons in the coming months. During January, the flow rate climbed steeply. By the end of January, the National Refugee Commission (NRC) was registering new arrivals at the rate of approximately 4,500 persons per month. This was also the median for most of February and March.

From mid-March to mid-April the numbers of new refugees in Tug Wajale registered by the NRC appear to have declined. While the four weeks from February 22 - March 15 averaged 4,961 persons a week, the last four weeks of March 22 - April 12 averaged only 3,021 per week. This was approximately 60% of the preceding four week period.

This decline in registration figures was reversed by the registration of over 6,800 persons by the NRC in the week ending April 20. As the NRC had suspended registration for several days at a time on a number of occasions in the preceding weeks, some of these 6,800 were not actually new arrivals. However, even subtracting the maximum number of persons carried as backlog from the previous period (estimated by UNHCR staff in Tug Wajale "B" to be no more than 1,500 persons at that time), one is still left with a weekly total of over 5,000 persons for the most recent week.

o Limitations of the NRC Data

One needs to be careful about doing too sophisticated an analysis of the NRC data of the last 8 weeks or so as they are subject to a number of serious problems. For example, there are major differences between the NRC figures and those provided by the National Security Service (NSS) control point located on the border, about 7 kilometers from the Tug Wajale camp. All new refugees are supposed to pass through this point first, and to obtain a paper from the NSS, before proceeding to the camp. This is supposed to be true regardless of where they first crossed the border. This represents a major shift in government policy from that during the 1984-85 influx, when refugees could proceed on their own directly into the major northern city of Hargeysa.

The NRC figures are significantly higher than those of the NSS. One reason may be that some refugees are apparently coming directly to Tug Wajale "B", thus bypassing the NSS control point. The NRC says that it refuses to register such people, insisting that the NSS staff from the Tug Wajale control point must clear them first. However, it is generally felt that the higher NRC figure is mostly due to the addition of refugees from other camps in Somalia, and of Somali nationals, to the NRC registration lists. The NRC states that it is aware of this problem, and cites this as one reason (lack of staff being the other) that it has frequently shut down registration for several days at a time in the last weeks in order to sort the real arrivals from the bogus ones. Such stoppages account for the peaks and valleys in registration figures for March 17 - April 12 as indicated on the previous table.

This problem of registering people who are not actual arrivals from Ethiopia apparently became substantial during February, March and April. One possible explanation for the decline in registration numbers over the past nine weeks is that the decline represented a combination of a) an actual decline in new arrivals and b) a decline in the number of bogus refugees registering. The proportion of bogus refugees might have been somewhat lessened if they were deterred by the prospect of waiting in the camp for some indefinite period awaiting registration. In comparison, the new arrivals, who are not thought to be spontaneously settling in any significant numbers, generally lack any other option but to wait in the camp. However, with the re-opening of registration in the week of April 12, and with increased staff to do it, it is possible that bogus refugees may have heard the news and come in substantial numbers.

Given these uncertainties, it is especially important that a comparison be made of the NSS and NRC registration figures over the same time periods to see whether they reflect the same trends. The full NSS figures were not yet available to me at the

time of writing this report, but have been requested from Hargeysa.

C. The Composition of the Influx Population

On March 6-7, 1986, the new medical team from MSF/France conducted a survey of the Tug Wajale camp population. The survey was undertaken through a random sample of the different "vint-ages" of the camp, as each section had come into being at a different point in time. The survey found that men and women were represented equally in the camp (49% versus 51%), and that the population aged 0-15 years was about 55%. While this latter figure is a bit high for a normal village population, it is not greatly so given the limitations of the statistical reliability of the survey.

The picture which this data presents is consistent with that obtained by persons who have interviewed the newly arriving refugees. Such interviewers state that most refugees report arriving in relatively complete families, and in many cases, in groups containing many families from the same village.

All the officials and refugees whom I interviewed agreed that the majority of these new refugees are Muslim Oromos from the highlands of Hararghe province (i.e., from the awarjas of Harar, Gursum, and Jijiga). Most are from a sedentary farming background. However, the actual ethnic composition of the camp itself may become more difficult to determine accurately as time passes. It is possible that some Oromos who speak reasonable Somali will find it more advantageous to pass as Somalis. A further compounding factor may be the addition of a considerable number of Somali refugees from other camps and Somali nationals as well to the registered population. Interviews conducted in the camp may not fully reflect the percentage of such persons on registration lists as some of these Somalis might not remain in the camp on a regular basis, but instead would be present primarily during ration distribution days.

II. REASONS FOR LEAVING ETHIOPIA

A. Information Base

There has not been any systematic collection of information about these peoples' reasons for leaving (although a more systematic study is currently being conducted by Jason Clay of Cultural Survival). However, a significant amount of ad hoc interviewing of this refugee population has taken place by a variety of persons. These include NSS and NRC officials, various UNHCR officials (especially the two Protection Officers who are normally based in Mogadishu) and various NGOs and other international aid officials.

I was also able to complete a sample of 10 interviews of approximately 45 minutes to an hour each with camp residents selected at random in 6 of the 30 sections, and four other non-random interviews. (See Appendix One for a fuller discussion of methodological issues.) While this small number of interviews does not allow for a statistical analysis of the results, the refugees did show a consensus on certain key facts. These refugees reported a variety of factors as leading to their flight. The specific ones that they described as most important varied somewhat depending on the experience of their different villages. Most reported more than one factor as being involved in their particular case. For many refugees, the various government actions were described as simply different aspects of a general policy regarding how they are to be treated.

It may be useful to quote briefly from some of those persons interviewed before reviewing the reasons for flight that appeared most consistently in both these interviews and in the information collected by other officials.

B. Refugee Statements

An older man:

"I was formerly the section leader in our village. I used to explain to the people the importance of praying 5 times a day, and gave other religious instruction. One day the government told me that I must tell the people that now we have socialism: wives will be held in common, we must put all of our milk, fruit, and other things together. We must work for the government first.

When I told these things to the people, they thought that it was my idea. One evening I was meeting with the elders. They asked if these ideas came from me. I said no, that they were from the government. They said

that was good, because if they were from me, they had planned to kill me. We then decided that we must all leave."

Woman of about 45 years of age:

"The government says that if it can push all of the people together, it can control them, so the people must all come together. It says that there is to be no religion, that your child does not belong to you and is not under your control. We had a good crop this year, so we have not left because of hunger, but because of freedom."

Woman of about 35 years of age:

"My husband is one of those who leads the prayers in the mosque. One day when another man was leading prayer, some military came. They threatened to kill anyone who prayed, anyone whose head touched the ground. The prayer leader began to pray, and they shot him. The troops said that anyone who touched his body would be killed also. They then took his body outside of town and threw it out for the hyenas to eat."

Man of about 40 year of age:

"Before we did not face a lot of problems with the government. There was villagization, but it took places in villages in other places. The problems began when all of our things were collectivized; all of our resources, and our women. There is to be no individual, and no religion. The government cadre began talking about this three months ago, but when they actually started to do it, we had to leave. The government has been attacking our religion -- they are making mosques into stores, and into toilets."

"Fighting between the Oromo Liberation Front (OLF) and the government causes many problems. Once the OLF put a rocket into a group of military and escaped. The government then came, and many villagers were killed."

"If you refuse an order of the government, you are accused of being an OLF supporter. Some people have had their ears, or their noses cut off. Others have been forced into their houses, and then burned to death when the troops set fire to their house."

Man of about 25:

"My father and my brother were both forced to go into the army. I think that they may have been killed in Eritrea, but I don't know for sure. I therefore had to look after their two families as well as my own. When I heard that I was going to be taken for the army, I decided that we had to leave."

C. Main Causes of Flight

In the information collected through these interviews, and that obtained by other officials, the main reasons which refugees give for their flight are the following:

1. Villagization

Villagization here means the forced relocation of villages to a new location by the government. This was generally described as involving the use of troops to surround the village before it was moved. People often described the loss of crops standing in the fields, and in some cases, of their homes. Refugees did not report receiving any benefits at the new site, and a number described the motives for the move as primarily being a way to control the people. Some describe this as a way of eliminating support for the OLF by making it difficult for any outside persons to enter a village without being noticed and reported.

2. Forced Collectivization

In most instances, the refugees reported that cadre came to their village, often backed by troops, to tell the people of this new policy. While it apparently always occurs in instances of villagization, it may also occur without villagization itself actually happening.

The policy is described as one in which all assets are to be held in common, under the control of the government. This includes crops, land, and animals, as well as personal possessions. I was interested to hear the same story told to me by Oromo refugees in Djibouti as by a group in Tug Wajale "B". It involved a nomadic man who didn't comprehend the orders of the soldiers, and tried to give camel's milk directly to his child, instead of putting it with the communal supply. He was shot and killed. Whatever the validity of this story, it was used by the refugees to describe that they feel is the typical harsh approach which the government is using to institute this policy.

For some of the refugees this category would also include actions by the government to force them to change the crops that

they grow and to grow new ones for the government. Khat was mentioned by some as a crop no longer to be grown by individuals, with vegetables to be substituted in its place.

Almost all of the refugees who described this policy of collectivization also included steps taken to break down the bonds within families. Thus, children were said not to belong to their parents any more, but to the common good, and some were forcibly taken away to be schooled in different ways. Women in particular were quite vehement about what was commonly translated as "sharing of wives". This primarily appeared to mean free access to women for sexual purposes by the Ethiopian militia (whom the refugees consistently described in my interviews as "Amharra").

3. Religious Persecution

This category includes the desecration of mosques and the prevention of people from engaging in prayer or other religious activities. This was reportedly done directly in some cases while in others it was done through demanding that people work for the government through the times when prayers would normally take place.

A number of refugees made an analogy between socialism (the word they used, apparently from having learned it from the government cadre) and religion -- "socialism is a new religion and there cannot be any others". The refugees appear to know little about any possible persecution of Christians.

4. Forced Conscription

Conscription into the army, while not apparently markedly increasing in recent months, has cut into the population of able-bodied males in a relentless fashion. It has thus been the "last straw" for a number of refugee families. Those persons whom I interviewed stated that they had very little information, if any, about what was happening regarding fighting in other parts of the country. Even when men from their village were reported to have been killed, they knew little about the location and circumstances of their death.

D. Additional Points Regarding Reasons for Flight

One can identify a pattern of root causes, more immediate causes and final triggering events for the exodus of most of these refugees. The fundamental root cause is the resistance of large numbers of Oromos (and some Somalis) to forcible inclusion into an empire which they view as dominated by the Amharra group.

More immediate is their resistance to the new social and political order prescribed by the present government leadership, the Dergue.

In this context, central government policies of excessive taxation and of forced conscription can be seen as long-standing problems which have accelerated in recent years. More immediate events include the Dergue's decision to implement systematic villagization and collectivization throughout wide sections of the eastern part of Ethiopia, especially Hararghe province. The event which triggered the exodus of most of these refugees apparently was the imminent or actual implementation of villagization and/or collectivization in their village, often carried out in a fashion that included aspects of religious persecution. There is a consensus among those who have spoken with the refugees that the onset of these policies in their area is recent, beginning in most places in the last six months and proceeding village by village over the past several months.

However, as noted earlier, the refugees generally speak of these various factors as simply different approaches within a general policy of attacking their identity and culture (although these terms are not their own words, but mine, lacking knowledge of Oromo). In this context, it is probably an oversimplification to describe the reason why refugees leave as just "villagization." Villagization is the most easily observable phenomena, as it produces deserted villages, but it is not yet clear if it is the precipitating factor in the majority of cases of flight. A focus on villagization may also direct discussions about Ethiopian government actions towards debate about the economic and social merits of "new villages" (a la Ujamaa in Tanzania). This may obscure the wider context of Ethiopian government policies and actions. While there is an historical context to these actions, their impact appears to represent, as one voluntary agency official in Somalia stated, a "sudden, forced and brutal transformation of the lives and culture of these people."

In comparison with previous influxes into Somalia, there seems to be less splitting of families. Many of the refugees I interviewed attributed this to a fear of government retribution against those who remained behind. It may also reflect the possibility that programs such as collectivization and villagization can seriously affect the full spectrum of persons in a village more so than conscription or taxation, whose effects may be more limited to particular segments of the village.

I was impressed at the unanimity of the opinion of those who have interviewed the new arrivals that they are genuine refugees fleeing conditions of persecution. These interviewers are hardly naive observers, as many have worked with the refugee program in Somalia for years. They have thus become almost reflexively cynical about the stories they have heard from those claiming to

III. POSSIBLE CHANGES IN THE FUTURE RATE OF INFLUX

A. Current Projections

The most widely quoted predictions about the future size of Tug Wajale "B" are those of the UNHCR Emergency Consultant, Mike Day-Thompson. Day-Thompson's estimates are based on a mathematical extrapolation of the most recent influx rates. He views three-four months as a safe planning time frame for procurement and logistics and six months as needed for most fund-raising efforts, based on his experience with past refugee emergencies. Using such extrapolations, he projected at the beginning of April that the camp might reach 108,500 by the end of June and 145,000 by the end of August.

These predictions are being used primarily in planning for the future emergency assistance needs of Tug Wajale "B". They therefore make no attempt to separate out the numbers of persons entering the registration lists who are not actually new arrivals from those who are. It would appear that the percentage of bogus new arrivals may even increase unless new measures are taken to more effectively screen them out. However, it seems doubtful that the level of over-registration will reach that of the Gannett "B" camp during the 1985 influx. When the Gannett "B" camp population was re-registered before moving it to a new site the official census figure dropped from 60,000 to 26,000.

There are some rumors of men leaving their families in the Tug Wajale camp and returning to fight with the guerilla movements. However, it appears that a much higher percentage of men are remaining in the camp than was true for previous influx populations. This is probably because they have little chance to participate in nomadic life, to work elsewhere in Somalia, or to join in military activities.

The following discussion is of changes in the influx rate of actual arrivals from Ethiopia (excluding bogus new arrivals). A small percentage of these new arrivals from inside Ethiopia may be coming primarily to sign up for food rations and other benefits. However, it is my conclusion (as discussed further under "Changes in Somali Government Policy" in this section) that this group will be rather small. The following analysis therefore pertains to the factors which may influence the future rate of influx of legitimate new refugees.

B. Obstacles to Flight

Refugees report a number of different obstacles to flight which may now be deterring some from leaving. The point in time when villagers try to leave their home village is described as particularly dangerous. This is especially true for those living in the "new villages" which are described as often being monitored by troops.

Dangers on the escape routes are also reported but apparently occur less consistently. Many persons described being fired on by Ethiopian government troops or encountering dead bodies en route. Others reported no such encounters or met with troops who robbed them but let them go on their way. The fact that almost all these refugees travelled primarily at night to avoid Ethiopian troops indicates that such dangers were of concern to them.

Another factor which may affect future influx numbers is the difficulty which any sizable group of persons faces in travelling in the highlands areas undetected by Ethiopian government officials or troops. The refugees report that it is much easier for large groups of people to travel undetected once they have reached the lower elevations where the Somali nomads live. Travel in the highlands off the roads is very arduous but the roads themselves have frequent check points where any large groups of people quickly arouse suspicion. The people in the current flow come mostly from highland areas which are a relatively short distance from the lowland areas. Those from more distant points in the highlands may thus be deterred from attempting to flee even if they wish to.

Previous influxes into Somalia have been composed primarily of ethnic Somalis, most of whom have a nomadic or partly nomadic background. Most therefore had either been to Somalia themselves at some earlier point or had a family member who had made the trip. In contrast to these Somalis, the Oromo farmers who have now come to Tug Wajale apparently had little familiarity with the routes and minimal experience in making long treks. Many reported relying on Somali nomads to act as guides or provide travel advice.

These Oromos also report having little advance information about conditions in refugee camps in Somalia. They do arrive expecting to be given asylum and reasonable levels of assistance (e.g., adequate rations to live on). A number chose not to go to Djibouti based primarily on their understanding that the 1983-84 repatriation program from Djibouti had not been fully voluntary. Therefore, they feared that they might face expulsion Djibouti or not be allowed to enter at all.

C. Factors which may affect influx rates

There are four factors which are most widely discussed in Somalia as having a potential effect on the rate of new arrivals:

- o rain;
- o famine;
- o Ethiopian government policies; and
- o Somali government policies.

1. Rain

As the present influx is not related to drought conditions there is little likelihood of the heavy rains which have now begun affecting the "push factors." However, there have been arguments that rain will act to either impede or facilitate flight. Some argue that the rains will make the trip more difficult as the rains generally occur in the late afternoon or early evening. The land will thus not dry out until daytime when travel is the most dangerous. Others argue that rain may provide water for those who wish to bring animals with them and who could not afford to pay for water en route during the dry season.

2. Famine

Widespread implementation of the villagization program in Hararghe province may create famine conditions or at least serious food shortages through disrupting the work of the farmers at key times. Hararghe is the only region of the country for which the Ethiopian government requested more food aid in 1986 than in 1985. However, the refugees consistently report good rains. The implication of this to some observers is that the Ethiopian government is asking the international community to, in effect, subsidize the villagization program through providing additional food aid to cushion its negative impacts.

The present refugees are emphatic that food shortages are not presently a problem. Many report caching food (usually underground) as insurance against the government taking away much of their crop. The existence of such buffer stocks, and the adequate rains to date, make it unlikely that famine will be a problem unless the government pushes on emphatically with villagization and forced collectivization through the key planting and harvesting seasons (see below).

3. Changes in Ethiopian Government Policies

Ethiopian government policies constitute the main "push factors" in this influx. However, in speculating about how any changes in these policies will affect future flows, one must first deal with the confusion about their relationship to the present influx.

The Ethiopian government began a major push towards villagization in the eastern regions of the country by mid-1985. It was making ambitious plans to relocate up to a million persons by the end of that year. While the government probably failed to reach such a high target figure, it does appear to have been able to villagize much of the highland areas of Hararghe by mid-1986. Thus, the refugees probably represent a decided minority of those affected by villagization. The two explanations that I heard most frequently to explain their seemingly small numbers were:

1. The refugees represent a minority of those who wish to flee - the others are kept from leaving because of the dangers posed by government troops and controls.
2. The refugees come from those areas which have suffered the most heavy-handed implementation of the new government programs, probably due to the fact that many of these areas are known to be Oromo Liberation Front strongholds. As the villagization program is based at least partly on political motives, it may be most harshly implemented in areas where the government feels its control is most threatened.

I was not able to sort out which of these two explanations, or what balance between them, is most accurate. To help resolve this issue it would be useful to monitor whether new arrivals continue to come in the kind of intact family, or even partial village groups, that are so often seen at present. A continuation of this pattern might be an indication that obstacles to flight are not as severe as if only scattered individuals were able to leave.

There does not appear to be a consistent, active Ethiopian government policy of trying to forcibly block people from crossing into northwest Somalia once they have reached the lower elevations. While it is doubtful that an effort to close the border could be completely successful, a consistent policy of shooting first and asking questions later, coupled with increasing the number of troops in place, could certainly deter many potential refugees from attempting flight.

Further refugees may be created if the government completes the process of villagization in those areas where it has been

incomplete. Villagization appears to occur on a village by village basis over some time. This pace is most likely due to the limits of the government's resources. Completing the process in the areas where refugees have already come from might thus produce more people who want to leave from among a population that seems to be able to work out a way to leave in some substantial numbers.

However, there were some rumors when I was in Somalia that the government had decided to slow down villagization in the Jijiga area. The supposed rationale was to avoid driving more persons into the arms of the Western Somali Liberation Front. There were also reports from international sources, including several in Kenya, that the government might slow down or stop implementation of villagization during the present rainy season and the harvest season. This would be consistent with the concerns of international donors and reportedly from within the government itself (i.e., within the Ministry of Agriculture, and to a lesser extent, the Relief and Rehabilitation Commission) of the possibility that famine conditions would be created through implementing villagization at key times during the agricultural cycle. If these reports of slow-downs in the pace of villagization are true, one might expect some diminishing of the influx rate during the next several months, until the new programs were begun again at full force (if they are).

It is still an open question as to how severe the government policies have been in Bale and Sidamo provinces, and whether future human rights violations in these areas would produce major flows into Somalia. Oromos from parts of these provinces have entered Somalia in the past as refugees. However, they came primarily during the late 1970's, so it is difficult to know much about possible patterns of flight and obstacles to flight from these areas. Whether any significant percentage of Christians from any of the three provinces (Hararghe, Bale, and Sidamo) see Muslim Somalia as a potential source of refuge is also an open question. Previous influxes have included Christian Oromos but in very small numbers. Most persons have made their religion as inconspicuous as possible while in the refugee camps.

4. Changes in Somali Government Policies

The Government of Somalia has long granted asylum and provided assistance to the great majority of refugees who have sought it. The exceptions to this policy are primarily those persons whose ethnic background gives rise to suspicions of spying or to xenophobia (e.g., Amharras, and to a lesser extent Eritreans, Tigrayans and Oromos).

Most Oromos lack ethnic and clan ties in Somalia and a sizeable number do not speak Somali. A number of assistance officials stated that Oromo refugees have not fared as well as

ethnic Somalis in the distribution of resources within the existing refugee camps. One would also expect Oromo farmers to be somewhat less likely to engage in extensive cross-burden trade of rations than Somali nomads.

Collectively these observations indicate that there is only a moderate level effect in the current influx, if any, of the kinds of "pull factors" that are often described as operating in past flows into Somalia. Even the provision of standard levels of food rations are not likely to be a great draw for persons fleeing persecution as opposed to those fleeing drought.

However, many aid officials expressed concern that the Somali government may soon take actions that, rather than acting as "pull factors", could actively deter further Oromos from fleeing into northwest Somalia. These might include efforts to close the border between the two countries or to make conditions difficult in the camps where new arrivals are put (e.g., through keeping rations and other forms of assistance at very low levels). To some observers, the recent Somali government decision to keep the new arrivals at the Tug Wajale site rather than allow them to be moved to a better site may be an early indication of such a hardening of the government's position.

Potential causes for such a more restrictive asylum and assistance policy are said to include the following:

a. The Possibility of Cholera

During the previous major influx, an outbreak of cholera in the Gannett refugee camp in Hargeysa in early 1985 quickly spread to the town of Hargeysa itself and caused widespread deaths. Early reports of cholera deaths among the present new arrivals received international attention but proved false. This included a report made by UNHCR's office in Nairobi that incorrectly linked two unrelated facts - refugees were arriving in the northwest and new cholera cases had occurred in refugee camps (but actually in southern Somalia).

The fear of spreading cholera has been given by many Somali government officials as a major reason for not moving refugees from the present Tug Wajale site. Ironically, the characteristics of the present site (i.e., poor drainage and overcrowding) may make such outbreaks more likely to occur at Tug Wajale than at other sites. Some aid officials expressed concern that any documented cases of cholera in Tug Wajale could also be used as a pretext for Somali government attempts to close the border to further refugees when its real reasons for doing so would relate to other factors discussed below.

b. The Oromo Question

While Somalia has accepted Oromos in the previous influx populations there has not been a prior influx that was so overwhelmingly Oromo. The Somalis and Oromos have had numerous collisions in their collective histories. Disputes between the Oromo Liberation Front and the Western Somali Liberation Front have apparently minimized the goodwill that the two groups may once have felt through facing a common enemy - the Ethiopian government. One hears real concern among Somali nationals that a massive exodus of Oromos, who constitute up to 60% of Ethiopia's perhaps 40 million persons, could overwhelm Somalia's limited resources and markedly alter its ethnic balance.

c. Conflict with Donor Countries and the UN over Refugee Assistance Levels

Simultaneous with the arrival of the new refugees there has been increased friction between the Somali government on the one hand and the major donors and the UN on the other. This has primarily concerned the level of assistance provided to the refugees in Somalia. One aspect has centered around efforts of the western donor countries and the World Food Program to institute a "differential ration" system. Such a system would cut the food aid going to those camps which are closer to self-sufficiency while cutting less or none at all in those camps which are far from self-sufficiency. Another friction point has been the continued efforts of many of the western donor countries to have a census conducted of the older refugee camps. These donors view this census as a step towards reducing what they feel to be surplus amounts of food aid based on inflated census figures. The most recent effort at getting the Somali government to agree to such a census appears to have failed.

Somali government officials express concern at what they see as requests that they accept substantial numbers of new refugees even as the donors are seeking to cut assistance to those refugees already in-country. The government would apparently resist efforts to disengage these two issues. In fact, WFP recently linked them by insisting that the provision of full rations for the additional new population at Tug Wajale "B" could only be done by making a modest cut in the general ration for the older camps. As such a step would in effect institute a kind of differential ration system it was rejected by the National Refugee Commission.

Government policies regarding further new arrivals may also be affected by the dispute between the Somali government and UNHCR over the rate which UNHCR may utilize for exchanging the hard currency it brings into the country. The government recently insisted that UNHCR shift to the lower of the two

official exchange rates. One effect of such a policy would be that UNHCR's present budget levels of hard currency would be worth much less than originally planned. On April 16, UNHCR announced that it will not increase the amount of hard currency in its current budget to make up for this difference. Rather, it will cut its existing programs to the level of funding provided by the new exchange rate. There is to be no cutting of the "emergency programs" (with the cuts coming primarily in the longer-term programs such as settlements). There is also to be a special international appeal for new influx. The danger exists that Somali government's anger about UNHCR's decision may become part of the equation the government will use in determining further policies for the new influx.

d. "Rapprochement" Between Somalia and Ethiopia

The January 1986 meeting in Djibouti between Siad Barre of Somalia and H.M. Mengistu, the head of the Ethiopian Dergue, produced expressions of their mutual desire to end the differences between the two countries.

To the extent that such a rapprochement becomes a reality it might put President Barre in an uncomfortable position regarding any appearance of providing support and asylum for Oromo opponents of the Dergue. Thus, while international attention to the current influx might lessen Somali fears about any cuts in international funding for the refugees in Somalia, it might also cause anxiety about relations with Ethiopia if it made Somalia's acceptance of these refugees more visible.

IV. OBSTACLES TO RECOGNITION OF THE PROBLEMS INSIDE ETHIOPIA DRIVING THIS FLOW

The present influx has continued at a relatively high level for three months. The cumulative total of refugees is fast approaching the figure of about 50,000 persons which has been a rough demarcation point in past flows between moderate and mass ones. Yet there continues to be inadequate international recognition of the existence of these refugees and of the problems which they are fleeing.

It is important that refugees not be seen just as an assistance problem in the receiving country. They also need to be seen as spokespersons for those who remain behind in the sending country. In many past influxes, those who were able to leave the country were only a minority of those who were equally afflicted with the same problems. It is therefore important to examine the obstacles which exist to recognizing the problems inside Ethiopia which are driving this flight in order to create attention to ways to overcome them.

These obstacles are of four main types:

1. Misunderstandings about the nature of the present influx.
2. Conflicting messages from those working inside Ethiopia.
3. Lack of international media coverage.
4. Lack of systematic data collection about the causes and conditions of flight.

A. Misunderstandings about the nature of the present influx

There are three types of misunderstandings which have been most problematic:

1. Confusing this influx with the 1984-85 influx

As described earlier, initial reports of the present influx mistakenly described it as a continuation of the influx which took place in 1984-85. Thus, UNHCR's initial emergency appeal included aid for Tug Wajale along with aid to the camps created for the 1984-85 influx. This misperception continued at the international level for some time (even up to the present in some cases). Fortunately, UNHCR is now planning to launch a separate appeal for this new influx.

The tendency to incorrectly lump these two influxes together has obscured the nature of the present problems inside Hararghe. Famine is not noted as current problem by the refugees (although continued villagization could change that); active persecution by the government is. The solution therefore is not one of food aid but rather one of pressure to alter Ethiopian government policies.

2. Historical Credibility Problems Regarding Refugees in Somalia

The refugee situation in Somalia has become well known over the years for disputes about the actual numbers of refugees in the camps and for claims of massive diversion of food and other relief items. There have been questions raised as to whether the majority of the residents of the refugee camps are really there because of persecution or for economic reasons. This history leads many observers who have not been to Tug Wajale to automatically be skeptical of claims that many new, genuine refugees are arriving in the country.

3. Mixing of Non-Refugees into the Refugee Population

Given this historical context, it is especially worrying that there are already consistent reports of substantial numbers of impostors successfully passing themselves off as new arrivals in Tug Wajale "B". One effect of this may be to "mask" the real refugees and their story behind layers of contrived stories. Another problem is that this diverts some of the already limited time and energy which goes into attempting to understand who the refugees are and why they have come. Instead, this energy can be consumed by interviews focused on screening and on trying to determine who are the "real refugees." Journalists may also use up the limited amount of international attention which the influx may obtain on stories about their "discovery" of this problem of impostors passing as refugees.

B. Conflicting Messages from those Working Inside Ethiopia

These conflicting messages are essentially of two types.

The first are reports by UNHCR and other refugee assistance agency officials, and by the Ethiopian government, that large numbers of refugees from Somalia are continuing to return back to Ethiopia. To casual observers, this would appear to contradict claims that large numbers of people are now fleeing Ethiopia into Somalia.

In fact, both movements are occurring simultaneously. It is clear that significant numbers of former residents of refugee camps in Somalia have returned to Ethiopia (although probably in

a fraction of the numbers" claimed from the Ethiopian side and often with a foot remaining in the Somali camps by remaining registered there as well). However, these are different people from those who are now coming to Tug Wajale. The fact that many Somalis and some Oromos are returning home at the same time that Oromos from different areas of Ethiopia are leaving reflects the complicated realities of politics in the Horn of Africa.

The second type of conflicting message is of greater concern as it reflects significant problems within the humanitarian assistance system itself. These are the reported statements from officials working inside Ethiopia that they see no evidence of people leaving Ethiopia in any significant numbers (i.e. in the kinds of numbers observed in Tug Wajale "B"). These officials therefore question the existence of genuine new refugees in Tug Wajale. Some even claim that aid officials in Somalia are confusing a refugee influx with traditional nomadic movements. These reports from Ethiopia are attributed to U.S. government officials as well as to those of a number of NGOs.

Those persons working with the new influx population in Somalia tend to react with a mixture of anger and disbelief to such reports. Given the physical evidence of tens of thousands of Oromos within a country (Somalia) which has virtually no indigenous Oromos, it is difficult for them to imagine someone honestly disputing the conclusion that these people came from Ethiopia.

Many refugee aid officials in Somalia suspect that most international aid officials in Ethiopia seek to avoid confronting the Ethiopian government, or even their own headquarters, with information about oppressive government policies. They speculated that the main motive of their counterparts in Addis is a reluctance to risk their efforts to deal with the massive relief and rehabilitation needs of Ethiopia by getting involved in Ethiopian government policies that they have little influence on.

Another piece of the problem may simply be the inability of those working within Ethiopia to effectively monitor what is happening in the countryside. Those who have attempted to do so describe difficulties with logistics, obtaining one's own interpreter, being able to independently select interview sites and interviewees, and being able to interview persons out of earshot of government officials. Even if one were able to overcome these obstacles, it is doubtful that a local peasant would feel secure enough to criticize the Ethiopian government to a foreigner (especially one who he has never met before).

Within Somalia there is considerable confusion about what is being said on the other side of the border and by whom (a problem that is typical of most refugee situations). Information exchanges between counterparts within the same organization have

generally been minimal. In a few cases this appears to be the result of a conscious decision of the agency to steer clear of charges of spying, etc. However, in most cases it seems to reflect a lack of understanding of the value of such exchange and/or is simply the result of bureaucratic inefficiency (e.g., having reports get stuck in desk drawers in headquarters).

Some of these organizations which have staff on both sides of the border will be having regional meetings soon. Discussions about the existence and causes of this flow, and about how to facilitate future exchanges of information about it, should be given a top priority at such meetings.

C. Lack of International Media Coverage

Somalia has never enjoyed extensive national media coverage. This is partly because no journalists are based in Somalia, and partly because those that do make visits rarely get a warm reception from the government. Attempting to cover the influx from Nairobi has not been made any easier by the chastisement which a senior UNHCR/Somalia Branch Office official received from headquarters for remarks made concerning the influx at a February press conference in Nairobi. Some observers felt that this headquarters reaction was influenced by the strong protests lodged by the Ethiopian government.

Another factor limiting media attention is that most of the present camp population does not show visual signs of suffering. By comparison, the refugee camps in eastern Sudan in 1984-85 experienced extremely high death rates. The suffering which the new refugees in Somalia experienced took place inside Ethiopia, the results of which are generally not visible on photographs (unlike the effects of famine for example). Ironically, the recent Government of Somalia decision to leave the camp where it is (announced around April 7) and the almost simultaneous arrival of heavy seasonal rains may yet create such visible suffering.

There is a danger that the recent famine in Africa, and especially that in Ethiopia, may have created a kind of "body count" mentality on the part of the media. Thus, to qualify as a humanitarian crisis a situation may have to produce substantial numbers of dead people. However, this is more typical of famine and warfare than of most human rights violations. One would hope that investigations into the problems which the refugees claim are causing their flight, which in many ways may have more fundamental implications for the long-term future of the residents of Ethiopia than famine itself, are not obscured by the lack of observable, widespread deaths.

It is unfortunate that the two "events" which have received some media coverage were misleadingly reported. As noted earlier, there were not 17 cholera deaths in the northwest (there was none). Secondly, the BBC report of a Somali government statement that there was only one days supply of food left in the country for the refugees in late March implied that the shortage was related to the new influx. Rather it reflected the ongoing dispute between the government and the western donor countries about the numbers of refugees in the country and the size of the individual rations.

For persons interested in human rights problems in eastern Ethiopia, and in particular villagization, travelling to Tug Wajale to speak with the refugees is arguably at least as informative as travelling to Ethiopia to undertake interviews there. Whether media people will take "the road less travelled by" remains to be seen.

D. Lack of Systematic Data on the Refugees' Experiences

In refugee relief operations the operative phrase is often "Do something now!" This creates a context in which investigations about why the refugees have come is rarely done in any systematic manner. Despite the fact that they are often used by the media as authoritative sources, most assistance workers know little about the background of the refugees they are assisting. A systematic study of the refugees is needed to clarify such questions as where these people have come from, the relative importance of the various causes for their flight, and what changes in the demographic and socio-cultural characteristics of the new arrivals would signify important changes in the influx. The presentation of the findings of such a study could also offer the kind of "event" which would invite more extensive media coverage of the situation. It might also open up greater debate about whether international assistance within Ethiopia is being used to support policies that the donors have not agreed to.

APPENDIX ONE: REFLECTIONS ON THE CASE TWO YEARS LATER

by Lance Clark
June 1988

From the vantage point of 1988, two years after this case study was initially written, there are a number of observations that I might make concerning the several of the points raised in this paper. These are mainly of three types:

- o information about the relevant events which occurred in Somalia subsequent to my April, 1986 field visit;
- o information collected by Jason Clay of Cultural Survival through refugee interviews in Tug Wajale "B" shortly after my visit which disagrees with points made in this paper; and
- o information obtained in early 1988 from observations made by expatriates in one of the three awarjas in Hararghe province where most of the refugees had come from.

A. Subsequent Events in Somalia

The influx tapered off shortly after my field visit in April, 1986. This appeared to correlate with the completion of the bulk of the villagization program in the highlands of Hararghe.

After considerable debate and discussion, the Somali government eventually agreed to allow the refugees in Tug Wajale "B" to be moved to a better site nearby at _____???. This move was conducted in _____?? Around the process of moving the camp it was possible to conduct a census which in turn dropped the official population from _____ to _____.

B. Information Reported in the Cultural Survival Study

Jason Clay of the U.S.-based private research organization Cultural Survival conducted 40 interviews with randomly selected refugees in 20 of the sections of Tug Wajale "B" in April, 1986. A number of the points made in this report are worth noting:

- o He concludes that the refugee population was about 60% Oromo and 25% Somalis.

- o He notes that the average family size according to the National Refugee Commission data as of early March was 3.2 - this would imply that there were fewer intact families than generally reported.
- o This NRC data also indicated that there were over twice as many women as men in the camp, a statistic which differs markedly from the MSF study which found them about equal in numbers.
- o Most refugees reported that they had suffered marked declines in their agriculture production over the past five years, giving forced labor and drought as the main reasons (although they noted that drought was not a problem this year).
- o The main reasons they gave for flight, in order, were: homes destroyed by the government; forced labor (by the government); religious persecution; animals taken (by government officials, military, or militia); crops taken (by the same groups); socialism; and villagization. This produces an interesting problem for the researcher, as while components of villagization (e.g., destruction of homes) were primary causes given, few refugees stated that "villagization" per se was the primary cause.
- o Rapes by the military and militia were widely reported, but were not a primary cause of flight.
- o There appeared to be some evidence that the refugees as a groups were slightly better off economically than the average villager in their area (e.g., many owned several oxen).
- o Refugees noted many examples of harsh government actions (e.g., execution, torture, imprisonment) used to attempt to counter the activities of the Oromo Liberation Front.

C. 1988 Information from Hararghe Province

In 1988 it was possible to obtain some firsthand accounts of the status of many of the villages in one of the three main awarjas (districts) in Hararghe province where the refugees in Tug Wajale came from. A range of sources indicated that some number of refugees from this area had returned home by early 1988. However, there was virtually no information available as to how many had returned and what kind of reception they had received as UNHCR was not monitoring their return (unlike for those refugees returning from Djibouti).

According to western sources, most of the villages in the highland areas of this awarja had been villagized by early 1987. The residents were reportedly generally quite negative about the villagization program, but were resigned to it as a fait accompli. Oromo Liberation Front activity had apparently somewhat diminished after the completion of the villagization campaign. Militia in this area were conspicuous and armed with rifles.

The major discrepancy between this 1988 information and that contained in this report concerns the forced collectivization of land. As of 1988 most of the land in the new villages (and in the area in general) remained uncollectivized. Although Hararghe province apparently has the highest percentage of collectivized land of any of the provinces in Ethiopia this percentage is in the teens. Perhaps the reports which many refugees in Tug Wajale gave of fleeing forced collectivization in their villages actually reflected the plans that they heard from the cadre more than the actual implementation of this program. The program has apparently been greatly constrained by the lack of resources which the government would need to carry it out. However, it may also be the case that while the government has not collectivized the majority of the land in this area, it may well have collectivized many other key assets (e.g., animals and crops).

Unfortunately, the ability of any outside observers in Hararghe to resolve such questions through obtaining information concerning the conditions in the new villages and the viewpoints of the villagers concerning government actions remains extremely limited. Contact between expatriates and the average villager remain limited and focused on questions of technical assistance, not on the political, social, and cultural context in which the assistance is provided. Certainly there have been no efforts at systematically interviewing villagers as was possible with refugees in Tug Wajale "B".

APPENDIX TWO: METHODOLOGICAL ISSUES REGARDING REFUGEE INTERVIEWS

One of the principal reasons why refugee interviews were conducted as part of this study was to gain more insight into the best approaches to use in getting information from these invaluable sources. The following section describes some of the methodologies used in the small sample of interviews conducted and offers some thoughts about the methodological issues raised.

A. Selecting Interview Subjects

A total of 10 interviews were conducted spread over 6 of the 30 sections of Tug Wajale "B". It was recognized that this was too small a sample to draw any detailed statistical analysis from. In order to establish a reasonable level of baseline data which would provide a basis of comparison for later studies it might have been sufficient to conduct 25-30 interviews among the ten sections that housed the earlier arrivals and 25-30 among the ten sections that housed the most recent ones. The selection of "vintages" of refugees could help identify important shifts that are already occurring over the course of the present influx. Two teams of interviewers (i.e., a main interviewer and one or two interpreters) could have accomplished this in a total of about three days (six "team-days").

The method of random selection that I used involved first walking around the edges of the section to get an idea of its size. I then went to what appeared to be the center of the section and threw a spinning pen into the air. I then used my digital stopwatch to determine a random number. I did this by starting the watch, letting it run for several seconds, and then stopping it. The last digit of the hundredths of a second reading was used as the random number. I then selected the tent that was that number away from where I stood in the direction that the pen pointed to. If there were not enough tents within the boundaries of the section (e.g., if they watch number was eight but I reached the edge of the section after six tents) I repeated the number selection until it produced a number within the limit of available tents. This methodology proved very easy to use in practice.

The interview subject was the person who was considered the "head of household" in the tent selected, or the person considered "in charge" if that person was absent. This may bias the sample against women, although it is often the case that men are not present in the daytime hours and therefore one ends up interviewing the wife in the family, or another family member. In many situations it is less disruptive for the refugees if the interviews are conducted in the evenings when most of the day's work is completed and most family members are present.

B. Context of the Interviews

These interviews were carried out in the subject's tent. As each tent typically had eight or more inhabitants, and many persons nearby were interested in what was going on, the tents generally became crowded during the interviews. Often other persons in the tent would call out comments during the interviews or want to tell their story. While this was often useful in clarifying particular points, it may also have led subjects to overstate the severity of problems in Ethiopia in order to gain the audience's approval. In retrospect, I would have attempted to limit those in the tent to the immediate family (if possible) and to discourage anyone but the main speaker from offering testimony until he or she was finished, and we were seeking to clarify or expand on these remarks.

C. Interpreters

All ten of these interviews were translated by the same interpreter obtained through a non-governmental organization working in Tug Wajale "B". He proved intelligent and hard-working. However, interpreting for interviews of 45 minutes to an hour each can be grueling work if it goes on all day. There is also the tendency when an interpreter gets tired to shorten his translations, i.e., to summarize what he thinks the speaker has said rather than interpreting verbatim. For these reasons, as well as in order to have another check on the accuracy of the interpreter, it might have been preferable to have had two interpreters who could have been used alternately.

My interpreter did not speak all of the dialects which were required, thus on some occasions necessitating using a second person to translate the refugees' remarks into one of the languages he spoke. It would have been especially useful to have had a second interpreter who had been able to speak dialects which the first one did not.

These interviews were not taped out of concern about government reaction and of making the refugees suspicious and uncomfortable. In retrospect, this would have been a good idea. The refugees would probably have not been markedly more circumspect with a tape than with a strange American trying to write down their every word. It would have offered a way of ensuring that key refugee statements were not missed, of checking on the accuracy of translation (by having a sample of the tapes reviewed by persons back in the U.S. who are fully fluent in English and in the language being spoken by the refugees), and of allowing the main interviewer to concentrate more fully on what was being said and the best lines of inquiry, rather than spending much of his time writing notes.

D. Format of the Interviews

I did not use a formal interview protocol. This mainly reflected concern that about Somali government reaction. In the past interviews that used such protocols were viewed as formal enough to require that the questions first be cleared through an official review procedure. This procedure typically took months to complete, and in most cases led to denial of permission to carry out the study. However, in the present case Somali government officials apparently were not as concerned about interviews with the refugees on their reasons for flight, and use of a protocol might have been possible. While slavishly reading through a series of prepared questions would probably have made for more awkward interviews, the use of a protocol to guide the interview and to ensure that all key issues were touched on with each subject would have been useful. It also would have been helpful in clarifying to potential interpreters the objectives of the research and the kinds of questions that we would be asking.

Experiences of the collection and use of micro-level data in disaster preparedness and managing emergency operations

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INTRODUCTION

A two day workshop was held to bring together groups and individuals from research groups and non-governmental organizations (NGOs) who were working on the topic of micro-level indicators and early warning systems. The objective of the workshop was to provide an overview on the current state of the art in this area of work. The workshop was seen as being part of the overall process of reviewing the use of information in emergencies.

Experience of the past three years in Africa has changed our views on food crises and the role of international assistance. Many of the ideas developing initially from earlier experiences of crises, particularly in relation to the use of socio-economic indicators in early warning, are now being taken up by agencies (Seaman and Holt, 1980). The situation is therefore different from even four years ago when many of the ideas concerning the use of socio-economic data in early warning were, to all intents and purposes, academic concepts. Now, as the participants in the workshop have shown, micro-level socio-economic indicators are being tried and tested in a wide range of situations in Africa, albeit after the current crisis is almost over. A generic problem in this area of work however has been that despite, or perhaps because of, the many and varied activities involved in testing the use of micro-level indicators in early warning, it is difficult at present to get operationally-based project staff to document their work.

Working within the assumption that micro-level indicators have a role to play in early warning and disaster preparedness, the workshop focussed on themes and issues

resulting from the experiences of the participants in their work with micro-level indicators. The focus was thus on:

- a. Sub-Saharan Africa;
- b. drought-prone regions;
- c. long-onset disasters as opposed to short-onset disasters;
- d. interventions by governments and non-governmental organizations;
- e. how to put early warning systems together.

This report of the workshop synthesizes the points raised during the discussions and orders them under the thematic headings of "models," "indicators" and "systems." The workshop was in fact structured in a conventional way, progressing from the consideration of research issues to reviews of recent experiences.

MODELS

The development of thinking on famine early warning systems has, inevitably, been closely related to advances in the understanding of famines and the processes at work in the lead up to the outbreak of famine conditions. Until as recently as the mid-1970s our understanding was limited geographically to South Asia and then primarily to the reports of the Indian Famine Commissions working towards the end of the 19th century. Over the last decade our understanding has been significantly advanced, for example, by Sen's work on the concept of "entitlements" (Sen, 1981) and studies of the processes at work have been made in Africa by Holt, Wood and others. Building on this work Cutler produced a "model" of the sequence of events and this formed part of his presentation to the workshop (see Fig. 1).

Most participants saw a "model" as an abstraction of a process and not as a predictive tool. It represents a good approximation of the *sequence* of events in the build-up to a famine but gives little indication of the *timing* of these events. Cutler's comparative study of Ethiopia and Bangladesh shows for example, the considerable differences that may occur in the timing of events in these two very different contexts (Cutler, 1985). In Bangladesh with its high proportion of landless, the whole sequence may be compressed into several months even for a drought induced crisis. In Ethiopia it took several years of poor harvests before the peasants began the "terminal" mass migrations.

Another contrast between these two countries is the degree of market integration, both within the country and internationally. This was identified as a critical factor in accounting for the ability to cope with recent food crises in areas of Bangladesh and for the tragedy which occurred in areas of Ethiopia. The specificity of the famine process to a particular ecology and economy was underscored in discussion.

The example was given of a situation in Bangladesh in August 1984 following abnormally severe flooding, when

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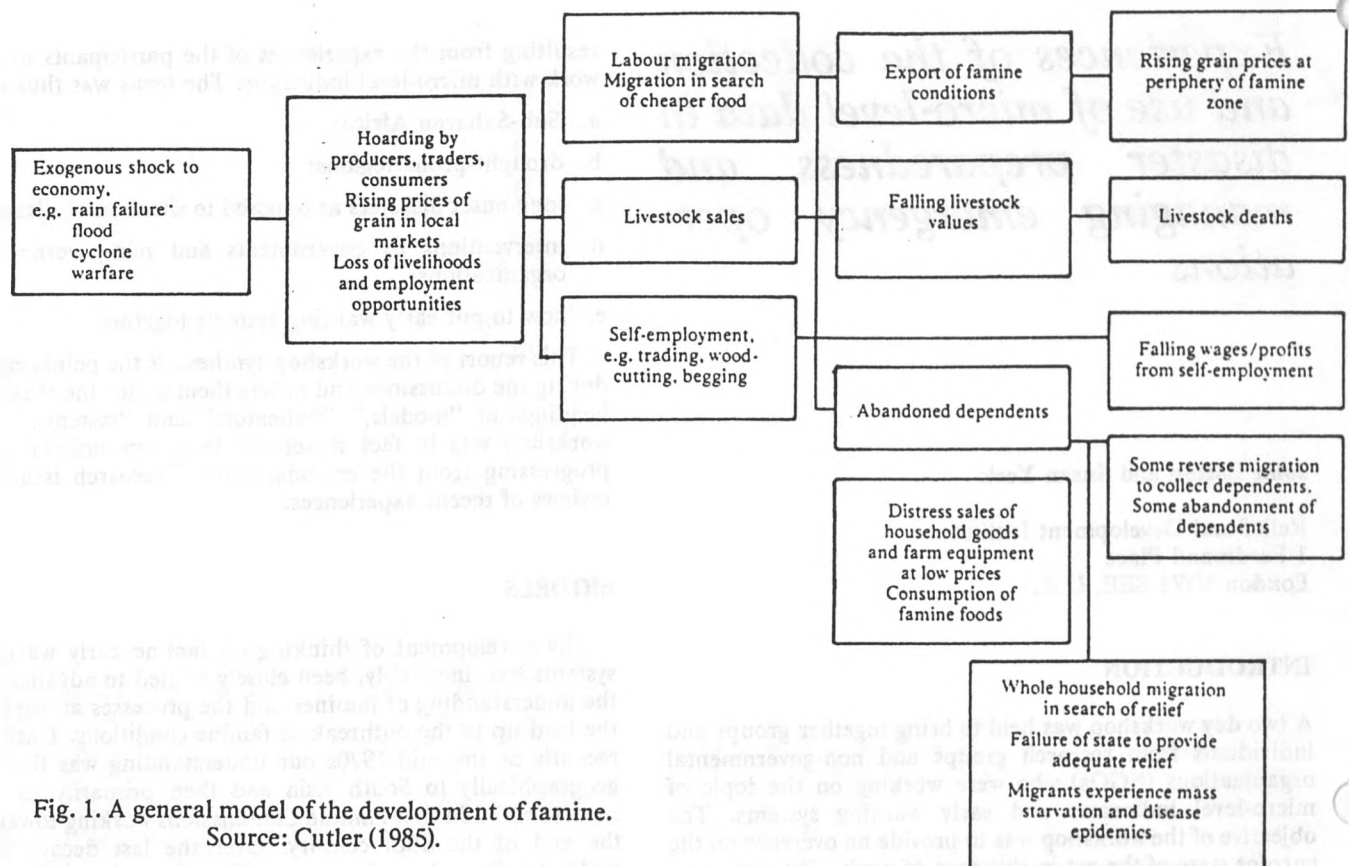


Fig. 1. A general model of the development of famine.
Source: Cutler (1985).

rice prices rose and cattle prices fell suggesting a developing food crisis according to the "model" as it presently stands. In the most severely affected areas there were large numbers of cattle and in reality the problem was more that of a fodder rather than a food crisis. Recent famine models do not yet recognize such a degree of eco-environmental specificity, even in Bangladesh, which was taken into account in the earlier Famine Code manuals.

Several participants stressed that our understanding of the processes at work in famines, particularly in the African context, remains in its infancy. Considerable doubt was expressed that a universally applicable predictive model was either presently available or was likely to be developed in the future. In the light of this, concern was expressed that relief agencies were investing in early warning systems that assumed too much of the "model" as it presently stood. Until such time as the processes at work in the wide range of social, political, economic and ecological contexts, were better understood, there is the distinct danger that the proxy indicators that are now being gathered for early warning purposes, may be misinterpreted or even that they may be inappropriate indicators for the area being monitored.

There was general agreement then, that much more research was needed before truly predictive models could be developed. The failure of the academic community to research adequately the Sahelian and Ethiopian famines of the early 1970s was seen as being largely responsible for our present lack of understanding. As a starting point a full analysis was required of each of the recent cases of famine or near-famine in Africa. It was pointed out that certain historical studies of famine contained some valuable insights into the processes at work.

Given time it should be possible to develop area-specific models with much greater predictive powers. The extent to which it would be necessary to subdivide ecological and economic areas in order to achieve predictive models was not pursued very far. As to the areas where the research should take place, it was felt that enough was known about the historical vulnerability of certain areas and populations, together with the present problems of specific regions, to set priorities.

Several participants questioned the conventional view of famine as a random cyclical process which always begins from the same baseline. When seen in the context of the downward spiral that most economies in Africa experienced

in the late 1970s and early 1980s, such a view is suspect. Further work on models of famine need to take account of the underlying processes of change. If they do not, there is again the danger of an inadequate model resulting in the selection of the wrong indicators.

It was suggested that a more valid approach may be to see famines as a downward ratchet, so that those countries and populations now emerging from the recent food crises and famines face a whole new set of conditions to those they faced prior to 1982. The issue of whether such a cumulative process is irreversible for those caught within it, was seen as being an important area for future research.

Another potentially significant area for further review was whether early warning systems could tap the reservoirs of indigenous knowledge and traditional coping mechanisms. The existence of complex traditional coping mechanisms has long been recognized, though it remains a little-researched field. In recent interviews of peasants in famine-affected areas, several researchers have noted how their respondents have given the start of the crisis as being considerably earlier than that taken as the start of the crisis by agencies working in the area. This suggests that early warning systems might benefit by opening channels for the input of "more local" information. However, governments and donors may be reluctant to give credence to such information as it will be strongly suspected as lacking in objectivity. Nevertheless, "local views" may form a useful early indicator which triggers the more detailed monitoring of other indicators.

Most, if not all, of the existing research into the dynamics of famine falls into the "outsider" category. To date only limited attention has been given to the perceptions of the processes at work by those affected. It is possible that the "insider model" (by which is meant the set of ideas, knowledge and perceptions held by those affected) may differ from the models of the "outsiders." If such differences exist, it is important that they are understood, for there is great potential in local people being seen by relief agencies as actors and not just as passive receivers. Until there is a better understanding of their models of food crisis, it will be difficult to co-opt them in tackling an emergency situation and furthermore, the effects of such attempts will be less predictable.

One area in which the insider and outsider models may differ concerns the focus of nutritional monitoring and relief interventions on children. Nutritional science tells us why it is necessary to do this, and the ability to appeal to the Western conscience is clearly attractive to relief agencies trying to raise funds. Nevertheless, it is quite possible that the focus on children is at odds with the perceptions and priorities held by those affected. It was agreed that investigation of "insider models" could be a rich avenue for increasing our understanding of the processes at work in the lead-up to famine and thus to the development of more effective early warning systems.

INDICATORS

Background

It is useful to divide early warning indicators into the following three categories:

- i. meteorological/agricultural production indicators (e.g. rainfall data, agro-meteorological data, crop forecasts, grazing condition, livestock condition etc.)
- ii. socio-economic indicators (e.g. price movements of staple foods, livestock and household assets, abnormal migrations, etc.)
- iii. nutrition and health indicators.

Until recently, the type (i) indicators were the focus of attention and investment in regard to early warning. Quite rightly investment in agro-meteorological and crop forecasting systems continues (e.g. FAO's assistance to the Southern Africa Development Co-ordination Conference (SADCC) national and regional early warning systems). However, Sen's study has reminded us that famine is a social phenomenon and can occur without a substantial decline in aggregate national production. The aggregate food balance sheet approach to famine prediction has therefore been severely questioned as a guide to the measures needed.

Over the past four years interest has increased in the type (ii) indicators. The NGO community has shown particular interest in these indicators and, following their experiences during the African Emergency, have begun investing in early warning systems that rely to varying degrees on socio-economic indicators. The workshop deliberately concentrated on issues concerned with these indicators.

There was also discussion of the role of nutritional status in early warning systems. However, there is a wide range of views on this issue. Some participants regarded indicators of changes in nutritional status as coming too "late" in the sequence of events to give early warning of a crisis. Others maintain that indicators of change in nutritional status do have a valid contribution to make to early warning systems, with the Ghana case referred to below as an example.

Socio-economic indicators

As an illustration of the types of model being applied, Cutler summarized his work in Ethiopia and Bangladesh which had built on the initial work by Seaman and Holt. Changes in grain prices, livestock sales, distress sales and labour migration had all acted as early indicators of stress. As shown by the example of Mali (see below), all of these indicators are now being monitored for different parts of the country by each of the four early warning projects which have been set up within the last two years. In Sudan, market prices and volume of livestock sales form two of the three

main indicators monitored by the Sudan Early Warning System (EWS).

Whilst there was general agreement that the increased attention being given to socio-economic indicators was a "good thing," several warning notes were sounded by participants:

- i. There is a danger that more is being assumed of the indicators than is justified by the present state of knowledge. The fact that the same indicators are being monitored in countries which are quite different socially and economically, implies an assumption that a "universal model" already exists. There seems to be a certain tendency to ignore the fact that the indicators are proxy for real conditions and that a great deal may be going on "behind the indicators" that is not understood, e.g. grain prices or relative movements in grain and livestock prices are proxies for the real income effects of drought on consumers.
- ii. The raw data used as indicators can be very poor and potentially misleading. An example of this was given by Hesse who had closely observed the operations of a regional livestock market in Mali and found that speculators bought and resold stock several times in one day, thereby inflating the official recording of the numbers sold. In the light of such examples general concern was expressed at the increased use of micro-computers to process data. Data processed by computer has an air of scientific authority. Great care needs to be taken to guard against the "garbage in equals garbage out" syndrome. The quality of the data needs to be properly validated before being incorporated within a system and regularly rechecked thereafter.
- iii. Once again the problem of establishing what is meant by "normal" was raised. In Botswana, domestic production of the four main staple crops can fluctuate from 15,000 tonnes in a poor year to 160,000 tonnes in a good year. In Kadugli in Kordofan Province, Sudan, annual rainfall has exceeded the long-term mean in only four of the last eighteen years. Economic trends in many countries since the beginning of the decade have been extremely poor. It is unclear whether such years should be treated as exceptional or not. Interestingly, the Sudan EWS only allows for data flows to be admitted as "indicators" once it has been possible to establish what the normal trends are. It is not clear whether NGOs operating elsewhere are able to do this. In the absence of an understanding of what the normal patterns are, the making of valid interpretations of the trends displayed by indicators can become difficult, if not impossible.

There was some discussion about ways of selecting indicators and presenting the results in order to elicit a prompt and appropriate response from donors. It was suggested that greater use be made of graphical representations of the data. In the light of the belated response by western donors to the situation in Ethiopia, despite the existence of nutritional data which showed the situation to be extremely serious during 1983 and early

1984, it was suggested that an alternative and possibly more realistic approach to the selection of indicators would be to ask the donors which indicators they would be most likely to respond to.

An innovative concept employed by the Systeme d'Alerte Precoce (SAP) in Mali and planned for use by the system to be set up in Turkana District, Kenya, is a scoring system which attaches weights to the various indicators. If the total score attributed to the various indicators within an area exceeds a certain threshold, then it triggers either an increased level of monitoring, or the introduction of relief measures. Though such techniques are intuitively attractive, some misgivings were expressed as to whether these would prove to be too mechanistic. In addition there is always the danger that some participants in the system may "learn to play the game according to the new rules." It was important that such techniques employ indicators that could not be manipulated.

Nutritional indicators

There is as yet no sign of consensus on the practical role for anthropometric or quantitative indicators of nutritional status in early warning. Two case studies were considered at the workshop and these only seemed to raise further questions about nutritional monitoring. There is a widely held view that nutritional status is a "late" indicator and of no relevance to early warning systems. The presentation by Shoham showed that Catholic Relief Services (CRS) data in Ghana had displayed a marked decline in nutritional status no less than two years before the commencement of the Emergency Programme. In some contrast it was later shown that the decision by the Government of Botswana to launch a Relief Programme in 1982 was taken before the country's excellent Nutritional Surveillance System had displayed a significant worsening of the situation.

It may be possible to explain the Ghana case in terms of the breakdown of the Government's rainfall and crop forecasting/crop production systems as a result of the country's severe economic and political problems; the fact that CRS's Emergency Programme was severely affected by delays in approving food aid requests by USAID; and the fact that the food crisis of 1983/1984 came at the end of a long period during which food availability had been steadily declining.

In contrast, the fact that nutritional status has not served as an early warning tool in Botswana may be explained in terms of a sophisticated and responsive administration that has been prepared to launch a relief programme on the basis of rainfall and preliminary crop forecasts alone.

The recognition by the end of the workshop that there was no clear consensus as to the potential role of nutritional status as an early warning indicator, was seen by all present as confirming that this is an issue which requires further investigation. Of all the indicators, those of nutritional status of the affected populations and particularly children, appears to be the most credible from the donor

point of view. As a monitoring and targetting tool, nutrition is particularly useful, as shown by the Botswana example.

SYSTEMS

The context of interest in current Early Warning Systems (EWS)

We now find ourselves in a post-famine period. The "emergency" period is over. The media's focus on the African crisis has subsided considerably. The urgent scramble to raise funds, transport food, and provide relief, has died down.

What has emerged from the recent crisis in Africa is the concern, at a number of levels, that in the future a crisis on such a massive scale should not be allowed to happen again. There has been a renewed interest in early warning of food emergencies. The concept of early warning for food crises has been the focus of interest in a variety of quarters since the mid-1970s following the Sahelian crisis. The Global Information and Early Warning System (GIEWS) on food and agriculture was set up by the FAO in the late 1970s. Such systems emphasized agro-meteorological and crop forecast data in their initial system. Other researchers and NGOs began to enquire into the use of socio-economic data for identifying communities at risk.

The concern following the recent emergency has led to the renewed interest in developing early warning systems at a regional and national level in preparation for the next period of drought in Africa. This section of the report outlines the range of systems being developed in the light of renewed interest in socio-economic data as indicators of stress within a community.

A wide range of types of early warning system were represented at the workshop. All were at various stages of development. Some of the systems were involved in the collection of their own data for analysis whilst others used data already available and being currently collected by other groups, both governmental and non-governmental. The level of involvement of the systems ranged from national to regional to the local village-level.

Mali — a case study of four different systems in parallel

Mali provides us with the case of four different systems existing in parallel and at four different levels of organization. All these systems were represented at the workshop and each represents a quite different type of approach to the early warning process. There are in addition, national information being fed into the Global International Early Warning System (GIEWS) and informal monitoring of the food situation by various diplomatic and aid missions.

The case of Mali has been chosen because it shows the evolution of the problem of forecasting areas of food insecurity as it has been perceived by different interest groups and the way their interest has led to parallel but distinct activities to strengthen early warning systems.

The four systems currently being developed in Mali are briefly:

1. Systeme D'Alerte Precoce (SAP) — the government-based system organized with the technical assistance of Medecins Sans Frontieres (Belgium) and Association Europeenne pour le Development et la Sante (AEDES).
2. Famine Early Warning System (FEWS) — the U.S. Agency for International Development (USAID) funded system co-ordinated by Tulane University (School of Public Health and Tropical Medicine).
3. Save the Children Fund (U.K.) funded Sahel Information Network co-ordinated from the London School of Hygiene and Tropical Medicine (LSHTM).
4. Oxfam Early Warning System (EWS) — an independent system based on local level groups and associations of peasant farmers.

Evolution of Early Warning Systems (EWS) in Mali

In 1984 a common cause of concern amongst voluntary agencies was their own lack of concerted knowledge as to what was going on in the Sahel at that time. There was no concerted approach to information collection and dissemination. It was not clear what was going on in the country or the region as a whole, particularly in relation to the food situation. A number of NGOs therefore considered what they might do to improve this situation. It was agreed that not enough information was available from the NGOs that was in a useable form. The initial idea was that as no regular, useful information was available then the NGOs should put together a network, to help at least the NGO sector, to see what the current situation was in a given country. Information was available on studies made of potential indicators and the NGO committee in Bamako began to develop a system whereby NGOs working in the field could report together on these indicators. This was felt to be the most cost-effective approach, mainly voluntary, and orchestrated by one agency. The London School of Hygiene and Tropical Medicine began to work on this approach with the NGO committee in Bamako using a monthly questionnaire developed to collect information on half a dozen or so indicators of food availability, prices, and agricultural conditions.

During this period of NGO exploration of possible information networks there had been no overall government system of early warning in Mali. At this time the FEWS system began to develop in Mali under the project co-ordination of Tulane University to collate national data on agro-meteorological and nutritional data along with whatever socio-economic data might be available and to provide it to AID in Washington DC. The UNDP then became interested in developing the government system and the EEC provided major funds for this activity. In less than a year, since April 1986, the government model (SAP) has been developed with the technical assistance of MSF/AEDES (Belgium).

The creation of the governmental system so quickly and on such a large scale posed a major question for the NGO network — what would the government do about all of these systems? Would it say no to the smaller NGO systems? In fact the government set up a working group for all agencies interested in information gathering. However, there was no proposal for merging all the parallel systems together.

By the end of 1986 Save the Children Fund (U.K.) had funded the London School of Hygiene and Tropical Medicine to begin setting up the NGO Sahel Information Network. In parallel and covering different interest areas the OXFAM EWS and Tulane University's FEWS projects were in the process of developing and implementing their programmes.

Mali is a very large country and there are still some forty to fifty voluntary agencies operating in rural areas, even after two good years of rain. There is thus a potential network in the field of people who are not government personnel.

The NGO meetings in Mali have however highlighted several issues of interest to NGOs. After only 12 months of good agricultural production NGOs are not so excited by the issue of early warning (unless they are working with one or two badly affected populations). The focus of interest has now shifted onto:

1. what is happening elsewhere in Mali and the region;
2. what other NGOs are doing;
3. long-term food security.

This development away from purely early warning issues is re-elected in both the OXFAM and SCF-funded projects.

Details of the four parallel systems in Mali

The four different types of EWS are outlined below to show their different approaches to the process of setting up an early warning information system. However, a major factor pointed out by workshop participants is that all of the systems have been developed "post-famine," so to say, after the major crisis period has lapsed. Thus none have been tested as viable predictors or triggers for response.

1. Systeme d'Alerte Precoce (SAP)

Since 1984 MSF (Belgium) has worked on information systems devised to respond to the needs of a rapid nutritional assessment system for famine relief operations (called the "score system"), and also on the need for EWSs in order to try to prevent food crises. Building on this experience MSF and the AEDS have been involved since 1986 in providing technical assistance in Mali and Chad to the National Authorities in the establishment of a national EWS. These projects are funded by the EEC.

The EWS is organized within the National Administrative and Technical structures and the EWS is "implanted" through the work of multidisciplinary mobile teams working alongside local counterparts in the regions. The aim is that the mobile teams will gradually disappear and the national structures will have integrated the EWS system by 1989. The project aims to be complementary to

those systems giving national quantitative food balance estimations by comparing the total food availabilities with the food needs of the populations.

The project focuses on the traditional "at risk" zones of Mali and Chad. In Mali it covers the Northern and the North-Western parts of the country, approximately 4,000,000 people.

The main objectives of the EWS are to:

1. detect and predict populations who may experience a food shortage in the future;
2. carry out 1. at a small geographical level;
3. to communicate all information to national authorities and international organizations.

This process should identify:

- (a) which populations are experiencing or who are prone to food and/or nutritional problems;
- (b) where the population "at risk" is located;
- (c) how many people are at risk;
- (d) when a response should be made;
- (e) what actions are necessary and possible in order to prevent or solve the problem.

2. Famine Early Warning System (FEWS) — Tulane University

In late 1985 the AID contracted Tulane University School of Public Health and Tropical Medicine, Department of Biostatistics and Epidemiology to gather social and health data in seven Sub-Saharan countries for a Famine Early Warning System. Mali was one of the chosen countries. Field staff collect secondary data from non-governmental and governmental organizations in Mali on socio-economic, demographic and nutritional conditions.

The purpose of the FEWS was to provide more complete information on the situation in Mali and the other selected countries to Washington DC to provide up-to-date information to decision-makers responsible for allocating relief supplies.

It was felt by some participants that the FEWS project overlapped considerably with the SAP government-based project. The FEWS co-ordinators were in fact reassessing the FEWS input in Mali at the time of the workshop, with the view to closing down that part of the project if necessary.

The FEWS project highlighted some of the problems relating to data standardization, the relationship between information systems and the decision-making process and co-ordination of overlapping systems.

3. Save the Children Fund (U.K.) funded Sahel NGO information network

As already indicated this system is based on work carried out with the NGO committee in Bamako to build an NGO network of information which would fill the perceived information gap.

This networking of information is being carried out through the collection of regular data for the regions of Gao and Mopti by participating NGOs on basic data covering the following six areas:

1. Qualitative state of agriculture and pasture.
2. Principal sources of food for the local population, i.e. family stocks, harvest stocks, exchange, market, food aid or wild foods.
3. Price of cereals on the local market.
4. Price of animals on the local market.
5. Daily labour prices, changes in casual labour employment.
6. Unusual migrations.

All the data is qualitative except for prices and should be easily available. The aim is that regular information will flow from the field centres to Bamako. Therefore the questionnaires are kept short and should take as little time as possible to complete.

The project is now also interested in other questions relating to food security. This relates to the general trend away from interest in purely early warning as has already been remarked on. Several areas of interest are:

1. "Pockets of distress" is a concept that has been talked about frequently. What does this mean? Is it literally pockets of a few people; certain types of people; or is it a permanent situation? Since the early 1970s there have been permanently displaced people — who are these people? What is the prognosis for the future?
2. In terms of food availability, how are they surviving, what are they depending on, is the situation changing? What options are groups of people following? Is it, in fact, necessary to define the different economic groups in each locality?
3. What is the effect of food aid? It was pointed out that there appears to be a great anti-food aid drive in many quarters in Mali this year. Government stocks are full and many peasant stocks are full. The Government cannot sell at its bottom price to farmers, but a lot of farmers (at a guess) are not eating well because they cannot buy.
4. The notion of "purchasing power." What is it and how does it affect the current situation in Mali?

The SCF-funded information network will now focus its attentions on these types of questions about food security, which can only be viewed over time. One constructive step is to define some of these population groups and their positions and make that an important part of the network system.

4. OXFAM — Early Warning System (EWS)

The OXFAM EWS is, like many of the other systems, at an early stage of development. It differs from the other

systems in Mali in that it is not a national system (although linked into the national system) and it aims at a much smaller population area. Its aims are to "try to develop a famine monitoring response strategy for a cercle (sub-district administrative unit)". An emphasis is put on the development of the capacity of the local community to respond to and control what happens in their locality. This approach looks towards an alternative way of responding to a crisis than the usual process of providing emergency aid at a late stage. It is an example of a "local participation" focussed programme which would take into account the indigenous view of the situation and what was needed in response to a local crisis.

The OXFAM EWS is based on the four premises that:

1. Famine develops over several years and therefore it should be possible to identify early signs of food crisis at the local level well before emergency aid is needed.
2. Early warning information and response should be integrated so that the agency collecting data should be able to act on it.
3. The response should aim to reinforce the population's ability to face a crisis, rather than providing purely emergency aid.
4. Local populations should play a role in the collection of data.

The OXFAM EWS is therefore based on its project partners, i.e. cereal banks, co-operatives, associations. Groups are being asked to collect rainfall and market data four times a year. OXFAM personnel then collect this data when they visit the groups and discuss the current situation. This would be the moment to propose interventions if necessary. The OXFAM EWS project has recently been started in the 4th region of Mali with ten cereal banks. At the time of the workshop data had not yet been collected.

Another aspect of this project is to further research the local level "dynamics" of early warning indicators. Currently work is being carried out on livestock prices.

Several limitations of this approach were identified by the project staff. A project covers a small geographical area and thus a limited number of people. There is always the risk of local populations distorting data to gain assistance. After the project ends, or when there are a series of good years, can a continuation of data collection be ensured. The local institutions are not yet collecting data, so it is difficult to judge their capabilities.

It was felt to be difficult to fully appraise the effectiveness of the various systems as they had yet to be tested in a crisis situation on their ability to persuade donors/agencies to respond to a food crisis. However it was felt that the example of Mali shows clearly the great difficulties that exist in co-ordination between agencies. It was agreed that this pointed to the need for agencies to be flexible and be able to adjust their programmes to suit the changes taking place in the institutional set-up of early warning systems in a particular country.

Other systems represented at the workshop

Three other EWSs were represented at the workshop — the Sudan Early Warning System, the Botswana Early Warning and Response System and a plan against drought and famine for Turkana Region, N. Kenya. These are considered separately.

Sudan Early Warning System (UNDP-UNEOS). The Sudan EWS is an example of a national system utilizing secondary data. It does not attempt to collect its own data. The Sudan EWS was set up in March 1986. Its aim is to establish "a food crisis Early Warning System that is at once operational, viable, credible and effective." In trying to locate areas that may face food crises it aims to carry out three activities in relation to data on market variables; meteorological data; nutritional survey data; agricultural progress data:

1. Current and historical data are examined to establish the context within which change has occurred.
2. When areas of stress are detected ground-truthing is done to check initial indications.
3. Risk assessment surveys would follow in critical areas to quantify assistance requirements needed.

Data collected by governmental and non-governmental groups within Sudan are analyzed. The EWS does not collect its own primary data. The main focus up to now has been to develop the historical data set analysis process in order to identify underlying trends.

Problems of such a system included:

1. That the EWS does not appear to be effective in identifying pockets of need. These do not show up in macro-indicators. Micro level data is not currently and may never be available with sufficient spread to identify all pockets of need.
2. Currently the information gathered and analyzed is not being explicitly used in decision-making on food policy and relief activities. It appeared that donors primarily wanted to know what bulk quantities of relief resources were needed. Tasking logistic and targetting efforts need micro level indicators. It was agreed that there was a need now to wean donors from this preoccupation with the global context of relief requirements.

Two of these systems in Botswana and N. Kenya were classified in discussion as "social security systems". They aim to create barriers against famine with employment guarantee schemes and other food aid programmes. Such systems, it was suggested, require a very different organization and use of information from that of the EWSs discussed so far.

Botswana — early warning and response system. Botswana's early warning and response system stands in some contrast to the other national systems, in that the decision to launch a relief programme is taken primarily on the basis of rainfall/agro-meteorological data and crop forecasts/

grazing condition. The programme commences promptly at the time the failed harvest would be gathered.

The excellent nutritional surveillance system is used as a monitoring and targetting tool and not as an early warning indicator. The NGO presence in Botswana is very limited and NGOs provide little if any data to the EWS.

An explanation of why the Government is prepared to commit significant domestic resources on the basis of "supply side" data and not wait for harder indications of stress, is most likely to be found in the comparatively sophisticated administration and the accountable and thus responsive political system.

Plan against drought and famine in Turkana, N. Kenya. A study of the drought and famine conditions in Turkana, N. Kenya was commissioned by the Kenyan Government's Turkana Rehabilitation Programme and OXFAM. Based on the results of this study a plan against drought and famine has been modelled for implementation in the region. The plan is based on the "shape" of the Indian famine codes of the 1900s. It is a "drought contingency strategy and plan".

This requires a district drought policy, a set of advanced preparations, an EWS, and a set of "actions during a drought to ensure food availability, guarantee employment for destitute people in public works, and buy animals from herders at reasonable prices to maintain purchasing power; and a set of rural reconstruction measures after the end of the drought".

All of these measures are to be co-ordinated by a District Drought Contingency Officer. Alongside this other strategies are suggested to reinforce the regional plan. These include: advanced negotiation of commitments from donors; construction of infrastructure such as stores, roads, etc; technical training seminars for district and governmental staff; standardization of nutritional surveillance techniques used in the region.

Issues arising from discussions on Early Warning Systems

a. Co-ordination and overlapping systems. Several of the workshop participants expressed initial doubts about the recent proliferation of early warning systems. In particular, questions were asked whether it is necessary for Mali, for example, to have at least four early warning systems. It was felt that perhaps once there is a good governmental or quasi-governmental early warning system, for example in Mali, then all the other NGO early warning systems will come to be superfluous. However, after discussion it was agreed that parallel EWSs are not necessarily superfluous. The official system can be subject to a variety of political checks and balances. It may therefore be that the best hope for local communities to make the right responses and to be helped in those responses by outsiders is in having parallel flows of information. That is, information which is not always subject to governmental control and to political weighting. It was agreed that the best hope for a timely and effective early warning system may, in fact, be to encourage such parallel systems. Then it becomes hard for any

centralized group to stop completely or manipulate all of the many flows of information.

It was agreed however that an exception to this is the duplication of activities by SAP and the FEWS project in Mali. In fact the FEWS project were reviewing their input into Mali and considering the possibility of the phasing out of this part of their programme.

b. Costs of monitoring systems. The problem of current and continued financing of EWS and monitoring systems was raised by several of the participants. It was pointed out that even the production of bulletins is time-consuming and costly.

It was not clear how such activities would be sustained beyond the initial injection of external funding. It was a general concern that after two or three good rains funders would lose interest in early warning systems, whilst data needs to be collected and processed over a long time period to provide any useful trends which can be used in early warning systems. Famines by their nature build up over a long time period and monitoring needs to continue during times when there is no apparent crisis. It was felt that less attention had been paid to the cost issue than was perhaps desirable.

c. Institution building. Many temporary systems have emerged during the drought for the purposes of monitoring communities and responding to community needs. But now the drought is over it is clear that the normal structures do not often use the information generated. Drought committees become dormant with "nothing to do." A major concern was felt to be the necessity of institution building at the local and national level in any future monitoring/information-gathering exercise. In particular, building on local expertise was seen as a priority rather than building purely expatriate systems which would disappear once interest in Africa's famine had died down.

However, the question of who collects and controls the data in the different types of system was raised in this context. This was followed by a plea for simplicity in systems so that as many people as possible can understand what is happening. There was a need to understand the flows of information in systems in order to understand its implications for the community.

Early warning systems tend to be centralized at the capital for decision-making purposes. It was felt that there is a need to pay more attention to the regional or provincial level. Particularly in large countries such as Sudan and Mali, e.g. in Sudan the Province of Darfur is the size of France. There is also a need to pay more attention to what the local governor or commandant can do on their own initiative.

d. Donor response and decision-making. A major concern for all participants was that of donor response to EWSs. It

was agreed that the linkages to decision making are problematic in the contexts of pure early warning information. Rather an information system has to be developed in the wider context of measures for food security and plans for disaster preparedness, linked perhaps to development activities for a region or project area.

There was much discussion about the sorts of warning signs that governments and donors respond to. Several people pointed out that as far as governments and donors are concerned these appear to be highly politically determined signals. Therefore it cannot be assumed that one set of signals which indicates a serious starvation crisis to one interest group is going to be accepted as such in all cases with an equal degree of alacrity by governments and donors. Therefore it was felt to be necessary to disaggregate much more who we are referring to when we are talking about institutions that respond. There is the government of the country concerned, there are governmental donors, there are non-governmental donors, and there are the local people themselves through whichever local community institutions exist. When talking about indicators and triggers, the way those different types of institution that have a role in relief react will very much determine what sort of signals are useful.

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CASE STUDY: UNHCR COORDINATION OF ASSISTANCE IN AN EMERGENCY

Judy Pedersen was Senior Programme Officer in UNHCR branch office in Satswana, a country experiencing a steady influx of approximately 1,000 refugees per month arriving from neighboring Kitzambique. While UNHCR made available to the Satswana Government a significant emergency appropriation, the Satswana Social Services Department -- the Government-designated implementing partner for the emergency programme -- was unable to develop a suitable project description or to control and coordinate the in-kind contributions of various voluntary agencies assisting -- many with their own financial and human resources -- in the emergency. Consequently, while some needs were over-subscribed, others were under-subscribed: for instance, many refugees had three blankets each (when climatically one was sufficient), but had no tent or other suitable shelter.

UNHCR provided its initial emergency assistance to the Government prior to the formulation of a detailed plan of operations or specific project description. At the UNHCR branch office, Judy wrote a sketchy project description which was sent to UNHCR Geneva in order to justify release of the second instalment of funds from the emergency project. However, the Government never officially endorsed her project description nor used to in any of its own administration of the programme.

While a majority of the financial resources needed for the emergency programme came from UNHCR, UNHCR had least control over their use. Claiming the emergency sapped their resources and prohibited proper planning and normal procedures, the Government frequently set priorities without consultation with UNHCR, used standards which were inappropriate to UNHCR-funded projects, and ordered supplies outside acceptable UNHCR procurement procedures. In addition, a number of voluntary agencies (not funded by UNHCR) made non-specific offers of assistance to the Government in return for programmatic and other "access" (such as to distribute religious materials) to the refugee camp. Individual voluntary agencies, themselves -- and often alone, assessed emergency needs, chose their input according to their own priorities and predilections, raised the needed funds through their own networks, and delivered the goods according to their own procedures and time considerations.

The result was confusion, duplication, omission, missed time considerations (such as seeds arriving only after the planting season was over), uncoordinated arrival of assistance inputs (like only rice one month, only oil the next, only tinned meat the next).

In an effort to ameliorate this situation, the Government organized an Emergency Coordination and Consultative Group. All Government departments, international organizations and voluntary

agencies involved in the emergency attended the monthly meetings. The Group meetings were chaired by the Director of the Satswana Social Services Department (he married the sister of the wife of the President). At these meetings, each agency representative reported on what they were providing in the refugee camps, when they expected their assistance to arrive, trouble in delivering past promises of assistance, and evidenced their unwillingness to participate in any more coordinated master plan organized by the Government and UNHCR which might limit their independence and flexibility while increasing their accountability for delivering promised goods on time.

In a word, these coordination meetings had little real effect. Yet, when deliveries of promised goods were missed, the Government asked UNHCR to provide additional funds and order the goods through emergency procurement procedures and air-freight the goods to Satswana at UNHCR expense. When the components of the approved food basket arrived late or uncoordinated, everyone blamed UNHCR -- and the refugees had to suffer the nutritional consequences. When the press found out that each refugee had three blankets but no tent, they blamed UNHCR for not being able to handle the emergency. Meanwhile, the refugees continued to arrive at the rate of 1,000 per month.

1. In the immediate term, what could UNHCR do to gain and/or improve control, monitoring and coordination among the Government departments, international organizations and self-funded voluntary agencies involved in the emergency programme?
2. In the longer-term, in light of the continued arrival of newcomers, what could UNHCR do to build in safe-guards against a repetition of this situation in future emergency projects in Satswana?

23 November 1988
H. Matsumoto

Emergency assistance arrangements
In Somalia

1. Different types of emergency

During the period of 1986 and 1987, Somalia faced large-scale and limited specific emergencies. The first type of emergency was the large influx of 40,000 asylum seekers from Ethiopia into the north-west Somalia. in early 1986. The second type was the transfer of 30,000 refugees from Ganett to Bialely in spring 1986 and 25,000 from Luuq to Bul Burti in early 1986

2. Early warning and assessment

The first, and probably the most difficult, factor in dealing with a sudden and large influx must be to assess the situation, i.e. how many people are coming when, where and with what conditions.

The assessment of such a cross border movement is not easy due to its political nature. There is a tendency for national and international observers close to the government of the country of origin to underestimate the situation, while the government often tries to deny the consequences of internal unrest.

If basic data on the prospect of influx are made available, the first stage of emergency relief work is half done.

The early warning and need assessment on specific types of emergencies such as to move a certain number of refugees from one place to another in order to avoid epidemic spread is less complicated than in the case of cross-border movements. Obviously if urgent transfer of refugees is required due to the outbreak of war, relief operations would be extremely difficult.

BO Mogadishu gathered necessary data through local civil and military authorities, diplomats, and NGO experts, and maintained routine exchange of information and views with those parties. In this process BO appreciated the provision of quite precise information by the US Embassy with which HCR could set up a reasonable master plan. The US Refugee Coordinator's judgement was that 40,000 to 50,000 Ethiopians, most of them Oromo ethnics, would arrive at the border area of Tug Wajale between January and May 1986 subject to the condition of rain. This judgement proved later to be a accurate one..

Any registration work is the basis of identifying arrivals and assessing their number, but the proper function of registration is impossible under the heavy pressure of a large and sudden influx of 500 to 1,000 people per day. HCR needs more technical expertise and training, together with more professional advanced equipment such as computers, cameras and videos.

3. Initial relief arrangements

For any successful emergency operation it appears important to know how timely it is to spark the attention of HQs and convince the

international community of the pressing need of assistance. Telex and telephone communication with HQs, and the organization of consultations and meetings among HCR, government authorities, donor representatives, NGOs and UN agencies in the field would certainly serve to this end, but above all the visit of emergency experts and senior officers from HQs would greatly help in a quick overall response to the situation.

In order to mobilize as immediate assistance any items, i.e. food, water trucks, fuel, shelters and medicines as well as technical and logistic and administrative services, it is essential that field offices keep a monthly consultation particularly with WFP and major donor government and NGO representatives and update the list of locally available stocks.

The establishment of a task force and an interagency group was also helpful for the promotion of coordinated efforts to arrange

initial aid and to work for an overall relief and maintenance project.

4. Supply of food, water and shelters

The immediate provision of those items could be arranged locally by re-allocating or borrowing a certain amount of food and shelters. The requirement of food should be assessed against the possible number of arrivals at least over the next three months.

5. Trucks, fuel and warehousing

Northwest Somalia had a refugee population of 400,000, and HCR had about 50 trucks and trailers. Road conditions between the Berbera post and the Tagwajare were not so bad as in other areas. Consequently the transport of food for 10,000 and 20,000 arrivals could be arranged with the existing trucks. Up to a distance of 200 km, one unit of truck and trailer with a capacity of 20 tons is enough for 20,000 refugees. But HCR badly needed 15 water trucks with a capacity of 6 tons to transport water to a distance of 60 km for 20,000 arrivals. As the numbers grew rapidly, the supply of water became the top priority issue for the prevention of cholera. A new arrangement of fuel supply and warehousing was made to meet a comprehensive logistic requirement.

6. Health, sanitation and camp layout

The general health condition of arrivals was rather poor and the rain threatened the spread of epidemics. The control of cholera and anemia was crucial from the outset of the emergency. The selection of camp areas was probably the most important factor to safeguard the health and sanitation of arrivals, but it involved various political difficulties and unfortunately they were kept in a risky area. A mildly sloping area was provided almost one year later and the arrivals faced the risk of cholera during the spring rainy season.

The deployment of medical and sanitation experts was a pressing requirement.

7. Communication and administration

It was important to set up regular communication networks at the site of arrival; Hargeisa Sub-Office and BO Mogadishu. This was done fairly smoothly with additional radio equipment and the improvement of teleprinter facilities.

8. Lessons

- (1) To maintain a close relation of mutual trust and collaboration with central and local authorities, donor embassies, NGOs and UN agencies, particularly WFP, WHO and UNICEF
- (2) To proceed to a prompt assessment of influx and undertake purposeful early warning to HQs and to invite emergency experts and senior officers from HQs
- (3) To set up a relief plan which would cover at least the next 3 to 6 months.
- (4) To make all efforts for the selection of a reasonable mildly

- (5) To take advantage of existing stocks while arranging for local and external procurement of relief items
- (6) To organize promptly a task force and consultation meetings among all parties concerned
- (7) To strengthen communication and administrative networks and request necessary staff
- (8) To use audio-visual equipment and material for the assesment of population, health conditions and for communication and PR.

REPORTS AND COMMENT

Lowland Lao and Hmong refugees in Thailand: The plight of those left behind

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INTRODUCTION

Despite the diminished flow of refugees from Indochina and a waning of public and media interest in this problem, almost 200,000 Lao, Hmong, Vietnamese, and Cambodian refugees remain in camps in Thailand. In addition there are an estimated 75,000 to 90,000 Thai citizens who have been directly displaced or otherwise affected by this situation. The problems which these refugees face are increasingly less those of finding adequate food, clothing and shelter and are related more to the pace of resettlement and their uncertain future status if they are not qualified for third country resettlement.

This paper examined the status of two groups of Indochinese refugees in camps in north and northeast Thailand, the lowland Lao and Hmong. It focuses specifically on Thai government policies toward these refugees, the recently established voluntary repatriation program to Laos, the process of camp consolidation, and conditions in the large Hmong refugee camp at Ban Vinai in northeast Thailand.*

THAI GOVERNMENT POLICY REGARDING REFUGEES

The official Thai government position with respect to the current Indochinese refugee problem has remained relatively constant since 1975. This position was outlined recently by Squadron Leader Prasong Soonsiri, Head of the Thai delegation to the 34th Session of the United Nations High Commissioner for Refugees (UNHCR) Executive

Committee which met in Geneva in October 1983. He said that Thailand basically pursues an "open door" policy for displaced persons which rests on assurances provided by nations of third country resettlement of their continued co-operation in accepting refugees and support in finding a final solution to the problem. The Thai government has consistently emphasized that no durable solution to the refugee problem can be found until its basic cause has been attacked. This cause is the ". . . fighting brought on by the invasion of foreign forces or the intentional expulsion by a government of its own citizens" (Prasong, 1983). In this context Thailand has pursued a strategy of "humane deterrence" toward refugees while co-operating with the government of Laos in a voluntary repatriation program for Lao and Hmong refugees. In reaffirming this position, Thailand has emphasized that it is a developing country with limited resources and a significant portion of its own citizens still at or near a poverty level. Moreover, large numbers of Thai citizens have been displaced or affected indirectly by the conflict along the border, and a residual refugee population of 50,000 Vietnamese has remained in the northeast since 1946—1950 (COERR, 1982).

In practice this position appears to be somewhat more flexible and sympathetic to the situation of the Lao and hill tribes refugees located in camps along the Thai-Lao border.* The policy of "humane deterrence is intended to maintain existing refugees at a living standard below that of Thai citizens, thereby discouraging further movements of refugees into Thailand. This element of Thai policy was first established in 1981. Despite the spartan living conditions in most of the Lao and Hmong camps, the quality of life is visibly better than that experienced by Khmer and Vietnamese refugees in camps scattered along the Thai-Khmer frontier. Levels of international relief aid have been adequate to provide sufficient quantities of food, clothing, and medical services for Lao and Hmong camps. This fact has not gone unnoticed during the last few years by neighbouring Thai villagers whose mean annual per capita incomes average around U.S.\$87 (Meesook, 1980). It is partly for this reason that Thai authorities imposed a monthly salary limit of *baht* 350 (U.S.\$15.22) in December of 1983 for refugees working for international agencies within some camps. Up to that time there had been no upper salary limit for this type of work and refugees were averaging *baht* 400 (U.S.\$17.40) per month. However, this restriction applies to only about 2,000 refugees, who work in camps administered by the Thai Ministry of the Interior. Another 9,000 refugees are similarly employed in other camps under the administrative control of different govern-

*The material on which this paper is based was collected during 1983—1984 while the author was conducting research on rural migration and resource change in Loei province, northeast Thailand. This activity was funded by a Fulbright Grant; however, the opinions expressed here in no way reflect those of the Thailand United States Educational Foundation (Fulbright).

*The term *hill-tribes* is a general label applied to upland minority populations throughout mainland Southeast Asia which differ in ethnolinguistic and cultural characteristics from the more dominant lowland Thai, Khmer, Lao and Vietnamese. *Hmong* refers to a specific hill-tribe population often identified in popular literature as *Meo* and *Miao*. *Hmong* is now standard in scientific usage and also preferred by the people themselves.

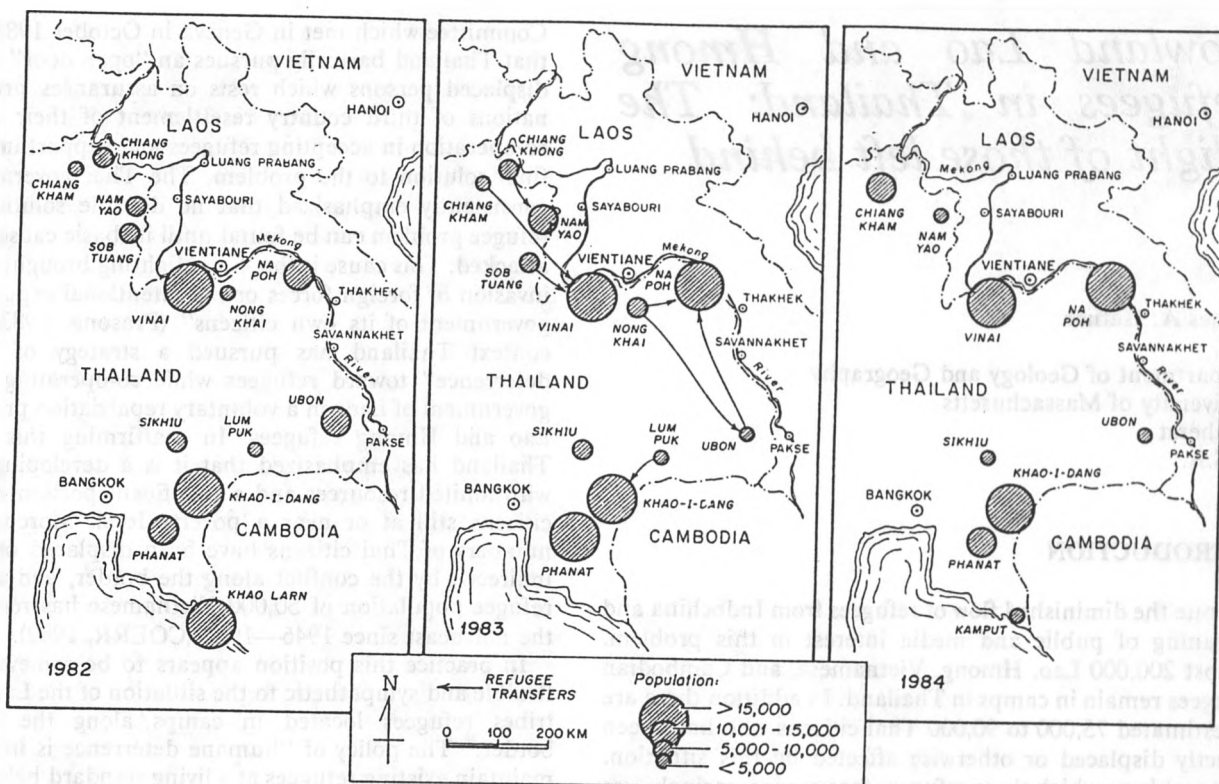


Fig. 1. Indochinese refugee camps.

ment agencies and are able to earn more income (COERR, 1983).

There is disagreement about the effectiveness of this policy and the implications of a large Lao and Hmong presence along Thai borders. Several prominent liberal Thai intellectuals and members of parliament from the northeast have argued for a re-opening of the Thai - Lao border, which has been closed, except for two border crossings, for over four years. In late 1983 an official Thai mission to Laos opened formal discussions on this and other issues, although no immediate change in policy resulted. Part of the argument for improved cross-border mobility is based on regional ethnic and kinship ties between the *Isan* (northeast Thai) and lowland Lao populations, the need to re-establish cross-border commercial contacts, and recent declines in tension along the two countries' common border. Local officials and merchants in Loei province which borders Laos on the Mekong River upstream from Vientiane, petitioned the Prime Minister in 1983 for eased border crossing controls citing substantive loss of trade and revenue as the grounds for their request. Traditionally, this cross-river commerce has been an important addition to internal trade in Thailand along the entire length of the common Mekong River border between Laos and Thailand (Hafner *et al.*, 1983). An opposing view is often articulated

by members of the Thai military and Border Patrol Police. They cite existing dangers from current Lao and Hmong camps along the river as centers for subversion and covert support of pro-Soviet *Pak Mai* (New Party) guerillas being trained at several dozen camps inside Laos. The Thai military has attributed frequent skirmishes along the upper Mekong River border between the two countries to this splinter group of the now outlawed Thai Communist Party. Regional political and military authorities in the northeast have also pointed to the resident Vietnamese refugee community as a cause for political instability and a source of funds for "spreading communism" in northeast Thailand. These allegations are of course very difficult to verify. However, it is likely that they have been a contributing factor in recent moves to consolidate these refugees into a smaller number of camps.

REFUGEE CAMPS CONSOLIDATION

It has been a distinct goal of Thai officials to reduce the number of existing refugee camps, especially those scattered in the remote and less easily monitored "security-sensitive zones" along the upper Mekong boundary with Laos (see Fig. 1). This consolidation has also been a function of the diminished flow into north and northeast Thailand of

lowland Lao and Hmong refugees. Since the peak period of refugee arrivals from Laos in the latter half of the 1970's, the number of new refugees diminished between 1980 and 1982. Consolidation has also had as a goal the "homogenization" of refugee populations along ethnolinguistic lines. From a practical point of view this would simplify administrative, processing, and service programs in many camps. During the peak years of refugee flow from Laos (1975—1981) there were as many as a dozen separate camps for Lao and Hmong refugees scattered from Chiang Rai province in the north to Ubon province in the northeast. Many of these camps had very mixed populations consisting of Kui, Yao, Lue, Thaidam, Htien, lowland Lao and others (see Table 1). The closing and consolidation of camps began in 1981 and by the end of 1984 it was expected that only two camps would remain open for lowland Lao and Hmong refugees; one at Ban Vinai in Loei for Hmong and a second at Na Poh in Nakhon Panom for lowland Lao (Fig. 1).

The four camps in northern Thailand were established early in 1976 to accommodate the large flow of Laotian

refugees. The population of each camp has remained primarily hill-tribes refugees, although lowland Lao have been represented. As part of the process of camp consolidation, and as the rate of refugee movement slowed, Sob Tuang, Chiang Khong, and Chiang Kham camps were officially closed early in 1982. The intention was to encourage some refugees to participate in the voluntary repatriation program begun in 1981, and others to be relocated to Ban Vinai camp in northeast Thailand. However, an unexpected increase in refugee movements from Laos to Thailand and difficulties with the voluntary repatriation program have meant that these goals were only partially met. Although now officially closed, Chiang Kham and Ban Nam Yao camps still support over 10,000 hill tribe refugees from Laos (Fig. 1). The increased rate of refugee arrivals from Laos since 1982 may, however, have the short-term effect of keeping these camps unofficially open.

The consolidation process has not proceeded without creating some additional hardships for refugees and the international voluntary relief workers who assist them.

Table 1. Lao and hill tribe refugee border camps in Thailand

Camp	Location	Date opened	Population size and composition		Camp status
			1982	1983	
Chiang Khong	Chiang Rai	1976	6,173	Hmong, Kui, Lao, Yao, Lue, Thaidam	Closed (February 1982) Population moved to Ban Nam Yao and Ban Vinai camps
Chiang Kham	Payao	1976	3,000	Hmong, Kui, Lao, Yao, Lue, Thaidam	Closed (February 1982) Population moved to Ban Nam Vinai camps
Ban Nam Yao	Nan	1976	9,982	Hmong, Lao, Kui, Htien, Yao, Lue	13,477 Hmong, Lao Planned to close, 1984. Population to B. Vinai
Sob Tuang	Nan	1976	7,058	Hmong, Kui, Lao, Lue	Closed Population to Ban Vinai
Ban Vinai	Loei	1975	33,500	Hmong	39,000 Hmong Designated as main Hilltribe and Hmong camp
Nong Khai	Nong Khai	1976	8,800	Hmong, Lao	Closed (March 1982) Hmong population to B. Vinai, Lao to Na Poh and Ubon
Na Poh	Nakhom Panom	1977	11,715	Lao	18,467 Lao Designated as main Lao camp
Ubon	Ubon	1975	11,268	Lao	Closed (December 1982) Population moved to Na Poh



Fig. 2. Ban Vinai refugee camp, Loei province, northeast Thailand.

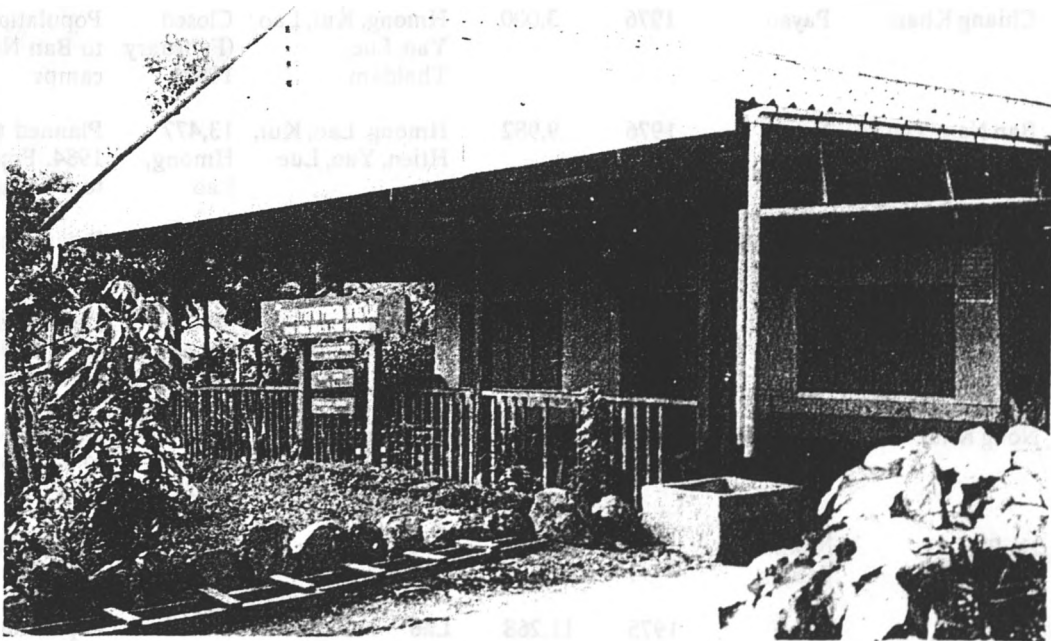


Fig. 3. World Vision funded hospital at Ban Vinai.

Many of the current camps were designed and built to accommodate much smaller populations than they currently contain. Ban Vinai, for example, was originally designed to support 20,000 people in an area of 116 ha (approximately 200 people/ha). By 1984 this density had almost doubled to 380 people/ha as the camp population grew to over 44,000 (COERR, 1984). Delays in transferring people from the smaller camps as these closed have frequently left refugees without some services. Pressure on available space and facilities has been especially great in those camps selected to remain open in the future. Expectations that these pressures might be relieved once the voluntary repatriation program was formalized with the Lao government have not been realized.

THE VOLUNTARY REPATRIATION PROGRAM

In 1980 the Thai and Lao governments, with the support of the UNHCR approved a program for the voluntary repatriation of lowland Lao and Hmong populations now in camps in Thailand. This program was generally regarded as an effective solution to the disposition of Lao and Hmong refugees who did not meet requirements for third country resettlement or did not wish to consider such an opportunity. Procedures for repatriation involve the submission of names of potential voluntary repatriants to the Lao government which makes a case by case determination of eligibility. Thai authorities and the UNHCR representatives have co-operated in providing these people with a "resettlement package" of fishing nets, clothing, and some farm tools. However, the program has not proceeded smoothly, and was suspended for seven months in the first half of 1983. Unsettled conditions along the border and protests by Lao authorities that they were unable to manage and accommodate repatriated refugees because of internal economic conditions were cited as the main reasons for the program's interruption. Officially, approximately 2,400 lowland Lao and Hmong are reported to have returned to Laos in the first three years of the program. Unofficially, it is generally believed that several thousand additional refugees have returned to Laos on their own.

The repatriation of Lao and Hmong refugees, not unlike the resettlement of Vietnamese and Khmer refugees, has frequently been used by the Thai authorities to exert pressure on third countries of resettlement to accelerate their acceptance of refugees. In July of 1983 a group of 400 lowland Lao in the Phanat Refugee Processing Center near Bangkok, were abruptly moved back to Ubon camp in the northeast by the Thai Ministry of Interior. This group had been waiting for resettlement for six months and had already completed necessary processing procedures. Unofficially, it was stated that they would be repatriated to Laos as a protest against delays in moving refugees to third countries. No further word was heard from this group until January 1984 when it was reported that 400 lowland Lao at Ubon were being prepared for repatriation to Laos under the voluntary repatriation program. Throughout the weeks that followed the resumption of the program in November

1983, small groups of Lao and Hmong, totalling 135 people, were returned to Laos from transfer points at Nong Khai and Chong Mek near Pakse in southern Laos.

The process of repatriation has been slow and it is difficult to predict whether or when it will be accelerated. For many hill tribe refugees it represents the only viable option to remaining in refugee camps. Officials and voluntary service workers at Ban Vinai reported during interviews in 1983 and 1984, that many Hmong expected ultimately to return to Laos and therefore were not considering third country resettlement. Some do not qualify for third country resettlement, or, if qualified, are reluctant to take this step. Their choices are further clouded by uncertainty regarding whether they would be accepted for repatriation, apprehension about the outcome of that decision once they reached Laos, and doubts as to whether the Thai government will continue to sustain them indefinitely. Proposals have periodically been advanced to establish a separate and 'permanent' hill tribe resettlement area in northern Thailand where more land would be provided for farming and some measure of autonomy established. Although these suggestions have been routinely rejected by Thai authorities, the expansion of Ban Vinai camp and the opening of the related Nong Daeng Agricultural-Vocational Training Project nearby suggests that policy may be undergoing modification. At present it is certainly not clear what ultimate form of mutually acceptable solution to the problem of the status of this group of refugees will be reached.

BAN VINAI: THE HMONG REFUGEE CAMP IN NORTHEAST THAILAND

The Hmong refugee camp at Ban Vinai is located some 12 km south of the Thai-Lao border in the Pak Chom district of Loei province. This camp is 640 km by road from Bangkok and slightly more than two hours from the closest Thai provincial town, Loei city. The siting of this camp has been advantageous in terms of its location near border areas frequently used by refugees who cross into Thailand from Laos. The Mekong River at this point is sufficiently low during the dry season (February-June) so that refugees can easily wade or float across its narrow channel.

The neighboring uplands are heavily forested and lightly settled by Thai farmers. Until the middle of the last decade this area was a haven for guerilla forces moving between Laos and Thailand, but the suppression of this movement has substantially removed this factor as a serious concern. However, the region remains classified as a 'security sensitive area' and border friction with Laos has not diminished official or local apprehension over the presence of the refugee camp.

Outwardly, Ban Vinai bears little resemblance to the Khmer Camps huddled along the Thai-Cambodian borders. One's first impression is simply of a rather large Thai village. There are no barbed wire fences, watch towers or armed sentry posts which might suggest that it is something other than a rural village. Opened in December 1975 on



Fig. 4. Bathing at a tube well.



Fig. 5. The daily market providing food staples and consumer goods for Hmong refugees.

116 ha of land to accommodate hill tribes refugees from the Laotian province of Sang Khong, it has become the largest Hmong camp in Thailand and possibly the largest single Hmong settlement in the world. Over 90% of the population is Hmong. Between June 1983 and June 1984 the camp grew from 33,000 to slightly more than 44,000 people (COERR, 1984). The primary sources of this growth have come from the frequent redistribution of refugees from other camps, the continuing flow of new refugees from Laos, and the effects of a birth rate of 5.4% per annum.

When the initial group of Hmong refugees was established at this camp they had already organized themselves into clusters based on their patrilineal clan system. At least ten of the traditional twenty Hmong clans are represented today in the nine housing centers at Ban Vinai. Relocated Hmong from Nong Khai, Ban Nam Yao, and other camps were thus easily accepted into this system. Cultural traditions and practices remain strong and have been encouraged by administrators and voluntary agencies working in the camp. A Hmong Cultural Preservation program supported by Caritas Italiana has encouraged refugee efforts to preserve traditional holidays, forms of dress, and other aspects of Hmong cultural heritage. Polygamy is still widely practised by the Hmong and men may have as many as ten wives, although not all may reside in the same building. The diminished male population resulting from earlier Hmong military activities, deaths during their migration to Thailand, and social obligations to marry wives of deceased male family members are important factors in the continuation of this practice. In one case, which gained some notoriety in the camp in 1983, a 41 year old male had eleven wives ranging in age from 16 to 52 years and was actively pursuing negotiations to wed a 14 year old girl. Bride price or dowry paid in such marriages can be substantial considering the limited income earning opportunities in the camp. Dowries of U.S.\$150—400 are not unusual and may be paid in silver, livestock, household goods, or Thai currency. As it is a factor in the high rate of natural population increase, camp administrators have made efforts to discourage this practice, but they have generally been unsuccessful. There is also a widespread resistance to western medical technology and preventive health measures. In December 1983 two Hmong women suffered miscarriages shortly after a camp-wide vaccination program for tetanus. The association of these two events by the Hmong greatly increased tensions with the medical staff and has set-back progress made in gaining their acceptance of some basic health care practices.

The effects of the rapid growth of the camp's population are apparent in the problems of space that the population currently faces. In December 1983, a large group of new refugees arrived from camps being closed elsewhere in Thailand. The eight housing centers within the camp were already full and new land was being sought to provide additional housing. It has been very difficult to acquire land owned privately or by the government in adjoining areas. Unfortunately, the only available space within the camp was the graveyard and other land being used by a Catholic Office for Emergency Relief and Refugees (COERR)

Hansen's disease rehabilitation and housing center. People afflicted with leprosy are treated by the Hmong almost as harshly as those who marry within their own clan, so the graveyard was designated as a new housing center (Figs. 2 and 3). These attitudes towards certain diseases had earlier forced the COERR program to petition local officials for a small plot of land outside of the camp where its prosthesis and rehabilitation programs could be located.

While a variety of medical, educational and handicraft activities are run in the camp by voluntary relief agencies, housing and other facilities are often rudimentary. Potable water for drinking, bathing and washing clothes comes from open tubewells or rows of overhead galvanized metal tanks (Figs. 4 and 5). As the dry season approaches, water supply in this drought-prone area of Thailand is a serious concern. There is no significant sources of surface water near the camp and local hydrological conditions have made sanitation and sewerage disposal a persistent problem (Howard, 1979; Waters, 1984). Housing is constructed of concrete block and thatch roofing in the older 'long-houses,' but many newer dwellings built with scrap wood, thatch, and corrugated tin sheet are temporary in appearance.

Little land within the camp is available for agriculture. Nevertheless, the Hmong have developed a network of intensive vegetable gardens which is woven throughout the different housing, market, medical, and recreation areas of the camp (Fig. 6 and 7). At one point these gardens spill beyond camp borders into a small 2 ha plot along the access road. In order to use this land, tedious negotiations with Thai authorities and local villagers were required. Periodically, some of the refugees have illegally cultivated land outside the camp. Hillslopes adjoining the camp are generally unused by Thai villagers because of their steep slope and poor soils, but have yielded important food staples (rice) for camp residents and some cash crops (sorghum and cassava) which can be sold or bartered through local markets. This practice has led to frequent disputes involving local villagers, Thai police and military authorities. Despite these problems some initiatives have been taken to expand agricultural opportunities for the Hmong in combination with a vocational and training program outside the camp.

In 1979 the Thai Ministry of the Interior (MOI) and the World Vision Foundation (WVF) started the Nong Daeng Agricultural and Vocational Training Project 8 km northeast of Ban Vinai. This project seeks to provide a framework for expanded agricultural and vocational training for local villagers and selected Hmong refugees. In addition to 80 ha of farm land cleared from secondary upland forest, the project site includes three small reservoirs for fish raising and irrigation of rice fields, a small orchard, and programs in pig, poultry and duck raising (COERR, 1984). Apart from expanding agricultural opportunities for the Hmong, it will improve farming systems technology for local farmers and establish the foundations for better mutual understanding between local Thai residents and the refugees. However, even this project has been plagued by problems and in 1983 COERR assumed responsibility for its financing and supervision. Most significant perhaps, in

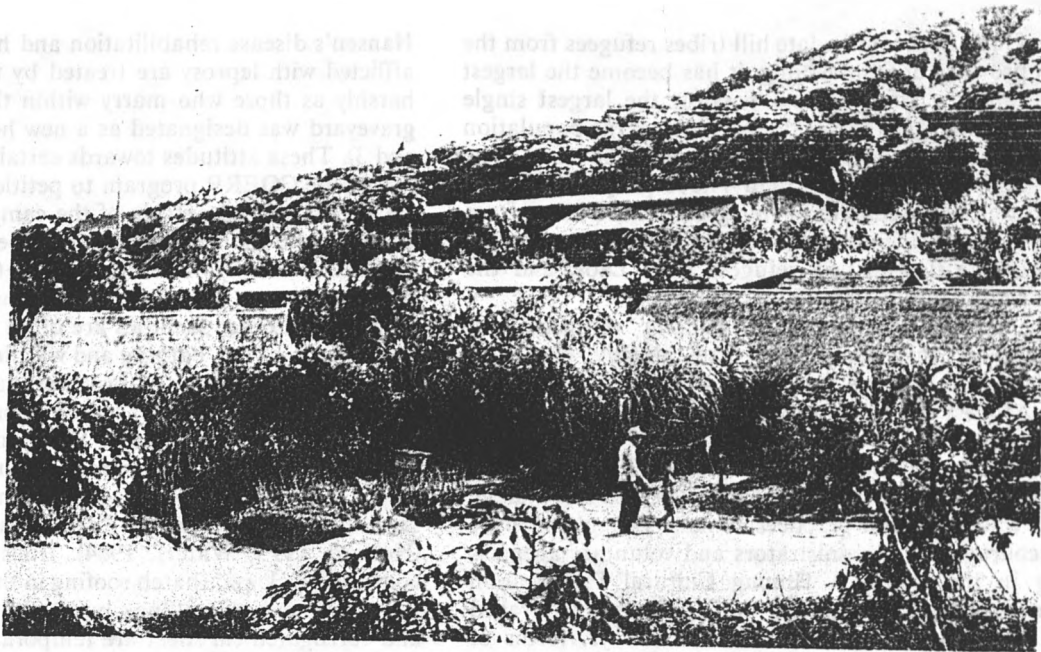


Fig. 6. Hmong vegetable gardens and long-house residences in Ban Vinai.

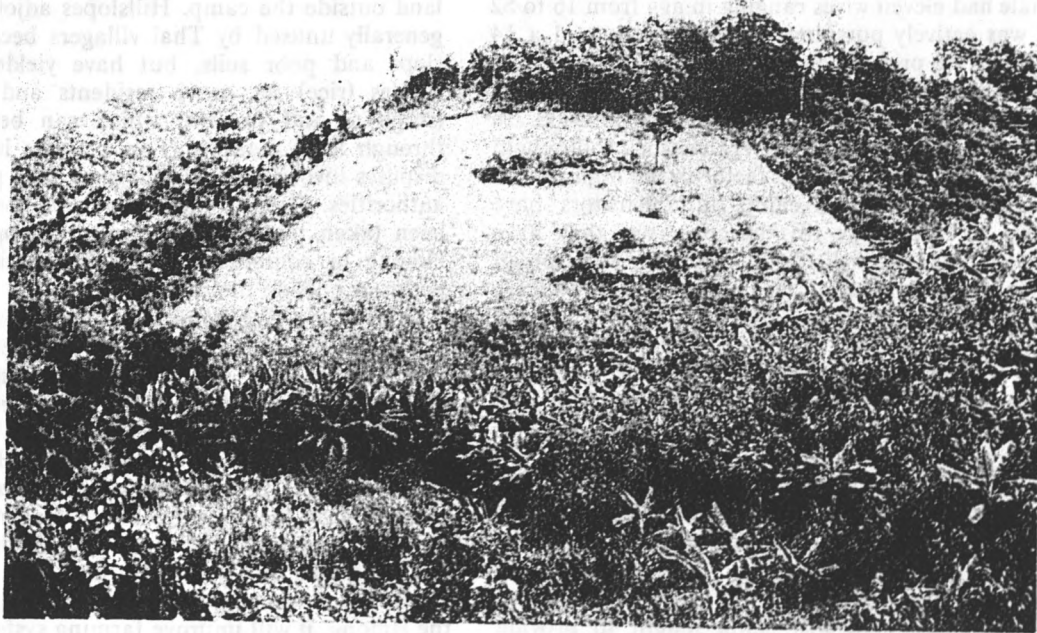


Fig. 7. Upland dry rice grown by refugees on hillsides bordering Ban Vinai camp.

this transfer, is the growing trend of voluntary agencies to reduce or shift their support to larger international umbrella agencies as priorities in refugee relief work have shifted from Southeast Asia to Africa.

Despite overcrowded camp conditions, slow rates of resettlement to third countries, uncertainty surrounding repatriation to Laos, and a questionable future in Thailand, new refugees arrive almost weekly from Laos. Over 300 Hmong crossed into Thailand near Nong Khai in December 1983. One month later a group of 100 students from the Dong Dod Teachers Training School in Vientiane reached Sri Chiangmai. This group was escaping a reduction in schooling to 3 hours a week, forced labor, conscription into the Lao army, and requirements that they study Russian and Chinese. Yet, these events seem not to have changed the attitudes of those already in Ban Vinai nor stimulated any reassessment of refugee or resettlement policy.

CONCLUSIONS

While Thai government policy towards this group of refugees may be more sympathetic and, indirectly serve to encourage others to flee Laos, it has not contributed to the attainment of a solution to the problem. Lowland Lao and Hmong remain generally unwilling to accept third country resettlement, are hesitant to participate in voluntary repatriation programs, yet appear firmly committed to an

ultimate return to their homeland. The process of camp consolidation may have alleviated some logistics and service delivery problems, but has also reinforced the Thai apprehension over having such large and politically sensitive refugee populations so close to its borders with hostile neighbors. As international support for these refugee groups declines, which it may be doing in the face of a renewed refugee crisis in Africa, the Thai government's resolve to sustain them may also decline accordingly. Hardening of the Thai position on long-term responsibility for Indochinese refugees may consequently signal a new direction in their policy. All too frequently it is the plight of those refugees left behind which is ultimately most devastating.

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Disaster
Management Center

University of Wisconsin
Department of Engineering Professional Development

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

Presenter: Christian Harleman

1. Topical Focus: Management Techniques
2. Country/Region: Mali
3. Problem Description:
(Attached)
4. What was Learned:
(Attached)
5. Special Comments:

Management during emergencies

BACKGROUND

The republic of Mali is a land locked area occupying 1,200,000 km² of which two thirds is in the Sahelian region.

The country belongs to one of the most underdeveloped countries in the world with a population of 7.2 million people. Thirty percent of this population is of usuradic origins mostly located in the regions of TimGocton and Gao.

Since 1970 the country has been affected by chronic drought and at the end of 1983 several reports emphasized the deteriorating situation which was described as an economic and ecologic disaster. Due to this situation the government of Mali through UNICEF in Geneva sent a request to the Swedish government for assistance in the form of utilization of the Swedish special unit for disaster relief.

A first unit arrived in Mali mid June 1984 for discussions with UNICEF and governmental officials.

After discussions it was decided that the population in the region of TimGocton could be reached by health/nutritional teams which the objectives for assistance the vulnerable groups as lactating/pregnant women and malnourished children.

At the same time the teams would participate in the rehabilitation of health institutions and undertake activities within UNICEF survival program as vaccination, nutritional surveillance and training of Malian personal. The vaccination against measles was emphasized.

Problems and Solutions

To the end of June the Swedish teams arrived in TimGocton together with equipment and medical supplies. The teams arrived with a C 130 Hercules from Royal Swedish Air Forces which immediately after the arrival had to return to Dacar and purchase additional cars which were missing in TimGocton and urgently needed for the forthcoming surveys.

The surveys were carried during three weeks in July and it was found that the drought-affected population was scattered over a large territory with no adequate health structure, that the nomadic concentrations were in desperate need of food, that measles already had taken a large number of children below 6 years age and that the teams were not allowed to assist nomads scattered round the town of TimGouton. At the same time food for a generally feeding program was missing and disagreement conceiving available funds for the desperate need of food.

The logistical arrangements and needs in form of transport means and supply/resources were not analyzed and at the same time there was no planning for forth coming demands.

However, a plan was worked out in coordination with central and local authorities and later approved by UNICEF.

In spite of the initial difficulties the work went smoothly through September, October for mid November when no food was available.

An examination was done and it appeared that WFP was short of food and was not expecting delivery from the donors before mid February/March. This gap in food delivery apparently was depending on a very late assessment of the current food situation and considerably delayed the appeals and distribution plans to the donors.

By purchasing locally this inconvenience was overcome and the food distribution in TimGocton could continue.

As the Swedish Unit in accordance to the decision made by the Swedish Government only was allowed to operate in six months, it had been decided in an early stage that the actual programs should be handed over to local authorities. Accordingly a training program had been carried out right from the beginning. To the end of the operation when the responsibilities were to be handed over to the local authorities there were no difficulties concerning immunization programs or nutrition education but regarding food distribution it was flatly refused.

In order to solve the problem and ease the situation four members and later one had to remain further six months and the program became integrated with UNICEF health programs.

Summary

In spite of all initial difficulties concerning information, policy, logistic and responsibilities the operation and its results turned out well - but the delay of almost one and a half months was mainly depending on weak management and a UNICEF office not fully and properly staffed.

Recommendations

Agreement

Normally an agreement should be worked out ahead of time by government officials and the head office of the UN agency concerning the utilization of an emergency unit (EU). The representative of the UN organization concerned must obtain information at early stage so that the agreement will be in accord with the current situation and available resources and the responsibilities must be clearly assigned.

Available funds must be discussed in advance and disposed in conformity with a predetermined budget particularly as these funds often will be at disposal from governmental sources as well as from the UN organization.

Before an operation begins requirements, frames for the budget and cash flow must be established as well as the accounting system so as to facilitate the justification of expenditures and needs.

Policy

The policy of the UN organization in such an operation must be clear and the emergency units have to operate accordingly. At the same time full information must be provided about other related and ongoing programs in th country. Also the UN Staff must be kept well informed about newly arrived organizations (units) and forthcoming operations.

Administration

As an emergency operation increases the demands put on the administrative core this group must be well defined and have clear areas of responsibilities for each section. An organization chart or well performed personnel briefings on this matter will avoid misunderstandings. Written rules or directives concerning passport, import-facilities, effecting local purchases, transport requirements, etc. must be clarified in written form and made available to all concerned.

Logistics

Logistic arrangements are crucial particularly at the very beginning of an operation and the initial needs must be analyzed:

- o the need for communications (radio), available frequencies and adaptability to existing networks
- o the need for transport means available and if locally purchased vehicles are used also the maintenance facilities available
- o what kind of supplies are required at the initial stage and what will be required thereafter at regular intervals
- o kind of supply/resources are available locally i.e. storage capacity, delivery times, etc.
- o one person must be appointed and be in charge of all preparations

Above preparatory measures must be taken in consideration before the arrival of any emergency - (other) team. After the operation has begun the following points should be considered:

- o appointment of a liaison officer with defined duties and responsibilities
- o directives to be issued
- o organization of a regularly planned supply
- o investigation of the capacity of the emergency - (other) unit to expand or diversify operations according to possible developments
- o planning of the forthcoming demands

Above mentioned must be coordinated with the emergency units respectively.

Concerning food delivery from the donors these must be influenced and alerted well in advance

- o the assessment of current food - situation must be done as soon as possible after the rains
- o an improvement of the time implementation (forward planning) so plans and request will reach the donors well in advance
- o donors to respect distribution plans particularly those concerning time and destination.

Hand Over

There are no solutions or general recommendations.

It seems as just food distribution is one of the most sensitive areas and in the time of emergencies when tension might be high between ethnic groups, tribes and families, nobody is prepared to take the responsibilities.

Leadership

Good leadership depends primarily upon good communications in the technical and personal sense and the head of an emergency unit must be informed from the start as to policies, directives and objectives.

Introduction to other useful contacts must be assured and regular meeting with the heads of the various emergency - (other) units must be upheld.

Visits in the field must be carried out and should be effected by staff members working at the national headquarters. Implementation of planning must improve so as to avoid difficulties and problems for the various units working in the field.

Conclusion

For the emergencies when all requirements are on one organization; and afterwards it was found that us all turned out so well it is easy to blame just that particular organization.

I think that an expanded and extensive training program will facilitate other emergencies but maybe another selection process must be considered in order to be better prepared for emergencies.

Case Study

The Refugee Emergency in Eastern Sudan 1984, 1985

1. Introduction

- History of Refugees in Sudan
- Too many -- too long
- Breakdown by nationality
- Mode of settlement
- Policy of Sudan towards refugee
 - Policy attracting more and more refugees there
- Persistence and continuity of influxes then growing resentment

2. COUNTRY/REGION

Sudan, the Country

- * One of the 25 least developed countries in the world.
- * Political, social and economic problems
- * Poor infrastructure and means of communication
- * Vulnerability

East Sudan

- * One of the least developed regions in one of the least developed countries
- * Marginal socially and economically
- * Strategic in terms of national security since it borders Ethiopia and Saudi Arabia, refugees are aliens!
- * Many of its elements maintained historical and ethnic contacts with Eritreans and Ethiopians. For many seeking asylum in Sudan is a social rather than political issue
- * However, since 1967 when the first influx of Eritreans occurred, Eastern Sudan more or less witnessed continuous influxes and trickling of refugees. In 1967 there were only 30,000 Eritrean refugees, now the estimated number is more than 850,000 amounting to almost 40% of the region's total population of 2.2 million.

This high concentration of refugees and their long period of stay has withered away many of the positive sentiments refugees received in their early presence. The unassisted spontaneously settled refugees (amounting to 46% of refugee population and concentrating in the three major cities of the region). Refugee has taxed beyond the limit city service creating growing sentiments of resentment and tension.

The Context and Environment of the Emergency

Politically: Refugees given their number and their root political causes of their cases, taken into account the tense relationship between Sudan and Ethiopia, are now looked on as a source of political and diplomatic

embarrassment to the country. The very presence of the Eritrean refugees in Sudan has led Ethiopia to side with John Gargang and blackmail Sudan. The Eritrean case however has grown into a political controversy in the country's politics. However this situation in many cases compromised the initiative of the refugee administration when it seeks political support and backing. Fortunately enough Sudan at the time of emergency was experiencing a similar emergency situation of drought and famine. It was then easy for the political and social set up to appreciate the situation.

Socially: The impact of the unassisted spontaneously settled refugees in towns has created a strong social resentment among the region urban and rural population. Sentiments many times grew high on very minor and trivial incidents. However the way UNHCR dealt with our plight towards supporting the over-burdened services in towns has led to these tendencies. They can easily be defused if assistance was extended to balance somehow the boredom of the urban refugees. Besides refugees were imagined by many as a source of certain social evils. Many associate them with prostitution and robbery.

Economically: the country as a whole is experiencing a dreadful economic situation. The sixteen years of dictatorship has crippled the economy and rendered the country heavily indebted. Food items were scarce and found costly. Foreign currency was in short supply and the balance of payments was adverse. In such a situation, refugees, who would have otherwise provided a source of cheap labor, were considered as an extra-cause for scarcity and higher prices. Many started quantifying refugee impact on the economy and they were held responsible for many economic problems.

Administratively: The Sudanese civil service once hailed as the best in Africa was led into chaos, corruption and incompetence. However the policies of recent dictatorships had led many civil servants to leave the country either pulled by the petro-dollars or pushed by the arrogant merciless regime. The refugee Administration however has to deal with and list the support of such a crippled apparatus yet in vain in many cases.

3. The Problem Description

- A. History of famine in Ethiopia, Eritrea and Tigray. Reported 1980
- B. The political factor - Ethiopian - regime refused access to relief agencies and to UN agencies into areas of Tigray and Eritrea
- C. Local displacement from East into central and West Tigray then into Sudan
- D. The Tigrayans (REST-TPLF) started transferring their people across the border into Sudan where they could be relieved. Hence the movement was organized but in no coordination with Sudanese authorities. The GPM in East refused to accept them as refugees and they were classified by him as drought victims. He suggested instead a committee to deal with their case awaiting their promised return to Tigray. However at length the GPM was overruled from the center and the Tigrayans were accepted as refugees and were termed "people of concern to UNHCR." By the end of Sept. 1984 the estimated number of refugees crossing was 4000. By December '84 the number of new arrivals was 87 thousand.

January 1985	60.5 thousand
February 1985	36 thousand
March	45 thousand
April	33 thousand
May	5 thousand

In April, some started to return.

- E. The influx had been organized as such by Relief Society of Tigray. It was massive and intense, and was concentrated into an already heavily impacted area with refugees. Refugees arrived in very bad shape, impoverished and malnourished. Later the outbreak of measles and cholera duly claimed hundreds of their lives.

4. Lessons Learned

- A. Major lesson drawn was the importance of getting an early warning system with supporting information systems and documentation, data banks. The system should be developed to provide for reliable information that needs to be coordinated, disseminated, evaluated.
2. The vital need for forward or contingency planning. It was almost certain that for every dollar spent on risk reductions (this includes E.W.S.--Early Warning System) hundreds or thousands are poured into disaster relief program. The costs incurred during that emergency would have been far less if an E.W. system was in place and a contingency plan was drawn. In our situation many lives claimed by measles and cholera could have been saved if there was an E.W.S. and if a contingency plan was drawn.
- C. Contingency funds and resources must be made available to national authorities to take the initiative.
- D. Nationals should be trained in emergency management. They will be more at hand, more knowledgeable in many situations than experts, they are less expensive and more committed.
- E. It is very difficult to manage so sensitive a situation while you lack the political and administrative support. Difficult times were encountered during the emergency in attempts to enlist the support of Governors and Ministers.
- F. The quality of leadership and principles of personnel administration are very crucial. It is rather the art of management and the humanistic democratic approach that will count in emergency situations. However, systems and discipline are also needed.
- G. Food and other forms of assistance provided should also be extended to the impacted areas especially if they are suffering as well. Otherwise prejudices might develop that would endanger the social and physical security of the refugees. Hence the concept of protection need to be extended to extra-protection social and economic measures.

- H. Aid provided should try to complement not to substitute refugee efforts and initiatives towards helping themselves with whatsoever materials and assistance they can muster. Paternalistic attitudes will lead to misconceptions and dependancy and would color the image of the refugees in the long run.
- I. Food aid in particular seems to be geared more to their needs and satisfaction of donors than the recipients.
- J. NGO's who proved to be extremely helpful, flexible and resourceful need to develop their assistance delivery systems in accordance with the national systems. Services will sooner or later be passed over to the national authorities.
- K. Partners in an emergency need to sit back and assess and evaluate their experience and to feed back their decision-making mechanism. They need to establish their codes, guidelines, standards and procedures so that they can promote their prompt response, cut down their costs and can develop a more flexible and feasible mechanisms and techniques of administration.
- L. UNHCR should be very discreet in its relations with host governments specially when those governments believe that they as the first donors are assisting UNHCR and not the vice versa. In Sudan, refugees were considered the responsibility of the international community and Sudan is just an embarrassed recipient of refugees because of the mere facts of its geopolitics. The tendency of UNHCR to create its own parallel structure during the emergency was believed to be a step towards operationalism and substitution of the national administration.
- M. UN system should develop some ways to contain and manage such situations as developed in case of Tigrayans and Eritreans, i.e. people were forced to be displaced because their government refused access to their areas.

5. Special Comments

How was the Emergency managed?

COR was originally established as a government unit to deal with refugee influxes which are more or less an emergency. The office has paradoxically two forms of establishment: the Head Quarters paid by the government and receiving a limited support from UNHCR, and the projects totally funded by UNHCR. This resulted in two terms of services: a career service in the Head Quarters and a secondment hire-and-fire relationship in the projects. However the hire-and-fire relationship created a dynamic personnel situation which provided an extra measure of control in the hands of leadership. This, together with other factors, provided a strong leadership in the East to which a great deal in the success can be attributed.

The GPM office in East Sudan faced by the unprecedented influxes of refugees had to quickly re-structure its establishment and pull its human resources. New area levels were later established to provide field

supervision over the camp management (the organogram). Those who were thought to be well experienced in refugee administration were drawn for different refugee settlements and assigned field responsibilities. Many were drawn from agriculture and veterinary sectors who were then redundant in a sense. The idea was to economize in personnel recruitment and in enlisting experienced staff. This principle had run all through the emergency as I believe it reduced much the cost of administration and helped a lot in meeting the managerial demands in this situation.

Though no job descriptions were strictly provided, the caliber of the staff deployed at area and camp levels provided suitable and competent guidance to all personnel. Enough power and authority was delegated and the span of control was well narrowed by the new levels. However the unity and chain of command were strictly maintained and were further promoted by the continuous discipline, monitoring, supervision from the leadership. Morale was kept high through the continuing presence of leadership in the field and by the many attempts to render the very difficult and harsh work conditions tolerable and meaningful. The field staff was well paid compared to other refugee administration staff and to the government workers at large. This enabled the administration to recruit the best elements and to motivate them both internally and externally by endeavoring to cater for their expressed needs and wants. In this way the group dynamics was maintained and a team spirit secured.

At an early stage, and given the unprecedented influx of refugees and the acute emergency situation that erupted, emergency and disaster experts were badly needed, consultants and extra-technical staff were to be introduced to advise and complement the already existing technical staff who were given full autonomy and provided with all support.

A plan of operation was to be drawn to provide a framework for decision-making and organization - though the plan has only been completed in May and after more than nine months from the start of the emergency yet the emergency experts (i.e. Fred Cuny and Kent Hardin) were of great help in creating an orderly response to the dictates of the situation. The plan had been developed as comprehensively as possible and was produced in full cooperation from part of the refugee administration. The plan provided an excellent guide towards assessing, quantifying, and budgeting needs and though it had been a reference to COR people it was a source of embarrassment to UNHCR with its outstretched resources and entrenched bureaucracy.

Coordination forums within the refugee administration, at both central and regional levels, were established and the coordination process was central. Monthly coordination meetings were organized and attended by GPM personnel, UNHCR, at H.Q.s and field and NGO's coordinators and some field staff. The COR many times attended from Khartoum. These meetings provided an excellent chance for exchanging ideas and views, assessing situations, identifying problems and anticipating difficulties and in coordinating efforts and assigning rules. They provided a well acknowledged advisory mechanism for decision-making and monitoring.

To preempt any resentment from part of the local population in areas impacted by refugees the refugee administration had adopted an integrative approach in providing services. Nationals were allowed access to water, health, sanitation, milling and other services provided. Many were compensated for the illegal occupation of their agricultural lands in the wake of the emergency.

The media locally and internationally was well managed and easy access for the media people was secured at both central and regional level. Donors were also provided all possible access to see to it that their donations were received by beneficiaries. The efficiency with which the whole situation was managed was quite enough to enlist more support and more donations. And though this emergency program has adversely affected other programs designed for the self-sufficiency of refugees, the impact provided country and NGO's donation were quite remarkable.

The UNHCR offices on the other hand took more time to appreciate the situation, and yet once the emergency was understood, were quick in deploying their staff and mustering donations and NGO's to the rescue. The experts and consultants they introduced have been of great help in containing the situation and providing a guidance and training opportunities to the local staff. However, the members could have been less.

At the central level, the COR provided the overall supervision of emergency operation, secured the political support, coordinated at that level with UNHCR Rep. and NGO coordinators, and with relevant governmental departments.

At this COR level, agreements whether bilateral or tripartite were formulated, legalized and signed and COR at center has to see to it that those agreements are properly adhered to, revised and amended.

At COR level also, budgets that were prepared with intensive field participation and feedback were enforced and discussed and submitted to UNHCR. Budgets were used as a primary measure of planning and control.

REPORTS AND COMMENT

The work of the Austrian Relief Committee for Afghan refugees — 1984

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GENERAL SITUATION OF AFGHAN REFUGEES

Since 1979 Pakistan has been accommodating an influx of Afghan refugees, who have become the largest single population in the world, estimated at approximately three million at the end of 1984. Since 1982 the numbers have more or less stabilized, but during 1984 there were still between 8,000 and 9,000 people coming over the border each month. Six hundred thousand refugees have gone to Iran and thousands more, especially from urban areas have taken refuge in the West and Gulf countries.

The registered refugees in Pakistan live in 300 tent villages. Seventy-four per cent of the refugees are living in the NWFP, 20% in Baluchistan and 4% in Punjab. The majority are Pathans from the areas bordering Pakistan, so at least they have language in common with the local population, while many Baluch are registered in Baluchistan; there are also smaller numbers of all the other ethnic groups of Afghanistan, such as Nuristanis, Tajiks, Uzbeks, Turkmen and Mongols. They are all Muslims. They are almost all from rural areas, which creates problems in Pakistan where they have no access to the land which was always their livelihood. However, in many parts of the country a substantial part of the labour force is Afghan, and many of the relatively few craftsmen and technicians have been able to find or create work on the local markets, as the Government of Pakistan does not restrict either their movements or economic activities — but this has created resentment among locals.

Within Afghanistan, fighting, heavy bombardment and reprisals against civilians persist. There is no sign of political change in the near future. Therefore the continuation of relief aid is vitally important. The Afghan refugee problem will be long term and therefore long term programmes are necessary for a solution, besides relief assistance on a daily basis.

EFFORTS OF THE PAKISTAN GOVERNMENT, UNHCR AND VOLAGS

The Pakistan Government, UNHCR and all VOLAGS working with Afghan refugees, have come to the conclusion

that self reliance is the only answer to the long term problem. All concerned are developing their assistance accordingly, e.g. integration of the health systems within the tent villages, education programmes, vocational training and training of refugees in areas such as irrigation, forestry and road building. Veterinary services are provided for the approximately 2.7 million animals the refugees have brought with them from Afghanistan and approximately 88,000 children are going to schools in their respective camps or in cities.

Among the 3,000,000 refugees living in over 300 tent villages are thousands of skilled and semi-skilled people, who could become self-sufficient in their occupation with the right aid.

ARC'S AID PROGRAMME IN PAKISTAN

(i) Basic Health and Sanitation Programmes

With the unlikelihood of any solution in the near future to the refugee problem, we have been extending our work for the treatment and prevention of diseases by educating the refugees to help themselves in areas such as hygiene, nutrition, simple home remedies and with the education of community health workers within the camps.

The Sanitation and Basic Health Programme covers the settled areas of NWFP and Mianwali (Punjab). From July 1982 to date it has been sponsored by UNHCR, with some financial support from CRS, under the direct supervision of ARC. The total expenses for 1984 were Rs.4,607,589.78.

During 1984 there were a total of 18,045 latrines constructed and 6,898 PVC pipes installed. There were 45,631 bars of soap and 26,898 sanitary pads distributed. The LHVs and FOs gave 4,143 lectures with an attendance of 27,231.

A total of forty-eight sanitarians have been trained during 1983 and 1984, to supervise and maintain sanitation in the camps, to promote concepts of preventative health care through sanitation, to work in collaboration with the medical unit in each respective camp and assist the FOs in the construction of new latrines where necessary.

Three in-service workshops were held during 1984 for the staff to improve practical knowledge in areas such as digging latrines and treatment of infection and understanding of work methods. e.g. communication of ideas and assessment of the camps. These have proved to be very productive.

(ii) Report of the medical teams, Gandaf and Baghicha, Mardan District

With the passing of another year and the unlikelihood of any imminent solution to the refugee problem, we have been extending our medical programme for the prevention and treatment of disease by educating the refugees to solve their own medical problems through personal hygiene, environmental sanitation, simple home remedies and improvement of nutritional status. The decrease in the numbers of daily

patients (an average of forty patients per doctor), the control of contagious diseases such as tuberculosis and measles, and the decrease in the cost of medicine used, are witness to the effectiveness of our work.

Details of our activities in Baghicha and Gandaf camps in Mardan district are as follows:

1. Daily diagnosis and treatment by two doctors in each team, male and female, on alternate days, treating children every day.
2. Case finding, diagnosis, treatment and follow up of tuberculous patients every Monday.
3. Transportation and necessary help to patients needing to visit government hospitals in Mardan and Peshawar and follow up of their progress.
4. Dressing, injections, ear lavage and small surgery by male and female nurses in each camp.
5. Maternity and child health programme.
 - a. Ante-natal programme, including medical check up and regular examinations (BP, weight, blood, urine), advice and treatment of problems, health education about care of new born child, diet, personal hygiene and distribution of supplementary food.
 - b. Care of delivery by LHV's and trained traditional birth attendants.
 - c. Under five programme, including treatment and rehabilitation of malnourished children, advice and consultation for their mothers, distribution of additional food and record keeping of height, weight and measurements.
 - d. Home visit programme by LHV's.
6. Daily laboratory examinations of blood, sputum, urine, stools, etc., in both camps.
7. Vaccination of children under five, school children, pregnant women and all women between fifteen and forty years.
8. Regular health education in schools, two days per week in each school
9. Health education for specific groups, such as tuberculous patients, pregnant women and mothers of sick children.
10. Malaria control programme.
11. Nutrition programme, including distribution of one glass of liquid milk for each school pupil, of which there are over 1,000 in Baghicha and 2,000 in Gandaf, and distribution of additional food for vulnerable groups such as pregnant women, malnourished children, orphans and TB patients.
12. Training programme for community health workers.
13. Regular workshops for our staff to improve their knowledge and standardize curative and preventative work in both camps.
14. Distribution of soap and clothes to pregnant women and newborn babies and necessary help to disabled patients.

The majority of people visiting our clinic have minor complaints because of the poor conditions they have to live in, lack of personal hygiene, malnutrition, widespread infection, poverty, unemployment, overcrowding, repeated pregnancy and other socio-economic factors. During the summer they suffer particularly from diarrhoeal diseases, skin infections, malaria and intestinal parasites, while during the winter the most common complaint is infection of the respiratory tract. However, the mortality rate among



Fig. 1. Carrying latrine slab.

mothers, newborn babies and children under five is comparatively high. The main causes of infant mortality are tetanus neonatorum; birth trauma, cord infection and septicemia. Through ante-natal, natal and post natal care of mothers, introducing sterile cord tying and cutting and tetanus toxoid injections for pregnant women, we have improved this situation. With the training of family *daiis* and community health workers we hope to do so further, to be able to keep correct mortality data, a register of births and deaths and to evaluate the effectiveness of our work.

Some of our most effective work over the past year has been the training of thirty-four community health workers in both camps, with three months practical and class study of the prevention and cure of camp health problems. Working under five supervisors, the volunteer CHWs are involved in the following areas:

- camp cleanliness
- prevention of drinking impure water
- health education

Fig. 2. The ARC dispensary at Baghicha.

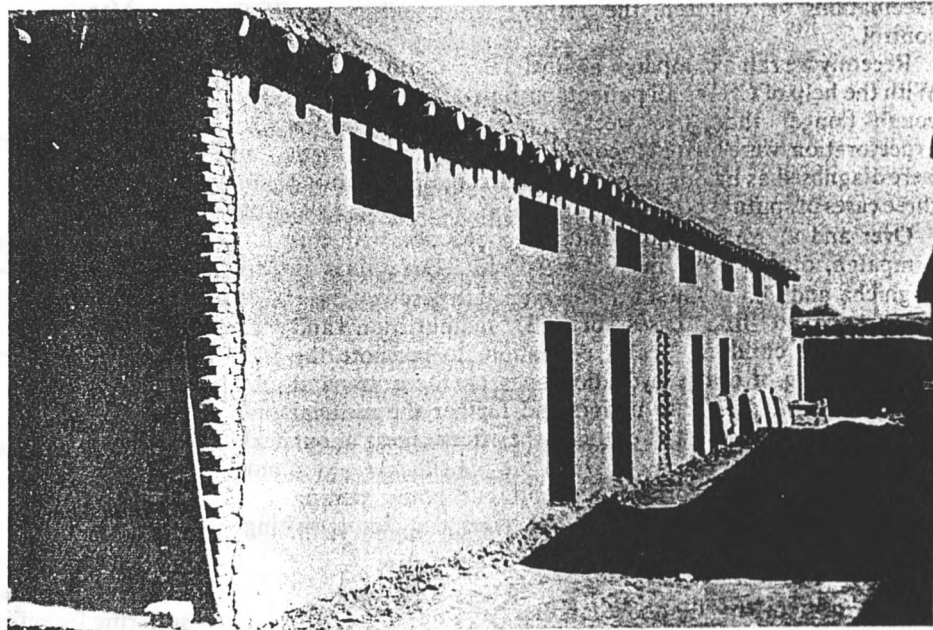


Fig. 3. Children queuing for milk in Baghicha Camp, Mardan.

- co-operation in latrine building
- introduction of malnourished and unvaccinated children to the camp clinics and registration of the latter
- case finding of TB and other serious and contagious diseases
- follow up of TB patients
- co-operation with other social programmes related to the health of camp population

Pulmonary tuberculosis has been a major problem in our camps in the past. However, with active case finding, better facilities for diagnosis and cure, home visits and BCG vaccinations for children, the TB problem is now under control.

Recently we ran a campaign against TB in Gandaf camp. With the help of CHWs all patients suffering from a chronic cough (longer than two weeks), fever, chest pain or expectoration, were invited to come to the clinic. Five of them were diagnosed as having pulmonary tuberculosis, including three cases of sputum positive.

Over and above the visits made in connection with this campaign, during 1984 the LHVs visited 349 families in Baghicha and 283 in Gandaf. The main purposes of these visits were to find cases of TB, malnutrition and unvaccinated children, health education, to promote the understanding of oral rehydration salts on the ante-natal programme and finally to understand further the medical problems of the camps and evaluate the effectiveness of our programme.

Some important information about our home visiting programme in Baghicha camp:

Families visited	349
Members comprising the above families	2,566 (average 7 per family)
Families with chronic diseases	36 (10%)
Unvaccinated children	303
Families who have not visited dispensary	22 (6%)
Malnourished children	57
Families living in tents	29 (8%)
Families without latrine — (NB pit latrines are impossible in Baghicha because of high water table)	140 (40%)
Families using water tank	272 (78%)
Families using animal protein	39 (11%)
Families with members working outside camp	191 (54%)
Families registered in dispensary:	
a. Baghicha	1,060
b. Gandaf	1,600

Both dispensaries were financed by the Norwegian Refugee Council and Church Aid, while the Primary Health Centre was financed by Catholic Relief Services.

Table 1. Diagnosis and treatment of out-patients

(a) Baghicha camp	
Men	3,333
Women	4,864
Children	10,180
Total	18,377
(b) Gandaf camp	
Men	3,912
Women	6,910
Children	7,200
Total	18,022

Table 2. Registered ante-natal cases

(a) Baghicha	91 (including 63 deliveries)
(b) Gandaf	90 (including 68 deliveries)

Table 3. Registered under five cases

(a) Baghicha	127
(b) Gandaf	105

About 32% registered children in Baghicha camp are suffering from first degree malnutrition.

Table 4. Anti-malaria programme

	Total slides	Positive cases
(a) Baghicha	1,531	322
(b) Gandaf	1,407	116

Positivity rate in Baghicha is 21%.
Positivity rate in Gandaf is 8.2%.

Table 5. Vaccinations

Age groups	Baghicha	Gandaf
0—11 months	500	288
12—23 months	753	842
2—4 years	1,073	732
5 + years	596	840
Pregnant women	661	404
Total	3,583	3,106

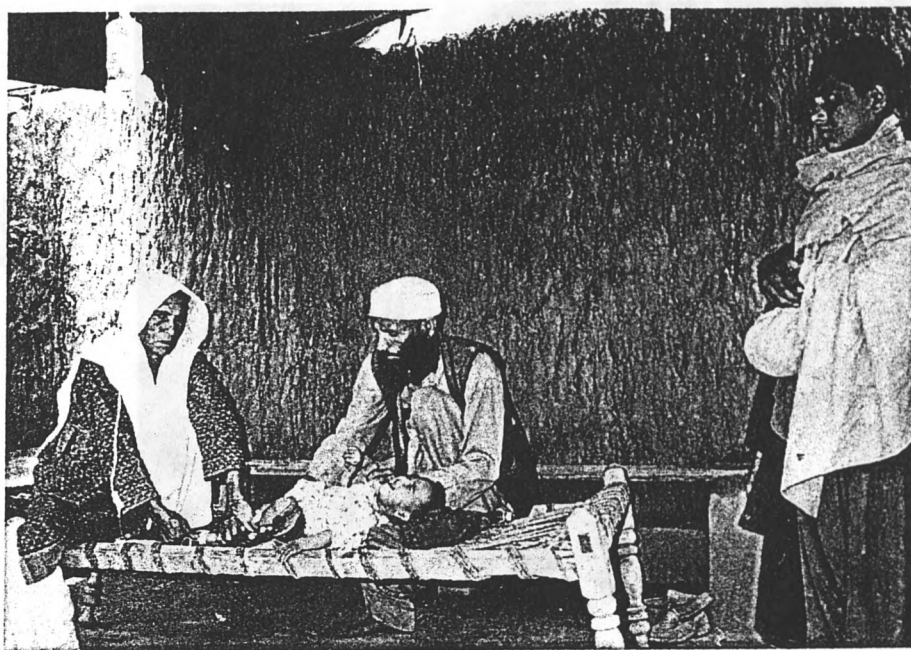


Fig. 4. A trained *dai* (traditional birth attendant).

Table 6. Treatment and diagnosis of TB cases at Baghicha camp, 1984

	Males	Females	Children	Total
Patients under treatment at end of 1983	18	50	10	78
Started treatment during 1984	13	31	3	47
Discharged from treatment during 1984	17	38	10	65
Under treatment at end of 1984	14	43	3	60

Table 7. Treatment and Diagnosis of TB cases at Gandaf camp, 1984

	Males	Females	Children	Total
Patients under treatment at end of 1983	31	61	6	98
Started treatment during 1984	16	25	7	48
Discharged from treatment during 1984	27	48	3	78
Under treatment at end of 1984	20	38	10	68

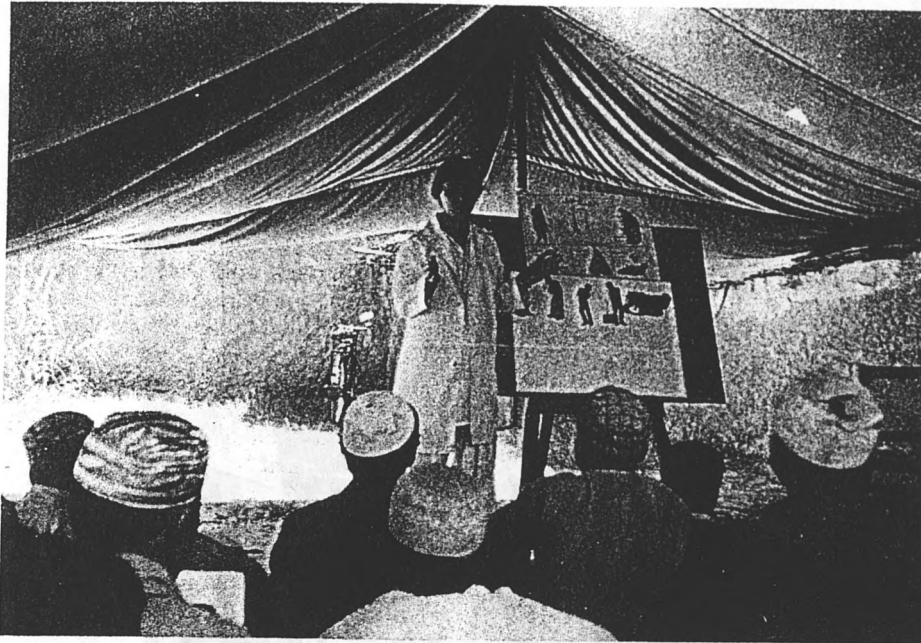


Fig. 5. Training PHW's at Baghicha Camp.

(iii) Multi-purpose Technical Training Workshop

This project began with a preliminary phase in March, 1983. In June, 1983, a yard in Peshawar city was rented and a large work shop and some classrooms were built. The Centre started its training course with forty Afghan refugee youths; there are five practical instructors, four theoretical teachers, all Afghans experienced in their fields.

The aim of the project is to give a mechanical training to those Afghans who were unable to complete their studies in schools and universities in Afghanistan and also those refugee children who have been educated in Pakistan up to a maximum of 6 years. The Centre's main course is in auto mechanics, but there are short term courses in areas such as lathing, welding, auto electrics and painting for those who cannot attend a full year course either for financial reasons, or because of their low educational level. We aim to train up to 100 young refugees by December, 1985, in the main centre in Peshawar and up to 200 more in two sub-centres in refugee camps in Mardan.

The training is 50% theoretical and 50% practical. The theoretical training covers the basics of auto mechanics, auto electrics, physics, mathematics, English and theology. Practical training is done through the auto repair shop, which takes mainly vehicles from other refugee agencies. Attached to the repair shop are a machine shop, a welding shop and electrical shop equipped with basic machinery and tools, providing further practical work for the trainees.

The workshop is trying to receive enough work from outside in order to provide as much practical work as possible for its trainees and cover part of its expenses with their gains. About one quarter of the approximately Rs.600,000 spent on

the workshop in 1984 was covered by workshop income.

Twenty of the forty trainees who started the first course in June, 1983, completed their one year course in July, 1984. Some of them have been provided with the basic tools and equipment to enable them to find jobs on the local market or create their own small workshops. A few of them have gone to work in the local markets of India and Iran.

The workshop co-operates well with other ARC projects, mending their vehicles, providing the medical teams with furniture, taking work clothes from the sewing project, while it receives a weekly visit and medicines from a doctor.

The main problems concern the fluctuating numbers of students because of family and economic problems, lack of equipment and machinery, the unavailability of curriculum materials in Dari and inadequate training because the workshop does not repair private vehicles.

During 1984 the workshop was supported financially by Stichting Vluchteling (Holland, OXFAM (U.K.), Norwegian Church Aid and the Norwegian Refugee Council.

(iv) Assistance to skilled Afghan refugees in NWFP

During June and July, 1984, discussions were going on between ARC and UNHCR concerning a new project for Afghan refugees. In August, 1984, they signed an agreement whereby UNHCR would fund a project, ASAR, to be implemented by ARC. The aim of the project is to identify skilled Afghan refugees, estimated to make up 10% of the refugee population and provide them with 60% to 80% of their tools and equipment, follow up their progress and according to their achievements provide them with the capital to extend their business.



Fig. 6. The ARC workshop at Peshawar.

Great care is being taken not to damage the local market. Most refugees in the camps are supported in order to work in their own camps, while the proposals of the refugees in cities are carefully researched.

Originally, it was proposed to support 200 skilled refugees at a total cost of Rs.883,500, but more refugees were identified and finally 307 people were

supported at a cost of Rs.737,345. A project proposal has been drawn up for approximately a thousand participants for 1985. An addition to the staff of three Field Officers has been suggested to put the second and third phases, of monitoring work and extending aid, into motion successfully, and guarantee the success of the project.

Fig. 7. The ARC/DRC sewing project.



(v) Sewing Project

In March, 1984, the Sewing Project, started as a pilot project by ARC in 1983, was taken over by the Danish Refugee Council. The implementing body of DRC is the "Steering Committee," consisting of four Danish non-governmental organizations, of which the leading one is CARITAS Denmark. The Sewing Project budget for 1984 was in total Rs.2,004,290 (gross)/ Rs.1,888,290 (net), and was funded jointly by DRC and DANIDA (Danish International Development Aid) and the Norwegian Refugee Council.

By March 1984, the Sewing Centre, located in Peshawar, employed five trainers and assistants for seventeen students on a training cum production programme, whose main work was the production of textile articles and local clothes for refugees through ARC. A small custom tailoring activity aimed at resident internationals had begun. This was extended with the arrival of a Danish handicraft expert who organized a training programme in basic patternmaking, cutting and stitching, and developed it according to the sophisticated expectations of the urban refugee students. Simultaneously, production for other refugee aid organizations increased.

This necessitated the division of the Centre into a training programme and separate workshop for graduated trainees, located in the same building. At the end of 1984 there were four women working here. It is supervised by a professional Afghan tailor, and functions also as an advanced level

training. The women are paid according to the orders, independent tailors — an average of Rs.764 at the end of 1984, of which 10% is deducted as a contribution to expenses. The income of the workshop in December was Rs.3,054.95 (net).

An embroidery programme trains seventy women in Baghicha refugee village, who now produce embroidery of a high standard, which is made up into clothes and articles in the workshop. As well as providing income generating facilities this programme plays an important role in preserving and developing traditional Afghan embroidery techniques.

A basic sewing training programme in Gandaf, Mardan area, has been delayed because of difficulties in finding suitable staff for the programme, but interest is evident and twenty needy women with sewing machines have been identified.

A small kindergarten has been started for children of the staff at the Centre, with a full time teacher. In October it received a donation of Rs.4,641.15 from the Catholic Relief Service.

The immediate future plans for the Sewing Project are the development of marketing outlets, partly in co-operation with DRC, which plans a sales-exhibition, with sales on a postal-order basis, and development of the camp programme, one possibility being development of traditional Afghan knitting. The handicraft expert felt the Afghan staff of the Sewing Project qualified enough to take over her functions as a step towards self-reliance.

UNHCR MANAGEMENT CASE NO. 2
BRIEFING SHEET

Your group represents the Appointments, Postings and Promotions Board. You have been asked to select a Representative in Ruritania (P-5) from amongst the six candidates described below. The High Commissioner will make the final decision, but has asked you to recommend the six in order of preference.

Ruritania is a large developing country, run by a difficult government under a "moderate" but corrupt dictator. The government claims to host over 200,000 refugees, though UNHCR suspects the real figure to be less than half. The BO administers a large programme budget of \$7 million, and there is pressure to cut this down since some of the money is suspected to be siphoned off to the private bank accounts of government officials. The Representative supervises a staff of four international professionals and eleven local GS personnel. The capital of Ruritania is a category II duty station which many feel should be category III.

The APPB has been asked to bear in mind the following considerations:

(1) Merit and proven ability; (2) experience and seniority; (3) rotation from Headquarters to field; (4) need to promote women to responsible positions; (5) supervisory skills; (6) diplomatic skills; (7) need to place staff without assignment, i.e "floaters".

All you know about the candidates appears on the summary below. You have 50 minutes to agree upon your order of preference.

CANDIDATES

1. Aruna

Aruna is 32, a bright, assertive girl who joined UNHCR straight after college and has served with distinction for 10 years. Starting as a P-1, she has had outstanding PERs and has risen rapidly to be promoted to P-4 last year. She has worked as a Training Officer at Headquarters, and before that as an Associate Resettlement Officer in Bangkok, a Programme Officer in Khartoum and Deputy Representative in Manila. She is confident, energetic and ambitious, though somewhat aggressive, and feels she can handle the challenge of the job. If selected she would have to supervise a Deputy five years older than her who has filed a bitter recourse at his non-promotion from P-3. Her outstanding professional ability and thorough knowledge of the office is, however, beyond question.

2. Ghalib

Ghalib is 52, a P-5 for the last seven years. He joined UNHCR fifteen years ago on secondment from the diplomatic service of a country neighbouring Ruritania, with which Ruritania has excellent relations. He is a quiet, well-dressed, pleasant man with no reputation for hard work. He has been Representative in a number of countries with similar or smaller programmes, and has been known not to "make waves". He is the seniormost of the applicants. He has, however, let it be understood that it is time he had a Headquarters posting after spending most of his career in the field.

3. Polly

Polly is 45, recently promoted to P-5 after a long and bitter fight with her supervisor, who had refused to recommend her. She is well-educated and articulate, widely considered to be highly intelligent as well as "difficult". She has spent her entire 11-year career at Headquarters in legal and protection work, resisting transfer to the field on the grounds that her husband, a senior official at WHO, cannot move with her. The High Commissioner has however finally promoted her "subject to rotation to the field". She is contesting this condition but has meanwhile been persuaded to apply for the post. Apart from replacing her Section Chiefs on leave, she has never supervised more than one other staff member.

4. Sounga

Sounga is 40. He has been a P-5 for three years and was Representative in a very similar programme to Ruritania's a year ago, but was declared persona non grata there and withdrawn after an abrasive argument with the Foreign Minister. He is an able man who has developed a drinking problem after the death of his wife in a car accident. Sounga has had 17 years with UNHCR and has served in a variety of duty stations where he has acquired wide experience in all aspects of UNHCR's work. However, since his premature withdrawal from his last post he has not found an assignment and has been "floating" at Headquarters. His drinking has got worse with the enforced idleness and sympathetic colleagues have urged you to "place" him soon, before he becomes a complete alcoholic.

5. Jean-Jacques

Jean-Jacques is a senior P-4 who has spent his entire nine years with UNHCR in the Finance and Administrative Service at Headquarters, where he has acquired an excellent reputation for accuracy with figures and a first-rate understanding of programmes. He has frequently travelled on short missions to the field and identified serious programme problems a step ahead of the auditors, remedying them himself and training field staff to avoid such problems in the future. As Acting Chief of his section he has demonstrated tact, firmness and good inter-personal relations. He would have been promoted to P-5 years ago but for his unwillingness to leave Geneva, where he finds it most convenient to maintain his personal lifestyle. Jean-Jacques, a bachelor, has not applied for the post, since he knows Ruritania to be a socially conservative country, but Personnel Services and the Regional Bureau have added his name to the list anyway. Some who know him say he would "crack up" if posted away from Geneva. The Staff Council has cited him as an example of inequity in the office's rotation policy and has suggested he and others like him be asked to choose between rotation and resignation. The Deputy High Commissioner has meanwhile indicated that there may be grounds for considering his post "non-rotational", though no decision has been taken on this.

6. Mark

Mark is 48, married with two school-going children, a senior P-4 with an unimplemented promotion to P-5 which will come into effect if he is assigned to a post at that level. He has a somewhat mixed record in his 15 years with the office. Though articulate and highly intelligent, a "born diplomat" according to his supervisors, he has had a relaxed attitude to office hours and abhors the details - the "nuts and bolts" - of work. Some suggest that he has been given flattering PERs in the past to "promote him out of the way"; indeed, Mark's last promotion was based on a recommendation by a supervisor who has privately expressed scathing criticism of his "laziness". However, he is an influential figure in the office because of his years of experience, field service and leadership role amongst staff of his ethnic group at UNHCR. What is more, he is an old Oxbridge classmate of the Foreign Minister of Ruritania, who has hinted to the High Commissioner that Mark's appointment would be welcomed by the host government.

Shashi Tharoor

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March 1989

EMERGENCY LOGISTICS and PROCUREMENT DISCUSSION CASE

Introduction

The following information describes a real situation at the present time as Afghan Refugees are beginning to contemplate the possibility of their return to their homeland. Much of the information presented is extracted from actual documents although additional elaboration has been added for the purposes of this case. For the purpose of the case, the emphasis is placed on the actual physical actions of repatriation, of return, of the refugees to Afghanistan, not on the more extensive circumstances of social and economic rehabilitation of the country.

For the past nine years UNHCR has been heavily involved in the coordination and provision of emergency assistance to the Afghan refugees, particularly those in Pakistan. It is evident that UNHCR will also have a major responsibility at the time of the refugees' actual repatriation back to Afghanistan. The current situation of anticipation presents a rare opportunity when there is a measure of advance knowledge and the estimation of a probable event requiring extensive international assistance.

When presented with a Plan of Response, as UNHCR was, initial assessments and decisions have to be made. Certain logistical and procurement responses ought then to be set into motion. This case seeks to present an abbreviated version of some of the issues likely to be faced by an emergency manager in the earlier stages of a developing response. The objective of the case is to encourage group discussion regarding the transport/logistical and procurement aspects of the situation as perceived from participants' experience, taking account of the presentations made in the workshop.

1. When presented with an initial plan against a given background, how does one assess the essential and relevant points and the practical implications for response ?
2. What working assumptions can be drawn pertinent to transport/logistics and procurement requirements from the case and how ought the emergency manager proceed ?
3. What are the likely physical components and operational needs, in initial quantities, for preparing an effective transport/logistics and procurement response.
4. Assuming that funds are available, what is a realistic time-frame for preparation ?

For ease of organizing observations and subsequent discussion, worksheets are attached at the end of the case.

Background (with reference to attached map).

Prior to events that have created severe disruption to the society and the economy during the past decade, Afghanistan was a country of about 15 million people living a largely traditionalist life based on strong kinship and tribal affiliation. Most Afghans (92 %) lived in more than 25,000 villages in houses constructed of mud and/or stone with a heavy timber-supported roof. Many of the remaining population resided in the major regional cities of Mazar-i-Sharif, Kabul, Kandehar, and Herat. Isolation, combined with traditionalism resulted in a limited distribution of externally-derived social services and one of the world's highest rates of illiteracy.

The country is arid in many places and generally harsh and rugged with several mountain ranges having peaks over 15,000 feet forming a spine through the center of the country. The climate becomes severe in much of eastern and central Afghanistan from November to February. The south-west of the country is desert and sparsely populated except for the intensively cultivated and irrigated Helmand Valley. While access to the interior was difficult with only limited mileage of improved roads, a major highway circled through the country linking each of the cardinal regions. Only 6 of the 29 provincial capitals were not readily accessible from Route 1 and it also provided the only major commercial and vehicular access to Pakistan, Iran, and Russia. The country has no railroad. There were, however, innumerable crossing points used historically by foot and animal traffic in the movement of both goods and people.

The prevailing economy was based on subsistence agriculture frequently concentrated in mountain valleys, heavily irrigated by traditional means from numerous streams, rivers, and sophisticated subterranean channels. The major cereal crop was planted in the Fall months and harvested in the Spring with the irrigated fields producing 80 % of the country's grain. Despite considerable and severe topographic and climatic variation, the country was self-sufficient in food production. For centuries the Afghans had also been traders between five civilizations becoming expert marketeers and transporters.

Their isolated mountain valleys and strong traditional habits created a characteristic tough independence with strong immediate loyalties matched only by pervasive distrust of others. Because of the geography and strong local social organization, central authority has never been a strong or unifying force, as greater influence was exerted by local landlords, religious leaders, or tribal elders. Enmity, distrust and a traditional code of revenge have forged strong bonds of self-reliance within numerous heterogeneous groups throughout the country.

The country is heavily fragmented ethnically with the historically dominant Pashtuns (or Pathans) comprising about 50 % of the population. While the Pashtuns are concentrated in the

East and South of the country adjacent to Pakistan, the Farziwan-speaking Tajiks and related groups (40 %) occupy the northern part of the country. Fifteen to twenty percent of the population, occupying the high, central mountain ranges are Shiite Muslims, in contrast to all other Afghans who are Sunni.

Afghanistan in 1988 ...

Political events and war during the past ten years have resulted in approximately 5 million Afghans becoming refugees in the neighboring countries of Pakistan and Iran. An additional 1.5 million Afghans are thought to have abandoned their traditional villages and become displaced within Afghanistan either by moving into the interior mountain ranges or by going to the major provincial cities. It is generally believed that most cities have increased in size by two or three times as a result of internal movements of population. The capital Kabul has grown from 800,000 people to about 2.5 million, placing a severe strain on local resources and services. Many of the highly educated Afghans have fled the country and it is estimated that another 1 million people may have been killed during the past decade.

There has been much destruction and deterioration of civil and productive infrastructure in the country with as many as 1/3 of the Afghan villages destroyed or abandoned to the severity of the elements. Even though many fields have gone unplanted for years, orchards have been cut or untended, and livestock have been decimated, it is believed that the country has managed to obtain and distribute sufficient food for the current population. There are very few trees in Afghanistan. As there has been widespread damage or lack of maintenance to watercourses and irrigation works, and access to other fields is limited by mines, increases in agricultural production may be protracted. While road conditions have deteriorated considerably, particularly on major arteries, transportation and trade have continued despite the prevalence of war conditions in much of the country. Fuel, like fertilizer and some cereals, has been supplied by the Soviet Union, and has generally been available in the cities and along major trade routes.

The 3.2 million refugees who are registered in 342 refugee villages in Pakistan are unencumbered in their movements. It is not unusual for family members to return periodically to the homestead, and the men return to Afghanistan to fight *jihad*. In most cases the refugees have tried in some measure to recreate their home environments by quickly turning refugee tents and camps into Afghan mud villages complete with markets and local services. Through the efforts of the UN Agencies, the Government of Pakistan, and numerous Non-Governmental Organizations, schools, clinics, vocational training, employment, and other social service facilities have been established. Similarly, a basic food ration has been supplied to the registered refugees by the international assistance community, administered by the Government of Pakistan's Refugee Commission. By common

acknowledgement, the refugees in Pakistan have been well-provided for both in terms of material and social concerns. By all accounts they now have more possessions than when they arrived and many of them are considered as important resources for eventual return. Many refugee men are employed as laborers, traders (amongst others, in the lucrative fields of arms, drugs, and other contraband), and as local and long-distance transporters. Many have bought trucks, pickups, and tractors since they arrived in Pakistan.

The refugees in Pakistan are situated, in most cases, either in the North-West Frontier Province (NWFP), contiguous to eastern Afghanistan, or in the western Pakistan province of Baluchistan, opposite southern Afghanistan. A smaller number of refugees is located in Punjab Province further from the border. In each area there is a regional predominance among the refugees, generally living among kin or fellow villagers, reflecting their conditions and means of flight, as well as their social affinity to cluster among their own people. It is generally believed that about 80 % of the registered refugees in Pakistan originally lived within 100 miles of the Afghanistan - Pakistan border, and that is the area to which they will return. The great preponderance of the refugees in Pakistan are Pashtun, although some Tajiks reside in the northern area of NWFP. In the majority of cases, the refugees walked to Pakistan, in some instances with pack animals, and they generally traveled in a group with a local or tribal leader.

In addition to refugees who have registered with the Government of Pakistan, there is an unknown number of "unregistered" refugees who, while being allowed to remain in Pakistan, are not officially recipients of externally-supplied assistance. While many do reside in the vicinity of refugee villages, others wander or have been absorbed into urban environments in Pakistan. The number of unregistered refugees could be a few hundred thousand.

The 1.3 million Afghan refugees who have fled to Iran are predominantly from the far-western provinces of Afghanistan. Historically, there has been frequent movement by Afghans across the Iranian border for employment and because of trade. While many of the Afghans are living in refugee villages in north-eastern Iran, a much higher percentage than those in Pakistan are not receiving external assistance and have merged into the Iranian economy and society. As they have demonstrated a greater degree of assimilation, even if temporary, the impact of their expected repatriation to Afghanistan is not viewed as being either overwhelming nor sudden.

The repatriation of the Afghan refugees is anticipated to be the largest population movement in the world since the Second World War. As a consequence, it is important that time in advance of its occurrence be used well to plan for an effective exercise.

Assumptions - For the purpose of this case, assume the following:

- The great majority of Afghan refugees wish and intend to return to the homes that they left.
- It is in Pakistan's interest for the bulk of the Afghan refugees to return home as soon as they are able, although they will not be forced out.
- The decision to return to Afghanistan will be taken by a leader of a group and it will apply to the group, even though the nature of that leader and the timing of his decision will vary from group to group.
- The decision to return will be taken only after the departure of foreign troops from Afghanistan and the cessation of high-intensity fighting, bombing etc. although local instability and regional conflict may be remain.
- The extent of damage and the relative degrees of stability will vary throughout the country and "the return to normalcy" will proceed at different rates in different places.
- While there will be change in the central government and hostilities directed by the governing authorities will be significantly diminished, there will be numerous and varied local authorities throughout the country. Many of the local authorities will be affiliated with or directed by dominant ex-rebel commanders.
- Great Powers (and major donors) will continue to pursue political and strategic objectives in Afghanistan.

The Proposed Repatriation Plan for Afghan Refugees from Pakistan
(as considered by the Government of Pakistan)

Refugee Population in Pakistan:	Population	Families	Camps
Total Population	3,220,000	513,000	342
in North-West Frontier	2,200,000	351,000	249
in Baluchistan	820,000	131,000	76
in Punjab	200,000	31,000	17

(additional data exists regarding place of origin of families, tribal affiliation, gender and age demographics, by refugee village in Pakistan)

Location of Refugees in Pakistan:	Percentage
within 5 miles of border	4
within 5 - 10 miles of border	22
within 10 - 20 miles of border	20
beyond 20 miles of the border	54

Mode of Return:	Percentage
wish to return within a month after departure of Soviet troops	10
within 3 months	25
within 6 months	45
after 6 months	20

Repatriation Policy:

1. Repatriation will be purely voluntary.
2. Repatriation will commence simultaneously from all three provinces.
3. In order to facilitate the return of the refugees, the Government of Pakistan (GOP), with the help of the International Community, will provide free transportation up to designated reception centers in Afghanistan.
4. A basic kit will be provided to each refugee family that will return under the Plan's arrangements. The idea is to enable the refugees to sustain themselves for the first few months in Afghanistan.
5. Mass inoculation will be carried out amongst the refugee population before their repatriation.

Transportation:

It is proposed that 3 families with their luggage, including animals, will be dispatched in one truck.

Total number of families - 513,000,
at rate of 3 families per truck = 171,000 truck trips.

Requirements spread over a period of six months (180 days)
= 950 trucks per day.
= 28,500 shifts per month
at rate of 10 shifts per month = 2,850 trucks

Considering that each truck will cover an average distance of 200 miles a day, the total cost of transportation at the rate of \$ 110 per truck per trip will be \$19 million.

Operations:

Each GOP District Administrator for Afghan refugees will prepare his own contingency plan within the overall framework of the National contingency Plan. It is proposed that each District Administrator will enter into agreements with commercial transporters of the area. Number of families, type of luggage, destination, routes, would have to be indicated clearly. Rates have to be settled in advance. He will coordinate with other Districts under the auspices of the Commissioners in order to make sure that the routes and caravans do not cause any traffic congestion and no overlapping occurs which would upset arrangements.

The returning refugees will be allowed to take their belongings with them, which will include personal effects, cattle, foodstuffs, weapons etc. The trucks will travel in convoy of 15 trucks each so that traffic jams are not created. There should be a time-table so that an orderly departure is possible. The convoys will not be subjected to any checking whatsoever on their return. Relevant customs and immigration rules will not apply to the returning refugees.

Crossing Points:

Locations	Type of Crossing	# of Families	% of Prov.
NWFP a.	tertiary	6736	2
b.	secondary	43980	12
c.	major highway	158741	47
d.	secondary	32011	9
e.	primary	52697	14
f.	primary	36238	10
g.	secondary	21597	6
BALU a.	minor	2640	2
CHI- b.	secondary	20832	17
STAN c.	minor	2520	2
d.	minor	1600	1
e.	secondary	22895	19
f.	minor	1732	1
g.	major highway	70587	58

Basic Kit:

It is proposed that a basic kit be provided to each returning family on the eve of their departure. Distribution would probably take place in the refugee village, although UNHCR would prefer it to take place in the reception centers in Afghanistan. The basic kit would consist of the following items:

- wheat for three months @ scale of 15 kg. per person, per month. (270 kg. for a 6 member family)
- cooking oil for three months @ .9 kg. per person, per month. (16 kg. for a six member family)
- dry skim milk at same ration as oil.
- tools consisting of 1 shovel, 1 pick-axe, 1 hoe per family.
- depending upon the period of the year and the province of origin, each family will be provided with seeds of some common crops to suit different climates in different regions of Afghanistan. Details will be worked out soon.
- Each family will be provided with a tent for their immediate use on their return. Number of tents required for 513,000 families is 513,000.

Total cost of basic kit for 513,000 families is \$142 million

Cost would be borne by UNHCR and WFP. It is felt that the basic kit would enable the refugees to sustain themselves for the first three months. after this time, UNHCR, assisted by other UN Agencies and the international community would chalk out a program for the rehabilitation of the refugees and restoration of the damage to ecology and other infrastructure.

Reception:

As it was found not to be feasible to transport the refugees to their homes/ultimate destinations as the distances and the costs would be enormous, besides most of the refugees come from rural areas not connected by roads, and it would be difficult to persuade drivers to journey deep into Afghanistan without escorts and assurances of safe journey, it was decided to drop refugees at convenient reception points on the other side of the border. UNHCR and other UN or NGO organizations would establish their camps at "Reception Centers" across the border in order to make arrangements for the reception of returnees, their food and lodging etc. They will be sent to their respective villages and houses after a short stay at the reception centers. UNHCR and other NGO's would operate in collaboration with the authorities of the central Afghan Government in Kabul and such commanders who are *de facto* Administrators of the area. For this purpose, effective liaison would be established with the UNHCR and other relevant NGO's.

Funds:

Funds for the whole operation will be provided by UNHCR. Depending on the volume of work, each District Administrator will be provided with funds in advance. He could make arrangements in advance and enter into agreements with Afghan/Pakistani transporters to transport the refugees with their belongings according to carefully drawn up schedule of departure. Sufficient funds should be provided to cope with unforeseen contingencies while repatriation is in progress.

Administration:

Existing Refugee Commission and camp administration arrangements would continue. The Commission in each of the three provinces would have the expertise and the resources to manage and administer the repatriation program. No extra staff is required for this purpose. Commissioners will liaise closely with the Provincial Governments, the Central Ministry, and UNHCR.

Depending on the progress of repatriation, such changes, at the level of the District or the Province, may be introduced so as to make the program more responsive, quicker, and efficient. The Plan will have to be flexible, practical, simple, free of too much bureaucratic interference, and at the same time orderly and disciplined. For this purpose, rules and regulations, whenever they tend to obstruct the implementation of the program, would have to be relaxed in order to give maximum administrative and financial autonomy to the field officers. As the repatriation will be watched by millions of people with interest, it is imperative that the Plan be conceived and implemented, in consultation with refugees themselves, in a manner which causes as few hardships as possible to the returnees and is economical, efficient, and decentralized.

YOU ARE THE UNHCR EMERGENCY MANAGER. WHAT DO YOU DO ?
HOW DO YOU PLAN FOR THE TRANSPORT, LOGISTICS, AND PROCUREMENT
REQUIREMENTS FOR REPATRIATION ?

Worksheet 1.

What are the essential and relevant points of the Plan, taking into account the prevailing background ?

What are the practical implications for:
Transportation/Logistics Procurement

Worksheet 2.

What working assumptions can be drawn pertinent to:
Transport/Logistics Procurement

How ought the emergency manager proceed on the working assumptions made above, to undertake preparation for a response ?

Worksheet 3 & 4

What physical components and operational needs, in what initial quantities, are required to prepare for an effective response to anticipated repatriation needs ?

How long, in weeks, will they take to be installed and ready for "engagement" ?

Transportation/Logistics

Procurement

Needs	Quantity	Time	Needs	Quantity	Time
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**Disaster
Management Center**

University of Wisconsin

Department of Engineering Professional Development

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

Presenter: Fabrice Gausson

1. Topical Focus: Logistics
2. Country/Region: Ethiopia/Illubabor (Gambella province)
3. Problem Description:

This case study describes in a chronological way the various measures which were undertaken to reopen the Gambella-Itang road washed away some 27 kms from Gambella as well as to repair a Bailey bridge which fell down due to heavy rainfall and flood. At the time of the problem the food stock in Itang was reported to last only 6 days. The case study also emphasizes the UNHCR role in such circumstances.

4. What was Learned:
 - A. Be vigiland to road maintenance needs.
 - B. Be aware of bupper stock requirements for uncertain times.
 - C. Use trucks appropriate to terrain and seasonal climate.
 - D. Delegate logistics responsibilities to implementing partners to stimulate field-initiated responses.

A. General Background

The Gambella province has approximately 135,000 inhabitants composed mainly of Anywacs and Nuers (lowlanders). However more and more Ethiopian highlanders are coming to the area. Also, a resettlement project has been opened in 1984 for some 50,000 settlers, mainly coming from the Wollo province.

It is situated at some 770 kms from Addis-Abeba and 1,400 kms from the Ethiopian fronts. The Sudanese border is located approximately 150 kms from the town of Gambella.

The region is politically sensitive due to the following factors:

- o massive refugee population (some 130,000 refugees) living in Itang (some 54 kms from Gambella towards the Sudanese border): The refugee population account for some 50% of the total population of the Gambella province.
- o conflict between the Sudanese government and a liberation front in the Southern part of Sudan which initiated the influx of refugees in the Gambella province as of late 1983.
- o local conflicts with various Ethiopian liberation fronts.

Moreover it should be stated that some parts of the Gambella province were only reunited with Ethiopia in 1956, after the independence of Sudan. Thus the area is under close surveillance by the regional and central authority in Addis-Abeba. Decisions cannot be made locally without coordination and approval from higher authority at the central level.

There is a multiple number of governmental agencies whose actions may often adversely affect the situation, although the Workers Party of Ethiopia (WPE) does exert the political power on the province. UNHCR presence is ensured by a sub-office in Gambella staffed with two international officers and two local programme officers, the latter posted in Itang. At the time of the problem only one international was present in the Sub-office. The Ministry of Interior, as the government body, represents the Ethiopian government on refugee and related matters. It is represented at regional (Mettu, 3 hours drive from Gambella and 1 day and half from Addis-Abeba) provincial and district levels. The Ministry has seconded to the Relief and Rehabilitation Commission (RRC), the implementation of the program.

As the nominee of the RRC, the RRC/UNHCR Coordination Office is responsible for the overall implementation of the care and maintenance in Itang and has some 35 local officers working in the camp. The health sector is operated by the Ethiopian Red Cross (ERCS) with some 120 local officers in Itang and the rural settlement project is run by the Liberation World Federation (LWF) also based in Itang, with some 40 local officers.

B. Infrastructure

The Gambella province is linked to Addis-Abela and the ports by two graded roads often eroded by the rain at some particular points during the rainy season (from June to September). It takes approximately 3-4 days to bring the food supply by trucks from Addis-Abella. Logistics operations are heavily centralised at central level without any direct involvement from the implementing partners or UNHCR at local level (Gambella or Itang). Itang is linked to Gambella by a 54 kms road just recently upgraded with selected materials.

The province is situated at the bottom of highlands and as a result of which flood often affect the area. Futhermore, there are no topographic data of the region available.

The maintenance of the roads is the responsibility of the Ethiopian Transport Construction Authority (ETCA) based in Mettu, the regional capital. It is often overburdened all year long by various projects and suffers from a chronic lack of machinery and planning. Priorities also depend upon unplanned instructions issued, by the central level located at Addis-Ababa.

As of 1 March 1987, storage facilities were completed in Itang and could ensure a buffer stock of 3 months food supply.

The communication links are poor, mainly by radio or phone.

Problem Description

This case study describes in a chronological way the various measures which were undertaken to reopen the Gambella-Itang road washed away some 27 kms from Gambella as well as to repair a Bailey bridge which fell down due to heavy rainfall and flood. At the time of the problem the food stock in Itang was reported to last only 6 days. The case study also emphasizes the UNHCR role in such circumstances.

Strategy

The guiding principle adopted by UNHCR was that the road could be repaired by the Ethiopian Construction Authority (ETCA) within a period of 6 days provided it was viewed as a priority task by the higher authorities situated in Addis-Ababa. In doing so UNHCR should act as a catalyst so as to ensure that all concerned parties could act in a coordinated way to achieve this objective.

Experience gained by UNHCR in a similar situation in July 1986 had demonstrated the need to involve higher authorities right at the beginning of the operation to obtain the appropriate number of machinery and local political support. The following actions were taken in the endeavour to reopen the road:

1. Alert central authorities and bring the Regional Manager of ETCA to the site - June 1, 1987, (1st day).

UNHCR assessed the damages on the road on June 1, 1987 at 11 AM. It coordinated with the deputy administrator in Gambella, in the absence of the Administrator and the Secretary of WPE. A car and a driver was provided to the deputy by UNHCR to allow the deputy to go the site and report on the situation. A telegram was then issued by the deputy to the regional administrator at 1500 PM (as the phone was not working) and copied to the Public Security Department as well as the secretary of the WPE in Gambella.

Simultaneously radio contacts were established by UNHCR with its office in Addis-Abeba to assess the supply of food and request political support. In addition to this, it was decided not to interrupt the flow of food trucks proceeding towards Gambella/Itang.

2. Follow-up on actions taken in paragraph 1 - June 2, 1987 - (2nd day)

UNHCR held a meeting with the regional administrator in Mettu (3 hours drive from Gambella) to request appropriate support and coordinate with the regional manager of ETCA.

3. Assessment of damages and plan of action to be undertaken by ETCA - June 3, 1987 - (3rd day)

Confirmation was given by ETCA that orders were issued at high level to repair the road.

Furthermore, as an alternative, the WPE secretary promised to involve the army in case the road could not be opened within a period of 6 days.

Need for machinery (10 dozers, 5 dump trucks, 3 loaders, 2 graders) to be coordinated with the WPE secretary for political support.

Storage capacity was arranged in Gambella to stock approximately 150 MT of food to unload trucks which could not wait for the reopening of the road.

Contacts were made with the Ethiopian Building Construction Authority (EBCA), a sister agency of ETCA for the use of a Kato truck equipped with a crane to uplift the Bailey bridge.

4. Repair of the road - June 4, 5 and 6, 1987

All the necessary machinery arrived on the site on June 5, 1987 i.e., four days after the initial assessment of damages made by the deputy administrator. 300 meters of road were temporarily repaired. The fallen bridge and the road were filled with selected materials. The Kato truck could not be used as the project manager was absent at the venue of the problem.

The road was reopened on June 6 to 10 and 20 MT trucks. However, some 150MT had to be unloaded in Gambella from the WTOE trucks operated by the World Food Programme (WFP) in view of their heavy tonnage (30 MT long trailer).

During the above described process the whole operation was coordinated by UNHCR/ETCA and the RRC/UNHCR Coordination Office which had moved its relevant officers from Itang to Gambella in the UNHCR premises to be able to use UNHCR cars and equipment such as the radio, photocopier etc...

Factors that contributed to the success of the operation

Although some maintenance work still needed to be done, the parties involved in the operation concluded that the objective of reopening the road was successfully achieved. The factors that contributed to the success of the operation were as follows:

quick intervention of higher authorities who issued an immediate order to ETCA to give priority attention to the Gambella/Itang road despite other needs occurring in the region. In this regard one should note the importance of using photos (Polaroid) to activate this kind of order from higher authorities in such circumstances.

cooperation on the part of WPE (political support), ETCA (technical assistance), UNHCR (catalyst role) and all relevant partners.

personal involvement of the regional administrator who established direct contacts with higher authorities in Addis-Abeba.

good weather conditions during the operation.

Recommendations/Lessons Learned

Need to be vigilant on the maintenance of the road.

Need to build up a buffer stock in Itang.

Need to use appropriate kind of trucks on roads often affected during the rainy season.

Need to delegate more responsibilities on the logistic side to the implementing partners in Itang to stimulate active answers at field level.

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Logistics
2. Country/Region: Ethiopia, March 1988 - to date
3. Problem Description:

Currently there are two major emergencies in the Eastern and Western parts of Ethiopia. In the West we have 4 camps for refugees in three different regions. The camps are situated in extremely remote parts of the country. The turn-around trip to these camps is 10 days from the port of Assab and 5 days from Addis Ababa. Total number of refugees is approximately 315,000.

In the East of the country there are four camps for Somali refugees, again in remote parts of the country. The turn-around trip from the port of Assab is 10 days, and 7 days from Addis Ababa. The caseload is approximately 300,000.

The logistic problem was compounded by other emergencies in the country, such as the weather, i.e., heavy rains which resulted in washed-out roads, landslides, floods, etc.
4. Aim: To supply emergency relief to the camps with both food and non-food items.
5. Problems:

Bad roads.
Lack of trucks and tankers, and workshops for repairs.
Congested ports.
6. Lessons Learned:
 - A) Planning is a must.
 - B) Coordination is vital.
 - C) Need for a fleet committed to the operation of the game.
 - D) Flexibility is the name of the game.
 - E) Logistics is for the professionals.
7. Special Comments:
 - A) At least one of the camps was cut off by the rains and we had to resort to airlifting food to the camp. This was extremely expensive.
 - B) At the initial stages of the operation in the East we again had to resort to airlifting, as that was the only way to reach the camps fast enough to ensure timely response, as time was of the essence.

Medical supplies management in the cholera epidemic in Somalia 1985

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In March/April 1985 a cholera epidemic of explosive speed affected a population of 45,000 newly arrived refugees in the town of Hargeysa in the North-West region of Somalia. Seven hundred and sixty one people were killed by the disease within ten days. Great efforts were made on regional, national and international levels in order to reduce mortality and to control the spread of the disease, and large amounts of relief supplies were immediately flown into the country from various aid organizations and governments. This paper describes the supplies management during the operation, with an emphasis on the mobilization of supplies from abroad and from the capital into the emergency area. Recommendations are offered for the organization of medical supplies during cholera outbreaks. The author worked during the epidemic as co-ordinating secretary for relief supplies in Mogadishu.

Key words: Logistics; Somalia; Epidemics; Cholera; Medical Supplies Management; International Relief System.

INTRODUCTION

Since the second half of 1984, an increasing number of refugees from Ethiopia arrived in the North-West province of Somalia. The 30,000 refugees who arrived prior to September 1984 were transferred into a temporary holding camp at Bixindule at that time. However, by the end of March 1985, again 45,000 refugees had gathered at a site called Gannet, within the town of Hargeysa, awaiting transfer to a new holding camp (see Fig. 1). Gannet was not set up as a camp and lacked all basic infrastructure like water supply, sanitation or health facilities. The Refugee Health Unit and the Primary Health Care Programme of the Somali Ministry of Health, as well as the Save the Children Fund (U.K.), UNICEF and the World Muslim League started to provide some basic health services in

February, but there was an urgent need to transfer the refugees to a more suitable place. All the medical teams stressed the risk of a severe diarrhoea outbreak at Gannet as soon as the imminent seasonal rains started.

There had, however, not been any record of cholera in the area for more than ten years, and the massive outbreak of cholera starting on 26th March was unexpected. The official report of the Cholera Control Committee (1985) clearly shows that the disease was brought by refugees from Ethiopia.

The first cases of profuse diarrhoea and vomiting had been detected in Gannet on 22nd March, but were not diagnosed as cholera. On 26th March, all refugees were officially registered at Gannet, and unfortunately the seasonal rainfalls started on that same day. The fact that the refugees stood, during the registration procedure, for several hours in the rain and mud without latrines or a supply of safe drinking water is probably responsible for the explosive speed of the outbreak, totalling over a thousand cases in the first three days (see Fig. 2). The organization of control measures began immediately, and the Ministry of Health in Mogadishu was notified about the outbreak on 28th March. An isolation tent area was erected, and on 30th March the pathogen was identified as *Vibrio cholerae* Ogawa serotype, susceptible to both tetracycline and cotrimoxazole. The Somali government officially announced the cholera epidemic on 31st March. Mass prophylaxis of the entire camp population was carried out from 1st to 5th April, combined with an active search for cholera cases. The number of cholera cases and deaths sharply dropped after 2nd April, indicating that the epidemic was coming under control, at least in Gannet. New cases, however, were detected in increasing numbers in Hargeysa town (population approximately 300,000) and in other refugee camps in the North-West region (refugee population approximately 280,000). Vigorous and efficient control measures prevented a rapid spread and high mortality in these populations, and a proliferation of the disastrous situation at Gannet was avoided. Cholera remained endemic in the area, however, requiring continuous surveillance and control measures.

ORGANIZATIONAL STRUCTURE OF THE CHOLERA RELIEF OPERATION

The management of the cholera epidemic in Somalia was greatly facilitated by the existence of efficient health care systems in the affected area, namely the Refugee Health Unit (RHU) in the refugee camps and the Primary Health Care Programme (PHC) within the non-refugee population. Both were well organized departments of the Somali Ministry of Health and were able to reach their respective communities through community health workers or community leaders. Both had also well-established drug supply systems in operation. The Refugee Health Unit had excellent logistic support through ELU/CARE, the Emergency Logistics Unit of the National Refugee Commission; ELU/CARE's successful operation in Somalia

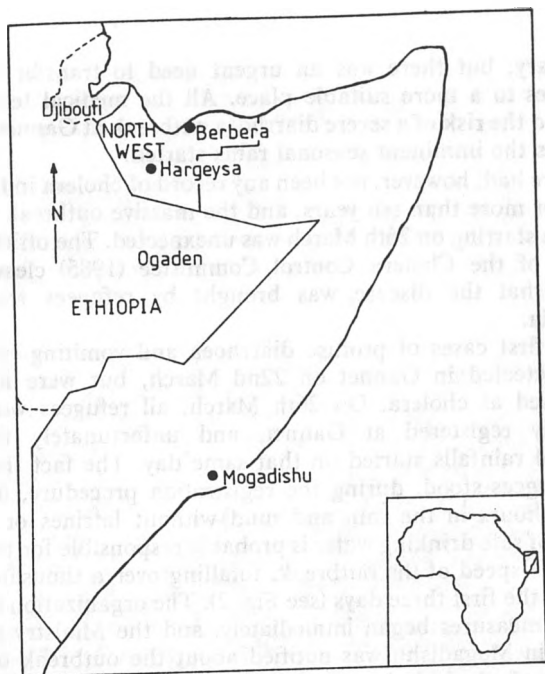


Fig. 1. Map of Somalia.

has been described elsewhere (Kemball-Cook and Stephenson, 1984). The Primary Health Care Programme in the North-West region was supported by a strong UNICEF regional office in Hargeysa. In Hargeysa, cholera control measures were directed by a Cholera Control Committee, consisting of Ministry of Health officials and expatriate advisers, which met every morning to discuss day-to-day work and also produced daily information bulletins. Medical supplies management in Hargeysa was centralized on 3rd April by the establishment of the Hargeysa Central Cholera Stores, headed by an experienced UNICEF/PHC pharmacist adviser and supported by national pharmacists sent from Mogadishu. Warehouses and transport for the medical supplies were provided by ELU/CARE.

Also in the capital Mogadishu, a Cholera Control Office of the Ministry of Health, as well as regular meetings with all involved agencies, were established. There remained, however, some uncertainty as to which of the top officials of the Ministry of Health was actually directing the cholera control efforts. The pharmacist adviser of the Refugee Health Unit and the director of the Department of Medical Supplies of the Ministry of Health were appointed co-ordinating secretaries for cholera relief supplies in Mogadishu. They co-ordinated the appeal for relief goods and prepared the first emergency supply orders. Starting from 3rd April, a regular cholera relief supplies report was produced, which listed the pledges for and arrivals of relief

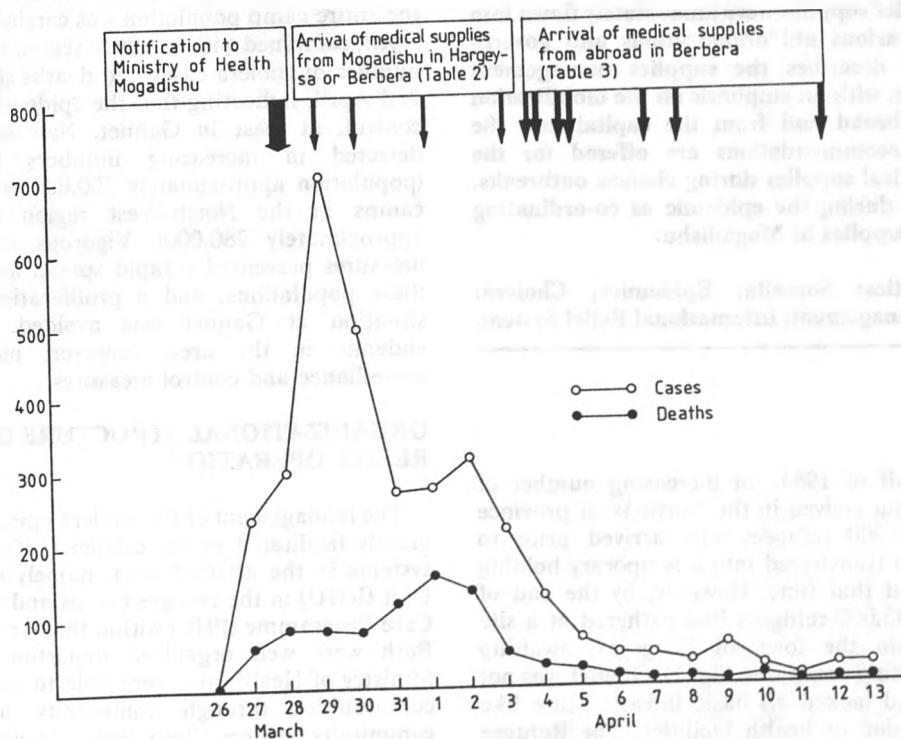


Fig. 2. Cholera cases and deaths in Gannet, and arrivals of medical supplies.

supplies from different organizations with their arrival dates and exact contents. This document proved very important for informing the donor agencies which items were still in urgent need.

On 30th March, the cholera control offices of Hargeysa and Mogadishu started direct radio communications with each other, which greatly facilitated the co-ordination of work. It became apparent, however, that for the numerous technical details of the supply management, an additional direct radio link was necessary between the responsible supply managers in Hargeysa and Mogadishu; this was established on 4th April. In general, co-operation between all government institutions and international and voluntary agencies was good throughout the epidemic.

MOBILIZATION OF IN-COUNTRY RESOURCES

Table 1 shows the stocks of drugs relevant to cholera treatment which were available in the country at the beginning of the epidemic. The UNICEF-supported Primary Health Care Programme in the North-West region and especially the Refugee Health Unit had considerable amounts of antibiotics and oral rehydration salts (ORS), but hardly any intravenous fluids, which are essential for the treatment of cholera. The World Health Organization, however, had established an emergency stock of 2,500 l. intravenous (i.v.) fluids for possible cholera outbreaks, after a few cases of cholera had been detected at the southern border of Somalia with Kenya in the end of 1984. This stock

became of paramount importance for the initial response to the epidemic.

No other organizations or Ministry of Health departments had significant amounts of relevant drugs, especially since there had been a shortage of i.v. fluids in the country for several months.

In Hargeysa, the available medical supplies (see Table 1) were quickly put into use. Also, the Ministry of Health immediately provided additional personnel, so that the number of medical staff in Gannet rose from five to 113 within six days. On the evening of 28th March, the director of the Refugee Health Unit (RHU) in Mogadishu received a radio message about an outbreak of diarrhoea with cholera-like symptoms and high mortality in Gannet. Within hours, the Minister of Health and the representatives of the World Health Organization (WHO) and the United Nations High Commissioner for Refugees (UNHCR) were contacted, and the Minister of Defense ordered a small military airplane to transport the first medical supplies to Hargeysa the next morning.

Two additional airplanes with medical supplies from WHO and RHU stores were sent into the affected area on 30th March. Table 2 lists the first consignments sent from Mogadishu to the North-West region. In summary, the entire available stock of i.v. fluids in the country was moved into the affected area within four days.

Jet airplanes could not land in Hargeysa, but only in the larger airport of Berbera, where supplies were unloaded onto waiting ELU/CARE or UNICEF trucks and

Table 1. Stocks of drugs relevant to cholera in Somalia at the beginning of the epidemic (26th March 1985)

Drug	Unit	Hargeysa		Mogadishu		Total
		RHU	PHC	RHU	WHO	
Ringer Lactate (or Hartmann) i.v. solution	litre	644	—	595	2,500	3,739
Oral rehydration salt	27.5 g	60,000	72,500	345,000 (+230,000*)	50,000	757,000
Tetracyclin 250 mg	caps	—	†	886,000	50,000	936,000
Co-trimoxazole 480 mg	tbl	94,800	192,000	491,000 (+842,000*)	—	1,619,800
Co-trimoxazole syrup 240 mg/5 ml	100 ml	1,404	5,704	37,446	—	44,554
Cetrimide powder	kg	30	—	132	—	162
Chlorhexidine conc. solution 20%	100 ml	—	1,219	—	—	1,219

*Supplies in Mogadishu harbour, awaiting clearance.

†Data not available.

PHC = Primary Health Care Programme Stores.

RHU = Refugee Health Unit Stores.

WHO = World Health Organization Stores.

Table 2. Relief supplies and personnel sent from Mogadishu to Hargeysa
29th March 1985 to 3rd April 1985

Date sent	Date received	Means of transport	i.v. fluids (litres)	Other supplies	Personnel
29th March	29th March	Military airplane	300	40,000 tetracycline caps 32 kg cefrimide powder 800 nasogastric tubes	1 RHU official
30th March	30th March	Somali Airlines	1,770	240,000 tetracycline caps 65 kg cefrimide powder Laboratory equipment	—
30th March	30th March	Somali Airlines	—	—	Five Ministry of Health officials; WHO Microbiologist
30th March	4th April	ELU/CARE truck	—	151,000 oral rehydration salt and water supply equipment	—
1st April	1st April	Somali Airlines	1,000	240,000 tetracycline caps	Vice Minister of Health and thirty-one doctors and nurses
3rd April	3rd April	Somali Airlines	—	100,000 tetracycline caps 400,000 cotrimoxazole caps 4,050 cotrimoxazole syrup 100 ml	—

transported to Hargeysa; they reached Hargeysa within a few hours after arrival of the airplanes.

The provision of safe drinking water was a very important aspect in the management of the epidemic. The Ecumenical Relief and Development Group for Somalia (ERDGS), the Refugee Water Supply Division of the Somali Government and OXFAM (U.K.) constructed the necessary facilities in Gannet within a few days.

MOBILIZATION OF INTERNATIONAL AID

The Ministry of Health held the first meetings concerning the epidemic with aid and relief agencies on 29th March, and after the disease was confirmed to be cholera on 30th March, the Somali government officially appealed to the international community for help. First orders for medical supplies were already placed on 29th and 30th March by UNHCR and the League of Red Cross Societies, and many others followed (see Table 3). On 28th March, the representative of the World Health Organization and the RHU pharmacist adviser estimated the daily consumption of i.v. fluids in Gannet to be 300 l. This turned out to be a serious underestimation, since Hargeysa reported by radio on 31st March a consumption of 1,200 l./day — while the

entire stock of the country was 3,700 l. initially! Efforts for quick procurement were again increased after this desperate situation became apparent, and an additional large order was placed by UNICEF with its supply office UNIPAC at Copenhagen. On request of the UNDP representative in Mogadishu, the United Nations Disaster Relief Organization (UNDRO) launched an international appeal for aid on 3rd April.

In the following days, the Cholera Control Office in Mogadishu, with the assistance of WHO and the RHU pharmacist adviser, worked out an official list of requirements for the epidemic. It was based on a WHO recommendation that preparations should be made for an epidemic producing within one month 50,000 patients with clinical symptoms of cholera. This list is shown in Table 4. 50,000 patients was a worst-case scenario, and fortunately only about 10% of this number of cases actually occurred over the following weeks, thanks to efficient control measures.

Relief supplies from abroad started to reach the affected area on 4th April. Table 3 gives an overview of the consignments of medical supplies arriving until 15th April.

Originally, there was a Red Cross airplane with 15,000 l. of i.v. fluids from Addis Ababa scheduled to land in

Table 3. Consignments of cholera relief supplies from international donors, arriving in Somalia until 15th April

Arrival date	Funding agency	Estimated tons	Number of personnel	Place of arrival	Date ordered	Delivery time
3rd April	Red Cross	5	—	Mogadishu		
4th April	French Government	6	—	Berbera	30th March	4 days
4th April	Red Cross	12	5	Berbera	*	*
5th April	UNICEF	37	—	Berbera	30th March	5 days
5th April	UNHCR	20	—	Berbera	1st April	4 days
5th April	Red Cross	1	—	Berbera	29th March	7 days
6th April	Red Cross	6	2	Mogadishu	*	*
7th April	German Emergency Doctors	20	1	Mogadishu	30th March	7 days
7th April	Italian Government	12	—	Berbera	31st March	7 days
8th April	Medecins sans Frontieres	20	9	Mogadishu	*	*
9th April	U.S. AID	1	—	Berbera	3rd April	5 days
12th April	OXFAM and Save the Children Fund (U.K.)	36	3	Mogadishu	*	*
13th April	Islamic African Relief Agency	7	—	Berbera	*	*
13th April	Egyptian Government	6	12	Mogadishu	*	*
14th April	West German Government/ERDGS	6	—	Mogadishu	*	*
				Mogadishu	2nd April	12 days

* Dates not known.

Hargeysa already on 1st April. This flight would have entirely altered the supply situation during the epidemic; it was cancelled, however, for unknown reasons. It appears that the cancellation was not ordered, as originally believed, by the Ethiopian government, but by misinformed officials of the League of Red Cross Societies.

The first cholera relief consignment to arrive in Somalia had been procured by the League of Red Cross Societies in Nairobi/Kenya. It arrived in Mogadishu on a regular passenger flight in the late evening of 3rd April. Immediate transport to Hargeysa seemed unwise at that time, since three large relief airplanes were scheduled to land in Berbera the next morning. From 4th April, medical supplies from the international community reached the North-West region. The first six consignments arriving in Berbera will be briefly analyzed in the following; they are presented in the order of their arrival, under the name of their respective funding agency.

1. 4th April: French Government

This shipment arrived on a French military airplane from Djibouti. It is not known to this author who had prepared the request to the French government. The supplies delivered were 6,000 l. of dextrose intravenous solution, which is inappropriate for cholera treatment. They were therefore, in spite of their timely arrival, not useful.

2. 4th April: League of Red Cross Societies

This charter airplane arrived in Berbera from Oslo via Cologne. The original request had been made by the Mogadishu representative of the League of Red Cross Societies, based on a proposal by the RHU pharmacist adviser. Unfortunately, the Norwegian Red Cross did not follow this list, but sent supplies such as a field surgical unit and many drugs inappropriate for cholera. No packing list accompanied the shipment. Therefore, it did not substantially improve the shortage of medical supplies.

3. 5th April: UNICEF

The original request was prepared by the Ministry of Health, adapted to comply with the UNIPAC emergency stockpile list and telexed by UNICEF Mogadishu to UNIPAC Copenhagen on 1st April. UNIPAC responded within 36 hours, confirming that most items were in stock and suggesting substitutes for unavailable items. A U.S. government airplane had been promised by the American Embassy in Mogadishu to pick up the supplies on 1st or 2nd April. This airplane, however, did not reach Copenhagen until 4th April, and took off with the relief goods the same day. It was denied immediate overflying rights over Ethiopia, changed course into the airspace of North Yemen without permission by the Yemeni authorities, and was forced by the air force of North Yemen to land in Sanaa for inspection. After 24 hours of delay, it reached Berbera on the morning of 5th April. The contents of this shipment

were entirely appropriate and corresponded to the request made by the Ministry of Health, except for a last-minute substitution of ampicillin syrup for tetracyclin syrup; ampicillin is not indicated for cholera. It had clear packing lists and could be unpacked and used with no delay. Together with the UNHCR shipment arriving on the same day, it resolved the desperate supply situation in the Hargeysa cholera epidemic.

4. 5th April: UNHCR

UNHCR was the first agency during the epidemic to telex a request for emergency medical supplies to their headquarters. The goods, arriving on a chartered cargo airplane from Amsterdam in Berbera on 5th April, were appropriate and corresponded to the original request, and together with the UNICEF consignment ended the shortage of medical supplies in the epidemic.

Its usefulness, however, was somewhat diminished by the lack of a packing list, which considerably delayed unpacking and distribution.

5. 7th April: German Emergency Doctors (GED)

The Hargeysa representative of the GED telexed a request to his headquarters from Berbera on 31st March. GED had stockpiles for a cholera emergency and largely followed the request of their representative in Hargeysa. A commercial cargo plane delivered the goods on 7th April. This shipment was highly appreciated by the medical staff in the emergency, for it complemented the previous shipments with a lot of useful equipment such as hospital tents, torches, handwashing bowls etc.

6. 8th April: Medecines Sans Frontieres (MSF) with the Governments of Holland and Belgium

The intervention by MSF, with financial support from Holland and Belgium, was triggered by the appeal by the United Nations Disaster Relief Organization (UNDRO), launched on 3rd April. MSF had already prepared for a medical operation in Somalia, and medical supplies were ready for airlift. These were, however, drugs not especially selected for a cholera emergency, and were only of limited use for the epidemic. A second MSF shipment, arriving some weeks later, brought more specific relief supplies.

More relief consignments continued to arrive in the following days and weeks. Table 3 summarizes the arrivals until 15th April; but also after that date material aid was received from various governments and agencies. Beginning on about 7th April, these supplies were directed to Mogadishu, since the limit of the storage space of Hargeysa was reached, and cases of cholera appeared in the capital and in the refugee camps in the southern part of Somalia.

A substantial part of the requirements listed in Table 4 were met by the international response. Some items, however, remained in short supply, and their procurement turned out to be problematical, since hardly any agency was

willing to allocate further funds for the control of the epidemic once the initial acute emergency phase was over.

As shown in Table 3, some organizations did not only send supplies but also medical personnel. Their help was highly welcome, but probably not decisive for the control of the epidemic. Qualified medical personnel were desperately needed in the first days of the epidemic, but, as Fig. 2 shows, the external aid only arrived after the first outbreak of cholera had largely ceased in Gannet.

DISCUSSION

The 1985 cholera epidemic in Somalia was, in its initial focus at Gannet, extremely explosive in its speed (see Fig. 2). This epidemic, with its potential of spreading out into the population of Hargeysa and the surrounding villages and refugee camps, presented an extreme challenge to the medical and non-medical organizations involved in its control, and likewise to the managers of medical supplies for this operation.

In spite of all efforts, the case fatality rate of patients admitted to the isolation area in Gannet was approximately 22%, the large majority of the deaths occurring in the first ten days of the epidemic. Even taking into account the poor nutritional status of the refugees, such a high mortality clearly indicates that patients did not receive adequate care. The main reason for this shortcoming was the overwhelming speed of the epidemic: "Within the four days from 26th to 29th [of March], the daily number of cases admitted to the Gannet isolation area went from two to 662. This meant over 1,000 patients suddenly requiring intensive care, obviously an impossible task in primitive conditions and with so few staff" (Cholera Control Committee, 1985). It should be added that, especially since there was initially no medical infrastructure or community organization which could have been used for an active case-finding in Gannet, many patients died in their huts before receiving any medical attention. In Hargeysa town, for instance, where the disease spread slower and the medical infrastructure was better, the case fatality rate was around 5%, and even lower in some of the other refugee camps.

The management of supplies was at least so successful that no major part of the mortality had to be attributed to a lack of medical supplies. The official report of the Cholera Control Committee in Hargeysa (1985) concludes: "Although stocks of infusions and antibiotics ran dangerously low and had to be used conservatively, they never actually ran out, thanks to prompt delivery of emergency supplies from Mogadishu and later from international donors." The main bottleneck in the first days was a lack of experienced personnel to administer i.v. fluids, rather than the lack of these fluids. If, however, all patients had received the necessary amount of infusions, stocks would have clearly been depleted within three or four days.

Table 2 shows that the medical supplies available in the capital were very quickly mobilized and sent into the emergency area. Also, the relief goods arriving from international donors could be transported to Hargeysa and utilized with minimal delay. The success of the logistical

Table 4. Official list of requirements for the cholera epidemic in Somalia

Item	Unit	Quantity
a. i.v. fluids and administration sets		
Lactated Ringer i.v. solution	1,000 ml	120,000
Lactated Ringer half strength i.v. solution with Dextrose 5%	1,000 ml	40,000
Giving sets for i.v. fluids	each	100,000
Scalp vein set 19 G (butterfly needle)	each	50,000
Scalp vein set 21 G (butterfly needle)	each	50,000
Scalp vein set 23 G (butterfly needle)	each	30,000
Intravenous catheter 16 G	each	30,000
b. Drugs		
Oral rehydration salt 27.5 g sachet	each	800,000
Tetracyclin 250 mg caps	caps	4,000,000
Tetracyclin syrup 125 mg/5 ml	60 ml	50,000
Tetracyclin inj. 250 mg/2 ml	vial	10,000
Co-trimoxazole tbl 480 mg	tbl	2,000,000
Co-trimoxazole syrup 240 mg/5 ml	100 ml	15,000
Promethazine inj. 50 mg/2 ml*	vial	20,000
c. Disinfectants		
Cetrimide conc. sol. 40%	5 l.	400
d. Dressing materials		
Cotton wool	kg	2,000
Adhesive tape 2.5 cm	5 m roll	2,000
e. Feeding tubes		
Nasal feeding tube 8 FR 380 mm infant	each	4,000
Nasal feeding tube 22 FR 800 mm adult	each	4,000
f. Equipment for isolation camps		
Tents for hospital use (80 m ²)	each	40
Folding cut adult size	each	1,000
Plastic sheeting vinyl 910 mm	meter	8,000
Bucket 10 l. graduated	each	2,000
i.v. stand, double hook	each	500
Blankets	each	20,000
g. Equipment of drinking water provision		
OXFAM Water Storage Package (incl. 3 tanks 30 m ³ each)	package	4
OXFAM Water Distribution Package (incl. 1 ring pipe with 40 taps and a pump)	package	4
OXFAM Water Pumping Package (incl. 1 pump for pumping shallow wells)	package	4
Water containers 5 litres with lid and handle	each	20,000
Calcium hypochlorite (HTH) dry powder	kg	2,500
h. Sanitation tools for latrine digging		
Shovels	each	1,000
Pick-axes	each	1,000
Wheel barrows	each	400
i. Soap for personal hygiene		
Soap	300 g bar	500,000
j. Communication facilities		
Radio transmitters	each	5
k. Vaccines*		
Cholera vaccine	doses	10,000

This list was prepared by the Somali Ministry of Health. It was calculated for an epidemic producing 50,000 patients with clinical symptoms of cholera.

*This should be omitted; see Recommendations for comments.

operation was mainly due to the existence of efficient logistical and drug supply systems in Somalia, namely the ELU/CARE organization and the drug stores of the Primary Health Care Programme and the Refugee Health Unit. The emergency stock of i.v. fluids, which had been established by the World Health Organization in Mogadishu, was of paramount importance for the first days of the epidemic.

Table 3 documents that the international response to the epidemic was quick and massive. However, as can be seen from Fig. 2, it still came too late to meet the peak of the disaster. Unfortunately, the first two shipments from international donors arriving in the emergency area proved to consist mainly of inappropriate medical supplies; most of the following, however, consisted of useful items.

For the co-ordination of the appeal and the supplies management, pharmacist advisers with several years experience in Somalia were made responsible, both in Hargeysa and Mogadishu. Their experience and local knowledge facilitated a smooth logistical operation.

All Ministry of Health personnel worked with extraordinary effort and devotion during the epidemic, and the Somali government gave every support to the necessary operations, including the supplies management. In a time when western media mainly report about difficulties and failures in relief operations in developing countries, it will be emphasized here that the international relief goods for the Somali cholera epidemic reached the emergency area complete and with no delay, and that the Somali government was devoted and co-operative throughout the operation.

However, in retrospect several mistakes in the supplies management became apparent, which contributed to the shortage of drugs in the first days:

1. The reserve stocks of i.v. fluids in the country were too small and should have been augmented after the first suspicions about cholera in Kenya and Ethiopia.
2. The disease was diagnosed too late. Provisions should have been made for an earlier laboratory diagnosis of cholera throughout the country.
3. The daily consumption of i.v. fluids was at first (28th March) seriously underestimated, and this estimation was only corrected three days later.
4. In retrospect, it can be seen that the quickest way to bring i.v. fluids to Hargeysa would have been procurement in Nairobi/Kenya and direct airlift to Hargeysa by a commercial charter flight. Also, the supplies from UNIPAC may have arrived three days earlier if ordered immediately.

The most serious fault, however, for which both international organizations and the Somali government have to take responsibility, was that a situation was allowed to develop at Gannet where 45,000 refugees were crowded into an unsuitable area with no water supply, no latrines and insufficient health care facilities and food rations. The introduction of cholera into Somalia would not have caused

any substantial death toll if the disease had not found this ideal breeding site at Gannet.

RECOMMENDATIONS

General recommendations for the medical supplies management in disasters have been published (PAHO/WHO, 1983). From the experience of the described cholera epidemic, some lessons can be learned for the logistics in future cholera outbreaks:

1. The best medical preparedness for a cholera epidemic is a solid health infrastructure, especially a community-based Primary Health Care Programme with due priority on diarrhoeal disease control. Likewise, the best logistical preparation for a medical emergency is the establishment of an essential drug supply system with experienced personnel, efficiently administered drug stores and emergency stocks for the initial management of an epidemic.
2. Early diagnosis of cholera is most crucial for an immediate response. Once there is a risk of the disease being introduced, possibilities for a quick laboratory diagnosis of cholera must be established. The appropriate method is the distribution of e.g. Cary-Blair transport media to all peripheral health facilities, together with some training in the simple procedures of taking stool swabs. The actual laboratory examination of stool samples can be done in central laboratory facilities.
3. Experienced medical supply officers or pharmacist advisers should manage the logistical work, both in the emergency area and in the capital where the appeal for relief supplies has to be co-ordinated. All requests for supplies must be channelled through these people in order to avoid confusion and duplications. To inform all involved organizations, government bodies etc., daily information bulletins should be edited, containing epidemiological data as well as pledges for and arrivals of relief supplies.
4. Table 4 shows the official list of requirements for the cholera epidemic prepared by the Somali Ministry of Health with assistance from international advisers. It gives a good overview of the kind of supplies needed for a cholera emergency as well as their relative amounts. The folding cots, plastic sheeting and graduated buckets are intended for the construction of cholera beds, which are important for the management of cholera patients in the acute phase. Cholera vaccines and tetracycline injections, however, have no role in the control of a cholera epidemic and should be omitted from the list.
5. The estimation of the *absolute* amount of medical supplies needed for the management of a cholera epidemic is very difficult, the main problem being the estimation of the number of clinical cases which will develop in a given population. In Gannet, where the conditions were extremely bad with a very crowded population, no sanitary facilities and no safe drinking

water, as much as 7.7% of the population were affected, whereas in the established refugee camps and in the town of Hargeysa, with good water supplies, an efficient health infrastructure and rigorous control measures, the affected percentages were only 0.18 and 0.15%, respectively. Medical experts differ in their opinion whether or not the amount of i.v. fluids needed for the management of cholera patients can be greatly reduced by the consequent and early use of oral rehydration fluids. The official list of requirements for the described cholera epidemic (Table 4) was based on an average of 3 l. per case, following a suggestion of the WHO representative in Somalia. For the complete management of a cholera case with i.v. fluids, however, 7 l. would be more appropriate.

6. The most rapidly available international source of relief goods is probably UNIPACs Emergency Stockpile at Copenhagen (see Table 3). If possible, it should be used as first choice for quick procurement, using UNICEF's country office as contact. Supplies should be airlifted by a commercial cargo airplane, which is usually more quickly available than foreign military planes. Orders must comply with UNIPACs Emergency Stockpile List, given in the UNIPAC catalogue.
7. All relief consignments must be accompanied by clear packing lists, in order to allow quick identification and utilization of the supplies. Omission of packing lists is a

serious and unnecessary, but nevertheless common mistake by relief organizations.

8. A special bottleneck experienced in the Somali cholera epidemic was the shortage of laboratory supplies and experienced laboratory technicians for surveillance during the epidemic. It is recommended that organizations involved in medical relief operations establish emergency stocks of complete sets of reagents for cholera diagnosis. This would require only marginal amounts of money and storage space, but could be highly useful in an epidemic.

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Lessons in logistics from Somalia

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By February 1981 the refugee relief operation in Somalia was close to breakdown. The Governor of Somalia and the United Nations High Commission for Refugees (UNHCR) contracted the agency CARE to manage the logistics of the operation. By August 1981 over 99% of food received at Mogadishu was reaching the camps. Here we describe this apparent success, and attempt to diagnose the contributing factors. Chief among these are dynamic leadership, 'systems' management, adaptability of personnel, the use of professional Indian food monitors in the camps, and the support given by the Government. The chief qualification on the success of the operation has been the continued dependency on expatriate expertise.

General conclusions are offered relating to the management of logistics in relief operations. The most important conclusion is that there is a prime need for logistics to be centralized in a single organization at the start of major emergencies. We point to the current inadequacy in an international relief system which fails to ensure this, and suggest that a new or existing part of the United Nations family be given a 'brief' for in-country logistics — to become a UN Emergency Logistics Office.

Keywords: Logistics; Somalia; Refugee relief operation; Centralization; CARE; International Relief System.

BEFORE THE ELU/CARE PROGRAMME

In normal times Somalia has a population of about four million, of whom about three quarters have a predominantly nomadic lifestyle. Following the Ogadan War of 1977/1978, refugees started arriving in Somalia from the Ogaden rangelands and from adjacent arable areas of southern Ethiopia.

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It seems that the first big influx in 1978 was largely absorbed within the local population, but after that, most new arrivals were placed in refugee camps administered by the Government's National Refugee Commission. Official figures for the numbers in camps at different times are shown in Table 1.

December 1979 to August 1980

It was not until 1979 that the numbers in camps overwhelmed the available facilities, reaching 500,000 by the end of the year. The Government declared a state of emergency in September 1979 and asked for large-scale international aid. UNHCR had been giving moderate assistance prior to this escalation of the crisis, and in October it responded with a \$5.8m programme. Between July 1979 and June 1980 some 100,000 tonnes of food were sent for the refugees.

At this time there were three international bodies involved with the logistics of the relief operation inside the country: the World Food Programme (WFP), UNHCR and the League of Red Cross Societies (LRCS). Inside Somalia in 1980 and the first half of 1981, WFP's responsibilities were broadly, to administrate handling and transport costs on behalf of the UNHCR. However, in the northwest, with one third of the refugee population WFP was also responsible for the management of the logistics system.

UNHCR was assisting the Government with the transport of food to camps with cash payments to pay private road contractors and by the procurement of trucks. The LRCS was also supplying the transit camps near the Ogaden border. The Government had established the National Refugee Commission (NRC) under the Ministry of Local Government, which had overall responsibility for seeing that the refugees in camps were adequately supplied with food and other needs.

The handling of refugee food in 1980 was undertaken by the following different national organizations:

NRC - Using its own truck fleet and hiring private contractors to transport butteroil, meat purchased locally, dried skim milk (DSM) and non-food items.

Table 1. Refugee population in Somalia, 1978—1981

Date	Total refugees in camps
Mid 1978	85,000
End 1978	103,000
Mid May 1979	189,000
August 1979	271,000
October 1979	350,000
End January 1980	539,000
End May 1980	713,000
February 1981	1,332,000
End 1981	700,000*

*Planning figure agreed following census of November 1981.

ADC - The Agricultural Development Corporation, the food parastatal with responsibility to manage the supply to camps of maize and sorghum. ADC received cereals for refugees into port warehouses and supplied the camps from its regional warehouses with food of supposedly equivalent value and probably of different type from that originally supplied. It used its own fleet plus contractors.

ENC - The state trading organization with responsibility for supply to camps of flour, vegetable oil, sugar, tea and rice. Like the ADC, it received donated foods into port warehouses and supplied camps with supposedly equivalent amounts from the regional warehouses, and used its own fleet plus contractors.

FAD - The Food Aid Department, under the Ministry of Local Government. It was responsible for supply of commodities for supplementary feeding, and also for document clearance of shipments of WFP-imported food and some handling and storage.

The arrangement for payment for transport was that the ADC and ENC would bill the NRC or the FAD. However, they would in practice subtract an estimate for transport costs from the value of the food they sent to the refugees.

Following the declaration of emergency, the UN sent an Inter-agency Mission to Somalia in late 1979. It found that not only did the government agencies involved not have enough trucks, but also that private contractors were reluctant to provide transport to the camps because of the poor road conditions. Another reason for their reluctance was that the NRC were running up large debts for transport — by September 1980 they totalled over \$1m, according to one report.

Consultants from Intertect were advising the UN during 1980. One of their reports observed (September 1980) that the ADC and ENC were putting all refugee food straight into their general stocks on receipt at the port, making no separation between refugee and non-refugee food. Often food donated for refugees would appear on the open market, a practice quite legal in Somali law (see the Ribbeck Report). Another factor working against accountability was that the ENC are a commercial organization and are not equipped to account for food stocks and movements. In principle, the ADC and ENC were supposed to supply commodities of equivalent value to the camps from their regional stores. However, the practice appeared to be that the other commitments — for the military, police, hospitals, schools and general public — took a higher priority. One estimate (quoted in the Ribbeck Report) was that refugees were only receiving about two thirds of their entitlements. Of 40,000 tonnes of U.S. maize delivered to Mogadishu between May 1979 and July 1980, only 21,000 tonnes was delivered to camps (according to a USAID official).

In the period up to the autumn of 1980, we find in summary that although there was probably adequacy of refugee food supply to the ports, the logistics organization within Somalia was inadequate. There were four government bodies with some responsibility for part of the operation; WFP and UNHCR were also involved in logistics, but without clear definitions of their respective roles.

These factors led to a chaotic food supply to the camps. Unofficial estimates in 1980 by agencies were that no more than half of the ration scale was being delivered to families and only four or five commodities of the eight commodity "basket" were in camps in any one month.

In September 1980, a report stated that:

"Food distribution in the camps was irregular. The supply of food from outside appeared to be viewed by both refugees and camp officials as beyond their control. Since the commodities provided in each shipment varied, the refugees were left without any clear idea of what foods they were likely to receive or when they might next receive them."

(Quoted in the Ribbeck Report)

The response of the UN to this situation was to pour resources into the existing organizational set-up, without ensuring that it had the capacity to account for the food or to maintain the trucks.

The Inter-agency Mission of December 1979 recommended \$120m of assistance, of which \$9m was for the transport sector (road construction and maintenance, logistics personnel, additional storage and more trucks). In 1980, 113 trucks and 66 trailers arrived, followed by 106 trucks and 34 trailers in 1981. The report was accepted by the Secretary-General in February 1980, and international assistance was mobilized. However, as stated above, the Mission made no recommendations for the logistics organization which should receive this large amount of assistance. The Report merely noted the close co-operation between UNHCR and other UN organizations, expressed the hope that donors would use WFP as a channel for food aid, and the belief that WFP should "... arrange, in co-operation with other agencies, for logistical support for food-distribution and storage."

In 1980 UNHCR requested help from the Intertect consultants. The first mission, in March—April, came to the conclusion that responsibility for food distribution needed to be re-assigned to a food agency other than WFP. A second mission took place from May to September, and included a logistics specialist. In July he recommended an *independent logistics office* under the NRC. The office would take over the roles of the ADC and ENC *vis-a-vis* refugees, plan deliveries to camps which would be done by transporter(s), and arrange for their payment by WFP on behalf of UNHCR.

WFP suggested the idea to the Government in August, who approved it in outline. Detailed proposals were then worked out and submitted in October along with the suggestion of an *outside implementing agency* for the transport component, and were again approved. To maintain continuity in the interim, WFP asked the Peace Corps to provide UN volunteers as monitors of food distribution, and the LRCS to provide short-term staff to assist the NRC in the establishment of its "Emergency Logistics Unit." At this point the UNHCR requested another survey, from a consultant to the International Labour Organization (Creighton, 1980).

September 1980 — April 1981

At the end of August the operation was on a knife-edge. The camps, and Somalia as a whole were almost out of food. Large shipments of food aid (mostly from the United States) were expected at the beginning of September, and there was great doubt as to whether the existing *ad-hoc* logistics system could cope.

The Emergency Logistics Unit (ELU) was formed in early September with staff seconded from government by the NRC and a core of three expatriates (two from Swiss Disaster Relief and one from Africare). They were successful in managing to move the food, but circumstances made it impossible to do more. There was no proper accounting, and diversions continued. However it was possible for the ELU to take over from the ENC.

An interim agreement was made in November, against a background of some confusion over responsibilities, whereby WFP would be responsible for assisting NRC in all food delivery to camps except in the case of maize/sorghum which ADC would continue to handle. This included the payment of transport costs, which would be reimbursed to WFP by UNHCR (these totalled over \$3m for the first six months of 1981). The monitoring of distribution of food to refugees was assigned to LRCS in co-operation with Swedish Disaster Relief and Swedish personnel in all regions except the northwest, where WFP remained responsible.

The Creighton survey was made during November and December 1980. It recommended, as expected, a joint UN—Government contract to set up an organization which would handle receipt, storage, and transport of food to refugee camps, and suggested the ILO as a possible implementing agency. He also recommended strongly the establishment of a centralized base (offices, storage, workshop and transport) at the Old Port area of Mogadishu. The option of using hired transport was dismissed. UNHCR began to look for an agency to carry out these recommendations. However, there was another option on the table, namely to continue the current arrangement of providing expatriate assistance to NRC.

At the end of November a team of three British logistics experts arrived, recruited through the British Disasters Emergency Committee (DEC), in response to the request from WFP to LRCS. It was originally envisaged that they would act in an advisory capacity only. However, only days after they arrived, UNHCR transferred responsibility for transport management to them, and there was the prospect of more expatriates being recruited to assist them. The DEC team had no clear terms of reference. The Creighton Report said of them that "Their roles are not clearly defined . . . they would also be absorbed into the NRC without real beneficial effect" (as had the previous expatriate assistants).

On their arrival the team found that there were large amounts of food piled up at Mogadishu port, but that WFP were (reportedly) reluctant to slow down imports. The vehicle workshop at the NRC compound was completely inadequate, with one Swedish Disaster Relief mechanic desperately trying to keep the trucks on the road. They had

inadequate numbers of staff of variable quality, and could not hire more. They had no working funds and no independent fuel source for the trucks. Fuelling sometimes took up to four days at the public stations; it was not until February 1981 that even limited access was possible to a UNHCR reserve stock at the port, which was being used by the Food Aid Department. Driver control was very poor; since they were not paid properly, drivers carried passengers and cargo en route. This meant that turnaround times were often as much as ten days instead of a planned maximum of five days. Field monitors constantly reported diversions of food shipments, but nothing was done about them.

The British team succeeded in establishing a base in the Old Port and developed a commodity management system by February. However, this could not be properly implemented at the time because of the lack of adequate field staff and of the resources at the Old Port to check systematically the returned copies of weighbills. As a result it was still not possible to stop the diversion of food. That there were not more deaths in the camps during the autumn of 1980 and early 1981 was not because the logistics system had become capable of delivering food to the refugees in the quantities donated. Rather it was because the quantities donated were greatly in excess of those needed, the official roll of refugees being larger than the actual numbers being fed in the camps.

By the end of January it seemed that at last the operation was under better control. However, that impression was illusory. UNHCR had been unable to find an agency which would take over in March, when the contracts of the British team were to expire. Negotiations with the ILO were taking

Table 2. A chronology of significant milestones during 1981

April	First members of the CARE team arrive
May	Heavy floods. Old Port warehouses inundated with relief supplies. Trying to cope using the previous system
June	Ten day ration basket introduced
July	Independent fuel point at Old Port for ELU vehicles. Old Port made secure. Control over truck fleet and drivers secured. Commodity Management Plan written
August	Office in northwest opened. Indian field monitors arrive and take up positions in the regions
September	Agreement with NRC on recruitment and dismissal. Vehicle workshop moved to Old Port
October	Checkpoints made operational. Verification system introduced. Camp logistics staff become ELU employees
November	Radios operational at all regions and checkpoints. Verified that 99% of food despatched from Mogadishu is reaching the camps

up valuable time — by the end of February the decision was still pending — and it was known that it would take them some further time to put in a team after the contract was signed. On the other hand, UNHCR had succeeded neither in recruiting more expatriates to supplement the British team nor in giving them more permanent contracts. Upset at this uncertainty, the team leader left in February. The remaining two members were thus running transport and commodity management without a leader. In the words of a USAID official, "the operation fell apart."

CARE had previously expressed interest in managing the logistics operation in September 1980, but had been rebuffed by UNHCR (the feeling, apparently, was that an American agency would be undesirable). In February 1981 CARE again made an informal offer, and this time UNHCR were ready to accept it.

The first CARE team members arrived on 8th April, after a Letter of Intent was signed by CARE and UNHCR. Negotiations on the contract continued between the Government, UNHCR and CARE. The Government wished to alter CARE's role from "management" to "advisory," at which point the CARE negotiators told their team to prepare to leave. After a few days the Government changed its mind, and the contract was signed on 26th May, covering a period of one year from 1st April 1981, with the CARE team as the new ELU management.

THE ELU/CARE OPERATION

ELU/CARE is a type of organization that is rare, if not unique, in the world of relief and development, being an "amalgam" of host government and voluntary agency. It is a unit of the NRC, but at the same time it is under the management (and effective day-to-day control) of the international development agency CARE. Its origins lie in a tripartite agreement signed between NRC, UNHCR and CARE. UNHCR pay the entire cost of running the ELU/CARE operation direct to the CARE head office, which then funds the operation, including payment of the salaries of all ELU staff. The current contract came up for renewal on 31st December 1982. The annual budget is currently about \$10m (1983) and the present strength of international staff is fifty.

The ELU/CARE operation has been, by contemporary standards, a significant success. By the autumn of 1981, after only four months, it was able to verify that over 99% of food earmarked for refugees (which arrived at Mogadishu) was reaching the camp stores. Yet, there is a sense in which this logistical success has worked against realization of wider and more long-term objectives of the relief programme. Power and new responsibilities accrued to the organization as its competence became manifest. An instance of this was the incorporation in October 1981 onto the ELU payroll of all field logistics staff in the south with the agreement of the NRC. Previously, the NRC logistics personnel in the camps — storekeepers, watchmen and porters — had been "volunteers" who had received food-for-work rather than an official salary, and the result had been considerable misuse of camp food stocks. The new arrangement made ELU one of the largest transport

organizations in Somalia, with more than 840 staff, and it extended control of the logistics chain right down to the camp store level. Other examples of new responsibilities which accrued to ELU/CARE were the provision of vehicle maintenance and fuel for agencies, port clearance for agency materials and the distribution of non-food items in camps.

The most recent stage in this accretion of responsibilities was the implementation in mid-1983 of a "ration shop" distribution system in the camps, designed to bring ration distribution more in line with entitlement. ELU/CARE conceived the original idea, and implemented it with the active and public support of UNHCR and NRC. These increased responsibilities, with the extra staff and resources needed to discharge them, have made inevitable the continued reliance on expatriate management and have postponed the "Somalization" of the operation.

Main milestones and achievements

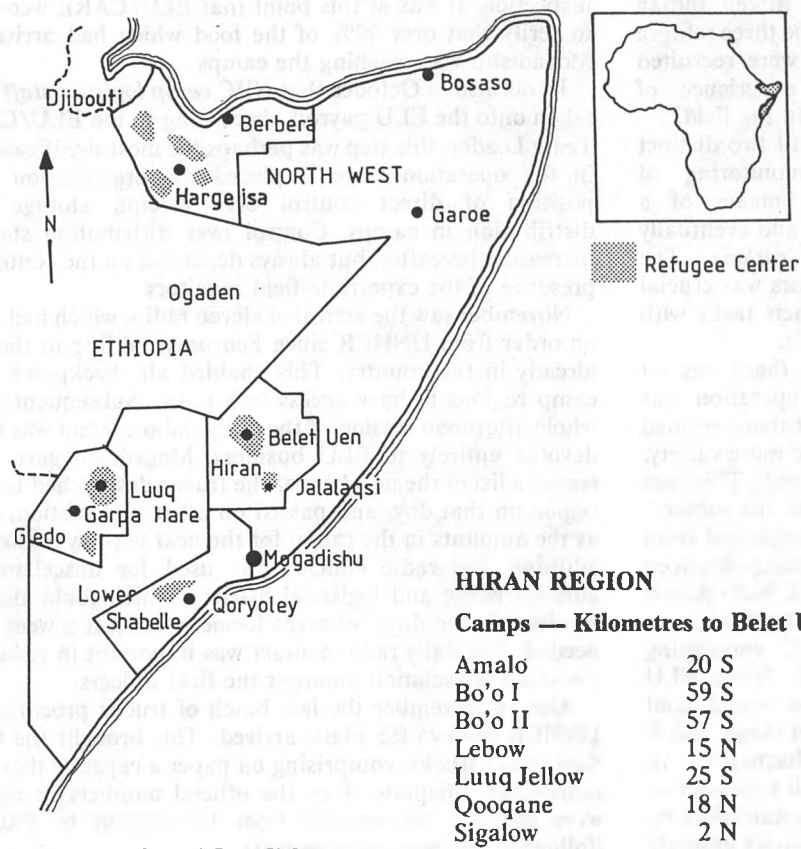
The first CARE team members arrived on 8th April 1981, and by mid-May there were fourteen. Of these only three were fully experienced in relief settings; three had considerable experience with CARE development projects in different countries but not in disaster relief, and two were Indian staff with backgrounds of senior management of CARE food distribution programmes in India (see Table 2).

They arrived to find the ELU operating in very cramped conditions out of two offices in the Old Port. Storage in the Old Port was being used, but the workshop was near the NRC headquarters, about 10 km away. There was no independent ELU fuel point. Drivers were not given payment — they were entrusted with a truck and expected to make an income from carrying passengers and cargo between Mogadishu and the camps. No turnaround times were enforced. The procedure for despatching truckloads to camps was somewhat haphazard, sending loads as and when trucks were available and attempting to give camps roughly equitable treatment (according to their relative population sizes). National staff had already been appointed by NRC, and disciplining was a constant problem.

April and May were spent trying to operate the previous system, while considering ways of improvement. The floods which followed the heavy rains in May made it impossible to do more than maintain the status quo, because the logistical system was swamped with extra supplies for flood relief.

The first significant milestone in the operation was in June 1981, when the *ten-day ration basket* was introduced. Every ten days each camp would be sent a predetermined amount and mix of foods, based on a per capita ration. The ration for each ten day period would be calculated on the basis of what was available in Mogadishu for refugee supplies. In theory then, each camp could be told in advance how much food it could expect over the next ten days. Once the ration had been despatched to a camp, no more would be sent there until the next period — even if there happened to be food in the warehouses and trucks available.

This development divided up the logistical demands into discrete, realizable units — as opposed to the previous



NORTH WEST REGION

Camps — kilometres to Hargeisa

Agabar	53 N
Adi Addeys	82 E
Arabsio	35 W
Daray Ma'An	125 NW
Dam	9 E
Darbi Hore	217 NW
Las Dhure	42 N
Saba'ad	35 NE
Tug Wajale	80 W

GEDO REGION

Camps — kilometres to Luuq

Ali Matan	9 S
Ban Mandule	5 S
Dorianley	10 S
Halba I	15 N
Halba II	15 N
Halgan	8 SW
Horseed	2 W
Maganey	12 SW

Camps — kilometres to Garba Hare

Bur Dhubo	48 SE
Hilo Mareer	57 E
Malka Hiday	63 E
Suriye	60 E

HIRAN REGION

Camps — Kilometres to Belet Uen

Amalo	20 S
Bo'o I	59 S
Bo'o II	57 S
Lebow	15 N
Luuq Jellow	25 S
Qooqane	18 N
Sigalow	2 N

LOWER SHABELLE REGION

Camps — kilometres to Mogadishu

Qoryoley I	139 SW
Qoryoley II	136 SW
Qoryoley III	136 SW

Kilometres from Mogadishu to:

Belet Uen	344
Qoryoley	132
Jalalaqsi	166
Hargeisa	1,628
Luuq	426
Garba Hare	496

Camps — kilometres to Mogadishu

Jalalaqsi I	166 N
Jalalaqsi II	171 N
Jalalaqsi III	166 N
Jalalaqsi IV	166 N

Fig. 1. Refugee centres in Somali Democratic Republic.

practice of trying to meet an open-ended continuum of demand. It provided for a definite task to be achieved in a definite time, thereby allowing for regular reports back at the end of each period. The period of ten days was chosen because this was long enough to be manageable as a discrete unit for logistics planning and reporting back, while not too long for the refugees to wait between distributions.

July saw significant developments in the secure establishment of the Mogadishu base, and in the securing of control over transport operations. The *inventory system* was introduced, requiring daily reconciliation of warehouse receipts from the port with port records of movements and of issues from warehouses with records of commodities moved to camps. The system could then provide details of all stocks updated daily.

At the beginning of July an *independent ELU fuel point* was secured within the Old Port, and a system was introduced whereby drivers were paid, with financial incentives to encourage fast turn-round and good vehicle maintenance. In July the "commodity control loop" was made to work, with the capability of matching returned copies of issue vouchers with the copy left behind. This meant that amounts received in camps could be compared against issues. A file of "acceptable signatures" of storekeepers and camp officials was established, in order to check the signature which acknowledged receipt on the returned copy.

With the establishment of a secure base and a closed documentation cycle for commodity control, the operation was ready for the next stage of consolidation. The

"Commodity Management Plan" was completed in July; this set out procedures and job descriptions for the whole system of commodity control. By August, fifteen Indian professional *field monitors* were in place in the three refugee regions in the south and southwest. They were recruited from CARE-India, and had extensive experience of supervising food handling and distribution in the field.

The field monitors were brought in to fulfil two distinct but complementary tasks: first, the monitoring of truckloads to and from the camps, by means of a *checkpoint system*; second, the monitoring, and eventually the control, of *distribution of general rations*. The experience and professionalism of the monitors was crucial to this stage, and they were to carry out their tasks with increasing effectiveness from August onwards.

From about the second week in August, there was an increasing feeling in Mogadishu that the operation was starting to take hold. Agencies reported that there seemed to be more food than ever in the camps, and in more variety. Nutritional status had demonstrably improved. This was perhaps the time when the relief effort "turned the corner."

In September the vehicle workshop was transferred from the NRC compound to the Old Port (previously fourteen Indian mechanics, recruited by CARE in India, had taken it over from Swiss Disaster Relief). Also in September, a *modus vivendi* was reached with the NRC concerning *recruitment and dismissal* of national staff. When ELU required staff they would notify NRC, who would send candidates for testing. ELU could select from these, and if necessary reject all of them and request alternatives. In addition, ELU could recruit from outside to fill a vacancy — subject to NRC clearance. Procedures were established by which personnel could be dismissed on disciplinary grounds without NRC approval, according to the Somali labour code. This development was important because in the past the operation's effectiveness had been severely limited by the use of unsatisfactory personnel nominated by NRC. However, the recruitment and the retention of good, qualified nationals continues to be one of the biggest problems.

ELU/CARE opened an office in the northwest in August, and took over logistics from WFP in November. This paved the way for a systematic extension to the control systems already being implemented in the south of the country, although for a variety of reasons, progress was slower. For example, the UN volunteers assigned by UNHCR to ELU to act as Food Monitors in the northwest lacked the experience needed. Also, they had inadequate transport initially. The distribution arrangements used in the camps were not conducive to effective supervision, and there was less co-operation than in the south from local officials in efforts to introduce more thorough controls. Similarly, there were problems in obtaining official support locally for ELU's recruitment and replacement policy for Somali staff.

In October all the checkpoints in the regions were working, and it was possible to introduce a new, independent method of verifying that shipments were reaching the camps. After the completion of despatch of the ten-day ration to a camp, a *Verification List* containing details of each shipment involved was sent to the field

monitor with responsibility for that camp. He confirmed that the shipments were in fact received at the camp by inspection. It was at this point that ELU/CARE were able to verify that over 99% of the food which had arrived at Mogadishu was reaching the camps.

It was also in October that NRC *camp logistics staff* were taken onto the ELU payroll. According to the ELU/CARE Team Leader, this step was perhaps the most significant one in the operation since it placed the organization in a position of direct control over receipt, storage and distribution in camps. Control over distribution steadily increased thereafter, but always depended on the continued presence of the expatriate field monitors.

November saw the arrival of eleven radios which had been on order from UNHCR since February, adding to the five already in the country. This enabled all checkpoints and camp regions to have access to a radio. Subsequently the whole afternoon session of the daily radio contact was to be devoted entirely to ELU business. Mogadishu gave each region a list of the numbers of the trucks despatched to that region on that day, and passed on other information, such as the amounts in the ration for the next ten-day period. In addition, the radio contact was used for miscellaneous administrative and logistical matters, which could this be resolved in two days, whereas formerly at least a week was needed. The daily radio contact was important in reducing the sense of isolation amongst the field officers.

Also in November the last batch of trucks procured by UNHCR Geneva (55 Fiats) arrived. This brought the total fleet to 223 trucks, comprising on paper a capacity that was more than adequate since the official numbers in camps were soon to be reduced from 1.3 million to 700,000 (following the November census).

In March 1982 a further stage in control over distributions was reached, when the NRC agreed that the ELU field monitors should henceforth have the authority to determine the day and time on which distributions would take place. Formerly the camp commanders would set the date, and then inform the field officer. Often the field officer would arrive at the appointed time, to be told that the distribution had already taken place.

From the end of 1981 to late 1983, the ELU/CARE operation was 'fine-tuning' and increasing in influence, while at the same time the scale of need was diminishing — a familiar phenomenon with disaster relief. The amounts of food being delivered to the camps during 1982 was on average about 11,000 tonnes/month (7,000 tonnes in the south and 4,000 tonnes in the northwest) — an annual average of 130,000 tonnes. It is unlikely that food pledges for 1983 will have exceeded this. This is in contrast to the 200,000 tonnes/year which seemed necessary in late 1980.

In September 1982 *regional warehouses* became operational in five of the six ELU field regions in the south, and in Hargeisa and Berbera in the northwest. These were introduced in order to:

- (a) hold all supplementary feeding commodities for distribution to the agency responsible in each of the camps;
- (b) hold all commodities for general feeding (except in the

south, where cereals, wheat flour and oil continued to be sent direct to camps from Mogadishu, due to their quantity and to avoid double handling expenses);

- (c) hold one ten-day supply of cereals, flour and oil as an emergency buffer;
- (d) hold all non-food items (tarpaulins, blankets, soap, clothes, utensils etc.).

The warehouses proved their worth in the October 1982 rains, when roads to most camps became impassable for the ration trucks. Trucks could unload their commodities at the warehouse and return to Mogadishu, leaving the ELU regional tractors and trailers to complete the delivery as road conditions permitted; this was done for the most part in the required period.

DISCUSSION

Reasons for success

We suggest that four main factors lie behind ELU/CARE's success up to the end of 1983.

1. The Volag/Government blend. Its unique status as a blend of voluntary agency and government, building on the agency's experience; giving confidence to donors and the UN; and at the same time obtaining authority from the Government and gaining immediate access to senior officials. The mandate from the international relief community, via the UNHCR, enabled ELU/CARE to press for changes felt to be in the best interests of the refugees. Examples of these have been mentioned above. A late example was the implementation by the ELU of a ration shop system, which donors, UNHCR, WFP and NRC supported strongly. An organization which was entirely run by the Government would not have had the freedom, nor perhaps the motivation, to push for changes like these. At the same time, however, they could not have been brought about unless ELU had had the interest and the authority of the Government behind it.

2. Leadership. A style of leadership which was realistic about what could be achieved in a given time and which divided the logistics tasks into stages accordingly; and second, which communicated this sense of priorities to subordinates. The importance of this approach is apparent from the progress of the first four or five months of the operation. Although there was great pressure to do something about the chaotic conditions in the field, first priority was given to the Mogadishu end. The belief amongst the CARE staff was that it was essential to secure the foundations they were standing on before they took the next step. Had they put resources into the field before getting proper control over what they were sending out, it would have been effort largely wasted.

It was not until August 1981 that field officers were put in place to monitor shipments and check receipts and distributions at camps. This had been preceded by *systematic preparation*, in the form of a written "Commodity Management Plan" endorsed by the Government, and

the orientation of the field officers in its use. As a result when the field officers did start work, there was an immediate and dramatic rise in the quantities of food available in the camps and distributed to the refugees.

3. "Systems outlook." The Third World experience and "systems sense" of key staff. Although some staff had had experience in logistics systems, they did not come in with a pre-conceived notion of the system that they would introduce. They placed emphasis on the fact that they had to design it from scratch, after examining what had and had not been working. This meant an open mind, and a willingness to experiment. For example, the "convoy system" was abandoned immediately the checkpoints started to work, because it was apparent that the checkpoints were achieving the same goal but with much more flexibility.

A systematic approach was used in planning, by holding frequent open-ended meetings to discuss problems. Trial approaches would be agreed on, recorded, implemented and reviewed after some time. A great emphasis was placed on written procedures, regular written reports from all responsible personnel, and regular coordination meetings. The field officers were successful, not just because they were good at their job, but because they were part of an integrated management. Third World experience was important because the greatest problems were *managerial* and not technical. The expatriates had to be aware of what would, and would not, work with their national staff, and of the ways in which plans tend to go awry due to the many constraints found in a developing country.

4. Experienced field officers. Experienced professional field officers from CARE-India's food distribution programmes, were introduced as food monitors early on. The logistics system had to achieve an effective presence in the field if the operation was to proceed beyond control over *despatch* of commodities towards control over *receipt*, and finally to control over *distribution*. From their experience with CARE-India's food distribution programmes, the field officers understood how people in a developing country respond to free food distribution; they were able to put their finger on the avenues by which food "disappears," which for an inexperienced person would take months. Their experience in handling people was also important. They knew how to get work out of their field employees. Perhaps most importantly, they had experience of dealing with conflict. One field officer described the process he used as "isolating those opposed to you, working on those sympathetic."

5. Other factors. The four factors described above can be said to have set the primary conditions for success. But a number of other factors played an important part.

First, the co-operation received from senior NRC officials at critical junctures must be stressed.

Second, the size and nature of the heavy vehicle fleet set the conditions in which quite outstanding technical efforts by workshop staff in both the northwest and the south offset early procurement delays. The majority of trucks were Fiat

682N3's — a comparatively uncomplicated and rugged vehicle. Also, although many of the trailers and some of the other manufacturers' trucks had serious structural or mechanical deficiencies, the total number of trucks and trailers was comparatively high in relation to the demand, under the conditions and arrangements in which vehicle movements were scheduled. Generally, therefore, there was some spare capacity, and the system tolerated delays in supply of some components.

Third, the siting of the base and office facilities in the south of the country was probably a positive factor. The choice of the Old Port as a logistics base, before the arrival of the CARE team, gave some advantage. Similarly the other CARE administrative office in Mogadishu, established later, was only a short distance from the Old Port. The fact that the main base was in Mogadishu itself, near to the New Port and the airport, only a short distance from both the NRC and UNHCR offices, and with international telex facilities relatively accessible, certainly aided day-to-day administration and was of great importance in the control of incoming food and supplies. The impact of distance and lack of communications could be seen in the northwest, where the only link with the Mogadishu HQ was by a UNHCR radio link and a weekly UN mail pouch procurement, in particular, lagged, although the Hargeisa team showed a remarkable ability to overcome the effects of their isolation.

Two other contributing factors worth emphasizing are the organization's control of its own fuel supplies, and the authority given to department heads to make local purchases of critical items where necessary. The ability to ensure a relatively constant supply of fuel for both the main and the regional truck fleets, and for the personal vehicles of key staff, gave the operation as a whole a much greater sense of security, and may well have prevented a number of major crises. The ability of department heads to make decisions on local purchase independently gave the operation considerable flexibility. Departmental (or imprest) accounts were used, replenished when drawn down. This resource was of particular importance in the development of the vehicle workshop system. A final and more general reason for success must be the fact that logistics was recognized as sufficiently crucial for around \$10 million *per annum* to be allocated to it.

A perspective on ELU/CARE's success

In spite of the obvious success of the operation, there are some significant qualifications to be made when putting it into the context of lessons for the future. Had logistics for the operation been organized rationally and carefully from the beginning, there would have been no need to bring CARE in at all. Furthermore, had UNHCR reinforced the "interim solution" of bolstering the ELU with expatriate experts over 1980/1981, that itself may have prevented the chaos of February 1981 and the visible justification for agency management. Indeed it could be argued that such a solution to logistics organization, although less efficient and effective in the short-term, would have been more

appropriate as the operation began to deal with declining numbers of refugees.

There had been a move during 1980 towards centralizing logistics in one organization, but progress was slow. The reasons for the delay lay more in the inability or reluctance of the UN organizations to press for changes than in reluctance of the Somali Government to agree to them. WFP and UNHCR did not present a united front, and UNHCR held on to a central role in logistics planning which could more profitably have been surrendered to the WFP. Over late 1980 and early 1981, UNHCR allowed the situation to slip out of control by their hesitation between the "outside agency" option and the "bolstered NRC" option.

On the whole, it appears that the UN, particularly the UNHCR, were not strongly motivated to get logistics centralized in a competent body until significant donor displeasure had built up, and there was the threat of public embarrassment over repeated logistical failure.

The original mandate given to CARE was to set up an effective and accountable logistics system, *not* to meet an emergency. The ELU/CARE operation must therefore be measured against the perceived requirement to account for the food delivered to the ports of Somalia and to verify that 100% of it was reaching the refugees. In this respect, the operation was entirely successful. The approach taken would not necessarily, in a different context, be the best for the priority of saving lives, either in the short or long term. For instance, in the *early* stages of an operation, it may be the best policy in terms of saving lives to "pump out" food without giving primary resources to ensuring accountability. Another alternative (which may be preferable) is giving priority to the delivery of much smaller quantities to precisely defined vulnerable groups, in which case the delivery of extra rations for general feeding suffers at the expense of supplementary and intensive feeding.

The third comment on the success of the operation has to do with the ways in which the achievement in the short-term of a system for accountable receipt and verified delivery of commodities, may have worked against the realization of broader and longer-term objectives for the relief programme.

Generally, refugee (and other food crises) have one or more emergency phases. There are no sharp, recognisable cut-off points for each phase and therefore there are dangers of lags in organization catching up with the current phase. If full responsibility for relief organization is taken by an outside agency, then there is benefit to be gained in efficiency and effectiveness. This is well suited to operations in the short-term, emergency phase, but can undermine the longer-term need to hand over responsibility to government and if appropriate, other national organizations such as commercial trucking contractors. Although the operation was still in an emergency phase when CARE took over in the south, in April 1981, it had certainly entered a period of declining logistical requirements by the end of 1982.

When CARE were introduced, it was envisaged that the operation could be handed over to Somali staff by April 1984. The prospective date for this "Phaseover" has receded as time has gone by. As ELU/CARE has become more

competent and powerful, it has been perceived as becoming more indispensable as well. It is in the short term interest of both donors and government to have a reliable organization for logistics which has the confidence of all parties. However, it may not be in the long term interests of either the refugees or the country for the Government to be seen as incapable of managing the operation.

CONCLUSIONS

What are the other lessons to be learnt from the ELU/CARE operation? Conclusions drawn here fall under two headings, organizational solutions for logistics and lessons for the international relief system.*

Organizational solutions

The Somalia experience shows that the option of contracting an outside agency to manage a relief operation in its entirety *can* lead to success. However, it should not be concluded that this experience offers the best blueprint for all circumstances. The organizational solutions will differ from country to country. In some, the government may be capable of running the operation (perhaps with assistance) and in others, an organization created by the UN might be more appropriate.

Organizational solutions will also differ according to the objectives of the operation. Different solutions could have been arrived at in Somalia, given a different set of actions by agencies. The question was raised during 1980 as to the possibility of separating the transport from the main logistics organization. Responsibility for transport could have been given entirely to commercial contractors or to the state transport organization. This option was not given serious attention at the time, perhaps because the Creighton Mission superseded it, with its strong bias toward creating a separate relief transport unit. Another reason for giving transport to the ELU could have been the felt need to ensure that there was a relief transport organization which could operate and look after the trucks that had been donated.

"Hiving off transport." In retrospect, it could have been wrong not to have placed a higher priority on "hiving off" the transport component of the operation to commercial contractors or the staff transport organization. There is substantial commercial trucking capacity in Somalia, and Somalis are well known for their expertise in this field. In the opinion of one senior official in Mogadishu, even if the commercial transport market had not initially been capable of meeting the demand, it would have expanded sufficiently in about a year. As an alternative, it is at least arguable that the Government transport organization (ONAT) or agencies like the ADC could have been capable of the job (with assistance).

*More "technical" aspects — guidelines on procurement, port operations, transport, workshop, commodity control and distribution — are to be issued in a separate document.

The advantages of such a policy lie in the reduction that is possible in the fixed costs of operating a truck fleet and a vehicle workshop, and in the consequent increases in flexibility for the operation as a whole. If the operation is in possession of large resources of this kind, there will be great pressures to keep them in use (even perhaps add to them), even while the ostensible demand may be declining. The danger is that the operation will tend to become "institutionalized" and inflexible, unable to phase down when logistical requirements decrease.

The situation of decreasing requirements was being experienced in Somalia in January 1983 with food deliveries to camps averaging less than a year previously. This coincidence of steady or increasing investment in transport and workshop resources with declining transport demand is in some ways unavoidable. However, it should be minimized by contracting out transport as far as can be done. The running costs of using commercial contractors will be higher than those of operating an "own fleet." However, the benefits in flexibility and in smaller fixed costs will outweigh this in the relief context.

Unitary organization. The principle conclusion which must be drawn from this operation (as indeed from every operation) is that for logistics to be effectively managed, responsibility must be centralized in a *single organization*.

The organization should have a clear mandate from both the host government and the international relief community. It should also have autonomy, if not complete freedom, on such crucial matters as staff recruitment, discipline and firing. An independent budget and freedom to do its own procurement (locally and internationally) are substantial advantages.

The logistics organization could be located in a government or ministry organization or outside it. The advantages of placing it within the government with no outside agency involvement in management (from the perspective of transition from emergency) were stated above. In any case the organization must have the authority of the government behind it, and be given powers to, for instance, requisition locally available government resources in cases of emergency.

The requirements for unitary organization does not preclude the "hiving-off" of well-demarcated segments of the operation to other bodies. The requirement is rather for central co-ordination. One organization must be in control of receiving commodities into the country, managing storage at base and in regions, scheduling deliveries and planning distributions. To divide these co-ordination responsibilities is to invite chaos.

Lessons for the international relief system

In Somalia there was not a clear allocation of responsibility between UN agencies in the area of in-country logistics and there was no early assessment of the organizational capacity and roles of the different government organizations which were, or might be, involved. Furthermore neither UNHCR nor WFP possessed enough field personnel in Somalia who were capable of assessing the

logistical requirements of the operation and the suitability of the various *ad hoc* arrangements that were assembled to meet them. Rationalization only began to emerge from mid-1980 onwards after donors' representatives started applying pressure and consultants were brought in.

There is no necessity for this familiar pattern of confused mandate, unpreparedness and insufficient staffing, to repeat itself in future relief operations. There are enough technical skills, experience, contingency funding, administration and procurement procedures available within the different organs of the UN to ensure adequate and timely response. The UN should, and can, develop the capability to ensure that, when an international relief operation becomes necessary in a country, there exists or is created a centralized logistics authority with the kind of characteristics outlined above. Many lives would have been saved in Somalia had this been done in early 1980, rather than in April 1981.

We suggest for consideration the idea of a "UN Emergency Logistics Office." Such an office would have the responsibility for logistics preparedness in vulnerable countries, and for seeing that suitable organization exists in-country once an operation starts. The Office could be located within an existing agency, such as WFP, UNDP or UNICEF, or could be established independently as an office under the Secretary General, like UNDRO. It could "contract out" assessment and implementation to other agencies in certain countries, depending on circumstances. For instance voluntary agencies with experience in food handling like CARE or CRS could be given tasks in countries where they already have a strong presence. The extreme case would be where an agency is contracted to manage the whole operation, as in Somalia. However, it is important that this Office, if it is to be credible and effective, should have an operational nucleus. This would imply that it has staff experienced in relief operations, at least some of which are field-based; it should have the capability to obtain more such staff on short notice for temporary duty; and it should have stand-by procurement and administrative procedures. There is no need for the 'UNELO' to maintain large and expensive stockpiles of trucks, although there would be advantage in holding stocks of radios and the office equipment needed for the nucleus of a logistics organization.

There are strong arguments in favour of basing "UNELO" in UNICEF — for its proven competence and its transport expertise — and in the UNDP — as the lead UN agency in many countries. However the WFP has great experience in handling and transporting food and possesses a substantial emergency budget. Furthermore it could become more operational in-country without a change in mandate, as a natural extension of its responsibility for out-country logistics. For these reasons we suggest that the most appropriate base for "UNELO" is the Emergency Office of the World Food Programme.

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7. Site Selection,
Planning, Shelter

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Camp Planning, Protection, Contingency Plan
2. Country/Region: Honduras
3. Background Information:
 - A. Because of an influx, 3000 Nicaraguan refugees arrived during 1987, and were settled in June 1987 in a new camp along the river Jalan. A drift(?) shelter and community services were built. The original assumption was the usual. Water level increase (2 meters) reached by the river during rainy season (6 months).
 - B. According to the government sources, some 600 Nicaraguan civilian members of the guerilla are currently living in the eastern region, near the Nicaraguan border, considered a restricted area for military security reasons. Part of this group should claim refugee status in the near future.
 - C. A contingency plan has been prepared to organize the reception, transfer and the settlement of the above-mentioned group. It includes also the influx of some 1400 other Nicaraguan refugees who could reach the reception centers in the forthcoming weeks. A budget was submitted to Headquarters.
4. Problem Description:
 - A. In September 1988 as a consequence of exceptional floods, the drift (?) was destroyed, the camp was isolated, then 2500 refugees spontaneously left the camp and were precariously settled in a safer place.
 - B. The authorities asked HCR to organize the reception and transport of ASYLUM seekers from the region where they were living to the refugee camps.
 - C. Due to the shortage of funds, no allocation has been allowed from the Emergency Fund. Instead, it was suggested that expenditures related to the contingency plan should be included in the current project.

5. What was learned?

- A. Despite the political limitations in finding appropriate land to rent and even the urgency to settle NEW refugees, technical studies regarding the risk of floods had to be done. Advice of national people neighbours of the coup had to be taken into consideration.
- B. Should HCR organise the reception of asylum-seekers in the neutral area, outside the military region under guerrilla control?
- C. Despite the preparation of a contingency plan in advance, the limitation of funds should limit the preparedness for an emergency operation. (?)

Cholera in Sudan: An account of an epidemic in a refugee camp in eastern Sudan, May—June 1985

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In 1985 cholera has been a serious problem in the horn of Africa, particularly affecting the many famine victims and refugees in that region. In this paper the history of cholera in Africa is briefly summarized, as is the background to the current refugee situation in eastern Sudan. A cholera epidemic involving 1,175 cases in two adjacent refugee camps in eastern Sudan is described. In this epidemic there were thirteen inpatient deaths and thirty-eight known home deaths from cholera. The management of the epidemic is described in detail. Overall an average of 8 l. of intravenous fluid was used per case, a higher figure than was anticipated, probably because of the unexpected degree of vomiting and the shortage of trained nursing staff.

The relationship between cholera and malnutrition is explored and hypochlorhydria is suggested as the main reason for the increased susceptibility to cholera among malnourished populations. It was observed that severely malnourished adults and children appeared to have less severe diarrhoea with their cholera, presumably because of reduced mucosal surface area and poor enterocyte function. Finally possible means of aborting cholera epidemics are discussed.

Key words: Cholera; Sudan; Ethiopia; Famine; Refugees; Sanitation; Epidemic; Diarrhoea; Tetracycline; Chlorination; Intravenous-fluid; Bladder-tanks; Chemoprophylaxis; Malnutrition; Hypochlorhydria.

1. BACKGROUND

(a) Cholera

Cholera, one of the most feared epidemic diseases in history, probably originated in India. There is evidence of its

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existence in India during the 5th century AD (Bhattacharji *et al.*, 1964), and there is reliable evidence of its presence there in the 16th century (Pollitzer, 1959). It has been stated that the disease did not leave Asia until the first modern pandemic which began in 1816 (Pollitzer, 1959), but Ethiopian historical records suggest that the disease may have existed in that country in 1634—1635, perhaps as part of a pandemic that included the 1629 epidemic in Java (Pankhurst, 1968).

In any case six pandemics occurred between 1817 and 1923 and all of them spread to east Africa, where cholera was first recorded in 1821 (Christie, 1876). In 19th century African cities cholera epidemics took a terrible toll. On one occasion 30,000 were said to have died in Cairo and Alexandria in twenty-four hours (Longmate, 1966). Like their European counterparts, African cities of the time had little sanitation or knowledge of how to control the spread of the disease (Christie, 1876). The worst cholera epidemics have occurred in years of famine and historical accounts of the disease almost always describe it as selecting out poor, undernourished people living in the worst areas of affected cities.

The speed of the disease, the unpredictable and explosive nature of epidemics, and the hopelessly ineffective nature of old remedies with resultant high mortality, all contributed to the mass panic and civil disorder that have accompanied this disease, both in Europe and Africa. In Ethiopia it was said to give rise to "a terror second only to the much dreaded smallpox" (Pankhurst, 1968; Longmate, 1966; Bilson, 1980).

It is surprising that more effective treatment was not devised during the 19th century as intravenous fluids and high volume oral fluids were both tried during the 1830's in Britain (Wendt, 1855; Longmate, 1966, p. 78). It was not until 1959 that intravenous fluids were used effectively against cholera (Watten *et al.*, 1959), and 1968 before the value of oral rehydration began to be fully realised (Nalin *et al.*, 1968; Mahalanabis *et al.*, 1968).

Between 1923 and 1960 the disease was not seen outside Asia except for the 1947 epidemic in Egypt when 20,000 deaths occurred in three months. The seventh pandemic, involving the less virulent El Tor vibrio, began in Indonesia in 1961, reaching Africa in 1970 where it has claimed many lives (Goodgame and Greenough, 1975). Although western countries have largely escaped this pandemic, there have been some cases in most countries and in 1974 Portugal had 2,467 cases in six months (Stock, 1976).

In November 1970 cholera was reported in Ethiopia for the first time since 1906, and although it has not been officially reported since, many recent cases in neighbouring countries appear to have been imported from Ethiopia (Stock, 1976), suggesting that there have been several epidemics since 1970 in Ethiopia. It is now believed by many that endemic foci now exist in the lowlands of Ethiopia.

In Sudan cholera was unofficially reported in 1971 in the south (Stock, 1976), and officially reported in 1979, again in the south (Weekly Epidemiological Record). In northern Sudan, camps in the eastern region have housed Ethiopian

refugees since the mid 1970's, but I believe this is the first time those camps have been seriously affected by cholera.

(b) Refugees in eastern Sudan

Refugees have been coming to eastern Sudan from Ethiopia for many years, but since the mid 1970's the numbers have increased considerably due to civil unrest in Ethiopia. In the early 1980's official estimates put the number of Ethiopian refugees in Sudan at nearly half a million. Some of these were located in semi-permanent agricultural settlements sponsored by UNHCR. Many others lived in the cities and towns of eastern Sudan.

When famine hit Ethiopia in 1984, the worst affected regions were Tigray, Wollo and Eritrea. As the rural areas of Tigray and Eritrea are largely controlled by liberation fronts, the farming communities in those areas were not accessible to international aid channelled through official lines. So with the help of the fronts these people marched enormous distances over difficult terrain to reach Sudan. Those who survived the journey were given assistance by UNHCR and voluntary agencies at temporary transit camps called Wad Khowli (Tigrayan) and Wad Sheraifi (Eritrean). For reasons of security and more practical provision of services, it was decided by the Sudanese government to move the refugees from the transit camps to temporary tent settlements further from the border. Shagarab East One, Two and Three camps (SE1, SE2 and SE3) were constructed near Khashm el Girba for this purpose, SE1 to take Eritreans from Wad Sheraifi, and SE2 and SE3 to take Tigrayans from Wad Khowli.

When cholera broke out there were 10,000 people in SE1 and 20,000 in SE2 about 2 km away. None had been moved to SE3 at that time. These were geometrically laid out tent cities, located about 5 km from Khashm el Girba dam from which water was trucked in and distributed, mostly via bladder tanks. Water chlorination was unreliable and the volume never adequate. Food, fuel and clothes were regularly distributed by the Sudanese government, and feeding centres and health services provided by voluntary agencies. These programs were supported by UNHCR.

Unfortunately the camp sites are prone to severe storms and flash flooding. Poor drainage was made worse by a road built by UNHCR which had no drainage provisions and converted part of the SE2 camp into a reservoir on three occasions, after the epidemic. At the time of the epidemic, sanitation for the camp consisted of a number of poorly utilized trench latrines scattered around the periphery of the camp.

2. THE EPIDEMIC AND ITS MANAGEMENT

The first cases of cholera appeared in Wad Khowli and SE1 camps on the same day, 15th May 1985. On that day the last 1,600 of the 20,000 refugees transferred from Wad Khowli arrived in SE2 camp in about forty lorries. Amongst the many sick refugees who got off the lorries (including one man with a fractured base of skull from the journey) was a four year old boy who had developed diarrhoea and

vomiting during the overnight trip, and was found collapsed soon after arrival. He was resuscitated with intravenous fluids, but due to a misunderstanding the fluids were discontinued during the night. He was found moribund in the morning and died soon after. Cholera had arrived in Shagarab.

(a) Overview of the epidemic

The epidemic in SE2 followed fairly classical lines with four well-defined phases (Stock, 1976, p. 43). The first phase, the introduction of the infection into the camp, was in this case very clear as it was imported directly from Wad Khowli. This was followed by a latent phase of twelve days, during which there were seventeen cases, initially from the area of the camp housing the 7,000 most recent arrivals, but later from all parts of the camp, indicating that the infection had now spread throughout the camp. The explosive phase followed, and over the next twelve days there were 677 cases from SE2. This was followed by a "tail" of twenty days during which there were 187 cases.

In SE2 there were a total of 879 cases or 4.5% of the population, with only twenty-five home deaths presumed due to cholera, and twelve inpatient deaths, half of which were probably due to factors other than cholera. The home deaths were counted using a system of grave-watchers and retrospective diagnosis.

The epidemic in SE1 camp followed closely behind that in SE2. The first case appeared in SE1 on 27th May. The explosive phase of the epidemic in that camp began nine days later just as the numbers were peaking in SE2 camp; the slight lag was fortuitous given that all cases from both camps were being managed in the same centre. Over the next six days there were 230 cases from the smaller camp, then, after a short "tail" of about a week, the epidemic ended abruptly in that camp. There had been 287 cases, or 2.9% of the population affected. There were sixteen presumed home deaths and one inpatient death from SE1. Overall there were 1,175 cases of cholera in the two camps over a period of about six weeks.

(b) Patient management

1. Casefinding. Public meetings were held by the Relief Society of Tigray (REST)* informing the population of the danger, and that the diarrhoea referral centre would be open twenty-four hours a day. Community health workers were patrolling the tents day and night bringing in suspected cases. With these measures there were relatively few deaths at home, although there was still a "rush hour" period between 5 am and 7 am when many shocked patients were brought in. Most patients were carried by neighbours or relatives on home-made stretchers made of sticks and scrap canvas or hessian bags. REST organized

*A Tigrayan relief organization operating in areas controlled by the Tigray Peoples Liberation Front and in the Sudan.

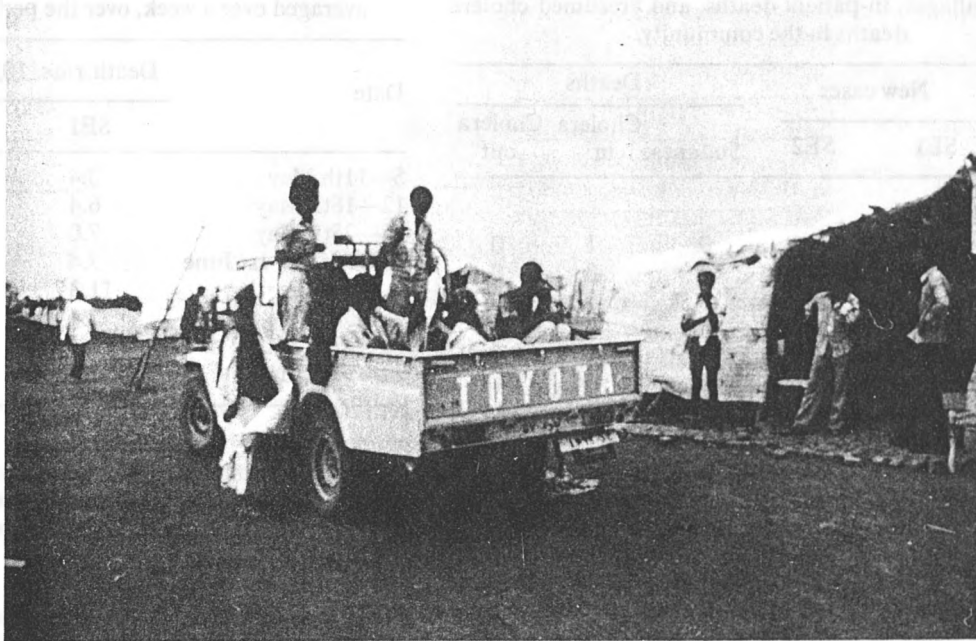


Fig. 1. New patients arriving at the hospital from the referral centre.



Fig. 2. One of the cess-pits. The latrines in the background are for attendants and ambulatory patients.

Table 1. New cholera cases from each camp and the nearby Sudanese villages, in-patient deaths, and presumed cholera deaths in the community.

Date	New cases		Deaths		
	SE1	SE2	Sudanese	Cholera in	Cholera out
May					
15	0	1	0	1	0
16—17	0	0	0	0	0
18	0	1	0	0	0
19	0	1	0	0	0
20	0	0	0	0	0
21	0	0	0	0	1
22	0	0	0	0	1
23	0	0	0	0	0
24	0	3	0	0	2
25	0	4	1	0	0
26	0	1	0	0	1
27	1	4	0	0	0
28	0	12	0	0	1
29	0	21	0	1	2
30	2	26	0	0	2
31	0	39	0	0	3
June					
1	0	65	0	0	3
2	0	75	0	0	5
3	2	72	0	1	0
4	6	98	0	0	1
5	20	79	1	2	1
6	46	80	0	0	1
7	52	69	3	2	1
8	55	41	1	2	2
9	24	32	0	0	4
10	33	27	2	1	2
11	15	28	0	0	2
12	9	17	0	0	2
13	6	19	0	0	1
14	10	9	0	0	0
15	2	7	0	1	0
16	1	9	0	0	0
17	1	8	0	0	0
18	2	8	0	0	0
19	0	4	0	0	0
20	0	4	0	0	0
21	0	2	0	0	0
22	0	3	1	0	0
23	0	2	0	0	0
24	0	2	0	0	0
25	0	4	0	0	0
26	0	2	0	0	0
27—30	0	0	0	6	0
Totals	287	879	9	13	38

Totals cases treated: 1,175

Table 2. Death rates in each camp, expressed as a daily rate, averaged over a week, over the period of the epidemic

Date	Death rate/10,000 population/day	
	SE1	SE2
5—11th May	3.4	6.0
12—18th May	6.4	5.9
19—25th May	7.0	4.6
26th May—1st June	7.4	5.2
2—8th June	11.3	5.8
9—15th June	7.4	4.1
16—22nd June	5.4	2.7
23—29th June	4.1	2.4

stretcher-bearers in each block for patients without relatives to carry them. Unfortunately there were many people in this predicament due to the dislocated nature of the community.

2. Screening and resuscitation. A diarrhoea referral centre was set up in each of the SE1 and SE2 camps. These were manned twenty-four hours a day by expatriate and local staff. These centres were capable of handling twenty to thirty acutely ill patients at a time, some on beds, others on grass mats on the floor with intravenous bottles hanging from the walls of the simple wood and grass buildings. A very large number of patients arrived at these places for assessment. Most of these did not have cholera and had to be assessed and sent away with treatment as quickly as possible. Doubtful cases were observed until the diagnosis was clarified; usually one or more stools needed to be observed by nursing staff looking for characteristic "rice-water" stools.

Of those with cholera about half were in hypovolemic shock at the time of presentation. These were aggressively resuscitated, some requiring two or three litres of intravenous fluid before a pulse could be felt. Nursing staff working in these centres soon became highly skilled at assessing these patients and inserting intravenous canulae, often a very difficult procedure in shocked cholera patients with hyperviscosity.

Once the diagnosis of cholera was established and the condition of the patient stable, transportation was arranged to the cholera hospital. At the peak of the epidemic the diarrhoea referral centres were chaotic places, staffed around the clock by two expatriate nurses and a variable number of locally trained staff. The work was fast and difficult sorting out crowds of sick, frightened people, some of whom were desperately ill. On one occasion, in the middle of the chaos, an otherwise well pregnant woman appeared in one of the centres and gave birth to a healthy baby on one of the beds. The mother was started on cotrimoxazole and quickly moved out.

Physically the referral centres were simple, locally built buildings. Important points for the successful operation of

such referral centres include:

- central location, easy for patients to find at night.
- physical separation, by fences and separate entrance, from other outpatient facilities.
- weatherproof roof and raised floor, preferably brick or concrete.
- adequate natural lighting for IV canula insertion.
- generator for electric lighting at night.
- separate kitchen and water supply.
- "pan-room" area with adequate number of bed-pans or buckets for collection and observation of stools.
- separate, fenced off cess-pit unless a more sophisticated system of waste disposal is available (e.g. the dual bladder-tank system).

During the course of the epidemic these points were introduced as our centres were improved.

3. Transport of patients. The cholera hospital was located on the periphery of the SE2 camp, about 1 km from the SE2 referral centre and 3 km from the SE1 referral centre. One vehicle and driver was available for each centre at all times and movement of patients was generally in groups of two to five, either in Landrover ambulances or pick-ups with plastic covered mattresses in the back. Each patient was accompanied by one attendant who remained with them throughout the course of their illness. About 90% of the patients had intravenous lines in at the time of transfer.

The movement of patients was generally limited by the availability of beds in the hospital. On one occasion a lorry was used to transfer fifteen patients from the overcrowded SE1 referral centre to the hospital. Walkie-talkies helped with the co-ordination of patient transfers at night.

4. Inpatient management. On arrival at the hospital all patients were registered and given a bed. The beds used had steel-frames woven with plastic thread through which urine and cholera stools could easily pass and which could be easily cleaned with water. With each bed was a bedpan for vomiting into, and a plastic washbasin which was placed under the bed for collection of stools.

a) Fluid management. Although oral rehydration solution (ORS) was encouraged from the beginning of the illness, intravenous fluids were used, in most cases until the vomiting had settled. The type of fluid used depended largely on what was available. At different times we used:

- Darrows solution, alternating with normal saline.
- Ringers lactate.
- "Fysioring," a Ringers-like solution without potassium, to which KCl, 13.5mmol/l was added when available.
- Dextran solution in severely shocked patients.

In each ward and in the referral centres there was a barrel of ORS with a tap from which attendants filled up the patients' cups. Throughout the epidemic an average of 8 litres of IV fluid was used per case, and at the height of the epidemic 1,000 litres of fluid per day was used.

Several attempts were made to devise workable fluid balance charts, but these were not successful, partly because washing water and urine inevitably became mixed with the stools, but mainly because the workers, with only very brief medical training, were not able to appreciate the concepts and importance of fluid balance. The best we could manage was a cross system for recording IV fluid input, half litres being marked as "/" and litres marked as "X" on a card on the end of the bed. All beds were numbered and each patients' inpatient history was recorded on a card, an entry onto which was made every shift.

The rate of IV fluid input for each patient was estimated by the nurse in charge, based on clinical evaluation and assessment of output.

b) Drugs. All patients were given tetracycline 500 mg four times daily for four days, children were given equivalent doses and pregnant women were given co-trimoxazole, two tablets twice daily for five days.

Patients' attendants and staff were given tetracycline 500 mg twice daily for the duration of exposure. Despite this prophylaxis several people who were apparently taking their capsules, developed cholera.

Household contacts were followed up by community health workers and given 500 mg of tetracycline twice daily for three days, or equivalent doses of tetracycline for children, or co-trimoxazole for pregnant women.

The average duration of hospitalization was three to four days, although some, particularly children, were discharged well after forty-eight hours. Patients who had not vomited for eight hours after cessation of IV fluids, and whose stool losses were settling, were eligible for transfer to the convalescent ward, a large, open room where patients were managed on grass mats on the ground. Each morning patients in this ward were assessed with regard to eligibility for discharge. Unfortunately many patients absconded from this ward before they could be formally discharged.

(c) Hospital, equipment and supplies

In general the items likely to be in short supply in the event of such an epidemic are IV fluids, beds, hospital space and basins or bedpans, in that order.

The hospital we used consisted of seven wood and grass, rectangular buildings with plastic covered roofs, in a large, fenced-off compound. Five of the buildings were used as wards containing up to 175 beds, the number required when the new case rate was up to 130 per day. In each ward there was a central stand with two 60-l. barrels with taps; one containing highly chlorinated water and clearly marked for washing only, and the other containing ORS. One of the other two buildings was the convalescent ward, and the last building was the kitchen, preparing food for patients' attendants and convalescent patients, and ORS. Two large



Fig. 3. Every patient was admitted with a personal attendant.



Fig. 4. Evaporation lake for disposal of chlorinated waste washing water.

tents were used for storing supplies. In our situation tents were found to be unsatisfactory for managing patients in, as they were too hot.

A generator provided power giving two or three fluorescent lights to each ward. Despite the presence of a spare generator, blackouts still occurred, and a supply of torches and kerosene lamps needed to be kept on hand.

Two separate water supplies were used, each a 7,000-l. bladder tank connected to a tapstand. One, for washing only, was highly chlorinated with the tapstand located near the washing area, on the way back to the wards from the cess-pits. We had intended to colour this water with potassium permanganate, which also has anti-vibrio qualities, but this was not available. Waste receptacles were rinsed in this water, the waste water then being tipped into an open plastic barrel from which it drained into a large evaporation lake. We had great difficulty maintaining the chlorination of this "super-chlorinated" water supply, probably because of the high silt content of the water, tending to bind the chlorine. To compensate we added a teaspoon of chlorine powder to each 60-l. tank of handwashing water; this caused no problems.

The second water supply on the other side of the compound provided drinking water, mainly for ORS preparation. A tap was constructed in the kitchen where ORS preparation took place.

The disposal of stools and vomitus presented a major problem. Large pits about 1 x 3 x 4 m were dug and covered with wood, plastic and earth with a half-metre square hole in the middle, into which the patients' attendants tipped the waste. Four of these huge cess-pits were filled during the epidemic. When one was full (about half a metre from ground level), it was sealed with plastic and earth in the hope of creating an anaerobic environment to kill the vibrios. It must be said that we felt very uncomfortable with this solution, partly because of the worry of a flood occurring during the epidemic, which fortunately did not occur, and partly because the nature of the soil in the area is such that those holes are likely to contain liquid for months or even years. If we had known of the dual bladder tank system pioneered in Bangladesh we would have tried it, as it is much safer.

We needed about 200 basins and 200 bedpans. After use these, and the beds were washed in chlorinated water and allowed to dry in the sun.

Intravenous fluid requirements have been mentioned already (about eight litres per case). The other item that is essential and always tends to be hard to find is IV cannulae; 18G, 20G and a few 22G should be ordered. Good quality IV strapping tape would also be very useful as the shocked patients sweat profusely, particularly during rehydration, and cheap tape can be costly when IV cannulae fall out. Managing cholera without cannulae, as we did early in the epidemic, is difficult and wasteful, as needles or butterflies have to be replaced every few hours, and up to three at a time may be required for the very sick patients, resulting in unnecessary trauma for the patients, and higher mortality.

(d) Staff requirements

Each of the referral centres required two skilled nurses, two or three locally trained medical staff, one cleaner, one person responsible for distributing ORS and one driver per eight hour shift. As in our case five different agencies were involved in providing medical staff to fight the epidemic, it was essential to have a full-time co-ordinator and a committee with representatives of all the agencies meeting every day.

In the inpatient facility one expatriate nurse or doctor was responsible for each group of thirty patients. This person was assisted by two locally trained medical workers and two cleaners, all working twelve hour shifts. Although this work was less stressful than the referral centres, the twelve hour shifts without days off took a noticeable psychological toll on workers at all levels. In addition to these staff, guards, cooks, maintenance workers and other sundry staff were required.

We made the mistake of allowing different people to do the hiring and firing in different areas. Probably one person should have been responsible for all cholera related staff. In general agencies should be discouraged from attaching their name to particular aspects of a project such as this.

It must be remembered that all the basic nursing requirements of patients were generally met by their attendants, usually a close friend or relative; without these people staff requirements would have been much greater.

3. CLINICAL ASPECTS

(a) General observations

As an ancient disease of great importance, cholera has been well described in the standard texts (Manson-Bahr and Apted, 1982). Nevertheless it is a disease that never ceases to surprise those who treat it, so some of our observations may be of interest.

As mentioned earlier about half our patients presented in shock. The typical patient was conscious but the sensorium was clouded by an inappropriate sense of tranquility. Two or three litres of intravenous fluid may be required for the pulse to return, and when it does return it is often slow, tachycardia not seeming to be a major feature of shock in this disease. With initial resuscitation the patient appeared to recover very quickly and if free of muscle cramps, felt well, despite sunken eyes and poor skin turgor which tended to persist.

At this point one voluminous bowel action may be all that is required to precipitate a state of secondary collapse, which affected many patients either *en route* to the hospital or soon after arrival there, despite apparently adequate intravenous fluid. A number of the patients who were initially managed orally rapidly went into this state and as the epidemic went on nursing staff became more reluctant to rely on ORS alone for management.

Significant vomiting occurred in the majority of cases. In most this settled after four to six hours but in some it persisted for over forty-eight hours.

One early case, a powerful young man employed by the camp authorities to clean up faeces scattered around the camp, suffered intractable vomiting for forty-eight hours and at one stage required 20 l. of IV fluid in twenty-four hours, whilst persisting with ORS throughout. Vomiting seems to have been a feature of this epidemic both in our camp, and in other areas of eastern Sudan, too much vomiting to be explained by acidosis alone. This seems to be one point of differentiation between Asian cholera and African cholera.

In any given case the diagnosis of cholera was based on a short history, with profound dehydration and cold extremities, and the nature of the stools. This latter point deserves some discussion. In a clearcut case the stools are obvious: clear or cloudy water, with or without flecks of mucous: the vomitus looking almost identical to the stools. Difficulty arose when a case appeared to have the other clinical features but the stools were yellowish or greenish. These cases were kept in the referral centre for observation. Many would deteriorate and develop typical cholera stools, others would improve and be sent home on tetracycline and ORS, the diagnosis being either gastroenteritis or mild cholera. Some however deteriorated but never developed typical stools; these were often malnourished children or adults. In these cases clinical diagnosis was impossible and bacteriological diagnosis not available, so they were managed as cholera.

For most patients the disease settled after twenty-four to forty-eight hours. The most severe cases were healthy young adults who generally recovered quickly. Cases occurring in severely malnourished children or adults were usually less clearcut at the outset, the disease often merging with nutritional diarrhoea. Fluid losses were less dramatic, their character often not typical of cholera, and the disease tended to run a longer course, sometimes lasting a week or ten days, providing difficult management decisions for attending medical staff. Relapses amongst this group were difficult to distinguish from continuing disease but there were some definite clinical relapses in typical cases occurring within a few days of discharge.

(b) Mortality and complications

Overall inpatient mortality was around 1%. Of the thirteen inpatient deaths, five were thought directly attributable to cholera, four from dehydration and one from fluid overload. Two were malnourished children in whom there was some doubt about the diagnosis and whose deaths were certainly contributed to by fluid overload. The other deaths in the hospital were in patients whose diagnoses were uncertain and cause of death mysterious. Some of these must have been electrolyte disturbances.

Overall the incidence of complications was low. As mentioned, three patients died from fluid overload and it is likely that unrecognized acute renal failure played a part in

some or all of these deaths as their pulmonary oedema proved refractory to treatment.

Two patients developed acute renal failure and survived after periods of seven and ten days anuria. Gangrene of the leg was seen as a late complication in one elderly man, six days after discharge. His family refused to allow active treatment for him and he died very soon after that decision was made.

(c) Laboratory data

A number of specimens were sent in alkaline peptone broth to the central laboratories. Specimens were taken directly from the rectum using a feeding tube and syringe and then squirted directly into the peptone broth. These were then kept as cool as possible and transported to the capital where the laboratory had been alerted. At least two of these specimens were positive for El Tor vibrio, Inaba strain. Resistance patterns were not made available.

(d) An interesting case: Hepatitis and cholera

After the epidemic was virtually over, one of our employees an otherwise healthy twenty-two year old paramedic who had been dealing with patients throughout the epidemic, developed hepatitis, which was just starting to be a problem in the camp. After three days of jaundice he appeared to be getting better when he was suddenly struck by severe but typical cholera. He was brought in by his colleagues pulseless and virtually comatose.

He was resuscitated but for seven days he was anuric, with no response to frusemide. Fluid balance was rigidly maintained and after the first three days he received no potassium containing fluid. He was given no antibiotics for his cholera and spontaneous recovery followed.

4. PUBLIC HEALTH ASPECTS

(a) Isolation

Within the camp strict isolation was difficult. The hospital on the periphery of the camp was generally a referral centre; only occasional patients presented directly there. Consequently when a patient was admitted with his attendant, they were not allowed out until discharged and no visitors were allowed in. Staff, living both in the camp and the expatriate compound, were allowed to come and go. All were taking prophylactic tetracycline. Isolation of the patients' families was impractical and probably of no use.

Isolation of the camps themselves presented a more serious problem. As there is only one road leading across the Khashm el Girba dam connecting the area with all the major towns in eastern Sudan, strict control of movement past the dam allowing only essential commodities into the area should have been fairly easy to accomplish. This however was not done and cholera, in its usual erratic manner, next sprang up in a refugee camp about 80 km away on the other side of the dam. It has since spread to



Fig. 5. Refugees in the camp queuing for water.

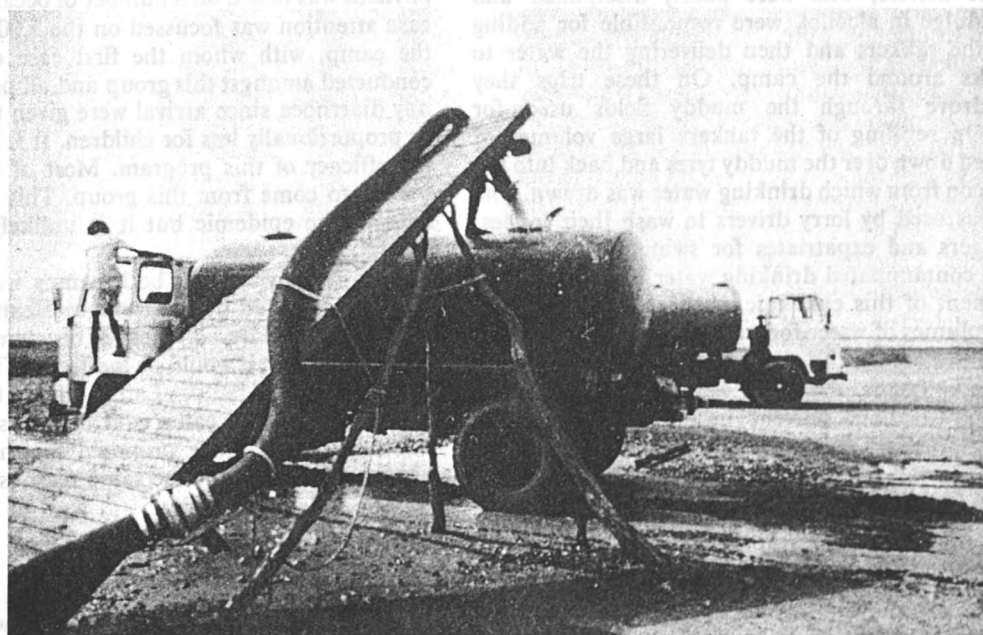


Fig. 6. Water tanker being filled.

almost every refugee camp and many of the towns in eastern Sudan. Many small villages have been affected with heavy death tolls.

In our area we were able to provide a "pick-up" service for the local Sudanese villages using nominated casefinders in each village. We successfully treated ten cases from the small nearby villages in this manner.

Historically few governments have successfully erected barricades to the spread of cholera, so even if stringent isolation procedures had been adopted, it would be optimistic to expect them to be effective. In any case cholera was moving from the other affected areas near the Ethiopian border towards Gedaref and this movement would have been even more difficult to control.

(b) Water supply

The question was raised during the epidemic as to why SE2 camp seemed to have such a high percentage of the population affected. Clearly poor sanitation and malnutrition were important, but both these factors were significantly worse amongst ethnically identical people in Wad Khowli, where the attack rate was half that in SE2. Attention was then focussed on the water supply.

At the time of the epidemic the Shagarab camps were awaiting the completion of a piped water supply from the Khashm el Girba dam 5 km away. As a stop-gap measure to cover this long wait, 30,000-l. bladder tanks filled by water tankers, were scattered around the camp. This system provided at best 10 l. per person per day. The tankers were filled at the water's edge usually with a great deal of spillage. The drivers, who were poorly disciplined and known to indulge in alcohol, were responsible for adding chlorine to the tankers and then delivering the water to various tanks around the camp. On these trips they frequently drove through the muddy fields used for defecation. On refilling of the tankers large volumes of water splashed down over the muddy tyres and back into the stagnant lagoon from which drinking water was drawn. The same area was used by lorry drivers to wash their lorries, and by villagers and expatriates for swimming. It seems possible that contaminated drinking water played a role in the development of this epidemic, there is no doubt that inadequate volumes of water for washing was an important factor.

During the epidemic, measures were taken to regulate chlorine administration, prevent undue spillage during filling, outlaw washing trucks in the area and move the water intake away from the bank. The first two improvements were carried out but the latter two proved impossible. Unfortunately chlorination of muddy silt-laden water is very difficult as much greater quantities need to be added before detectable chlorine can be measured at the tap.

(c) Ground water

Drainage of the camp site was always poor, partly because of the unfortunate road connecting the three camp

sites previously mentioned and partly because the camp was built on a flat expanse of clay soil which does not permit seepage.

Three days before the explosive phase of this epidemic, a sudden rainstorm caused flash flooding leaving holes and trenches around the camp filled with water which remained for days. Many of these places had been previously used for defecation and the pools they formed were now used for washing clothes and utensils, and possibly by some for drinking, particularly those who, for reasons of illhealth, were unable to wait in the long queues for their water. These pools were recognized early as a potential source of spread of the disease and some were filled in, but this process was incomplete and took a long time.

(d) Sanitation

Sanitation in the camp consisted of a series of trench latrines scattered around the periphery of the camp. These were poorly utilized, most people using the wide open spaces around the camp for defecation. There was however a great deal of faeces within the camp, from children, ill adults and those who, under cover of darkness did not wish to make the journey out to the periphery of the camp.

Despite much discussion, during the epidemic nothing was done to improve this situation, although since then a detailed latrine program has been started in the camp.

(e) Mass prophylaxis

During the epidemic the question of mass chemoprophylaxis was raised on a number of occasions. After the first case attention was focussed on the 7,000 recent arrivals in the camp, with whom the first case came. A drive was conducted amongst this group and all persons who had had any diarrhoea since arrival were given tetracycline 2 g stat or proportionally less for children. It is impossible to assess the efficacy of this program. Most of the early cases still tended to come from this group. This program may have delayed the epidemic but it is unlikely to have achieved anything else.

Mass prophylaxis for both camps was proposed at this stage but rejected by the Refugee Health Unit, for fear of encouraging the development of resistant strains and on the assumption that it would be ineffective (Towner *et al.*, 1980; Mhalu *et al.*, 1979). Later when the epidemic was established in SE2 camp and SE1 was still spared, mass chemoprophylaxis was proposed for the SE1 camp. This was rejected again for the same reasons.

(f) Contact prophylaxis

Throughout the epidemic, household contacts were followed up by community health workers and given tetracycline 500 mg twice daily for three days or equivalent doses in children. Co-trimoxazole was given to pregnant women. Each morning a list was given to the community health workers organizers of the previous day's addresses for tetracycline prophylaxis distribution.

(g) Staff health

As already mentioned, all staff dealing directly with cholera patients were given tetracycline 500 mg twice daily for the duration of their exposure. Handwashing with highly chlorinated water or disinfectant was constantly encouraged and smoking was discouraged in the hospital compound. At least three hospital cleaners and one dresser developed cholera, but none of the thirty or so expatriate staff dealing with the epidemic were affected. It was decided early in the epidemic that if any expatriate was affected, they would be managed in the hospital with the rest of the patients, there being no place for "private medicine" under these circumstances. Most but not all of our expatriate staff had current cholera vaccinations at the time of the epidemic, reflecting the current low level of confidence in the vaccine.

5. DISCUSSION

(a) Cholera and malnutrition

We witnessed an epidemic of El Tor cholera where 4.5% of a population were affected, many with severe disease; a population which had been acutely malnourished just prior to the epidemic.

Cholera has always been known to prey on the poorly nourished individuals in affected populations and cholera epidemics tend to follow droughts (Stock, 1976, p. 49). Experimental studies have shown that gastric acid is one of the body's main lines of resistance against cholera and hypochlorhydria clearly predisposes to cholera (Cash *et al.*, 1974). There is evidence that acute malnutrition predisposes to hypochlorhydria (Gracey *et al.*, 1977; Thomason *et al.*, 1981) and it seems reasonable to assume that this is the mechanism by which cholera selectively attacks the malnourished (Nalin *et al.*, 1978). In a population such as ours, all groups seemed to be affected, but the worst cases occurred in otherwise healthy young adults. Severely malnourished children and adults seemed to have a milder disease in terms of fluid loss but recovery was slower. As the basic pathology of cholera involves active secretion from all cells lining the small intestine, both in crypts and villi, it is not surprising that a severely malnourished patient with some degree of villous atrophy will have diminished potential for fluid loss. Thus while malnutrition predisposes to cholera it appears to lessen the severity of the disease.

(b) Planning

The early stages of an epidemic require careful planning for what is to come and a committee and cholera co-ordinator should be appointed as soon as the threat of cholera becomes apparent. Priority should be placed on buildings, IV fluids, canulae, beds, buckets and lighting. The two vital bits of information required at this stage are: (i) Is this really cholera? (ii) How many cases can we expect?

Great care should be taken during the early stages to send properly labelled, correctly taken specimens to the official

laboratories for confirmation of the diagnosis. Negative results in the face of compelling clinical features, should not deter planning; there are many explanations for this phenomenon. Early in our epidemic much doubt was expressed as to whether or not we were dealing with cholera. Fortunately preparation for the epidemic pushed on regardless.

Fears were frequently expressed that we might panic the population and cause a mass exodus if they found out there was cholera in the camp. On the contrary, we demonstrated early in the epidemic that we could deal effectively with the disease and subsequently received a high level of co-operation from the refugee population.

The second point about predicting the size of an epidemic is very difficult. In the absence of any other information we chose the 2—4% quoted by Manson-Bahr (1982) as a ceiling figure and it proved accurate.

Sanitation was, in many cases, as bad or worse in the towns of 19th-century England. In Leeds, one of the filthiest cities, 1% of the population died, indicating an attack rate of probably 2% (Longmate, 1966, p. 97). The worst hit town was Bilston where 16% of the population was affected and 5% died (Longmate, 1966, p. 118). On one ship 124 out of 330 contracted the disease (Longmate, 1966, p. 98); most figures, however, were lower and in London in 1832 the mortality from the great epidemic of that year was 0.5% of the population.

But that was all classical cholera, here we were dealing with El Tor cholera where less than 1% of those infected are said to develop the clinical disease. Here we were dealing with a community more at risk from the nutritional viewpoint and perhaps they were receiving larger than usual doses of the organism.

To emphasize the virulence of African El Tor cholera, it is worth looking at other recent epidemics in Africa where high attack rates have resulted in horrendous mortality figures. In some areas of Mali, 50% attack rates have been reported with 50% case fatality rates (Stock, 1976, p. 45).

(c) Official reporting

Looking at the "Weekly Epidemiological Record" of recent years is a disheartening experience. Everybody who has had anything to do with the horn of Africa knows that Sudan and Ethiopia have had serious epidemics this year. Official denials only stand in the way of both the international community and the local authorities dealing effectively with this important public health problem and prevent epidemiological investigation of the disease.

Although the population affected by the epidemic described was clearly encountering the vibrio for the first time, as the age distribution of patients was similar to that of the population, there is a strong suspicion amongst people working in the area that cholera is endemic in some areas of lowland Ethiopia, from which it spreads out when conditions are favourable.

The vibrio present at Wad Sheraifi camp near Kassala was said to be Ogawa strain suggesting that the current epidemic arose from more than one focus, or perhaps the

vibrio changed its antigenic properties along the way as it has been known to do before (Cvjetanovic and Barva, 1972). In any case any statement on the nature of cholera in the Horn of Africa will be largely speculation until governments begin to report the disease honestly.

(d) Effectiveness of public health measures undertaken

Dealing with cholera the three most important public health areas are water, sanitation and nutrition. Water has already been discussed; while we will never know if the epidemic was truly water borne, no-one can doubt that inadequate water for washing played a role. During the first two phases of the epidemic, most, but not all, of the seventeen cases came from the recently settled section of the camp. Once the explosive phase was over all twenty-one blocks of the camp were affected fairly equally with the exception of two blocks which seemed to have less cases than expected. These were in separate parts of the camp and seemed to have no relation to a particular water source or any other factor but as the blocks tended to be settled in village units, we ascribed these differences to variation in levels of village hygiene and nutrition. This information neither supported, nor refuted the drinking water borne theory. The delay in the SE1 camp being affected, did however seem incompatible with the theory as the two camps both had virtually the same water supply.

No real improvements in sanitation were made during the epidemic. Nutrition was constantly being improved as part of the overall relief program.

Mass chemoprophylaxis has already been mentioned. With such a discrete and accessible population who were at high risk for developing the disease, I believe it should have been tried in this case. Virtually the whole population could be covered by tetracycline for three days at a time when the disease had only just entered the camp. True the period of infectivity of the environment can only be guessed, but perhaps it was worth trying. It is hard to believe that this would do more to encourage resistance than the conventional use of tetracycline during a full scale epidemic which might otherwise have been avoided. It is interesting that during the preparation for this epidemic, the question of vaccination was not brought up reflecting how the place of vaccination has steadily declined in recent years. This situation will probably change with the development of new oral vaccines. In the meantime medical staff confronted with cholera epidemics will have to deal with as many public health variables as possible, but be prepared to rely on a sound curative system to bear the brunt of the epidemic.

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MATTERS ARISING

Health work in refugee camps: Some lessons from Somalia

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In the editorial of *Disasters* 5(1) (1981) it was suggested that some feedback from field workers might round out the information provided by specialists and technical experts. This article is a response to that request and may help to emphasize some essential lessons which have still not been learnt by some volunteers despite the mass of information available. There is no claim to originality, but all the facts stated here can be personally vouched for and occurred between May and October 1980. They are not intended as criticisms of individuals, who were all unsparing in their efforts to help the refugees.

The Somali Democratic Republic lies on the Horn of Africa. It is shaped like a boomerang, the convexity formed by its 3,250 km coastline bounded by the Gulf of Aden to the north and the Indian Ocean to the east, and the concavity by the 1,200 km Ethiopian—Somali border to the west. Within that concavity lies the disputed Ogaden. Djibouti lies to the north and Kenya to the south.

After the Somali attempt to wrest the Ogaden area, which contained a Somali ethnic population, from Ethiopia had failed in 1978, refugees fled in increasing numbers into Somalia. They now number between 850,000 and 1,250,000 in camps alone, while an unknown number are sheltering with relatives.

Thus one of the world's sixteen poorest countries with a previous population of about 3,500,000 is now having to cope with a 25% increase — all refugees. The camp inmates are predominantly women and children. 66% of the latter are under 15, and 25% under 6 years old. Males over 15 are serving with the guerrillas or tending what remains of their sheep, goats and camels in the Ogaden. Seventy per cent of Somalis are nomads who normally range over a vast area of scrubby semidesert with their herds heedless of artificial boundaries.

Last year the majority of refugees arrived in the 'camps of residence' in a reasonable state of health. This tended to deteriorate during the first month or so due largely to the enforced change from their customary meat and milk diet to relief programme cereals which were in any case inadequate in amount. Cultural disruption, overcrowding and consequent lack of sanitation were contributory factors. Some

sort of health balance was reached later thanks to their inherent adaptability. The prevailing diseases were gastroenteritis and all forms of respiratory illness including widespread tuberculosis.

The Somalis are a proud and intelligent people with a tradition of tribal warfare, poetry and song. They are Sunni Moslems. Despite their hard life they tend to look down on established farming which is in any case difficult in a country under 10% cultivatable. The women assemble the moveable shelters, called *Arquals*, made up of a flexible wooden framework covered with mats or skins. Many of these people have never seen a white person before, let alone encountered Western medicine. They have their own medicine however, based on two types of traditional healer. One uses herbs and other methods such as counter irritation by application of a red hot piece of metal to the skin over the site of the pain or suspected disease. He is a competent bonesetter too. The other is the Sheik or priest who prays with the sick and provides written texts from The Quoran to be sewn into leather amulets or the ink of the text may be dissolved in water which is then drunk. One hesitates to decry when Richard Burton the explorer in 1854 ridiculed their belief that the mosquito carried malaria. It is also wise to remember that such a people can be as racially arrogant as Westerners, and that their grudging respect must be earned. They also set a high value on good manners.

Unfortunately this was not always appreciated by expatriate teams who, forgetting that guests should introduce themselves to hosts, were impatient of fulfilling the customary formalities in the capital. One such team so far forgot itself as to arrive in its allotted camp, establish itself on site, and start work without making contact with the trained Somali nurse and her staff who had borne the brunt of the work hitherto.

This same team, who had generously given up holidays to work without salary for 4 to 6 weeks, were trained in various curative specialities. Refugees presenting themselves were diagnosed, treated, and sent on their way. Adults with gastroenteritis were given intravenous rehydration though this age group never seemed to need these measures elsewhere. Because of the short time each team member was available they felt that they had no time to make a systematic nutritional survey of the vulnerable groups or concern themselves with the very poor water supply. Eventually some began to see where the true priorities lay, but were hampered in their efforts by the constant change of personnel. It was a pity that the Government had not been able to maintain their original rule that all volunteers should contract for 6 months. There were many agencies striving to have a camp allotted to them.

Unfortunately these same well intentioned people had been too preoccupied to send their representative to a vital conference convened in Mogadishu by The Ministry of Health and The National Refugee Commission for all voluntary agencies working in the camps and the Somali Regional Medical Officers concerned, to decide upon the compulsory guidelines for the detection and treatment of malnutrition as well as the standardization of camp health

auxiliaries' diagnostic and chemotherapeutic procedures. The nutritional guidelines did not expressly forbid infant bottle feeding at this time as it was assumed that nobody would entertain the idea. However it had to be hastily written in when it was discovered that this same team was providing such a bottle service with 'take away' facilities. Even so, several weeks later another team was using bottles despite it now being clearly forbidden.

Overspecialization contributed to another situation. Whereas in May most camps had 20 to 28% of the 0 to 6 age group under 80% of the international height/weight nutritional standard, this had been largely reduced by September to about 7% excepting one camp where it was 39.1%. Although perhaps the universally inadequate General Feeding Programme was aggravated by an unexpected increase in refugee numbers, the responsible expatriate team seemed unaware of the deteriorating situation until it was pointed out to them. They were then slow to respond. A considerable operation had then to be hastily mounted using additional volunteers seconded from other agencies. With help from 4 other teams therefore, a non-selective supplementary feeding programme for approximately 15,000 children, and a therapeutic feeding programme for 600 children was established. This team's over-reliance on an excellent nutritionist who had unfortunately to be evacuated prematurely due to illness undoubtedly led to delay that was all the more regrettable as the original team leader had stressed the underlying nutritional problems.

Ignorance of the language is a problem, as dependence on interpreters of doubtful competence, reliability, and motivation puts a barrier between the relief worker and the refugee. The difficulties of assessing true needs when one suspects that the interpreter has become bored and impatient calls for imagination. One agency had arranged for its 2 volunteers to have a 2 week Somali language course in London prior to departure. This proved a tremendous asset.

In two camps the expatriates had failed to overcome the ingrained Somali tendency to site tuberculosis treatment centres at the camp periphery, presumably due to some confused outdated idea about isolation. The daily walking distances involved in a sprawling camp of 60,000 to 70,000 souls deterred the sick outpatients, and, one suspects, added to the number of defaulters to be traced and persuaded to return by the health workers. Similarly defaulting from a therapeutic feeding centre must have

been greatly increased by the children having to be taken to yet another clinic for their medical treatment, thus curtailing either the time or the assistance families had for getting food, fuel, and water. A little imagination would have been better than a lot of explanation.

One camp exemplified similarly the folly of trying to induce nomads used to excreting at will in plenty of space, where sun and wind soon disposed of faeces, to use latrines without teaching simple hygiene first. Even the conception of sharing the use and cleaning of such a device with 3 other families would need careful preparation. These latrines remained unused, and served as mantraps after dark.

Some understanding of the pressures on Government employees in such a poor country is essential if tempers are not to be lost. In Somalia health personnel are compulsorily posted to work in camps often remote from their homes. They resent this exile and their very meagre pay packets. It is not surprising if many have a different work ethic to expatriate volunteers. Incentives were officially considered to be unnecessary, but with lack of central government guidance most agencies provided some. Things nevertheless disappear, and it must be made quite clear that the blind eye only turns within a well defined orbit however sympathetic you might feel with their problems with galloping inflation.

The young Somali doctor, newly out of his 4 year training in Western style medicine, and newly out of his environment, had added stresses that needed understanding. Acting as medical counterpart to the expatriate, and leading his own health team, he needed to be included in all decision making as an equal colleague. Each had much to learn from the other. Otherwise his insecurity could lead to his pride and his male chauvinism rendering him uncooperative and even obstructive. He could be an invaluable ally and a vital link in the communication chain. Unhappy relationships and misunderstandings can be reduced.

Finally it is essential to make it clear to the camp commander politely but firmly, that if he removes your trained helpers for political, tribal, or administrative reasons, as is his right, he must replace them with adequate substitutes or accept responsibility for the consequences. No tempers need be lost, nor amour-propre damaged.

It requires considerable effort to alter during a few stressful weeks in an alien environment self protective professional attitudes fortified by years of training. That so many volunteers succeed redounds to their credit.

Refugee health care: Similar but different?

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The present review sets out to identify differences between refugees and other more stable communities living in less developed countries: demographic, mortality, morbidity, nutritional and selected epidemiological data are discussed. Although generalizations are difficult because of the variability of refugees and their differing circumstances, the health problems and diseases do not appear to differ qualitatively, although they may be quantitatively more severe.

The areas of particular concern lie not so much with the problems but with approaches to their solutions: the need to respond rapidly and appropriately to emergencies, the importance of attending to the priorities of nutrition, shelter, sanitation and water; and the necessity of providing services which are sufficiently flexible and sensitive to the changing needs of the refugees as they move from the acute emergency to the long-term settlements.

The review highlights certain areas where insufficient information is currently available, notably mental illness and the long-term issues of health and development, and outlines the implications of the conclusions for policy makers, with particular reference to training and research.

Key words: Refugee care; Refugees; subject review.

INTRODUCTION

During the past decade there has been increasing concern about the health care of refugees, displaced people, and other communities in less developed countries adversely affected by the acute and long-term consequences of disasters. A recent annotated bibliography on refugee health care (Simmonds and Gabaudan, 1982) for example, cites 180 articles published during the past 10 years: 43 were written between 1970—1975 and 137 during the period 1976—1981.

This trend may reflect the fact that refugees are increasing throughout the Third World (Aga Khan, 1981), possibly as a result of rapid political changes (D'Souza, 1981) and the vulnerability of traditional societies to natural

disasters (Adler *et al.*, 1981). It may also be the consequence of increasing concern about the appropriateness of the health care implemented, manifested as criticism of current provision (Aall, 1979) and appeals for the improved training and orientation of people intending to work in disaster situations or with refugees (Jelliffe and Jelliffe, 1981; Council of Europe, 1982).

As a result of this concern, specifically orientated research and training are now beginning to receive attention (Council of Europe, 1982; McConnell Clark Foundation, 1981; Notes and News, 1982; Jelliffe and Jelliffe, 1983; Feldstein *et al.*, 1983; Kastner, 1983). It is therefore timely to identify those problems which are specific to refugees, in terms of disease patterns and the provision of health services, which either do not occur, or are not priorities, in stable communities in less developed countries.

For this purpose the recent literature pertinent to refugee health care has been reviewed with the following objectives:

1. To outline the demographic characteristics, the spectrum of mortality, morbidity and nutritional problems, and selected epidemiological data.
2. To provide an overview of the provision of health care, and to examine specific problems and needs.
3. To determine the essential differences between refugee health care, and the more general principles of providing health services in less developed countries, to draw conclusions and make recommendations — with particular reference to the implications for research and training.

The study has been restricted to health care in refugee camps and chronic disasters, such as famine in less developed countries. This is not to imply that there are not important issues which require attention amongst refugees in industrialized countries (Murphy, 1977; Gaydos *et al.*, 1978; Harding and Looney, 1977) or in acute disasters in developing countries (Lechat, 1976; Kroeger, 1976).

However, whilst it is accepted that acute disasters may generate chronic problems (Chen and Rohde, 1971), and that there is frequently an acute phase in any refugee settlement (Nelder, 1979), in general, whilst many of the principles of acute and chronic disasters may be similar, the details and emphasis differ (Gerace, 1979; Glass *et al.*, 1980; Kates *et al.*, 1973; Lechat, 1979). Thus, acute disasters and mass casualties, resulting from either natural or man-made catastrophes, tend to require an orientation towards pre-disaster planning, early warning systems, primary prevention (for example anti-seismic engineering), the training of people in high risk areas; the provision of specialist equipment, and the availability of teams skilled in the establishment of emergency services and the principles of triage (Adler, 1979; Fisher, 1978; Mackay, 1975; D'Souza, 1980; Pan American Health Organization, 1981). The problems of particular importance in chronic disasters, although by no means mutually exclusive, tend to be more concerned with basic issues of primary health care, similar to those encountered in other impoverished communities, and therefore warrant separate consideration (Simmonds, 1980a; Simmonds *et al.*, 1983; Taylor, 1979).

For the purposes of the present review, displaced communities resulting from the aftermath of chronic disasters, economic migrants, people migrating for a variety of reasons within their home country, and the more specifically defined refugee populations (D'Souza, 1981) are all treated as one entity.

Demographic features

An understanding of the demographic profile of refugee populations is important for a number of reasons. It provides an indication of the overall effects on the community of becoming a refugee, in terms of births, deaths and migration; it enables any statistics which are collected to be used for comparative purposes by supplying a denominator, and it helps pose questions about deficits in the population which may assist in the identification of high-risk groups. Many factors which have an influence on deaths, births and migration are encountered to varying degrees in different refugee populations and it is therefore not surprising that the detailed demographic profiles are dissimilar. However, general trends may be identified.

The percentage of children under 5 years of age ranges from approximately 2% (Sumpter, 1980) to over 20% (Biellik and Henderson, 1981), most authors providing figures between 9–14% (Bennett *et al.*, 1968; Mahalanabis *et al.*, 1973; Seaman, 1972; Steketee and Mulholland, 1982). The proportion of children less than 12 months ranges from 2.8% (Seaman, 1972) to 6.3% (Bollag, 1980).

A similar variability is seen in the percentage of people over 15 years of age, ranging from 50% of the Bangladesh refugees (Mahalanabis, *et al.*, 1973) to 75% of the refugees from Sudan (Steketee and Mulholland, 1982). However, within this broad age category the majority of refugees are in the younger age groups with a relatively small proportion of older people in the community: 7% over 45 years of age (Bennett *et al.*, 1968), 2.7% over 60 years (Bollag, 1980), and 3.2% "very old" (Seaman, 1972).

Compared with an average developing country population profile (Morley, 1973), where 20% of the population are less than 5 years of age, 25% are in the 5–15 years age group, 40% are between 15–60 years old and 15% are over 60 years of age, the most obvious demographic difference is the under-representation of the very young and the very old (Sumpter, 1980; Belete *et al.*, 1977; Gardener *et al.*, 1972). The most likely reason is that since these are high risk groups even under normal circumstances, they are the first to die under the stressful conditions associated with becoming a refugee.

For a variety of reasons some refugee populations may show particularly extreme demographic features. For example, Vertongen and Carael (1981) provide data for Ethiopian refugees in Somalia, in which 61% were 0–15 years of age, 31% were adult females and only 8% were adult males. Several other authors have pointed out the relative lack of men (Belete *et al.*, 1977; Bizuneh, 1980; Lusty, 1979) as a result of their involvement in fighting in their home countries, looking for work elsewhere or tending herds in other areas.

In general, very few fertility data relating to refugee communities have been published. Holck and Cates (1982) have reported lowered fertility rates amongst some of the Kampuchean refugees, although much of their data relate to conceptions occurring before the camps were opened. Information is also available for certain long-term settlements, the high birth-rate in the Palestinian refugee camps in Lebanon giving rise to a population profile remarkable for its extreme youth (Sirhan, 1975). A number of factors may affect the fertility of refugees including stress, famine (Bongaarts, 1980; Frisch, 1978), the under-representation of men, the dislocation of families, the lack of privacy and concern for the future (Brown, 1969). Gardener *et al.* (1972) note that over 60% of the women of childbearing age in a Bangladesh camp did not wish to become pregnant while they were refugees. There are also suggestions, for the most part anecdotal, that the incidence of secondary amenorrhoea (Sydenham, 1946), spontaneous abortion and premature births are increased in refugee communities.

Mortality

Whilst it is important to be aware of the limitations of mortality data, statistics about deaths in a specified community can help to define high risk groups, identify priority diseases, and provide an overview of at least one factor affecting the health of the community.

In refugee camps, certain problems inherent in the collection and interpretation of mortality statistics may be compounded, notably ascertainment and diagnostic reliability. Ascertainment may be a particular problem, since not only may there be a higher percentage of deaths occurring in the community than in hospital, a ratio of 4 to 1 being noted by Seaman (1972), but there may also be deliberate under or over-reporting of deaths to the authorities (Thompson, 1980).

Mortality rates may show considerable variation at different times in the same refugee community, with the high initial rates decreasing during the ensuing months (Glass *et al.*, 1980). This may be particularly apparent in groups of refugees escaping from the combined onslaught of war and drought. A similar situation is noted in acute disasters (Lechat, 1979), and it is not clear in refugee communities whether this decline in mortality is predominantly related to the initial death of high risk members of the community, or to improvements in health status subsequent to the provision of food, water, shelter, sanitation facilities and medical care.

Documented hospital mortality rates range from 17% (Hickman, 1971; Swaminathan *et al.*, 1973) to 25% (Seaman, 1972), community based mortality statistics ranging from 10% (Ryan, 1975) to 21% of the population dying in the first two months during a famine in Uganda (Biellik and Henderson, 1981). Whilst there is no general trend relating to sex differentials in mortality, sometimes women (Glass *et al.*, 1980) and sometimes men (Biellik and Henderson, 1981) suffering from higher rates, the increased mortality amongst the young and the old is a common

finding (Biellik and Henderson, 1981; Seaman, 1972; Gardener *et al.*, 1972; Glass *et al.*, 1980).

In those studies which have attempted to compare refugee mortality statistics with either the indigenous population of the country of asylum, or with data relating to the refugee community prior to their migration, a marked increase in mortality has been demonstrated: for example in Uganda mortality rates were 9 to 10 times higher (Biellik and Henderson, 1981), and between 4 and 20 times greater amongst the Burmese refugees in Bangladesh (Aall, 1979).

The four main causes of death are common to all refugee communities: diarrhoea and dysentery, infectious diseases (including malaria, measles, kalaazar and tuberculosis), malnutrition and pneumonia (Biellik and Henderson, 1981; Seaman, 1972; Bizuneh, 1980; Glass *et al.*, 1980; Ryan, 1975). The order of importance varies depending on a number of factors, such as the cause of the refugee problem, the displacement period and the conditions in the country of asylum.

These data indicate that both the cause-specific and the age-specific refugee mortality statistics may be quantitatively greater than, if not qualitatively different from those in many less developed communities (WHO, 1980).

Morbidity

In conjunction with mortality statistics, morbidity data provide an important indication of the health problems in the community, identifying diseases which are common but rarely cause death.

As with the mortality data there may be problems of ascertainment and diagnostic criteria, and statistics relating to morbidity may differ depending on whether the source is hospital admissions, clinic attendances or community surveys (Smilkstein, 1981). However, despite these potential problems most authors are in agreement about the major causes of morbidity among refugees, namely diarrhoeal and other infectious diseases, malnutrition and nutritional deficiencies, pneumonia and upper respiratory tract infections and skin diseases associated with water availability and use (Sumpter, 1980; Seaman, 1972; Belete *et al.*, 1977; Bizuneh, 1980; Glass *et al.*, 1980; Swaminathan *et al.*, 1973; Ryan, 1975; Smilkstein, 1981; Feldstein and Weiss, 1982; Shaw, 1977; Everett, 1979; Simmonds and Brown, 1979; Steketee and Mulholland, 1982).

As a result of the variable causes and conditions of refugee communities, the relative importance of different diseases varies. For example, Isaza found that diarrhoea was responsible for 50% of all health centre consultations, of which 83% were in children less than 2 years old in the refugee camps in Honduras (Isaza *et al.*, 1980), whereas Gardener *et al.* (1972) found pyoderma and scabies to be the commonest diseases diagnosed amongst the Bangladesh refugees in India. In areas where malaria is endemic this may be responsible for a large proportion of health service attendances (Sumpter, 1980), and under certain circumstances nutritional diseases may be of major importance (Swaminathan *et al.*, 1973).

In general, analyses of morbidity data have relied on the routine collection of statistics in hospitals or clinics, rather

than data obtained from community surveys. For some diseases this does not present a problem. However, it may result in the under-representation of certain groups and causes of morbidity. For example, despite the fact that there are a number of reports concerning the mental health of refugees in industrialized countries (Murphy, 1977; Harding and Looney, 1977; Rahe *et al.*, 1978), and a growing awareness of the association between mental illness and both life-events (Paykel, 1974) and "uprooting" (Zwingmann, 1978), there is very little information, even at an anecdotal level, about mental illness in refugee camps (Bennet and Assael, 1970). Whilst the psychological effects of being a refugee may only manifest themselves long after resettlement, Gonzales (1980) describes the depressed psychological state of Cambodian refugees arriving in Thailand, Steketee and Mulholland (1982) identify depression as being a major problem in Sudan and both Sumpter (1980) and Murray *et al.* (1976) discuss the importance of psychosomatic illness amongst the refugee populations of Thailand and Ethiopia.

In view of the fact that host resistance is often low and opportunities for the transmission of diseases frequently increased, it might be expected that epidemics would be common. A number are well documented, and include acute haemorrhagic conjunctivitis (Arnou *et al.*, 1977), cholera (Mahalanabis *et al.*, 1973; Morris *et al.*, 1982), measles (Ryan, 1975; Drew and Banhann, 1982), meningococcal meningitis (Glass *et al.*, 1980), pyomyositis (Fanny *et al.*, 1982) and typhoid (Bollag, 1980). However, with the exception of measles, epidemics do not generally appear to be as important a problem as might be expected, even allowing for the possibility that a number of epidemics, particularly of gastrointestinal diseases, may go unrecognized because of inadequate surveillance (Seaman, 1972).

One further aspect of the morbidity patterns which requires consideration is the potential for refugees either to introduce or to come into contact with new diseases and both situations are referred to in the literature (Steketee and Mulholland, 1982; Bennett *et al.*, 1968). For example, the possibility that resistant falciparum malaria (Johnson, 1979) and schistosomiasis (Temcharoen, 1979) might have been introduced by refugees into Thailand and the exposure of Rwandan refugees to malaria in Uganda (Bennett *et al.*, 1968).

Thus the morbidity data concur with the mortality statistics, indicating that whilst certain diseases may be more common, in general the causes of ill-health are the same as those encountered throughout the developing world.

Nutrition

The nutritional status of refugees is another important measurement, since it not only indicates how successfully a fundamental need is being satisfied, but it also provides information about one aspect of the complex interrelationship between nutrition and infection (Foege, 1971).

A number of nutritional surveys have been carried out in refugee communities, although there are differences in the source of the groups surveyed, for example, hospitals,

clinics or community surveys, the phases of settlement and the criteria for 'malnutrition.'

Once again, since there are several contributory factors to the causation of malnutrition and refugee conditions are diverse, as might be expected there is variability in the nutritional status of different communities. For example, Dahlberg (1980) found 'malnutrition almost universal' amongst the Kampuchean refugees, whilst Bennett *et al.* (1968), describing the refugees from Rwanda, states that there was 'relatively little malnutrition.' In those refugee communities in which the prevalence is low, the possibility exists that many malnourished children and adults have already died (Biellik and Henderson, 1981; Barnabas, 1982). Furthermore, under-nutrition is often a problem, particularly in some Sub-saharan populations.

Community nutrition surveys of children of all ages provide prevalence ratios for moderate and severe malnutrition up to, but not usually exceeding 10% (Hickman, 1971; O'Sullivan *et al.*, 1980). For children under 5 years of age however, an acknowledged high risk group, the proportion of malnourished children has often been as high as 20% (Simmonds, 1980a; Belete *et al.*, 1977; Gardener *et al.*, 1972; Vertongen and Carael, 1981) — the prevalence of malnutrition being considerably greater than that determined under normal conditions (Swaminathan *et al.*, 1973). Specific nutritional deficiencies, for example Vitamin A deficiency (Hickman, 1971; Gardener *et al.*, 1972), Vitamin C deficiency (Magan *et al.*, 1983) and Beri-Beri (Everett, 1979) have been noted, sometimes related, ironically, to deficits in the food aid which was provided (Chen and Rohde, 1971; Rahe *et al.*, 1978).

Socio-economic status, work, leisure and culture

The frequently encountered relationship between socio-economic status and health has been noted in refugee communities (Simmonds and Brown, 1979). Shaw (1977) suggesting that this might have accounted for the relative absence of problems initially amongst the Vietnamese boat refugees, since the first people to leave were from the higher social classes. Swaminathan *et al.* (1973) also links the severity of the Andhra Pradesh drought to the socio-economic situation of the area. Although the distribution of relief supplies may be affected by socio-economic status, conversely, new economic systems and social stratifications may develop in refugee settlements, based, for example, on differential access to food aid (Christenson, 1982).

Camp life is often boring and purposeless (Sumpter, 1980; Belete *et al.*, 1977), creating apathy and compounding the long term problems of dependency (Belete *et al.*, 1977). In general, there are few opportunities for employment, although some refugees do find work (Bizuneh, 1980) and others may, under certain circumstances, keep animals and fowl, or start vegetable gardens (O'Sullivan *et al.*, 1980). The possibilities for employment are affected by a number of factors, including host government and camp policies: whether the refugees are allowed access to local markets (Magan *et al.*, 1983) or to try and find work outside the camps (Anton *et al.*, 1981; Chambers, 1982), the attitudes of the population in the country of asylum, the availability of

jobs and land for agricultural purposes and opportunities and support for self help projects (Simmonds and Brown, 1979; Thorogood, 1981). In addition, reference has been made to the lack of educational (Bizuneh, 1980), recreational (Shaw, 1977), religious and cultural (Jelliffe and Jelliffe, 1981) facilities. Such conditions not only encourage dependency, but may also have significant mental and physical health sequelae.

However, despite these problems and the destabilizing effects of an uncertain future, some refugees are full of initiative and succeed in transcending the difficulties and involve themselves in a variety of activities (Christenson, 1982, 1983).

Although rural refugees in Africa may be fortunate enough to move in family groups and to obtain asylum (sometimes of a permanent nature) in adjacent countries populated by people with tribal kinships (Nelder, 1979), the global picture is generally much less satisfactory, and even in Africa it is increasingly difficult to be anything but pessimistic about the future (Chambers, 1982). The social disruption associated with some of the precipitating factors of refugee situations may have serious consequences on the family and community structure (Holt, 1981) and ultimately on health. Almost by definition refugees are forced to leave their homes, their possessions and their jobs. Several authors have described the serious losses of livestock (between 30 and 80%) and land through sales and mortgages (Biellik and Henderson, 1981; Belete *et al.*, 1977; Vertongen, 1981; Mayer, 1975; Gebre-Medhin, 1977), the former being of particular importance for traditionally pastoralist communities. When such losses occur under relatively stable circumstances they have important implications for both short term survival and long term rehabilitation. However, when they take place against a backdrop of disturbances in the structure of the traditional extended family (Okeahialam, 1972) they may cause a collapse of the social network and this is sometimes the case in refugee communities (Gebre-Medhin, 1977). These problems have implications both for the health of refugees and also for the provision of health care, since they may compound the difficulties of achieving effective community involvement and participation (Simmonds *et al.*, 1983).

Less dramatic losses may also be sustained by refugees which affect their health. These include the loss of utensils for storage water and food, or for cooking, which may create a situation in which it is extremely difficult for people to maintaining standards of personal and domestic hygiene.

Refugees may be required to make a number of cultural adaptations which may be particularly difficult at times of mental and physical stress. For example, nomadic groups may be forced to live communally, people may be required to adapt to new staple foods and certain foods of cultural significance may be scarce, including the unavailability of medicinal plants required by traditional healers (Hiegel, 1981). Furthermore, certain habits which may be culturally acceptable under normal conditions may become quite unacceptable in the crowded conditions of a camp.

Although the cultural, social and economic life of the refugees may be modified by conditions in the camps, the refugees may also sometimes adversely affect the local

population and environment, by their increased demands for fuel, materials to construct shelters and grazing areas for their animals. They may also affect local markets because of the increased availability of labour and the introduction of surplus food aid or articles produced by the refugees which compete with local commodities (Simmonds, 1981; Chambers, 1982).

Environmental factors

Environmental issues are often particularly important problems for refugees for a variety of reasons, not least because they may be compelled to settle in areas which are not natural settlement areas (Ressler, 1979) and in the selection of which they did not participate.

Crowding may be particularly severe (Belete *et al.*, 1977; Swaminathan *et al.*, 1973). Seaman (1972) estimated that the population density of one of the camps in India was 450,000 people per square mile. Shelter is obviously important and is initially frequently inadequate. Furthermore, in famine situations lack of shelter and lack of food may act synergistically to increase mortality (Rivers and Brown, 1979).

The provision of sufficient quantities of clean water is a problem throughout the developing world (Bradley, 1977). However, it is often of particular concern (Bizuneh, 1980; Lloyd, 1981; Steketee and Mulholland, 1982) in refugee camps since refugees are sometimes settled in areas where water is simply not available and has to be transported at great cost. Howard (1979) describes the problems of providing water to 42,000 refugees settled on a 3 km island with no accessible water source, and Buist (1980) estimates that in one camp in Thailand £400,000 was spent every month supplying half a bucket of water daily to each person.

In those communities living in camps sited along rivers, people living downstream are likely to be exposed to highly polluted water. Similar problems may be faced by refugees in urban settings under war conditions, when contamination between the water and the sewerage systems may occur as the result of bomb damage.

Problems of sanitation and refuse disposal, encountered in most less developed countries (Mara and Feachem, 1980), may be of particular importance in refugee camps (Lloyd, 1981; Howard, 1979). Firstly, as already mentioned, individuals may be required to change habits which are their cultural norm. This problem applies to both rural and urban communities, for whom the sanitation facilities which are provided may be alien to the practices which pertain under normal circumstances. Secondly, the sites which are chosen for refugee settlements are frequently selected for pragmatic and political reasons rather than for considerations relating to environmental health. Not only may soil conditions be inappropriate, but seasonal variations in rainfall may have a number of effects both on the availability of water and also on the water table — with obvious implications for approaches to sanitation.

A number of authors have provided accounts of the decline in personal hygiene and public health subsequent to the cessation or disruption of environmental control systems

and the inadequate provision of facilities (Bollag, 1980; Bizuneh, 1980; Ryan, 1975; Christenson, 1982). Taylor states that the supply of emergency sanitation was the one notable area in which the relief organizations failed in the Bangladesh refugee camps (Taylor, 1979b).

The man-made aspects of the refugees' environment also require consideration. A number of decisions will be taken for the refugees by the country of asylum which are likely to have both immediate and long-term repercussions: these include options relating to self settlement or small holder settlement (Neldner, 1979; Chambers, 1982), whether 'camps' should be created and if they should be closed or open (Chambers, 1982), whether housing is to be temporary or permanent and if shelters are to be based on traditional or imported designs (Ressler, 1979). Methods of camp layout also appear to be important and may provide the opportunity to substantially reduce some potential environmental and social problems by, for example, the creation of community units rather than the implementation of a grid system (Cuny, 1977). Concerning all of these decisions, it is important to appreciate that what may appear to be an advantage in the acute situation may prove to be a disadvantage in the long-term rehabilitation of the refugees (Murray *et al.*, 1976).

The provision of health care

Considering that many of the health problems of refugees are comparable to those which are encountered throughout the developing world (at least in terms of the limited indices which have been discussed) it is not surprising that many of the difficulties of providing health care are similar. These include under-provision (Bizuneh, 1980), a curative orientation (Simmonds, 1980a; Buist, 1980; Bhiwandiwalla, 1980), inadequate supplies (Brown, 1969) and problems of communication, transport and co-ordination (Kroeger, 1976; Shaw, 1977). There are, however, additional problems which, although not unique, appear to be encountered with sufficient frequency to differentiate the provision of health care in the two settings.

Firstly, there are the problems of the people who are responsible for the provision of health care. The majority of health workers are likely to be international personnel who are foreigners to both the refugees and the country of asylum (although the situation among the Afghan refugees in Pakistan is currently an exception). These expatriates have often had insufficient training, orientation of experience (Jelliffe and Jelliffe, 1981; Smilkstein, 1981; Feldstein and Weiss, 1982; Dahlberg, 1980; Watson, 1982), and are replaced frequently because of the combined effects of short-term availability and *ad hoc* planning by the employing agencies. Linked to these problems is the question of whether the staff who are recruited are appropriate, not only in terms of their skills, but also in terms of their psychological and sociological profiles (Wauty *et al.*, 1977). Nurses and doctors tend to constitute the largest proportion of health personnel working with refugees (Council of Europe, 1982; Wauty *et al.*, 1977) but increasingly the rationale for this selection is being reassessed; non-medical staff might be more appropriate

or attending to the environmental and logistic problems which are of paramount importance in the prevention of many of the causes of mortality and morbidity (Kroeger, 1976; Ifekwunigwe, 1976).

In addition to the unresolved dilemmas of selection and training there are also problems associated with the refusal of agencies. The friction between non-governmental agencies and host countries, inter-agency conflict and the lack of standardized approaches or co-ordination is well documented (Kroeger, 1976; Neldner, 1979; Sumpter, 1980; Lusty, 1979; Buist, 1980; Bhiwandiwalla, 1980; Ifekwunigwe, 1976; Watson, 1982). Such conflicts are hardly surprising when it is appreciated that, for example, there were 182 different relief organizations working with the refugees from Bangladesh (Chisholm, 1978) and more recently, at least 30 agencies in both Thailand and Somalia.

Several authors have pointed out that health workers often respond to individual problems as if they were unique, the consideration being taken of the lessons to be learned from previous disasters (Feldstein and Weiss, 1982; Mayer, 1975; Taylor and Cuny, 1979). Whilst this must be partially related to inadequate training, mistakes are likely to continue to be repeated until programmes are routinely evaluated (Chisholm, 1978; Taylor and Cuny, 1979) and the results, both good and bad, published (O'Sullivan, 1981; Robinson *et al.*, 1980; Watson, 1982; Taylor, 1979b).

Another difference between refugees and 'normal' developing country communities is the information requirements. Whilst data are always necessary if an epidemiological approach to planning, surveillance and evaluation is to be implemented, the needs are greater in refugee camps where services are being provided *de novo*, and initial superficial impressions may be quite misleading (Lechat, 1979; Hickman, 1971). In this context, community surveys of representative samples of the refugee population are essential (Brown, 1972) and in certain circumstances, for some regions where droughts are frequent, the routine collection of data for pre-disaster planning may be warranted (Gebre-Medhin *et al.*, 1977; Ifekwunigwe, 1976). Monitoring and evaluation of the health problems and the services provided is important, since the needs may change as the initial emergency becomes more stable with subsequent implications for the provision of health care (Gagan *et al.*, 1983; Shears, 1982; Taylors, 1979b).

When considering the planning of health services, actions which are appropriate in the acute phase may not be undesirable in the long-term situation but may initially be counter-productive to future rehabilitation by creating or encouraging dependency and undermining self-reliance (Jelliffe, 1969; Briscoe, 1980; York and Grant, 1980). It is therefore important to be specific about short-term objectives and to integrate the solutions appropriately (Lechat, 1979). The aid/development dilemma has particular relevance in refugee situations (Gagan, 1982; Steketee and Mulholland, 1982).

A final consideration relating to the provision of health services concerns the orientation of the services. They need to be appropriate not only to the identified problems but also to the 'temporary-permanent' status of people in a foreign

country. Thus, it is important to take care not to increase expectations which cannot later be satisfied by providing standards of health care which it will not be possible to maintain once the emergency has ended (Simmonds *et al.*, 1983). If conflicts are to be avoided between the refugees and indigenous communities, it is essential to be aware of and responsive to the standards of health care being provided to the host population (de Ville de Goyet and Lechat, 1977; Nelson, 1981; Steketee and Mulholland, 1982; Kiljunen, 1983).

A few attempts have been made to avoid some of these problems: improving the co-ordination between inter-governmental agencies, non-governmental agencies and host governments (Simmonds, 1980b), standardizing the provision of services (Simmonds and Walker, 1982), and orientating health care away from the acute curative services (Simmonds and Brown, 1979; O'Sullivan *et al.*, 1980; Somalia Ministry of Health, 1981); ensuring the availability at short notice of adequately orientated health terms (Strong, 1981), providing suitable training opportunities for a variety of personnel (Council of Europe, 1982; Notes and News, 1982; Jelliffe and Jelliffe, 1983; Feldstein *et al.*, 1983), involving the refugees in the provision of health care (Brown, 1969; Isaza *et al.*, 1980; O'Sullivan *et al.*, 1980), collecting and analysing data for pre-disaster planning (Gebre-Medhin *et al.*, 1977) and evaluating standardized approaches (Biellik *et al.*, 1982; de Zoyza, 1982) and health programmes (Shears, 1982).

Whilst much has been written about the provision of health care there is relatively little information about utilization. Shaw (1977) states that 9% of the Vietnamese refugees on Guan were hospitalized at some time (although the period is not specified), and Glass (1980) emphasizes that utilization of medical services may be particularly high initially. For example, 13% of the refugees in Sakeo camp were seen daily by a doctor or nurse during the first month — although the large number of nurses and doctors may have stimulated the demand for health care. In general, however, this is an aspect of data collection which has not received sufficient attention. It is clearly insufficient merely to identify problems and generate a response. Not only is it important to determine whether people are using the services provided but it is also necessary to evaluate the relief activities. Apart from a few exceptions (Aall, 1979; Shears, 1982; Henderson and Biellik, 1983) this has not been a common feature of refugee community health programmes.

Discussion

Jelliffe has stated that "one can view the (refugee) camp as an abnormal developing country community under great physical and emotional stress" (Jelliffe and Jelliffe, 1981). For people concerned with training health workers, and for those responsible for the planning and implementation of health care, the questions which need to be answered are: (1) how abnormal a developing country community are the refugees? (2) What are the health implications of the physical and emotional stress? (3) What other factors need to be taken into consideration for the planning and implementation of health services?

Generalizations about refugees should be made with caution because there is marked variability in the characteristics of refugee communities depending on a number of factors. These include the cause, the displacement period, the size of the population, the season, the environmental conditions, the availability of natural resources in the region where the refugees are settled, and the proximity of the settlement to major centres. Other factors which may have an effect are the opportunities for work and cultivation, the attitudes of both the refugees and the indigenous population, the length of time which has elapsed since migration, and the orientation of the people responsible for organizing the immediate and long-term health care.

This diversity of refugee camps and settlements affects their needs and has implications for the provision of health care. On the one hand, there are emergency camps consisting of refugees escaping the combined onslaughts of war and famine, with social disruption and the loss of their personal possessions and usual means of survival, in what may be a hostile and unaccustomed environment lacking even the most basic services. At the other extreme are refugees living in settlements which are functioning social units, integrated with the local community, with adequate provision of the necessary public health amenities and employment opportunities and in which, despite the problems of displacement and an uncertain future, people have the power to take decisions about their own health. As the characteristics of the refugee community alter, as they move from the acute to the long-term setting, so their health needs may change both in quantity and in kind.

There are two further points which need to be taken into consideration when conclusions are based on the data included in this review.

Firstly, although the literature relating to refugee health care is increasing, there are many refugee communities about which little published information is available. Of the data which are documented some are in the form of reports which are not widely available, so it is unlikely that the present review is comprehensive.

The second problem concerns the reliability of some of the available information, which makes any detailed comparisons hazardous. A number of factors may give rise to uncertainty about numbers. These include political pressure to prevent censuses from being undertaken; the incentives in certain circumstances for over-registration (since the amount of food provided is likely to be proportional to the number of refugees registered); and the fact that many people working in refugee camps do not have sufficient expertise to make satisfactory guesstimates or, should the opportunity arise, collect detailed census data.

However, despite these problems, the data included in his review generally support Jelliffe's observation (Jelliffe and Jelliffe, 1981). They indicate that the health problems of refugees and other displaced people, the groups particularly at risk, and the major diseases, are similar to those facing most other deprived communities living in less developed countries.

The demographic, mortality and morbidity statistics depict a spectrum of diseases which flourish under

conditions of adverse social and economic circumstances, inadequate nutrition, lack of clean water and sanitation facilities and inappropriate provision of health care. Since these causative factors may be severe in refugee camps, particularly during the acute phase, it is not surprising that the health problems and diseases are sometimes quantitatively more serious than under normal circumstances.

However, despite the similarities between refugees and other more stable communities, there are several aspects about which it is difficult to make comparisons because of inadequate documented information. There are also some important differences.

There are two notable problems for which very little data exists: mental health, and the long-term needs of refugee communities. Apart from brief references to psychosomatic symptoms and depression, there is little mention in the literature of mental illness among refugees. This may be a problem which is managed by community support systems and traditional healers or remains untreated because western health services are seen as inappropriate or irrelevant. There may also be selection against people with chronic mental illnesses in refugee communities. An indication of the amount of psychological morbidity would be useful since there may be possibilities for both intervention and treatment.

Concerning the long-term health needs of refugees, there are very few published studies which provide either descriptive data relating to the health status of the refugees, or evaluations of the services which are provided.

A number of general questions require further investigation: What is the minimum amount of data which needs to be collected in order to monitor the changing needs, as the camp moves from an acute emergency to a long-term setting? What changes in provision need to be considered if long-term dependency is to be avoided, as the requirements change from aid to development? Since the emergency phase is rarely an end in itself, but more often the beginning of a chronic settlement, how is it possible, despite political and ideological conflicts and obstructions, to link short-term objectives with those which are more appropriate to the long-term problems?

Returning to the major differences between refugees and other stable communities in less developed countries, these appear to lie not so much with the causes of death and disease (although, as already mentioned, these may be quantitatively more serious), but more with the approaches to the provision of services: the determination of priorities, how these are affected by political pressures and their influence on the provision of health care.

There will always be a need for curative services, and being demand led, they are likely to be used if provided. However, in the acute phase the provision of diagnostic and curative medicine is unlikely to be a priority for maintaining or improving the health status of the refugees. The provision of clean water, sanitation facilities, shelter and effective distribution of food, which needs to be both nutritionally and culturally appropriate are the initial services most likely to benefit the refugees.

Another important requirement at this initial stage is the rapid gathering of the minimum amount of information necessary to determine the requirements for international

assistance, for making decisions about the most appropriate forms of aid (whether there is a need for money, people or provisions) and for the identification of high-risk groups and specific problems. In view of the large number of external agencies usually involved in this acute phase, several benefits might accrue from inter-agency co-operation at the time of this initial assessment. This would not only facilitate a more rapid and extensive overview but could also ensure that each agency contributes in a co-ordinated fashion to those problems for which they have particular expertise. Furthermore, it might be possible to avoid the duplication and deficits inherent in the current anarchic system favoured by some agencies.

This acute period has a number of characteristics which are relatively unique, and although it is usually only fairly short-lasting the rapid deployment of appropriate resources is essential if they are to be of benefit when they are most needed. Not only do services need to be co-ordinated and provided quickly (basing decisions on the minimal data available), but the orientation of these initial services may have implications for those provided in the long-term. It is therefore important that the short-term objectives should not be counter-productive to the long-term requirements which are likely to persist for a much longer period.

As the refugee camp moves from the acute to the long-term phase, a number of factors become important. Firstly, it is necessary to collect and analyse valid and reliable indices which can provide an indication of the changing health needs. Secondly, it is necessary to ensure that the services are sufficiently flexible to respond to these changes. Not only are there likely to be changes in the content of the health services, but also in their form. Initially, with the social disruption, the stress and the loss of food stores, livestock and means of production, the refugees will almost certainly be dependent on the provision of services by other people. However, as the refugees settle (and the majority of camps continue for a number of years), there needs to be a move away from providing health care for the refugees to providing services *with*, and ultimately *by* them.

Thus in terms of nutrition, whenever possible there should be a move away from providing food towards ensuring that the refugees have land, tools and seeds. Similarly, the priorities for medical care will need to move from clinic based services staffed by international health workers towards the involvement and training of refugees, in order for them to participate in all aspects of the provision of primary health care.

There are likely to be a number of difficulties with setting up primary health care services in refugee camps. These include their relative urgency, the existence of previous training programmes amongst the refugees or the host population, the uncertain future, the lack of financial resources and the community disruption. Many of the questions about who, what, where, when and how to train primary health workers in refugee camps require further investigation.

The training of refugees as primary health workers is likely to benefit the community whatever the outcome of the political conflicts which caused them to leave their homes:

whether they return, stay where they are or move to a third country of asylum. It is unfortunate, therefore, that the people who are trained and who are thus in a position to benefit their fellow refugees are also those most likely to be accepted for re-settlement in a third country of asylum.

Every effort should be made during the emergency phase to identify those refugees who already have some training and expertise in the provision of health care and to involve them whenever possible. Indigenous people provided with external support, in the form of money or provisions, are usually preferable to an influx of international health workers with their entourage of potential problems.

Finally, there is invariably a political cause for people becoming refugees and ultimately the solution to many of their problems requires political decisions and action. It is a complex issue, since not only may political decisions affect the refugees' health (Magan *et al.*, 1983; Henderson and Biellik, 1983) but, conversely, the activities of relief agencies may affect the local political situation (Kiljunen, 1983). The causes of mortality and morbidity and the provision of health care need to be seen in this context. There may be political forces which prevent information from being obtained or services from being optimally directed. Furthermore, health workers may be confronted by violations of human rights, which they cannot afford to ignore any more than they would consider neglecting the absence of other basic necessities such as food, water and shelter.

Conclusions and recommendations

The present review indicates that in many ways the problems of refugees are similar to those of many other deprived communities living in less developed countries. There are, however, a number of differences which have important policy implications for the provision of health care, training and research.

First, the problems may be more severe, compounded as they are by nutritional, environmental and psycho-social factors. They are also initially emergencies which take place against a back-drop of social disruption, political pressures, conflict and confusion.

Secondly, as the camp moves from the acute to the long-term phase, the health needs change, and it is necessary not only to identify these changes but also for the services to be able to respond to them. This move from aid to development, and the possible conflicts between the objectives of the emergency and long-term phases, are specific problems in refugee health care which require further consideration.

Finally, although the problems may not be unique, the initial urgency, the rapid assessment and determination of priorities; the co-ordination of a multiplicity of organizations who may differ in their approaches to health care, the need for the rapid provision of basic services and supplies and the potential obstructions to the effective provision of primary health care all suggest that the differences do not lie in the spectrum of diseases but in the most appropriate methods of providing the necessary services.

The review has a number of implications for training which could improve the availability and relevance of health care in refugee camps:

There is a need to provide training for a wide spectrum of international personnel who may be involved in the provision of health services: these include nurses, doctors, nutritionists, environmental engineers and administrators. That they should already have a grounding in primary health care and an appropriate orientation towards dealing with health problems in less developed countries is self evident. Whilst this is desirable for all international staff working in less developed countries, it is even more essential in refugee camps since the initial urgency of the problems make in-service training difficult.

In particular, the training should concentrate on methods of obtaining data for defining priorities, setting up surveillance systems to monitor the changing needs and on evaluating the services which are provided. The training of international health workers also needs to concentrate on the issues of team work and management and to provide methods of circumventing or overcoming potential obstructions to the implementation of primary health care. Apart from international personnel, similar training needs to be provided to national health workers who are seconded to work in the camps and to refugees who are available to work at this level within the health infra-structure.

The training of refugees to provide basic diagnostic and curative services and advice and support for promotive practices is essential if primary health care approaches are to be implemented, and if the involvement of the refugees is to be realized in terms of defining priorities, identifying solutions and implementing the services. It is essential that international and national health staff should be orientated towards such training. Whilst there is an obvious need in the long-term for primary health workers there is also likely to be an important role for such people during the emergency phase.

There are still many questions which need to be answered concerning the training of refugees as primary health workers. However, such training is clearly a priority since not only is it likely to create the most appropriate infrastructure for providing health care but it also provides the refugees with expertise and knowledge which will increase their self-reliance. This will be of value to them whatever the eventual outcome of the political decisions about their future.

The review indicates a number of areas which require further research. These can basically be divided into two main categories: research which is specific to refugees and research concerned with more general health care problems which are particularly important, but not unique to refugees. Within the category of specific refugee research there are two main sub-groups.

Applied research. This includes (a) the design and field trials of standard protocols, or packs, to assist health workers with making rapid assessments and setting up

surveillance and evaluation systems; (b) the formulation and evaluation of kits for providing standardized emergency drugs, water and sanitation; (c) the identification of specific problems relating to the training of refugees as primary health workers and the design and testing of training manuals; (d) the assessment of selection techniques for international health personnel, their optimal mix in terms of skills and expertise, and their group dynamics; and (e) the identification, implementation or reinforcement, and evaluation of policies and methods of pre-planning for governments which are likely to be faced with influxes of refugees or displaced people.

There are also several areas of research which have important bearings on policy and on the orientation and approach of both inter-governmental and non-governmental agencies. Some of the questions which need to be answered include (a) how does the initial orientation and provision of health care affect the long-term situation? (b) How can health programmes move from aid to development as the needs of the refugees change? (c) How can co-operation between agencies and governments be improved in order to avoid conflict and confusion? and (d) what are the present obstructions to such co-operation and how might their alleviation improve the provision of health care?

The more general category of research is extensive. Perhaps most specific to refugee communities is the need for descriptive and interventive studies on mental illness and the long-term problems in the camps. However, similar research relating to diarrhoeal, respiratory and skin diseases is also needed and the findings of such studies are likely to have relevance to many groups other than refugees.

Since nutrition is often a major problem in refugee camps there are a number of related issues which require research. These include the evaluation of therapeutic and, particularly, supplementary feeding programmes, and a more detailed assessment of the use of dried skimmed milk and vitamin supplements in refugee camps. Finally, there is a need for further investigations into the relationship between feeding after famine and the reactivation of certain diseases.

Future needs. There are currently very few indications that the problems of refugees and displaced people suffering from the effects of long-term disasters are likely to decrease in less developed countries. Considering the initial urgency and the extremely difficult conditions of refugee camps, health personnel, both international and local, need to be adequately trained. In addition there are a number of areas which require further research in order to ensure that available resources are optimally utilized.

If these needs for research and training are to be satisfied, then intergovernmental agencies, non-governmental organizations and governments, both nationally and internationally, will need to recognize that the problems exist and make resource commitments commensurate with their concern. Only if such resources are forthcoming is it likely that the millions of refugees living in less developed countries will be

able to maximize their health status in situations which force them to contend with the worst that the Third World has to offer.

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The impact of refugees on the health status and health services of host communities: Compounding bad with worse?

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Although there have been a number of recent developments in our understanding of refugee health problems that have influenced policies and action, the effects of refugees on the health status and services of host communities remain relatively neglected. This article sets out to explain why this is an important issue with implications for policy, planning surveillance and evaluation, training and research.

The first sections outline some of the problems facing host governments and communities in Africa and discuss the changing rhetoric between the first and second International Conferences for Assistance to Refugees in Africa. A number of possible ways in which refugees could affect the individual, agent and environmental causes of disease are considered, as are the characteristics of the refugees, the host communities and the response which may all modify this impact.

Policy implications of the impact of the refugees, both negative and positive, are discussed, and detailed consideration is given to the pros and cons of integrated and parallel approaches to health care provision. The need to monitor carefully the health status and services of host communities is emphasized and recommendations are made for this and other essential developments relating to training and research.

Key words: Refugees; Host Communities; Health status; Health services.

INTRODUCTION

The process of migration has a number of health implications for the populations which move, for the communities living in the areas to which they migrate and

for the people who stay behind (Dick, 1984). In terms of refugee migrations, increasing attention is being paid to the health problems of the people who are displaced, the refugees themselves (Dick and Simmonds, 1983, 1985; OXFAM, 1983; Simmonds *et al.*, 1983; Simmonds, 1984; UNHCR, 1982). However, there is a dearth of information, even at an anecdotal level, about the impact which refugee migrations have on the other two groups affected by these displacements — those who are left behind and host populations.

Increasing concern with the health of refugees has led to an improved understanding of the problems and more appropriate approaches to their solutions (OXFAM, 1983; Simmonds *et al.*, 1983; Somali Ministry of Health, 1981; UNHCR, 1982; WHO, 1984). Whilst no-one would argue against the concept of an emergency phase following refugee displacements, which requires specific emergency activities, in general the problems are of a long-term nature and, as such, demand a development approach (Simmonds, 1984). This relatively recent reorientation to the health problems of refugees is well illustrated in the changing rhetoric from the first to the second International Conference on Assistance to Refugees in Africa (ICARA), when requests for funding moved from emergency aid to a focus on development (UNHCR, 1981, 1984).

It is becoming increasingly apparent that the predominant causes of major population displacements, war and famine, have fairly intractable precursors. The implication of this for many refugees is that they will probably remain displaced for a long time and, in terms of "durable solutions," voluntary repatriation is often unlikely to be a feasible option in the immediate future. Resettlement in a third country of asylum is usually only possible for the skilled and educated (which, whilst being fortunate for those few individuals who are selected, often has serious negative repercussions on the people who are left behind in the camps and settlements). For large numbers of refugees, therefore, a process of integration with the host population is the most likely outcome during the period of *Temporary permanence*. This raises an important issue which is also reflected in the ICARA II documents: development projects for refugees need to be linked to those of the host countries which provide them with asylum.

Although the main focus of this paper is on refugees, a number of the issues which are raised will also be pertinent to internally displaced communities in developing countries. However, such communities differ from refugees in several ways: they do not cross a national frontier, there is no single intergovernmental organization with specific responsibility for their assistance and protection, and the setting up of parallel services for them should not be a policy option (despite the influx of an assortment of non governmental organizations with differing and sometimes conflicting approaches to health care).

Apart from a few studies which have mentioned the impact, or the potential impact of refugees on host communities (Hurwitz *et al.*, 1981; Keittivuti *et al.*, 1982; WHO, 1983), and a small number of reports which have been stimulated by concerned host governments (el Imam,

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Table 1. Selected characteristics of the four countries providing asylum to the major refugee displacements in Africa* (with U.K. data for comparison)

Host country	Somalia	Sudan	Zaire	Tanzania	U.K.
Total population in 1982 (in millions)	4.5	20.2	30.7	19.8	55.8
Infant mortality rate, 1982	184	119	106	98	11
GNP in U.S.S., 1982	290	440	190	280	9,660
Population per physician, 1980	14,290	8,930	14,780	17,560	650
Population per nursing person, 1980	2,330	1,430	1,920	2,980	140
Total number of refugees as of 1st January 1984†	700,000	690,000	303,500	180,000	140,000
Ratio of refugees to host population‡	1:6	1:29	1:101	1:110	1:399
UNHCR budget (millions of \$), 1983§	46.56	31.70	13.84	6.35	0.54

*According to national census data there were 258,000 refugees in Burundi during 1984. However, only 58,000 of these are considered to be in need of international assistance.

Source: World Bank (1984), pp. 218—273. Source of all statistics except when otherwise indicated.

†Source: UNHCR (1984a), pp. 24—25.

‡These overall refugee:host population ratios are somewhat misleading since in many areas of the host country there may be no refugees, whilst in those areas where refugees have settled they may actually outnumber the host population. The total number of refugees may exceed these figures since they do not include self-settled unregistered refugees.

§Source: UNHCR (1984b), pp. 1—166.

1984; Malik, 1984; Mohammed, 1984; Osman and Kussany, 1985), there is very little published information about this problem. The intention of this paper is therefore to explore, mostly at a theoretical level, possible ways in which the refugees may affect the host population and to raise several important issues for wider debate.

HOST COUNTRIES IN AFRICA

Africa has more refugees and internally displaced communities than any other continent. Within Africa, the largest numbers of refugees are currently situated in Somalia, Sudan, Tanzania and Zaire (UNHCR, 1984a). Table 1 provides some basic statistics from these countries and similar data from the United Kingdom for comparison.

All of these host countries are essentially "low income" countries. Not only are the problems they are facing likely to be extensive, but their health services are unlikely to be able to respond adequately to existing need — especially in rural areas and among the urban poor. Refugees, whether in camps or self-settled, usually find themselves alongside such high-risk communities. How does their presence and the presence of those who follow in their wake (such as the international aid organizations) affect the health problems

and health care of these host populations, who are frequently the poorest of the poor? This may be an even more serious issue than it appears from the data in Table 1, since often the overall national refugee-to-host population ratios hide much higher proportions of refugees in those areas where they have settled — where host communities usually have particularly serious health problems and poorly-developed health services.

Table 2 provides information about the budget allocations for 1981 and the funding requests made during the ICARA I conference by Somalia, Sudan, Zaire, Tanzania and Ethiopia (the latter country has been included because of the magnitude of its requests, even though these were predominantly for anticipated returnees). The proportions of these requests concerned with health and water programmes are also identified. Table 3 provides similar data for the 1984 allocations and ICARA II requests. In addition, more detailed information about the proposed ICARA II projects is provided in Table 4, including their costs and the numbers of refugees and host communities who are expected to benefit.

These data raise a number of important issues which are more clearly stated in the detailed commentaries in the source documents. Although there are some changes in

terms of the proportions of the requests specified for health and water projects, the most obvious difference between the ICARA I and ICARA II requests for funding is that the recipient focus has changed. They are no longer almost exclusively refugee orientated, but have altered their emphasis to include requests for resources to be used for projects which would benefit host government communities as well as refugees (Table 4). This is particularly apparent for those programmes which, rather than being directed towards specific groups, have been planned on a regional basis in areas where both refugees and host communities are living (with the latter often explicitly being expected to benefit more than the former).

Whilst some of these requests may be opportunistic, it is likely that in general they reflect the very real concern of host governments about the negative impact of the refugees on host nationals and on their health and health related services. Although it is not usually possible to identify the beneficiaries of the annual UNHCR budgets in the reports cited, generally the funds appear to be directed specifically towards refugees (as might be expected considering the mandate of UNHCR). However, in terms of how the host governments see the problems, as reflected by their ICARA II requests, the current focus of UNHCR expenditure sometimes appears to be quite different from the host governments' priorities.

Host countries are likely to be coping with an additional work-load as a result of the refugees, in terms of both secondary and primary care and their own community's increased needs. It is therefore important for the refugees' health to ensure that the host government services are supported. In terms of infectious disease control programmes, for example, it makes little epidemiological sense to become involved with one group and not with the other — the organisms which cause these diseases are not so bureaucratically selective!

However, even if it is accepted that the host government services require assistance, a question remains: what type of support would be most appropriate? Most of the ICARA II requests are for structural developments and equipment, often for hospitals rather than primary health care centres. Although there is mention of training and management support in a few of the requests, these aspects are rarely emphasized in the project descriptions. What is the rationale for such requests? What is the basis for these choices, in terms of deciding whether assistance should be directed to "bricks 'n mortar," supplies and equipment, salaries, training, or management and logistics support? If the "bricks 'n mortar" option is selected then this has a number of implications for the future, in particular responsibility for the recurrent costs of capital investments. Whilst host governments are often explicit in the ICARA II

Table 2. Somalia, Sudan, Zaire, Tanzania and Ethiopia — UNHCR 1981 allocations and ICARA I requests (millions of U.S.\$)

Host Country	Somalia	Sudan	Zaire	Tanzania	Ethiopia*
Approved 1981 programme allocation	158.4	41.5	7.9	6.1	1.3
ICARA I requests for additional assistance	271.9	217.9	88.0	11.5	55.4
Requests for direct refugee assistance (percentage of total)					
(a) Health	68.2 (25.1%)	—	13.1 (14.9%)	1.2 (10.1%)	0.9† (1.6%)
(b) Water	4.8 (1.8%)	11.3 (5.2%)	0.5 (0.6%)	0.8 (7.0%)	0.9 (1.6%)
Requests for infra-structural support (percentage of total)					
(a) Health	—	24.2 (11.1%)	7.4 (8.4%)	—	—
(b) Water	—	2.2 (1.0%)	—	—	—

Source: UNHCR (1981), pp. 64—104.

*Budget allocations and requests for *returnees*.

†Also includes sanitation.

Table 3. Somalia, Sudan, Zaire, Tanzania and Ethiopia — UNHCR 1984 allocations and ICARA II requests (millions of U.S.\$)*

Host Country	Somalia	Sudan	Zaire	Tanzania	Ethiopia†
Revised 1984 allocation‡	38.34	40.05	9.02	5.85	11.99
ICARA II: total assistance requests§	78.8	92.6	38.8	28.14	40.09
Health sector requests and percentage of total§	14.9 (18.8%)	18.9 (20.4%)	5.85 (15.1%)	3.5 (12.4%)	4.96 (12.4%)
Water supplies requests and percentage of total§	(18.9%)	(4.1%)	(8.4%)	(19.2%)	(7.7%)

*ICARA II. The requests are in addition to the proposed budgets for existing programmes and are often for a period of three years.

†Requests predominantly for returnees.

‡Source: UNHCR (1984b).

§Source: UNHCR (1984).

Table 4. ICARA II Health Projects: Content, Cost and Beneficiaries

Country	Region	Total number of refugees likely to benefit	Refugees as a % of total population likely to benefit	Description of project	Cost (in millions of U.S.\$)*
Somalia	NW Region	250,000	21.1%	Establishment of community-orientated hospitals including training facilities and out-patient clinics	14.9
	Hiran	209,000	32.7%		
	Gedo	200,000	31.0%		
Sudan	Gedaref and Kassala	170,000	45%	Upgrading of environmental health and sanitation.	2.7
				Improvement of hospitals	7.5
	Red Sea Province	70,000 (spontaneously settled)	n/a	Strengthening of health services and expansion of health facilities	3.2
	Equatoria	n/a	20%	Development of PHC and trypanosomiasis control.	3.0
				Hospital upgrading	2.0
	Khartoum	100,000	n/a	Malaria control	0.5
				Total	18.9
Zaire	Aru Cataractes Shaba	n/a	40%	Improvement of health infrastructure in refugee and returnee areas	5.85
Tanzania	Mpanda	108,000	68.4%	Expansion and improvement of health delivery services	3.5
	Urambo	26,000	n/a		
Ethiopia†	Dire Dawa	30,000 expected	4.3%	Hospital and health centre construction and equipment	4.96
		120,000	22.1%		
	Dakata Valley	51,000	n/a		

*Funding generally requested over a period of three years.

†The projects in Ethiopia are directed toward returnees.

requests that they will be able to allocate funds to cover these recurrent costs, such claims need to be carefully examined. Long-term resource commitments are, however, unlikely to be such a serious problem for projects which aim to improve and strengthen the health services' infrastructure by, for example, supporting training programmes.

PROCESSES BY WHICH REFUGEES MAY AFFECT THE HEALTH STATUS OF HOST COMMUNITIES

If the problems and their appropriate solutions are to be identified, it is first essential to develop an approach towards conceptualizing and clarifying the processes by which refugees may affect the health of host nationals. In general, the only information which is available is from studies focusing on other migrant groups and from anecdotal sources. Essentially, the impact of refugees may be on the agent, person or environmental factors of disease causation, the last of these categories including the quality and coverage of available health services.

1. Agent factors

There are several ways in which refugees may affect the disease agents responsible for mortality and morbidity in the host community. First, they may introduce or facilitate the spread of a number of organisms that are normally encountered in the country of asylum (some commonly and some rarely) but which, for a variety of possible reasons, are not prevalent at the time of the refugees' arrival — for example measles, whooping cough, cerebrospinal meningitis, dengue and relapsing fever. Other diseases that warrant careful consideration in this category are epidemic enteric diseases such as typhoid and cholera.

Secondly, refugees may introduce different or resistant forms of diseases which already occur. This may have serious implications for control programmes. The epidemiology of malaria has been altered in this way in some areas of Pakistan, Mexico and particularly Thailand and there are suggestions in southern Sudan (as yet unsubstantiated) that the epidemiological characteristics of trypanosomiasis have been affected.

Finally, the refugees may introduce entirely new disease agents, or pathogens which had previously been eradicated. In general, these reports relate to the *potential* for such introduction, rather than the actual initiation of epidemics of previously unencountered diseases. They range from schistosomiasis in Thailand to haemorrhagic fevers in Sudan. This aspect of the possible impact of refugees emphasizes not only the need for effective monitoring and contingency planning, but also the importance of understanding the disease problems of the refugees in their pre-refugee situation and during the displacement period — if appropriate surveillance systems are to be established and unnecessary anxieties allayed.

2. Person factors

Communities in countries of asylum living near to areas where the refugees settle may be affected by the refugees in

a number of ways which have implications for the frequency and severity of existing diseases. Since many of the diseases commonly encountered in such communities are related to nutritional status and socio-economic conditions, any ways in which the refugees negatively influence these characteristics of the surrounding population will be likely to compound the associated diseases.

For example, the refugees may adversely affect a number of individual characteristics including employment (both the availability of jobs and wages), housing and land costs, food and food prices. The various intergovernmental, national and non-governmental agencies' responses to the refugees may also have a negative impact on some of these characteristics. Not only may the refugees affect the health-related attributes of local communities, but they could also alter the number of susceptible people in the community, which, if there is significant mixing between the two populations, would increase the likelihood of epidemics of diseases such as measles. Furthermore, if there is persistent migration to and from the camps and settlements, as is often the case among nomadic refugees or refugees currently involved in looking for work or in other activities, this may introduce additional problems for national control programmes for diseases such as malaria and tuberculosis.

3. Environmental factors

The environmental impact of the refugees may affect the health status of the surrounding host communities, both immediately and also in the long term.

Concerning the physical environment, the refugees may use scarce resources which are already in short supply for the host population — for example, wood for fuel and shelter. If they bring animals with them, then these may compete with those of the local people for grazing. If overgrazing and deforestation are allowed to continue for long periods without replenishment, then the implications may be serious for the host country in terms of soil erosion and even desertification (see Young, 1985).

The biological environment may also be affected in several ways. Inadequate drainage or waste disposal in the camps will increase the opportunities for mosquito and fly breeding, some of which may be epidemiologically important in the transmission of disease. The refugees may also increase the pool of infectious agents, both through diseases from which they suffer, such as tuberculosis, and also through diseases which affect their animals and which may subsequently be transmitted to people, such as brucellosis and anthrax. The biological environment may further be adversely affected if sanitation programmes for the refugees are inappropriate or ineffective and water sources used by host communities become polluted.

Finally, the refugees can affect the social and economic environment directly — by increasing unemployment, for example — or indirectly by the international response to their plight, since this may, amongst other things, influence the availability and prices of local foods. In certain circumstances, the presence of refugees also has the

potential to compound existing political friction and instability in the country of asylum.

Whilst refugees may have an effect on both the needs and the provision of services of a number of health-related sectors, in the present context their impact on the provision of health care is of particular importance. The host country health services will almost inevitably become involved with some aspects of the provision of health care with (or, more frequently, *for*) the refugees. This involvement will be likely to have an adverse effect on them since in many host countries the health services, particularly those provided for the urban and rural poor, are already extremely overstretched. Among the negative impacts of this are increased workloads affecting the quality of care and increasing the frustrations and dissatisfaction of both patients and staff. These may become even more pronounced if the health and health-related services, such as water, which are provided to the refugees by international agencies are obviously better, quantitatively and qualitatively, than those which are available to local people.

It is important to be able to determine whether any such negative impacts are likely to be of local or national importance. Similarly, in terms of the diseases which the refugees bring with them, it is essential to differentiate between health problems which are likely to be of general public health concern and those which are merely of importance to the individual refugees who are affected.

Quite apart from the diseases which they suffer from, the sheer number of refugees is likely both to compound existing problems and to create new ones for the host community. This process may happen either directly or indirectly and may affect health or health-related sectors.

FACTORS WHICH MAY MODIFY THE IMPACT OF REFUGEES ON HOST COMMUNITIES

1. Refugees

The major causes of mortality and morbidity among the refugees will be determined by factors such as their pre-refugee characteristics, the reason for their altered status, the displacement period, the response and the conditions in the camps and settlements. The types of diseases which the refugees bring with them and those which develop in the camps will vary from community to community, and these variations will have differing effects on the host population. For example, the health problems are likely to be quite different if the refugees are urban people displaced by war or if they are chronically malnourished nomadic communities forced to settle in camps as a result of drought.

However, it is not only the diseases which the refugees bring with them that determine the ensuing problems, but also their health-related habits. Although some of these may be forced upon them by conditions in the camps (for example, overcrowding or lack of soap), personal hygiene and defecation practices may affect the prevalence of certain diseases which could be spread to the neighbouring resident population, particularly in the case of self-settled refugees.

Such practices are also a potential source of contamination of water supplies used by both host communities and refugees.

Many other refugee characteristics may affect their impact on the local population. For example, their skills profile will be important, since this is one of the factors that will initially determine to what extent they are able to become involved with the provision of their own services. Furthermore, if refugee health workers have been more appropriately selected and more effectively trained than the host country health workers, then the services that they are able to provide may be of a higher quality than those which the surrounding population receive. Conversely, if there are very few health workers among the refugees, the host country services may be overwhelmed. Either of these scenarios may cause or exacerbate friction between local communities and refugees.

The refugees' previous expectations for health care, their demands and their ability to vocalize these demands, particularly in relation to the local population, will influence the type and quality of services which they receive. Such attributes will also affect their utilization of, and compliance with those services that are available. These expectations and demands in turn reflect the refugees' origin, culture, and socio-economic status, and the relative level of development of their own health services.

The previous relations between the refugees and the host population are likely to affect both the provision of services and also the expression or containment of friction. The impact of the refugees is likely to be different if they are ethnically similar and suffer from similar health problems to the host community as opposed to being culturally dissimilar, with a different spectrum of diseases and long-standing enmity.

In the initial phase of the refugee problem, even if the services are appropriately orientated and effectively implemented, refugees will usually be dependent on the assisting organizations — one of whom will be the host government. During the emergency phase, particularly, when many of the problems are especially severe and most of the agencies are still "getting their act together," the health services in the country of asylum are likely to become involved in a number of ways: the diversion of staff (both health workers and administrators), the reallocation of resources (for example, drugs and vaccines) and the utilization of facilities.

2. Host country and community

In addition to the characteristics of the refugees, several aspects of the host country will also affect their impact. First, the health status of the host communities, the area, whether urban or rural, and the level of provision of health and health-related services will be important — particularly their orientation and development. In addition, the impact of the refugees will depend on the availability of host country health workers (and their categories) and on the potential of the host government health services to expand in order to cope with an increasing work-load. In this context, the major factors limiting expansion will need to be

identified: staff, buildings, equipment, the management and logistics infrastructure or training.

Host government policies towards the refugees are also important. Whether the camps are open or closed, and if the refugees are allowed — or even encouraged — to become self-settled will obviously affect their utilization of host government health services and the amount of contact between the two communities.

3. Health care — organization and provision

There are several aspects of health-care provision that may affect the refugees' impact. Probably the most important of these is whether the refugee services are integrated with those of the national health programme, or if they are planned and implemented in parallel. There are likely to be major differences between those countries in which the services for refugees are comparable and linked to those of the host community, and those which are at a far higher, or lower level of provision. If control and standardization are not ensured, and agency anarchy is allowed a free rein, then this is a sure recipe for problems. Inter-governmental and non-governmental agencies will frequently be in a position to provide or support an unrealistically high and usually inappropriate level of services, as a result of better funding, resources, staffing and, sometimes, management.

Decisions about refugee health policy and the orientation and abilities of the various agencies will have a number of repercussions. Not only will they determine who is responsible for pre-planning and overall "control," but they will also influence the relationships between the various international agencies and the host government and, within the host government, will set the scene for intersectoral co-operation.

In most countries which host significant numbers of refugees, a "Refugee Commission" of some description is likely to be set up within the government to deal specifically with the refugees' services and problems. The attitude of the people working in such a commission to themselves (infrastructural support or empire building?), to the international agencies (standardization or *laissez faire*?) and to the other government departments (co-operation or cornering the foreign exchange?) will almost certainly be influenced by whether or not the policy is for parallel or integrated services. The orientation and activities of Refugee Commissions will be important factors in determining the type and quality of the services which the refugees receive and have the potential either to aggravate or to obviate friction between the refugees and the host population. Furthermore, the composition and siting of the "Refugee Health Unit," whether it is within the Ministry of Health or within the Refugee Commission, is likely to have a number of repercussions on the provision of health care, both at a policy and also at an operational level.

PARALLEL SERVICES OR INTEGRATION

The decision to provide parallel or integrated health and health-related services has important implications, both in

the short-term and the long-term, for the refugees' impact on the host community. It is therefore worth examining some of the pros and cons of these two different systems. Since parallel services are most frequently encountered, the advantages and disadvantages of this approach will be discussed.

Advantages and disadvantages

The possible advantages of a parallel system are that it is easier to tailor the services to suit the specific needs of the refugees; it creates fewer problems in terms of training programmes, particularly if the likely "durable" solution is to be voluntary repatriation; it is less difficult to recognize and accept the qualifications of the refugees; it is easier to orientate the services and maintain standards in line with the expectations of the refugees, without taking those of the host community into consideration; it may be easier to restrict (or at least control) the use of host government services by refugees (and *vice versa*); and it may be less politically sensitive and easier to obtain funding if there are no grey areas about which resources are going to the refugees and which are benefitting host nationals.

The disadvantages, however, are likely to be much more extensive. Unless there is an exceptionally good relationship between the Refugee Commission, the Refugee Health Unit and other governmental departments, there may be difficulties ensuring intersectoral co-operation at either national or local level. There may also be conflicts about control. This will make it more difficult to provide services for the refugees, since these are often likely to be easier to implement if they can be built on an existing infrastructure (for example, water supplies and immunization).

If parallel services are provided, if there is inadequate communication or co-operation between the host and refugee services and if, additionally, both refugees and host nationals are able to use the services provided to either group, then a number of problems may arise:

- it may be difficult to identify duplication and assistance gaps;
- confusion may be created by the use of different health education messages, treatment regimes or immunization schedules;
- the collection of health service data may be sufficiently dissimilar for it to be difficult to collate, which may compound the problems of planning, monitoring and evaluation;
- it is more likely that inappropriate standards will be developed (comparing current services with past provision and future expectations); this may increase the friction between the host nationals and the refugees — without the reference points of integration, the definition of "appropriate" becomes very difficult;
- reorientating the services to an integrated approach in the future, if the refugees remain in their country of first asylum, may be extremely difficult;

- planning decisions about such things as the siting of clinics or wells may be more complicated and less rational, particularly if host government services in the area are underdeveloped, as is often the case.

Clearly, the decision to provide parallel or integrated services is not an all-or-none decision. However, the issue needs to be addressed in order to define health policies, and the implications of each approach, either alone or in combination, need to be considered. If, for example, integration is chosen, then it may be necessary to provide additional services in parallel, such as the training of "emergency" cadres of primary health care workers, initiating special feeding programmes or ensuring the availability of measles vaccine for new arrivals (although in many circumstances additional food and immunization services will also be necessary for the surrounding host population). It is important for a policy decision to be taken about the approach to health care provision and this needs to take into consideration the most likely outcome, not only the emergency phase of the displacement.

Integration — the obstacles

The need to think about the future when planning services during the emergency phase is particularly important because it may not be easy to move from a parallel to an integrated system, as the needs change from the acute to the long-term setting. However, if integrated services are provided and the refugees *are* voluntarily repatriated, then the host government would benefit from health services which have been strengthened by the input of resources and expertise. If parallel services are provided in such circumstances much of the input may be wasted, although of course the refugees should benefit from training programmes whatever the final outcome.

Difficulties may arise if the pay and conditions of service have been unrealistically high for people working with non-governmental organizations (a problem which may, additionally, drain health staff away from the government services). There may also be opposition to integration, from both health workers and refugees, if there are obvious differentials in the quantity and quality of the care provided, in terms of its orientation, range of services, diagnostic facilities and treatment policies, and the availability of equipment, drugs, buildings and staff. As a result of the often unrealistically high expectations which are created, the refugees and their health workers may see few benefits in moving from parallel services to integration. Therefore, whilst parallel services may be less difficult to initiate, they may store up problems for the future, particularly if the durable solution is integration.

Following refugee displacements there may be a number of factors which will militate against the setting up of integrated services. First, integration is unlikely to be supported by the non-governmental agencies if the host government services are inappropriate to the refugees' needs (as they may also sometimes be to the needs of the host communities themselves). If the health services being

provided to the host population are, despite a primary health care (PHC) rhetoric, little more than curative care, then there are likely to be pressures to set up a more appropriately orientated system for the refugees. However, if the policy is to provide integrated services, such problems will indicate the need for assistance, whether in terms of resources or expertise, and for support for the host government health services in order to assist the refugees.

A second problem concerns the training of PHC workers. In refugee camps, health workers need to be trained as rapidly as possible for a few priority activities, if refugees are to help with the planning and implementation of the PHC programme and are to be able to contribute during the emergency phase. What should be done if the host government PHC training is inadequate or inappropriate and, in any event, takes many months to complete? Whilst refugee health workers will frequently require additional training to help adapt to their new conditions, if they arrive with more appropriate skills and orientation than those health workers employed by the host government, who then needs to be retrained — the host government personnel or the refugees?

Thirdly, the host government infrastructural changes which take place following an influx of refugees may create conflict between the health unit of the Refugee Commission and the national Ministry of Health. Territorial imperatives may encourage the refugee health unit to make its own decisions without due consideration for national policy, and this attitude may implicitly be supported by organizations who wish their funds specifically to benefit refugees. Such funding is much more likely to be appropriate if the host government programmes are taken into consideration, since this will encourage a realistic approach to standards of care and to issues such as recurrent costs and maintenance.

Integration and host country support

If integration is to be accomplished then gross disparities between the services provided for refugees and those available to the host community need to be avoided. This does not mean that if the host country services are inappropriate, inefficient and suffer from poor management, inadequate logistics and a lack of supervision, that these should also be the hallmarks of the refugee services. What it does mean, however, is that attention needs to be directed not only to the refugees but also to supporting the host country services in terms of training and management in order to help overcome these problems.

The influx of resources and expertise which occur in response to refugee displacements needs to be shared with the host countries. This will obviously require delicate negotiations and may mean that the quality and quantity of the refugee services may be less than some externally defined ideal. However, it will also mean that the host countries benefit, which is only right since they often carry much of the burden. In addition, it will facilitate rather than obstruct the integration of the services. It will also be likely to decrease the friction which is almost inevitable if the host communities are being encouraged to be self-

sufficient and the refugees are, albeit inadvertently, going through exactly the opposite process. Finally, if the refugees are assisted via support for the host government health services and voluntary repatriation does become possible, then the input of resources has the potential to be of long-term benefit to the country of asylum.

Decisions about parallel or integrated services will have implications for a wide range of aspects of the host government health services. These include pre-planning and the development of policies; the relationship between the host government, UNHCR and other intergovernmental and non-governmental organizations; clarification of areas of responsibility, lines of communication, the functions and duties of health workers and their terms and conditions of service; standardization of approaches to the control of communicable diseases and of other interventions; and methods of surveillance and evaluation.

Finally, there needs to be a policy decision taken on the role of traditional healers. Official attitudes to their activities may be quite different if the refugees' culture is dissimilar from that of the people living in the country of asylum. Since the continued provision of traditional health care may be particularly important in socially disrupted refugee communities, in order to provide support and restore aspects of normality, their activities should be encouraged and supported whether the services are parallel or integrated.

REFUGEES — THE POSITIVE IMPACT

It would be quite misleading to imply that the impact of refugees on host communities is always negative. The positive effects will vary depending on the host government's state of development, its needs and the refugees' ability to contribute. They will also depend on the skills and orientation of the agencies who come to assist, both intergovernmental and non-governmental, and on the contact which they have with the government services, which, once again will depend to a large extent on whether the services are integrated or run in parallel.

For example, the impact of the refugees is likely to have more potential to be positive if the host country has poorly-developed primarily health-care services; if there are employment opportunities and an agricultural sector which needs both people and ideas for its development; if there is an influx of refugees who have the training and skills to help develop the health and related sectors; if there is an integrated approach to the provision of health care, with adequate pre-planning; and if a number of agencies have arrived in response to the refugee influx, which have resources and are willing, able and appropriately orientated to assist the development of services with both refugees and host communities.

However, the positive aspects of the impact are likely to be much less if the host country has effective PHC services; as developed an agricultural sector as its natural resources will allow; high unemployment and lack of arable land; or if the refugees lack skills (if, for example, the trained and

educated members of the refugee community have been creamed off either by selection prior to the displacement or by resettlement in a third country of asylum); and if the agencies are only involved with the refugees because of a parallel policy for health-care provision, or if their enthusiasm to assist is inversely proportional to the appropriateness of their knowledge and orientation.

These are very much caricatured descriptions which do not represent the reality of any host countries in particular. However, whilst the factors which have been identified and their combination will vary, their separate effects on the refugees' impact are likely to remain fairly consistent. In addition, the positive impact of the refugees (or at least their lack of negative impact) will depend on all the individual, agent and environmental factors already mentioned. It will also vary with the stage of the displacement, the proximity of host communities to the services provided for refugees and the development of these services.

Whatever the process of the positive impact, there is a difference between the refugees and the services provided for them fortuitously alleviating some of the health problems of the host community, and these resources purposefully being used as a positive contribution to the development of the host country's health and related services. Often any positive impact will be a chance happening. However, there are clearly many opportunities when responding to refugee displacements to assist host communities. It is to be regretted that such challenges are not more often explicitly and energetically accepted.

AN APPROACH TO IMPACT MONITORING

From the previous sections it will be clear that a good case can be made for considering the health needs and health services of host communities. This is important, both from the point of view of the possible negative impact of the refugees and also because this will encourage the integration of health-care provision. What methods are available for monitoring the impact of the refugees in order to identify areas which need support?

First, it is essential to know something about the host country prior to the arrival of the refugees. This will need to include information about health policies, orientation and activities, coverage and the quality of care, the common diseases and control programmes, recent trends in provision and utilization, and the training and availability of host national health workers. This information will be necessary if health planners are to decide rationally whether it is "bricks 'n mortar" which are required, and if so, whether these should be used for hospitals or clinics and where they should be sited, whether assistance is needed for equipment or consumables (such as drugs), for management and training or if all of these categories need to be supported.

Secondly, information is needed about the refugees prior to their displacement, concerning their provision and utilization of health services, prevalent diseases and health-related practices. In addition it is necessary to know about

the likely health implications of the cause of the displacement, the displacement period and camp conditions. This will provide information about probable impact (in terms of the introduction of new diseases or the exacerbation of existing ones), about the quantity and quality of refugee health workers and about the expectations of the displaced communities in terms of health care.

Thirdly, there clearly needs to be some monitoring system which will enable the host government to identify any changes in the epidemiological characteristics of the host community diseases, the patterns of health care utilization and their quality. Such information needs to cover all health facilities (from PHC clinics to the referral hospitals), including both those which provide services for the host communities and also those which are primarily provided for the refugees. In addition, information should be collected which would give an indication of the impact of the refugees on the health-related sectors — in particular, water, sanitation and other aspects of environmental health. These data will require effective routine recording systems, possibly from sentinel facilities, and the initiation of *ad hoc* surveys. An adequate assessment of the refugees' impact which is not only descriptive but also analytic is essential if a good case is to be made for assistance, and if such assistance is to be appropriately directed.

RECOMMENDATIONS

The adverse effects of refugees on the health status and services of host communities appears to be a major issue which has received relatively little attention, despite the implications for policy, planning, training and research. The problems need to be approached on a number of fronts.

1. Training

There are several implications for training:

- International workshops directed to people working at national government level in host countries should emphasize the potential negative (and positive) effects of refugees; provide approaches and methodologies for understanding and quantifying the problems; and outline ways in which adverse repercussions can be monitored and prevented. In particular, such workshops should emphasize the need for pre-planning and for developing policies which take account of the factors discussed above.
- International workshops for people likely to be working with refugees. Once again there is a need to point out the ways in which refugees affect the health and health services of host communities, to ensure that the problems of host communities are included in the initial assessments, and to emphasize the rationale behind integrated health provision and co-operation with the host government health and health-related sectors.

- In-country training and briefing programmes for health workers of all cadres, from international teams to refugee PHC workers, should emphasize specific problems which may occur, and provide methods of monitoring and identifying them. Any PHC training which is carried out should be influenced not only by the immediate problems but also by the most likely eventual outcome of the refugees' displacement.

2. Advocacy

In addition to training, it is important for intergovernmental organizations and non-governmental agencies to be made more aware of the problems of host governments and of the implication of these problems for policies and the planning of refugee health services. In terms of the intergovernmental organizations, there is a need for them either to expand their mandates to include host communities or for them to co-ordinate more effectively with those organizations which already see such activities as being part of their responsibilities. This is not to suggest that money and resources should be directed away from the refugees. However, although it is possible that existing resources could be used more effectively, additional funds will need to be made available to support host country health services and to combat any negative effects which the refugees may have on the health status of host communities. Since host countries are often so generous with their hospitality, there is really no reason why they should be adversely affected or why they should be forced to accept an increase in their own problems as a consequence of their assistance.

The support of host government services might reasonably be seen as being within the mandate of UNHCR (in terms of providing assistance to the refugees via the host country health services). However, whilst combatting the health problems of host communities is really outside this mandate, it should be appreciated that any increased health problems in the host community caused by the refugees are ultimately likely to adversely affect the services provided to the refugees themselves.

3. Monitoring

As a start to identifying the problems and improving our conceptualization of the issues, systems of monitoring and surveillance should be introduced routinely following new refugee displacements. These need to cover both the host services and those provided for the refugees, and must include health and health-related sectors. Such a monitoring system additionally needs to include different levels within the health-care infrastructure, from PHC centres to referral hospitals, if it is to assist in the appropriate allocation of resources. It should also be sensitively implemented. It is important that processes of monitoring or investigating the problem do not make the refugees feel threatened, create discriminatory practices or stir up any negative feelings that the host community may have towards the refugees — monitoring systems should not create the very problems which they are trying to quantify and ultimately prevent.

4. Research

There is a need for more research in this area if we are to obtain a clearer understanding of the issues, as a means to identifying possible solutions. Initially, there is a need for descriptive studies to support or refute the anecdotal impressions which currently form the basis for our understanding of the problems.

In addition, there is the specific need to develop a methodology which can be adopted and, where necessary, modified by host countries which will help them to estimate the impact quantitatively. This is essential if rational external responses are to be made to these problems in terms of assistance — what is needed, when, how much and where? Research could also help to identify possible levels of intervention and, subsequently, ways of avoiding certain aspects of the negative impact. It should be possible to determine how current policies and practices either compound the refugees' impact or increase the difficulties of integrating their services with those of the host government.

All organizations concerned with responding to refugee displacements need to be aware of the possible repercussions of such displacements on the host communities and should be prepared to respond positively to requests for assistance from the people living in the countries of asylum, as well as from the refugees themselves. It should be emphasized, once again, that this is not to suggest that funds should be diverted away from the refugees. What is needed is the improved use of existing resources and additional funds, which will not only improve the services provided to the refugees but which will also help to ensure that the host countries who so generously provide asylum to the refugees do not suffer as a result of this hospitality. This is a major challenge facing all people involved with the health of refugees.

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Training Community Health Workers in refugee camps: A case study from Pakistan

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In October 1983 a training programme for refugee community health workers was begun as the major part of a primary health care programme for Afghan refugees in Pakistan. The programme began with a pilot period in Badaber camp, situated near to Peshawar. The general issues involved in training auxiliary health personnel were answered by the use of a "knowledge, attitudes and practices survey" and involvement of the refugees from the beginning of the programme. The development of the training programme is discussed with reference to these issues and the constraints arising from the special circumstances of the refugees, in addition to those common to most national training programmes, are reviewed.

Keywords: Refugees; Community health care; Primary health care; Traditional birth attendant.

INTRODUCTION

Primary health care is advocated as the means of providing access to basic health services for all people (Walt and Vaughan, 1981) and as such is promoted in most developing countries, with varying degrees of commitment. It has more recently been recognized as appropriate health care for refugee camps, as many refugee situations have become long-term problems and the initial high cost, curative-oriented health services prove difficult to sustain (Simmonds *et al.*, 1983). UNHCR, in its 1982 Handbook for Emergencies, emphasizes that:

1. Refugees must have access to appropriate treatment, which must be provided at the right level to avoid swamping the local national health facilities. A community-based health service which co-operates closely with other community services is therefore essential.
2. Refugees should be directly involved in the development and provision of Health services, which should be based on the concept of Primary Health Care (PHC). The first

level is the Community Health Worker (CHW), selected from the community, to promote basic community-wide preventive measures. His major responsibilities are identification of public and individual health and nutritional problems, treating simple, referring more difficult cases; mother and child care; health education and basic surveillance.

Training of refugees is recommended in order to create an infrastructure for community health care and to increase self reliance (Dick and Simmonds, 1984), but it has seldom been approached in a well planned or co-ordinated way, and is often added to a refugee health programme after several years of curative services. CHW training was introduced successfully in Somalia and extended to the national programme, with standardized methods (Simmonds, 1980), but the experience has not been widely shared, and training continues to occur according to the interest of the health personnel, and relying on refugees presenting themselves to offer their services.

Pakistan, whose population is 86 million (1981 census), is host to the world's largest single refugee population. In October 1983 a Primary Health Care programme was begun under the supervision and co-ordination of UNHCR and the Government of Pakistan.

Save the Children Fund recruited two expatriates, including the author, who were seconded to UNICEF to implement the training programme. The programme began with a seven month pilot phase in Badaber refugee camp, to develop a strategy for training CHWs and Dais (birth

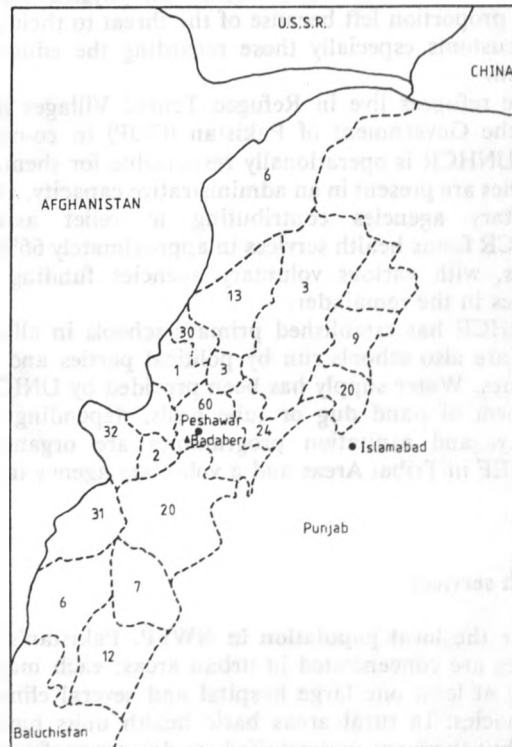


Fig. 1. North West Frontier Province, Pakistan. The figures denote the number of camps in the District/Agency.

attendants). The pilot phase ended in June 1984 and the strategy developed will be used in the camps which are funded by UNHCR.

The constraints on implementing the programme, progress in the pilot phase and implications for the extension of PHC to all areas settled by Afghan refugees are reviewed in this paper.

BACKGROUND

The refugee movement began in 1973 when Sardar Daud overthrew King Zahir Shah but the main influx started with the coup of Nur Mohammed Taraki in April 1978. After the overthrow of this government by his Prime Minister Hafizullah Amin, the refugees in Pakistan numbered 193,000. With Russian armed intervention on 26th December 1979 and the installation of Barbrak Karmal, the refugee exodus accelerated, reaching 1 million by 1980, 2 million by 1981 and almost 3 million since 1982. Of these over 2 million are in North West Frontier Province (NWFP), one third of whom are in the Tribal Areas along the border. Refugees comprise many ethnic groups; Pushtoons, Persian-speaking Hazaras, Turkic origin Turkomans, Uzbeks, Tajiks, Nooristanis and others. The majority of refugees in NWFP are Pushto-speaking Pathans, as are the indigenous population, but within this group there are many different tribes, with a long history of inter-tribal and inter-familial rivalry and conflict (Dupree, 1980). While many refugees left because of actual physical danger, a large proportion left because of the threat to their religion and customs especially those regarding the education of women.

The refugees live in Refugee Tented Villages (RTVS), and the Government of Pakistan (GOP) in co-operation with UNHCR is operationally responsible for them. Other agencies are present in an administrative capacity, about 18 voluntary agencies contributing to relief assistance. UNHCR funds health services in approximately 66% of the camps, with various voluntary agencies funding health services in the remainder.

UNHCR has established primary schools in all camps; there are also schools run by political parties and by the mosques. Water supply has been provided by UNICEF, in the form of hand dug or tube wells, depending on the locality, and sanitation programmes are organized by UNICEF in Tribal Areas and a voluntary agency in settled areas.

Health services

(a) **For the local population in NWFP.** Pakistan's health services are concentrated in urban areas; each major city having at least one large hospital and several clinics and pharmacies. In rural areas basic health units have been built, but these are understaffed, as doctors prefer to work in towns, and there is a shortage of nurses due to the restrictions on women's education. There are many private

practitioners in rural and urban areas. A primary health care programme has begun in Pakistan with financial support and advice being provided by USAID. Medical Technicians are trained at public health schools, in an 18 month course. The final 6 months of this course are meant to comprise training village health workers under the supervision of course tutors; however there have been many problems in implementing this programme and by 1983 only approximately 200 medical technicians had been trained in the whole of Pakistan. There are therefore very few village health workers in NWFP.

(b) **Health services in the camps.** A minimum level of health services has been set by GOP/UNHCR. Each population of 15,000 refugees has a Basic Health Unit (BHU), staffed by a doctor, lady health visitor (LHV), midwife, male dispenser, malaria supervisor, immunizer and sanitarians are currently being trained. Supervision of health services in NWFP is carried out by ten Field Supervising Medical Officers (FSMOs), and twelve Lady Health Visitor Supervisors, who are accountable to the Provincial Director of Health. The main health problems in the refugee population as judged by BHU annual returns are diarrhoea, respiratory tract infection, skin infection, fever and malnutrition. While there are no reliable statistics available, there is thought to be a high infant mortality rate, high maternal mortality rate, and the prevalence of TB and malaria appears to be greater than that in the indigenous population.

Priorities for health services stated at the 1984 Workshop on the Afghan Refugee Health Programme were to promote PHC, to improve coverage of immunization, to strengthen the TB and malaria control programmes and to increase the coverage of the sanitation and water supply programmes.

While many of the components of Primary Health Care are already being implemented in the camps, they have been implemented as separate activities and planning for each has been from the "top down." The PHC approach emphasises the need for prevention, equitable distribution, appropriateness, community participation and intersectoral co-operation (Vaughan and Walt, 1983), and this approach has been lacking in the provision of care for refugees, especially the latter two elements. The aims of training Community Health Workers and Dais are to improve the coverage of preventive health services and to create an awareness in the whole community of means of promoting health. Thus a focus on prevention is being made; access to health services should be increased (equitable distribution); by involving the community in planning and setting priorities, services can be made more appropriate and community participation stimulated, and intersectoral co-operation can be promoted at the grass roots level by CHWs and Dais but needs support by inter-agency co-ordination at the central level.

The constraints on introducing a training programme that will be successful in promoting the PHC approach are considerable:

(a) Most refugees have been living in camps for 4–5 years and have had no involvement in the development of

services. The camps are at the chronic stage where dependency is common (Jelliffe, 1981). Curative services so far have created a demand for medicine especially injections.

- (b) The feudal society means that camps are not a homogeneous "community." Camps are not stable as there is marked seasonal migration and many men return to Afghanistan to fight "Jihad" (holy war); selection of trainees is therefore difficult.
- (c) Strict Moslem attitudes make training of women a very sensitive issue, and restrict the movement of women once they are trained.
- (d) There is a shortage of personnel, either local or expatriate, with relevant training and expertise to train PHC workers.
- (e) Practical difficulties exist when working in the semi-autonomous tribal areas, where tribal laws apply, expatriates are rarely given permits to travel and women health workers are reluctant to go.

Nevertheless, the apparent lack of impact of costly health services provided so far and the absence of a foreseeable solution to the refugee problem, indicated the need to attempt to increase the effectiveness of health services by training refugees.

Community motivation

The first step was to carry out a "Knowledge, Attitudes and Practices" survey in the camp. The expatriates designed a questionnaire, to find out what refugees considered the main health problems in the camp and the reasons for them; what they know about prevention of disease; their beliefs about causes and methods of spread of common illnesses, and the home remedies for them, and practices relating to antenatal care, delivery, postnatal care and care of the infant. Interviews were conducted by Pakistani and Afghan interpreters with the expatriates; we interviewed the leaders in the camp such as mullahs, maliks and teachers, and groups of men and women from each tribe in the camp, as the aim of the survey was to promote discussion and not to collect scientifically valid morbidity data. At the end of each interview the proposed training of CHWs and Dais was discussed and the suggestions made by refugees were noted.

From the survey it was apparent that there were many people in the camp who were strongly motivated to work for the community and there was a high level of knowledge about disease and preventive measures, especially among the men. There was general enthusiasm regarding the training of men. Training women was a sensitive issue, and there were many constraints on it. There were no "village dais" identified in Badaber camp, most deliveries being conducted by an older relative or family dai. Most women could visit fewer than 30 houses, so that to achieve adequate coverage very many "family dais" would have to be trained. A place would have to be found near to each group of

women's houses for training, where Purdah could be maintained — the women would not be allowed to leave the camp or even to come to a central area in the camp for training. There were no literate women or women who would be allowed to act as trainers of dais, as even the most mobile women (such as widows) were restricted to visiting houses of people in their own tribe.

DEVELOPMENT OF THE TRAINING PROGRAMME IN BADABER CAMP

The main questions when developing the training programme were:

- (1) How can the refugees be motivated to take part in the programme after four years of "handouts."
- (2) How best to train CHWs and Dais; that is
 - who should be the trainers
 - how to recruit and select volunteers
 - how to train dais in a manner acceptable to the men
 - how to design curriculae relevant to the local situation and the expected tasks of the CHWs and Dais
- (3) How to develop a model which did not fall into the trap of many "pilot projects" that is to depend on resources that are not available when attempting to replicate the programme on a large scale (Walker, 1982).

The survey also gave an insight into the cultural acceptability of different methods of teaching, and showed what could be expected of CHWs and Dais once trained, given the limitations of Purdah and the tribal and political groups within the camp. It was used when writing the curriculae, both in selecting topics which were most important to teach, and in deciding which beliefs and practices should be encouraged and which changed in order to improve health status.

While the survey was in progress, large open meetings were held in each part of the camp for all elders and interested men. The programme was discussed, their worries, which were chiefly about attempts to change their religion or customs, were allayed, and their views on the priority problems in the camp identified. Following these meetings, a health committee was formed comprising representatives from each tribe in the camp, elected by the elders. Regular meetings with the health committee and BHU staff were begun to discuss improvements in the health services already provided in the camp.

Role of the CHW and Dai

In deciding this we considered the resources already available and the functions fulfilled by other grades of health worker. The major health and health related problems stated by refugees during the survey were diarrhoea, TB skin infection, fever and "stress." From Basic Health Unit returns, the most common illnesses seen

were respiratory infections, fever, diarrhoea and TB. Practices and beliefs identified during the survey as detrimental to health were:

- (1) Late weaning and not making semi-solid weaning foods; instead children were weaned directly onto solid food such as nan.
- (2) Withholding fluids from children with diarrhoea.
- (3) Withholding food from sick children especially those with measles.
- (4) The belief that malnutrition was due to "spirits" or "shadows" and not giving food to thin children.
- (5) Use of an unclean blade or knife to cut the cord at delivery.
- (6) Though many families had built their own wells and latrines, these were improperly maintained and often unsafe.

Refugee men were also interested to learn first aid, as most return to Afghanistan at some time to fight.

The role of CHWs was therefore decided by expatriates and refugees as delivering health education; case finding and follow up of TB, malaria patients and malnourished children; motivation for and assistance in outreach immunization programmes; provision of first aid services and registration of births and deaths. In all these tasks close liaison with the relevant BHU staff would be essential. The Dais' role is more limited as they are only allowed to visit the homes of their relatives. Their training programme concentrates on the conduct of safe deliveries, recognition and referral of at risk pregnancies to the BHU, and health education especially to promote breast feeding, early weaning, oral rehydration and immunization. The dais will also be asked to report births to BHU staff.

Who will be the trainers

We decided to use refugees as trainers because:

- (1) People selected from the refugees should be more motivated towards teaching basic health care, be flexible in their hours of teaching, know the customs of their people and would be more likely to use appropriate language. (Although Pakistanis in NWFP also speak Pushto, there are many differences in dialect and in customs especially between educated Pakistanis and the predominantly illiterate refugees.) Having been selected by the community they should be more able to motivate the refugees to volunteer for training as CHWs.
- (2) There is a shortage of host country personnel with experience in primary health care or training in communication. Health service personnel have received a hospital-based training and would be tempted to restrict their teaching to clinical diagnosis and treatment of diseases.
- (3) International personnel were excluded because of the Government of Pakistan's policy that health services in camps are not staffed by expatriates; in any case expatriates are likely to have the greatest difficulty in making instruction appropriate in content and language

and are often themselves not oriented towards PHC (Bryant, 1981).

It was therefore decided to recruit literate men from the camp who would be salaried and be called CHW Supervisors, and UNHCR agreed to include two of these posts per camp in their budget for BHU staff, throughout the province.

Criteria for selection were decided by the health committee to be:

- Presence in the camp at all times
- Commitment to working for the community
- Acceptability in the community
- Freedom from political involvement

Two men were selected by the expatriate PHC personnel after written tests (in Pushto) and interviews, from twenty-four candidates proposed by the community. They were aged 30 and 40 years, and were chosen on the basis of their ideas and attitudes towards preventive health care and teaching. After selection, further meetings were held with camp elders and the health committee to ensure that they were acceptable to the whole camp.

For women, a training programme had to be devised which utilized the Pakistani Lady Health Visitor as the trainer, as there were no Afghan women who would be allowed in all parts of the camp.

Who to train

During the survey we looked for people who had previously had training in health work, and traditional practitioners or traditional birth attendants. None were identified in the camp; there had been very little primary health care in Afghanistan, and traditional practitioners were often Hindu and remained in Afghanistan, or other had found work in Pakistani towns and villages. Trained health professionals were few outside the main cities of Afghanistan and were likely to have found work in Pakistan or in a country in the West. No traditional birth attendants were identified though 60% of deliveries in Afghanistan were reported to be conducted by Dais (Afghan Demographic Studies, 1975); they may have been reluctant to come forward due to the disruption of village units and the mixture of tribal groups in the camp, which greatly restricts the movement of women.

The recruitment of men for training as CHWs was done by the health committee and CHW supervisors. No criteria other than a commitment to working in preventive health and freedom from political party involvement had been set by us. The first group of fifteen volunteers were however all literate; and included a teacher and a mullah. Ages ranged between 20 and 50 years, most being in their 30s and most had other part-time or piecework jobs outside the camp. Though the younger men were more likely to leave the camp for periods of 3 months or more to go to Afghanistan to fight, and were less likely to carry authority in the camp, they were keen to learn and quicker to adapt to the new methods of teaching and participate in discussions.

For women, it was more difficult to recruit trainees. The Lady Health Visitor from the BHU visited different tribes in the camp, with the health committee representative from that tribe, and asked permission to train women. Eventually it was agreed that older women or widows could be trained as long as Purdah was maintained, and women from one tribe at a time were trained, in the house of a leader of that tribe. The first two groups of women were aged 30—50 years and had many years of experience of delivering babies.

Course design

This should ideally take into account the length of the course, curriculum content and methods of teaching, which will depend on the time available for training, resources available, the background of the trainees, their culture and religion.

Length

(a) **For training of CHW supervisors.** The course could not be as long as that for medical technicians in the national PHC programme, because of the desire to cover the whole province in 2 years in the extension of our programme. The length was arbitrarily set as three months and experience in the pilot phase showed that this was reasonable. The main topics could be covered in six weeks allowing six weeks for communication skills and teaching methods, and beginning the training of CHWs under supervision, both to evaluate how well the course prepared them for teaching CHWs and to give them confidence in beginning the training. It was felt that time was better spent in the initial process of motivating the community and selecting men who would have influence in the community, than in adding to the curriculum content.

(b) **For training CHWs.** As the trainers (CHW Supervisors) come from within the camp, they can decide with their groups of volunteers the timing of training — whether continuous or intermittent, number of hours per day, and site of training. In Badaber the first group of volunteers preferred a continuous course, and were only available in the afternoons as many obtained labouring jobs in the mornings. The course length was set as six weeks, three hours per day, six days per week.

As the pilot phase is still in progress at time of writing and the first training course for volunteers is not completed, the length of the courses for CHW supervisors and CHWs may need reconsideration for the extension phase. The fact that the volunteers themselves are literate, some having college education, means that the course for CHW supervisors may need to be lengthened in order to prepare them fully for teaching and questions that arise during discussion, and more time spent on preparing class plans, and relating each topic to areas previously discussed.

(c) **For TBAs.** Training was conducted two mornings per week for six weeks, but this was later reduced to five weeks as the women found it difficult to get time away from duties in the home.

Content

The curricula were designed to train the health workers for the tasks they were to perform. The main curriculum was written by expatriates for CHW supervisors and dealt not only with the knowledge, attitudes and practices required to perform each task, but with methods of teaching these to CHWs. It included the following topics:

- Introduction to the human body and the "germ theory" of disease.
- "Fluids" — loss of fluids; signs of loss of fluid; giving fluids.
- Nutrition.
- Common clinical problems e.g. TB, malaria.
- Use and misuse of medicines.
- First Aid.
- Immunization.
- Water and Sanitation.
- Teaching methods and health education.
- Recruiting volunteers and working with the community.

For each topic, the essential facts were written, followed by notes on suggestions of how to teach the topic to CHWs, with emphasis on discussion and demonstration and use of relevant quotes from the Quran. The curriculum was translated into Pushto and Farsi.

For CHWs, a loose leaf manual of reminders of the main points of each topic, with illustrations, was developed by CHW supervisors during their training course. Both the curriculum and manual will be revised according to experience in training courses during the extension of the programme.

For women, a shorter curriculum was written for use by the Lady Health Visitor. As for CHW Supervisors, equal emphasis was laid on teaching methods as for content of teaching. There were more difficulties involved in teaching women as trainees had no education at all, and the LHV's first language was Urdu, which made it doubly important to teach her how to assess whether her messages had really been understood.

Teaching methods

The course for CHW Supervisors was divided in a ratio of approximately 1:3 between time in the classroom and in the clinic or camp. The time in the "classroom" was equally divided between discussion, demonstrations and role play. Practical tasks, e.g. use of a thermometer, and injections, were then practiced in the BHU and health education practised in the BHU and the camp. Teaching methods were discussed and then practised by the trainees in role plays, to staff at the BHU, and then lessons were given to children at the school adjacent to the BHU before training of volunteers began. The first month of training volunteer CHWs was done under supervision by the expatriates. Continuous encouragement was required to enable the CHW Supervisors to change their teaching from lecturing to more interactive methods of teaching, and ongoing supervision of teaching will be needed to ensure that they do not revert to lecturing only. Initially the trainees were reticent about joining in discussions or

questioning the teachers; but after two weeks they became much more at ease, and more inventive when doing role plays. Traditional learning in Afghanistan is by story telling and school education consists of learning by rote, hence the trainees were used to didactic teaching, with strict maintenance of discipline at school.

Training of women was done in the home of a leader of their tribe and consisted mostly of discussion. Two visits were made to the antenatal clinic at the BHU during their training; though we would have liked to include more practical training in the antenatal clinic, most women were reluctant to come to the BHU which was situated at the edge of the camp, due to disapproval by their menfolk.

The design of appropriate teaching aids was part of the training course of the CHW Supervisors. Health education materials which were already available were mainly complex posters and leaflets which did not seem to be understood when we tested them in the camp. Educated men would interpret many of the posters correctly, but uneducated men and women did not, unless their meaning had been previously explained during visits to the BHU. It was decided that real life demonstrations would be used where possible, for example demonstrating making home based oral rehydration solution using the utensils available in the camp and then watching the trainees do it, rather than pointing at a picture. For health education, loudspeakers may prove useful, as the refugees are accustomed to listening to messages from loudspeakers in the mosques.

Examination

Before beginning to train community health workers, the CHW Supervisors were given a written test in Pushtu, on the theoretical content of the course, partly for us to assess how well they had understood it and partly to increase their status amongst their colleagues whom they would be training. Practical tasks and teaching methods were continuously assessed during training, by BHU staff and expatriates. Dais were given an oral test by the Lady Health Visitor, on completion of their course; two women of the first group of seven failed to complete the course because their husbands prevented them from attending. Those who completed the course all did well in the test, and were given certificates. The CHW course is not completed at the time of writing, but it is planned that they will have an oral and practical assessment and be awarded certificates.

Remuneration

CHW Supervisors are salaried members of BHU staff. CHWs and Dais are volunteers, but are issued with a kit comprising, for CHWs, first aid supplies and basic drugs such as aspirin, and for Dais a very simple delivery kit. The contents of the kits will be replenished from BHU stock. While it may be that more incentives will prove necessary for CHWs and Dais, it was not felt justified to start payment of them in one camp, when funds were not available to do this in all camps, and CHWs in the national programme are not salaried. Payment in cash or kind is traditionally made to

Dais, and it is expected that this will continue. Payment of CHW's may need to be on a fee for service basis; as most refugees have been spending large sums of money on private medicine, they may be prepared to pay for CHW's service. However, careful supervision would then be necessary to ensure that preventive medicine is not neglected and that the CHWs themselves are not tempted to become private practitioners (Simmonds *et al.*, 1983). The possibility of a community co-operative fund being established has been suggested to the health committee, but it appears unlikely as it is a difficult concept for such a tribal and parochial society as that of the Afghans, particularly with the extra constraints which operate in the refugee situation.

Supervision

Supervision of the work and attitudes of the CHWs will be by the CHW Supervisors and the Health Committee. Supervision of technical skills will be by BHU staff. BHU staff are in turn supervised by Field Supervising Medical Officers and Lady Health Visitor Supervisors. As these district level personnel are responsible for supervision of, and reporting on, all aspects of health services for refugees, they are unlikely to be able to allocate much time for supervision of the training programme. Hence, SCF/UNICEF are recruiting and training senior Afghan staff who will initially be involved in the process of community motivation in the other camps and later work with the FSMOs and LHV Supervisors in supervising the training programme. Periodic refresher courses for CHW Supervisors will be held and new skills may be introduced at these times, according to the priority problems in the camp.

Evaluation

Ideally, baseline surveys on health status prior to the training programme would be available for comparison with surveys after the CHWs and Dais had been trained. In Badaber these are not available, though a team from Centre for Disease Control, Atlanta, is conducting a health and nutritional status survey in a sample of camps in the province, which can act as a baseline for the extension of the programme. Indicators of uptake of services will provide a guide to the effectiveness of the CHWs and Dais. Examples are immunization returns; TB cases reported, contacts and defaulters traced; referrals to antenatal clinic, and under fives clinic; number of latrines built and the standard of maintenance of wells and latrines. The Knowledge Attitudes and Practices survey could be repeated to assess the impact of the health education programme.

Links with national programme

Although the National PHC programme is also in its early stages, the managers and advisors of the programme were contacted regularly during the development of the refugee programme, and the national curriculum was used and adapted when writing the curriculum for CHW Supervisors. It has been agreed that where two programmes are working in the same geographical area, they will be co-ordinated to try to standardize the services provided for refugees with those for the surrounding villagers.

DISCUSSION

The key to success of this training programme was felt to be the involvement of the refugee community as far as possible, so that the CHWs and Dais would be accepted by the community. Many of the activities of PHC were already being implemented in the camps, and the main tasks of the PHC workers would be to give health education and help BHU staff to perform outreach activities such as immunization. For this they would need to have the respect of the community. The use of a community survey proved valuable not only to stimulate interest among the refugees and to find the decision makers in the community, but also to identify priority problems and to plan culturally appropriate health education (Bennet, 1979). Time was taken over the selection of CHW Supervisors, which was justified by finally selecting two men who were allowed in all parts of the camp and who, together with the community, recruited fifteen volunteers for training as CHWs; it also took time to gain permission to train women as Dais. As noted by Simmonds *et al.* (1983), though it is recommended that candidates for community health worker training are chosen by the community, in refugee camps communities may have been broken up during their migration and be unable to decide who should sit on a health committee or how to select candidates for training. In Badaber the camp comprised many different subgroups, but once they became interested in the programme they formed a health committee which represented each tribe in the camp, met regularly to discuss the development of the programme and chose a method of selection of supervisors which was considered to be fair by all the refugee men.

The problem of incentives remains difficult to resolve; though volunteers were readily forthcoming in Badaber, experience in other countries shows that few refugees will continue to work on a regular basis without some sort of financial incentive (Simmonds *et al.*, 1983). Possibilities are food for work; fee for service, but this would tend to promote curative services at the expense of preventive services, or a community co-operative fund. This may be feasible in the future once the health committee gains experience and the refugees become accustomed to the idea of working together as a community; it will also depend on the initial achievement of the PHC programme and whether any benefit from the programme is perceived by the refugees. Funds have been raised within the camps to build mosques and mosque schools, and it is encouraging that many of the mullahs have helped in developing the programme in Badaber, as they could be important in promoting the idea of a community co-operative.

It is interesting to compare the progress in Badaber with that of the village health worker training scheme in Afghanistan, which was abruptly ended when the pro-Soviet regime was installed (O'Connor, 1980). The training scheme was preceded by knowledge, attitudes and practices surveys, as well as health and nutritional status surveys in a sample of villages, and beliefs and practices identified were similar to those found in our survey in Badaber. Positive factors noted by O'Connor about the training scheme were:

1. Afghans were interested in being trained as VHWs. 90% of villagers interviewed were interested, and volunteers for training were readily forthcoming.
2. It was possible to train Dais providing the conditions specified by the men were met.
3. Health committees were helpful in selecting volunteers, supporting them in their work, and ensuring that they worked honestly and well.
4. Despite initial fears by the programme organizers that there would be disagreement between factions in villages, in only one village were there factional problems.

Problems that arose during the training scheme in Afghanistan were:

1. A lack of transport so that supervision of training and of the work of the VHWs by the programme's senior personnel was difficult.
2. Referral structures were inadequately staffed and had insufficient medical supplies, resulting in low staff morale and under use of the basic health centres by the rural populations.
3. There was little incentive for VHWs to provide preventive services; the main demand by the villagers was for curative services.

In extending the refugee Community Health Worker and Dai training programme to camps throughout NWFP, these problems should be foreseen and action taken to avoid them. Training of CHW supervisors will be conducted in a residential training centre at present under construction at Badaber, but mobile teams will visit other camps to initiate the same selection process as was undertaken at Badaber, and the logistic problems involved in co-ordinating this with training courses and with supervising workers after training are considerable. Fortunately the infrastructure in Pakistan is more highly developed than that in the rural mountainous areas of Afghanistan, and it has been further improved because of the need to establish means of distributing basic rations throughout the Province.

Referral structures (basic health units) are now well established in the camps in terms of staff and medical supplies. The services provided, however, vary in quality as the number of patients (often adult men with minor physical complaints) seen are great, consultations short and health education minimal. Part of the activities in the extension of the programme will be to give in-service training to BHU staff, especially in health education, so that health education messages given by CHWs and Dais are reinforced by those given at the BHU. The Project Director of Health for Afghan refugees has allocated two days per week to "preventive services" at the BHU, which gives official recognition of their importance. This needs to be followed up by training of health service staff, to establish a co-ordinated health education programme relevant to the

situation in the camps and appropriate to the customs and culture of the refugees, and to enable them to work with CHWs in extending preventive and curative services in the community. One of the advantages of training refugee CHWs is that the workload of professional health workers is eased (Simmonds *et al.*, 1983); this is not an aim in itself — reducing the workload is only useful if the remaining work then becomes more effective.

Training refugee CHWs and Dais is only one part of a Primary Health care programme; in order to be successful in improving coverage and quality of services and the health status of refugees, strong co-ordination between all levels of health service staff and between different agencies will be necessary. For this, sustained effort will be required from UNHCR and the Government of Pakistan in their role as co-ordinator of health care for Afghan refugees.

CONCLUSION

Recent works on refugee health care emphasize the need for a community approach, participation by the refugees from the beginning, making use of previously trained refugee health workers, and, where indicated, training refugees as community health workers (UNHCR, 1982; Oxfam, 1983; Simmonds *et al.*, 1983). The programme in Badaber was designed by working with refugees to answer the issues which need consideration in developing any training programme (Vaughan and Walt, 1983). Despite the difficulty expected in motivating a community which had previously been uninvolved and is in the chronic camp stage where dependency is common (Jelliffe, 1981) it proved possible to obtain the interest and enthusiasm of the refugees and to design a programme relevant to the situation in the camps and appropriate to the culture and traditions of the Afghans. In order to sustain that interest and to expand the programme to all camps in the Province, support will be needed from all agencies, sectors and health service staff, to develop the current primary health care activities into a co-ordinated programme which succeeds in reaching the people for whom it has been designed.

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Training refugees as primary health care workers: Past imperfect, future conditional

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Many problems have been encountered in the planning and implementation of health care in refugee camps, and more specifically in the training of refugees as primary health care workers. A review of the published literature and a "survey" of the opinions and experiences of refugee, national and international health personnel regarding training has therefore been undertaken to provide an overview of what has been done and to make recommendations for future work.

The review highlights the need to reallocate resources away from high visibility emergency aid to development activities, such as training, that will create an infrastructure for primary health care and promote self-reliance.

Keywords: Refugees; Primary health care; Training; Subject review.

INTRODUCTION

For millions of refugees in the Third World, repatriation has become an increasingly remote option during the last ten to fifteen years. Separated from their homeland and culture many, for want of any better solution, live in exile in camps in the Third World, for long periods of time, often more than five years. To meet these differing circumstances, changes in aid to refugees in the health sector have been advocated. While the need, in certain circumstances, for acute emergency medical and surgical services is recognized, it is increasingly being realized that there is an urgent need to move towards the planning of health care within an overall perspective of development (Simmonds, 1980a, 1984; Simmonds *et al.*, 1983; Dick and Simmonds, 1985).

One of the implications of the development approach is that the refugees should help to plan, implement, and evaluate their own health services, in collaboration with, and within the remit of, the health policies of the host

government. As in any national health programme, basic health care workers are seen as a vital component of the success of any health programme. However, so many problems have been encountered in the planning and implementation of health care in refugee camps and, more specifically in the training of refugees as primary health care (PHC) workers, that this topic warrants discussion as a separate entity from national programmes.

This review was undertaken in order to:

- Highlight some of the differences between refugee populations and more stable communities that may affect training programmes.
- Review the published literature for experiences of training refugees as PHC workers.
- 'Survey' the opinions and experiences of refugee, national and international health personnel regarding refugee training programmes.
- Make practical recommendations for future training programmes.

What then are issues related to the training of PHC workers which present with even greater force and magnitude in refugee camps as compared with more stable Third World communities? These are important to identify since they have a bearing on the problems and constraints subsequently encountered, and also on their possible solutions. Other health and disease aspects which differentiate refugee populations from more stable communities can be found in Dick and Simmonds (1983, 1985), Simmonds *et al.* (1983, 1985) and Simmonds (1984).

SPECIAL ISSUES

- The need to acknowledge the development problems of refugees has only recently been expressed by some governments and international organizations (UNHCR, 1983, 1984; UN, 1983). In general, the necessary re-allocation of resources from short term emergency aid to planning all aid within a long-term perspective has yet to be seriously undertaken. The mandate of the main UN organization responsible for refugees, the United Nations High Commissioner for Refugees (UNHCR) does not include "development."
- Refugees have had little access to advice on development issues. Many international personnel responsible for policy decisions and implementation in refugee situations are professionally ill-equipped to deal with development, geared as they are to responding to the acute and dramatic, often in a highly visible manner. An overwhelming reliance on international aid is thereby created.
- Many of the countries which are host to refugees in the Third World are among some of the poorest in the world (ODI, 1983), and the inappropriate resources which are often poured into refugee emergencies means that refugees may remain at a level of absolute poverty for

longer than is necessary. This creates dependency which in turn increases the burden to the host government, the international organizations and the refugees themselves.

- The "brain drain" of refugees to cities, or to other countries for resettlement may affect those left behind in camps very dramatically — the community is then often bereft of its only available professionally trained or skilled people.
- "Career" prospects for refugees are sometimes dire. Within a camp refugees are often expected to work for no salary, and absolutely no attention is given to the need for promotion or in-service training. Competing with nationals in an era of economic recession and high unemployment levels usually ensures that meaningful employment outside a camp is rare.
- In their early life, the crucial time to start relevant planning, refugee camps are often little more than a collection of people, most of whom did not know each other beforehand. The "community" is thus a fairly nebulous concept and community participation a daunting challenge.

- Mental stress and boredom are also likely to be quantitatively more severe. Insecurity about the present and future, especially when linked to violations of human rights, detracts from making both personal and community long-term decisions and commitments.

These issues add to the constraints of implementing PHC in any community (Morley *et al.*, 1983) and bearing in mind the issues outlined earlier, it is likely that there will be even more problems in refugee camps (Dick and Simmonds, 1985). However, this should not be an excuse for inaction. PHC is advocated as both appropriate and necessary (Simmonds, 1984; Simmonds and Shears, 1984), in order to avoid the repetition of past mistakes regarding health care provision in refugee camps (Jelliffe and Jelliffe, 1981, 1983; Bryant, 1981).

PREVIOUS FIELD EXPERIENCES

The published and unpublished English language literature review (Cutts, 1984a) provides scant information about training, considering the large number of refugee emergencies which have occurred. It is hoped that the references provided in Tables 1—3 do not reflect the only

Table 1. Literature review of training refugees as community health care workers — national policy level

Host country to refugee community (country of origin)	Factors outlined	Reference
India (Tibet)	Guidelines for numbers to be trained Supervision, salary	Tibetan Delek Hospital Dharamsala, 1984
Somalia (Ethiopia)	Assessment of health needs Curriculum development Funding, supervision Role of expatriates Assessment, administration Should be chosen from among refugees Selection by community and health personnel Multipurpose and practical training Content relevant to priority health problems	Mussa, 1982 Simmonds, 1980b
	Guidelines for numbers to be trained Supervision Functions Guidelines for treatment and prevention of common diseases	Ministry of Health, Somalia, 1981

Table 2. Literature review of training refugees as community health care workers — camp level experiences

Host country to refugee community (country of origin)	Points highlighted	Reference
Pakistan (Afghanistan)	Constraints on implementing PHC	Suliman, 1983
	Pilot project on training in attempt to overcome constraints	
	Motivation of the refugees	Cutts, 1984b
	How best to train	
Philippines (Vietnam, Cambodia and Laos)	Awareness of available resources	
	Need for inter-agency co-ordinator when developing training programme	Cobey <i>et al.</i> , 1983
Somalia (Ethiopia)	Trained refugees might be useful to assist in resettlement of refugees in U.S.A.	
	Problems encountered	Bryant, 1981
	Lack of inter-agency co-ordination	MacAskill, 1982
Thailand (Laos)	Expatriate orientation to "Acute" services	
	Renumeration of the refugees	
	Effective use of minimally trained refugees to manage a measles epidemic as an example of mobilization of community	Drew and Bauhaus, 1982
	Initial difficulty in gaining acceptance of PHC workers by other refugees	O'Sullivan <i>et al.</i> , 1980
	Usefulness of training in encouraging self-reliance	
	Problems due to early resettlement of trained refugees	

training programmes ever implemented merely the few that have been written about. The literature has been divided into three main areas as follows:

- Information about national policies, whether that of host governments, as in Somalia, or of the refugees themselves, for example the Tibetans in India who, since 1963, have been permitted to run their own affairs as an administration-in-exile (Table 1).
- Field experiences at camp level. Here it is both disturbing and surprising that no published literature older than 1980 was found (Table 2).
- General papers written about refugee health care in

which strong recommendations for training refugees as health workers are made (Table 3).

THE FIELD WORKER PERSPECTIVE

Programme description

A questionnaire regarding training was administered to the forty-three participants of the 'Refugee Community Health Care' course organized by the Refugee Health Group, London School of Hygiene and Tropical Medicine, 25—29th June 1984. The participants included a mixture of host government nationals, refugees and international

health workers, who between them had worked with refugees in some thirteen different countries, ranging from Southeast Asia to Africa and Central America. The information obtained from this questionnaire can be summarized as follows:

- Training programmes for refugees have been implemented on a wide scale, in a reasonably co-ordinated manner in Somalia, Tanzania and India and are planned for in Pakistan. They were introduced early only in Tanzania; moderately early in Somalia, Honduras and Thailand, and very late in India and Pakistan. Most trainees have been literate, even when this has not been specified as a criterion for selection.
- Generally there has been very little involvement of refugees in training programmes except where the refugees themselves have instigated the programmes. Many countries have used international, or senior level host country personnel to teach PHC workers and tuition has often been in a second language, either that of the international personnel or host country. Written

Table 3. General literature calling for the training of refugees as community health workers

Points emphasized	References
Use of training to promote self-reliance, and to provide an infrastructure for community health care	Dick and Simmonds, 1983
Inappropriateness of previous aid programmes	Jelliffe and Jelliffe, 1981
Role of expatriates one of training and supervision	
Selection of trainees by the community	
Function of the refugees	
Early planning for training	OXFAM, 1983
Problem orientated, based on defined priorities	
Culturally appropriate teaching methods	
Cost affordable by host government	
Role of expatriates — training and advice	
Important to allocate sufficient time for selection	Seaman, 1981
Functions	
Practical approach to training	
Training as part of a health development approach to take place within the refugee camp	Simmonds, 1980a
Need for community involvement	
Resources for training	Simmonds <i>et al.</i> , 1983
Issues and constraints	
Outline of possible programme including tasks	
Evaluation	
Need for full time commitment of at least one person	
Standardization between camps	
Community involvement	UNHCR, 1983
Selection; problem of acceptance by community	
Functions	
Standardization between camps	

material in the refugees' own language has however been provided in Somalia, India, Honduras, Pakistan and in some camps in Thailand. The selection process was not described in detail by respondents; it seems to have been done without the full motivation of the community. Often, it was those people who presented themselves to the international workers or those who could speak English who were selected. In Pakistan, once it had eventually been agreed to implement training programmes, an effort was made to ensure trainees were acceptable to the community by holding large open meetings with the camp elders before and after the volunteers were proposed by the camp health committee.

- Objectives of the training usually included most of the eight PHC activities but with little or no reference to the PHC approach. Training was reported as being task oriented and at least 50% practical. Most respondents thought that the refugees spent at least 50% of their time in preventive work except where they were specifically trained as clinic assistants. However, the most commonly reported job done was treatment of common illness. Some form of payment seemed necessary in all countries except Pakistan where the programme has not been in progress long enough to see how well volunteers work. Other countries, e.g. Somalia and Thailand, began with volunteers who were later paid.
- Details of supervision and evaluation were not known by respondents. Presumably this reflects the lack of any formal incorporation of these aspects into the training programmes.
- In only three countries, e.g. India, Somalia and Tanzania, were there definite links with the national PHC programme

COMMENTS ABOUT TRAINING

Of the thirty-six completed questionnaires, twenty-seven respondents considered training refugees as PHC workers essential for health programmes to succeed; nine thought it important, and of equal or higher priority, than the provision of curative services.

The tasks most commonly stated as being important for the refugee PHC workers to perform were:

- health education
- treatment of common illness
- motivation for immunization
- assistance in supplementary feeding programmes
- MCH activities

In general, the same tasks were designated for male and female workers other than when the training was specifically orientated for traditional birth attendants (TBAs). However, it was agreed that the tasks female health workers could perform would vary according to the culture and religion of the refugees.

The main problems in implementing training programmes, the identification of solutions and possible improvements to the training of refugees as PHC workers are summarized in Table 4.

All the respondents thought the training of refugees as PHC workers, important or essential. Problems identified were similar to those noted in the literature and many related to the attitude or inexperience of international personnel and the lack of co-ordination between organizations. Appropriate input of resources was considered vital to an effective training programme, e.g. personnel for planning, implementing and evaluating, often refugees; funds for literature, salaries, and to enable the community to respond to problems identified. It was pointed out, for example, that health education about sanitation is of little use unless the resources are available to build latrines. While many problems were identified, it was encouraging to see the number and variety of solutions suggested, one of the more poignant being stated simply as "Time"!

SURVEY OF BRITISH NGOS

To determine the view of British non-government organizations (NGOs) regarding the training of refugees as basic health workers, and in an attempt to gain access to any unpublished reports or manuals, a standard letter was sent to the medical or international advisors of nine NGOs, five of whom replied.

There is obviously great variety in the work done by organizations, and in the nature and extent of briefing given to health workers. Most recommended the use of the UNHCR handbook (UNHCR, 1983), and were in favour of inter-agency co-ordination, and within-country standardization of health care activities in accordance with local priority problems. While generally being in favour of training programmes for refugee health workers, all pointed out the need for flexibility and for designing a training programme appropriate to the local situation. OXFAM was particularly concerned about the possibility of creating a "packaged" response by international health workers without assessment of the priorities in each area.

DISCUSSION

It was apparent from the results of the questionnaire, and from interviews with NGO advisors that there has been some form of refugee PHC worker training programme in many countries; however, there has been little published about these programmes. While many international health workers may have had only a marginal contact with training programmes, others have been more involved, and it would seem beneficial if more national and international experiences were shared. Even the programme in Somalia, which is held by many people interviewed in this study as an example which should be followed, has had little written about it which is available for general readership.

Training of refugee PHC workers is considered important in the literature, by the "Refugee Community Health Care" course participants, and by the NGOs who responded to the

Table 4. Problems in training refugees and possible solutions

Relating to	Problems	Problems solutions/improvements
Expatriates or organizations	Attitude of expatriates and health professionals	Reorientate health professions, planners and agencies to the PHC approach
	"Emergency" thinking of expatriates	Train the professionals and expatriates
	Inexperienced expatriates	Careful selection
	Too many expatriates	Do not rely on expatriates
	High turnover of expatriates	Use of expatriates as supervisors
Resources	Organization of NGOs	Increase inter-agency communication
	Lack of funds and incentives for PHC workers	Reallocate funds for salaries or give food for work
	Lack of resources for health education messages	Support health education with funds to improve camp conditions
	Lack of personnel: - appropriate trainers - literate/educated refugees	Train the trainers Combine language training with training in health care
	Lack of appropriate literature	Allocate funds and define necessary literature
	Lack of time due to demands of curative work	Assign senior person/team to work solely on training and preventive health care
Host government	Not oriented towards PHC or community involvement	Ideally host government should initiate PHC; possible promotional role for UN agencies
Refugees	Different language, culture, traditions and religion	Use of refugees as teachers. Involve community in planning and selection of trainees
	Unstable, insecure	Explain the importance of PHC
	Lack of sense of "community"	Better briefing of expatriates about culture and way of life in both refugee community and host country
Training programme	Introduced too late	Start in very early life of camp
	Inappropriate teaching	Keep curriculum short, task oriented to priority problems; build on what the refugees know; use standard syllabus; respect the refugees' culture. Increase PHC approach component. Train in small groups, at a time convenient to refugees
	Choice of trainees — loss due to resettlement; young workers not respected	Take time over selection Involve community, possibly form health committee
Others	Demand for curative medicine and drugs	Start preventive medicine early not as an after-thought or mythical cheap alternative to curative medicine
	Lack of supervision	Provide continuous support and encouragement to PHC workers once trained Give PHC workers specific tasks to do and add other tasks later if first ones are done according to set standards

request for information, although the latter expressed several reservations. The main reasons for training are given as encouraging self-help among the refugees, providing continuity of care, and promoting the PHC approach, which embodies prevention, equitable distribution, appropriateness, community participation and intersectoral co-operation (Vaughan and Walt, 1983).

There does not seem to be much evidence from this review that people have learnt from past mistakes or heeded what has been recommended in literature such as the book "Refugee Community Health Care" (Simmonds *et al.*, 1983), or the UNHCR handbook for Emergencies (1983). There has generally been a lack of community involvement in training programmes, and these have often been uncoordinated and implemented differently according to the interests of the organization or the experience of the expatriates involved; selection processes have not ensured that the PHC worker is accepted by the community; preventive health care has been stated as the main objective of training but much of the work actually done is curative; and supervision and evaluation have been relatively neglected. This may reflect the failure to learn from other people's experiences, the high turnover of expatriates, weak infrastructures with host governments to deal with refugee health, and the fact that the solutions to these problems are not easy to implement. In Pakistan the programme has been begun along the recommended lines (Simmonds, 1981; Simmonds *et al.*, 1983; Cutts, 1984b), but it is too early to predict its success.

Several constraints and problems regarding the training of refugees were identified (see Table 4). Of these host government policies, the orientation of organizations, expatriates and health professionals and inter-agency co-ordination will require a major effort by a central body to find solutions. It was agreed by some that UNHCR should fulfil this role in conjunction with the host government where possible, though not all NGOs agreed that UN would be the most appropriate body to carry out this function.

The need to support training programmes with adequate resources was stressed in the results of each part of the study. The long term implications for continuation of the programme need to be faced: thus funds should be available for salaries for PHC workers, for material support for preventive activities, to strengthen the infrastructure for the supervision of health workers and the provision of referral services. Resources allocated to refugee training programmes should preferably be in line with what will be available for the local population to avoid resentment, and to enable the refugee programme to be linked to, and eventually integrated within, the national programme.

Having decided whether training is required in a particular refugee situation, there was general agreement on what constitutes an "ideal" programme. Recommendations from respondents to questionnaires (see Table 4) and to the letters were similar to those in the literature (Simmonds *et al.*, 1983; OXFAM, 1983; UNHCR, 1983). It was suggested that there should be an experienced person or team whose sole responsibility would be to implement preventive care, including training and health education, in each camp from the start of the programme.

All but one respondent to the questionnaire and one NGO thought that guidelines on training programmes might be useful. It was suggested that the guidelines should not only include curriculum or teaching methods, but also advice on how to design the programme. It would also be helpful to include such issues as constraints on training, common problems and solutions to these problems; how to work with the community, and stimulate refugees to work together; how to obtain community participation; methods of selection of trainees who will be accepted by the community and suggestions for supervision and evaluation. It was emphasized by many people that guidelines should not be used as a packaged answer to "how to train refugees as health workers," but as a guide to the development of a programme which takes into account the local situation and resources available. However, there is already much excellent literature available for stable communities, and maybe refugee health workers should rather read and adapt this, bearing in mind the special constraints that were outlined earlier.

Finally, it should be emphasized that the people answering the questionnaire were a motivated and selected group, and the organizations contacted represented only a small number of the total providing aid to refugees. There was, however, unanimous agreement on the need for inter-agency co-operation, orientation and training of expatriates, and planning for appropriate health services with refugees. Since this is often not the situation in reality it is likely that the findings of this study cannot be generalized to all people working on health programmes with refugees.

RECOMMENDATIONS

From the information gained in this review, the following recommendations would seem pertinent:

- People who have been involved in training programmes with refugees should be encouraged to write about their experience for publication, in view of the specific problems of training PHC workers in such circumstances.
- International health workers must be better selected and trained, and be prepared to work in a training role.
- Further study and evaluation of both refugee and national training programmes would be useful to clarify the evolution of policy or decision-making, the problems of implementation which have been encountered, and help identify solutions. To this end a more general approach to training programmes for refugee PHC workers should possibly be designed.
- There is a generally felt need to produce practical guidelines for implementing training programmes, including discussion of the issues described in this report. One problem with writing such guidelines is that they may never be read, particularly by organizations and individuals who are not already oriented to PHC, and hence they may not reach the people who they would benefit most.

- A possible solution to this problem is to have an experienced team who would visit different refugee communities and work with host governments and national and international organizations, using and adapting the guidelines to initiate, plan and evaluate training programmes. Of particular importance would be the recommendations of approaches to generating community participation, and the selection of trainees at an early stage in the development of the refugee camp who would have an influence in the community. Evaluation is also clearly important for both assessing the programmes and sharing ideas.
- Every effort should be made to co-ordinate the work of different organizations.
- Governments likely to be host to refugees need to develop an infrastructure that will ensure that they have a greater say, and more control, given an influx of refugees.

SUMMARY

A review of training refugees as PHC workers was undertaken in order to provide an overview of what has been done and to make recommendations for future work. A literature review revealed few published articles on the subject. A questionnaire was given to participants at the "Refugee Community Health Care" course at the London School of Hygiene and Tropical Medicine, 25—29th June 1984, and letters were sent to, and interviews held with the medical advisors of some of the British NGOs. Information was obtained about training programmes in Somalia, Tanzania, Thailand, India, Honduras, Pakistan, Eritrea and Cameroon.

Despite the problems outlined in the literature and from experience, it was generally agreed that training refugee PHC workers is important and can have many benefits in the short and long term, in creating an infrastructure for PHC and promoting self-reliance.

Guidelines for training refugee PHC workers were suggested as a possible means of co-ordinating training programmes; suggestions for the content of the guidelines were made, and the need for flexibility in adapting them to the local situation was stressed.

This review has highlighted more questions than it has answers. Enough is still not known about issues such as attrition rates, incomes, career prospects, accountability, supervision, the role of the host government, the problems of self-settled urban refugees and the impact of all this on the mental health and attitude of refugees.

As governments, and international and national organizations are increasingly accepting the need for PHC in refugee camps, solutions to some of these problems should be possible. But the solutions will only be feasible if those people involved in refugee aid are willing to put the

needs of refugees before the need to impress donors with quick, high visibility results.

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REPORTS FROM THE FIELD

Tuberculosis programmes in Somali refugee camps

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INTRODUCTION

During the period 1978—1981 up to 1 million people moved from war conditions in southern Ethiopia to refugee camps in border areas of Somalia. The refugees came from a variety of backgrounds, some were nomadic pastoralists, some cultivators and some from small towns. The refugee camps have populations ranging from 8,000 to 40,000 persons, in crowded conditions. Health programmes are assisted by expatriate medical teams, though in most camps refugee health workers and Somali national staff are taking increasing responsibility for the running of the programmes. After the initial relief period, when the major emphasis was on nutrition programmes, provision of improved water supplies and basic curative services, the direction of the programmes has been to train refugee health workers to manage much of the health programme. The major components are preventative health and health education, implementation of mass immunization programmes among the under 5's (measles, polio, DPT and latterly BCG), and basic curative services concentrating on the most common health problems. Although many different teams have been involved, co-ordination and standardization of programmes has been achieved through the Refugee Health Unit, a department of the Somali Ministry of Health.

By mid-1981, the principal health problems in the camps were diarrhoeal diseases, acute chest infections, malaria and tuberculosis (TB).

THE PROBLEMS OF TUBERCULOSIS

Little information has been available on the prevalence of TB in the Ogaden region of Ethiopia from where most of the refugees came. Data available for prevalence of TB in the non-refugee population of Somalia is also limited. Several surveys of TB prevalence, diagnosed on the basis of sputum tests as part of the initial disease surveillance in the refugee camps, gave the figures listed in Table 1.

Table 1. Initial TB prevalence in Somali Camps

Camp	TB Prevalence
Ali Matan	2.6%
Dorialey	2.1%

Source: CDC (1981).

Because of the limited resources available and the urgency with which these surveys had to be done, these figures are necessarily only a guide.

At the individual camp level, pulmonary TB was suspected in a considerable number of adults attending clinics with persistent cough and weight loss, and in children in feeding programmes who were failing to gain weight despite feeding and treatment of acute infections.

The decision whether or not to start treatment in presumed cases presented a major dilemma, common to other relief situations. Firstly, there was the uncertainty of how long the refugees were likely to stay in the camps. By definition, refugees are not a stable population, nomadic refugees even less so. Should treatment be started if refugees were likely to stay for less than 18 months, or even less than 6 months. Secondly, there was an initial lack of diagnostic facilities. Thirdly there was uncertainty about the refugees' understanding of TB, and the probable difficulty of treatment compliance even if the refugees remained in the camps.

Despite these constraints, it was decided that treatment programmes for TB should be initiated. At the same time, refugee health workers were given training about the nature of TB, as the basis for TB health education programmes, though it must be admitted that proper emphasis was only given to this at a later stage when the inadequacies of the clinic based treatment programme became apparent. Plans for BCG immunization were considered but could not be immediately initiated because of the logistic problems of vaccine handling.

INITIAL TB TREATMENT PROGRAMME

In the beginning the major stumbling blocks were the lack of diagnostic facilities and the limited clinical TB experience of most of the doctors in the field. The relatively small number of patients with TB spine and TB glands were started on treatment on the basis of clinical examination. The remainder of this paper concerns the major problem which was pulmonary TB. The Refugee Health Unit agreed on the following criteria for the initiation of treatment (RHU, 1981).

If a person has at least two of the following, *and* is still sick after a full treatment with other antibiotics for 14 days:

Adults

Cough for 8 weeks with sputum
Weight loss
Blood in sputum

Children

Weight loss in feeding programme
Fever/tiredness for more than 2 weeks
Reduced activity

The standard drug regime for adults was the following:

Intensive phase: (3 months). Streptomycin — 0.75 g/day. TB1 (combined 1NH 300 mg thiacetazone 150 mg) — 1 daily.

Maintenance phase (minimum of additional 9 months). TB1 — once daily.

Treatment schedules for children were according to weight, and excluded thiacetazone for those under 15 kg.

In most camps separate TB clinics were set up, run by trained refugee health workers, who maintained the register and gave out the drugs and gave injections. Children with suspected TB in feeding programmes were treated at the feeding centres. A similar basic programme was set up in most camps. The remainder of this paper concentrates on the experience at Saba'ad camp, with a population of 30,000—40,000.

By mid-1981, an apparently effective TB treatment programme, within the difficulties of the refugee camp situation, was in operation. A basic laboratory had been set up, and two refugee health workers trained to examine sputums. The TB clinic was open daily except Friday (the Moslem holiday). Patients in the intensive phase attended daily for injections and tablet, and those on maintenance therapy attended weekly to collect a week's supply of tablets.

Those too sick to attend the clinic were given treatment at home in their *akul* by the section refugee health worker. It was not necessary to make any separate inpatient/hospital facility for the TB patients.

PROBLEMS ENCOUNTERED IN THE TB PROGRAMME

A review was made of the TB programme in August 1981, and its results are presented in Table 2.

These figures were clearly rather disturbing, and stressed the need to reconsider the effectiveness and mode of operation of the TB programme. Of the large number lost to follow up, it must be presumed that a considerable number may not have had TB considering the subjective criteria on which treatment was started. Treatment defaulters were defined as those on intensive phase missing three consecutive days' injections, and those on maintenance phase missing one week's tablets.

Because of the limited resources of the programme, and the priority to consider each disease primarily as a danger to the crowded refugee community, an attempt was made to

Table 2. The TB programme at Saba'ad camp in August 1981

Total number of patients started on treatment since July 1980	600
Number known to have completed 12 months' treatment	55
Number completely lost to follow up during treatment	301
Number attending 'regularly' at 31st August 1981 including those defaulting a few weeks	244
Number of defaulting a few weeks at 31st August 1981	70
Number of defaulters on intensive phase	14

concentrate on sputum positive patients. It was noted that few sputum positive patients were detected in June and July. This was found to be due to old reagents, emphasizing the need to supply fresh stains regularly if a major emphasis is to be given to microscopy.

EFFORTS TO IMPROVE THE TB PROGRAMME

The principle areas that needed reassessment included the following.

- The criteria used for the diagnosis of pulmonary TB before treatment was started.
- The reasons for persistent defaulting, and the attempts to trace and retrieve defaulters.
- The concentration primarily on sputum positive patients in an attempt to reduce transmission in the community, and the investigation of their contacts living in the same *akul*.
- The co-ordination of the TB health education programme in all sectors of the camp.
- The investigation of drug compliance of those in the maintenance phase who were receiving drugs from the clinic on a weekly basis.

Restricted criteria for diagnosis of TB

In adults, treatment was only started if (i) the patient was sputum positive or (ii) the patient was seriously ill and emaciated, and clinical examination suggested no alternative diagnosis. Approximately one-fifth of the patients presenting to the TB clinic with a potentially suspect history of cough, night fever etc. proved to be sputum positive. The remainder were weighed and asked to attend the TB clinic at fortnightly or monthly intervals. If their condition was clearly not deteriorating, they were discharged. On the other hand if they appeared worse then their sputum was taken. While it is probable that some patients with TB were excluded from treatment on this basis, it is certain that many without TB who may have been started on treatment under the earlier criteria were not now included unnecessarily. Follow up sputum tests were done on some positive patients, and most were found to be negative after 6 weeks of treatment.

Diagnosis of pulmonary TB in children remained a major problem, compounded by the fact that a greater proportion of children than adults defaulted. A later survey showed poor drug compliance in children in the maintenance phase. Satisfactory sputum specimens were rarely obtained, and the decision to start treatment was based on objective evidence of weight loss (despite known adequate food intake) and evidence of possible contact with a sputum positive case.

Persistent defaulting

When a reassessment of the programme was made in August 1981, 60 of the known persistent defaulters (or their families) were interviewed and the information obtained is presented in Table 3.

Table 3. Reasons for defaulting

Left camp — gone to Ogaden	5
Left camp — still in Somalia	8
Lost interest — feeling well	22
Too ill to attend	5
Social reasons — marriage, festival etc.	16
Adverse effects of treatment (nausea)	4
No. of defaulters on intensive phase	12

Little action could be taken on those who had left the camp, other than to request their families to urge them to return if contact was made. As some have gone to other camps, an attempt was made to have a standardized TB card for each patient in all camps, so that treatment could be continued rather than restarted. An attempt was also made to determine what facilities existed in the Ogaden region for TB treatment, but little detailed information could be obtained.

For all of the other groups, a major need was to increase the understanding of the need for continuous and prolonged treatment. While in any programme such health education has limited success, there was some scope through the work of refugee community health workers, and the camp administration.

The number complaining of adverse effects of the drugs is small. At a later stage, ethambutol became available as an alternative to thiacetazone. Two possible interpretations arise from the fact that most defaulters were in the maintenance phase. By then they were probably feeling better and had less incentive to attend for treatment. However, it is possible that as there was a marked preference for injections rather than tablets, patients felt less incentive to attend when injections had been completed. In most camps had the same experience, it was agreed at a health workshop with the Refugee Health Unit to begin a trial in two camps with a maintenance phase of biweekly streptomycin and streptomycin and isoniazid, and Supervised Intermittent Ambulatory Treatment (SIAT). This is underway and may be reported on at a later date.

More effective tracing of defaulters was begun by having

a specific group of community health workers responsible for pursuing TB defaulters in their section of the camp.

Concentration on sputum positive patients and contacts

The emphasis of the TB programme had been primarily centred around the TB clinic. Attempts were made to give greater concentration in the camp sections to trace contacts of sputum positive patients, initially to locate other possible sputum positive cases, who might pose a risk to the community. A brief questionnaire was drawn up to be filled in by a community health worker visiting a newly diagnosed positive case. The questions were aimed at locating people with a productive cough living in the three closest *akuls* to the patient, in order that their sputums could be examined. Of the initial 25 cases pursued in this survey, a further six sputum positive cases were located. Several of these were neglected old people who would not themselves have come to the TB clinic, and were a major source of infection. After this survey and the increasing emphasis on TB education, several new potential cases were located by the community health workers each week who would not have otherwise come to the TB clinic.

Study of drug compliance of those in the maintenance phase

Defaulters in the maintenance phase were defined as those not collecting their tablets from the clinic. This implied that those collecting their tablets were not defaulting and hence taking the tablets collected. As poor drug compliance had been noted in other aspects of the medical programme, a small study was undertaken.

Patients in the maintenance phase were visited in their *akuls* to see if they had the correct number of tablets remaining, according to the number of days since they had visited the clinics. While such a limited survey was of limited validity, it did give a guide to the compliance level. The results are noted in Table 4.

Table 4. Drug compliance of maintenance patients

	Adults	Children
% correct within 2 days' error	77%	43%
% more than 7 days' error	6%	27%

The results re-emphasized the problem of TB in children, with as much a problem in effective treatment as in diagnosis. For adults, it is possible that increased awareness of the importance of regular treatment could improve the results. For children, it raised the question of whether more supervised treatment in the maintenance phase was necessary.

IMPLICATIONS FOR FUTURE OF THE TB PROGRAMME

Much of the programme at Saba'ad camp was modified based on the above discussion. With a more rigorous

approach to diagnosis, a smaller number of patients were in the programme. Defaulters were actively persuaded and at May 1982, the number of persistent defaulters ranged from five to fifteen. A concentration on appropriate TB education programmes increased awareness of TB and succeeded in bringing more sputum positive cases to the clinic. Realistically, it is unlikely that such education will do much to reduce defaulting or increase drug compliance.

Through the Refugee Health Unit, BCG immunization of all children under five years old was undertaken, with plans for ongoing immunization of new borns. This can only be done three or four times a year because of the logistics of the vaccine cold-chain. It is hoped to do an evaluation of the TB programme at the end of 1982, and to also see the effect of the SIAT programme in those camps that have started it.

It is clear that policy on TB programmes in refugee situations cannot be rigid, but the lessons learned at Saba'ad indicate how important it is to continuously assess the impact of the programme.

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CASE HISTORY SUMMARY

1. Topical Focus: Typhoid Outbreak in Tongogara Camp
2. Country/Region: Zimbabwe/Southern Africa
3. Background:
Tongogara camp was created in 1984 for a population of 10,000 Mozambican refugees. Despite continued population influx to this camp, essential facilities and infrastructure remained unchanged. UNHCR's effort to extend water and health facilities (in 1988) was frustrated by government bureaucratic delays. The government of Zimbabwe is the implementing partner of UNHCR.

In October 1988, there was a typhoid outbreak in the camp. UNHCR BO immediately alerted the relevant authorities in the capital and offered to provide whatever was necessary for the treatment of affected cases and in order to contain the spread of the disease.

4. Problem Description:
 - A) Fifty-eight people located in nine sections out of eleven were suffering from typhoid. Two people died.
 - B) Contamination of water. Laboratory tests revealed that drinking water in certain sections contained 78 faecal coliform/100ml of water.
 - C) Inadequate sanitation facilities. The government policy of one VIP latrine per family, coupled with the nation-wide shortage of construction materials, i.e., cement, retarded the implementation of latrine construction. At the present rate of implementation, it will take over four years to catch up with the requirement of 5,600 latrines.
 - D) As a result of C), people resorted to open defecation.
 - E) Inadequate isolation area - the clinic was not big enough - there were not tents and the rainy season had started.
 - F) Communications (UNHCR tent intended for isolation area ended up in the warehouse).

5. Lessons Learned:

- A) Extension of essential facilities in the camp should have taken place at least two years ago (when population growth exceeded planned camp capacity).
- B) Water quality should be tested regularly and frequently "Don't EXPECT, INSPECT."
- C) The quality of overall sanitation programme is improved ONLY when the majority of the people have access to sanitation facilities. (Whereas one VIP latrine/family is ideal, it serves no purpose unless most people have access to facilities).
- D) Communication (especially during emergency), should be SIMPLE and CLEAR.
- E) There should be health education campaign (on an ongoing basis) in order to sensitize the camp population about basic hygiene.

A review of feeding programmes in refugee reception centres in Eastern Sudan, October 1985

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INTRODUCTION

Using questionnaires, data collection and personal interviews, a review was conducted of supplementary feeding programmes in Refugee Reception Centres in Kassala Province Eastern Sudan, between 1st October and 1st November 1985.

NB: Malnutrition is defined in this review as less than 80% wt/ht.

In assessing the impact of supplementary feeding programmes, there seems to be no great advantage in "on-the-spot" feeding versus "dry take-home" rations. The main difference is the improved regular attendance in the dry take-home rations and therefore, potentially improved monitoring and follow up. In any feeding programme, good supervision, case finding, follow up, monitoring and evaluation are essential.

BACKGROUND TO EASTERN SUDAN RECEPTION CENTRES

New arrivals

Since the beginning of 1984 more than 300,000 persons have entered the Sudan from Ethiopia, primarily from Eritrea and Tigray.

In the first half of 1984, some 20,000 new arrivals were assisted in two new reception centres east of Gedaref (Wad el Hilieu and Um Rakoba), a previously established transit centre (Wad Sherife, close to Kassala) and the semi-urban centre of Tawawa (near Gedaref), see Fig. 1. The rate of *influx of Eritreans* began to increase in July 1984, and from December through to April 1985 was frequently as high as 1,000 persons per day. Most of the newly arrived Eritreans went to Wad Sherife. Since mid-February some of these new arrivals have been transferred from there to other sites. During April the influx into Wad Sherife was particularly large and is believed to have included many spontaneously settled Ethiopians. Many of these apparently left the

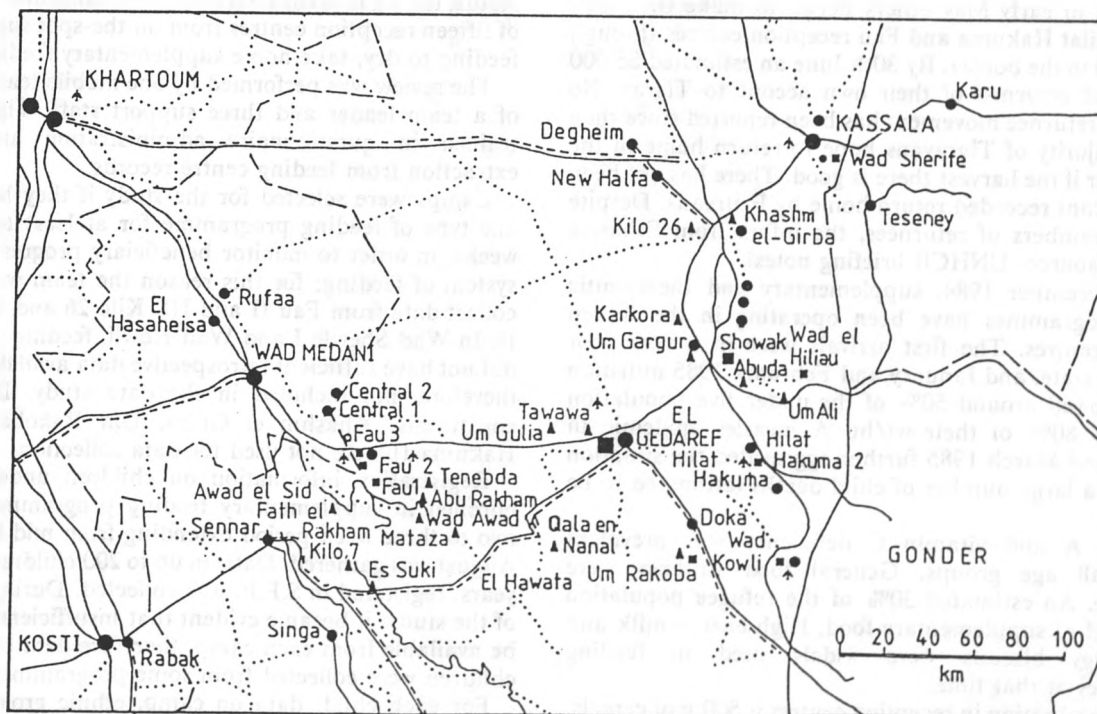


Fig. 1. Eastern Sudan showing refugee settlements and reception centres.

reception centre in early May, when some new arrivals began to be transferred to a new site near the Khashm el Girba reservoir (Shagarab East I, formerly Girba North). Since the completion of this move the population of Wad Sherife has again been increasing. In September and October several hundred persons arrived daily at Wad Sherife, reportedly as a result of security problems in their home areas. In addition to the influx into Kassala Province, over 20,000 semi-nomadic Eritreans, largely Beni Amer, entered South Takar district in the Red Sea Province during 1985.

The large-scale influx from Tigray began at the end of October. By the end of December some 40,000 persons had reached Tukl Baab (some 25 km north-east of Kassala). They were subsequently moved to three sites in the Fau area adjacent to the Rahad Canal. Since December 1984, the main influx has been to the Wad Kowli area, where over 90,000 Tigrayans have arrived including about 3,000 new arrivals at the end of August. Because Wad Kowli is not a satisfactory site with respect to access during the rains, and water during the dry season, about 25,000 refugees have been transferred from Wad Kowli to better sites. The population in the reception centres in October 1985 is shown in Table 1.

Spontaneous return

Between April and May 1985, large numbers of recent arrivals from Tigray province returned to their homes in order to prepare their fields and sow crops for the next harvest. Thousands returned to Ethiopia on foot from Wad Kowli, and in early May others began to make their way from the Hilat Hakuma and Fau reception centres through Wad Kowli to the border. By 30th June an estimated 55,000 persons had returned of their own accord to Tigray. No significant returnee movement has been reported since then but the majority of Tigrayans hope to return home in the coming year if the harvest there is good. There has not been any significant recorded return home by Eritreans. Despite the large numbers of returnees, the influx from Ethiopia continues (source: UNHCR briefing notes).

Since December 1984, supplementary and therapeutic feeding programmes have been operating in the fifteen reception centres. The first arrivals were in a very poor nutritional state, and January and February 1985 nutrition surveys showed around 50% of the under five population were below 80% of their wt/ht. A measles epidemic in February and March 1985 further aggravated the situation and led to a large number of child deaths (estimated to be 6,000).

Vitamin A and vitamin C deficiency was prevalent amongst all age groups. General food supplies were inadequate. An estimated 30% of the refugee population was in need of supplementary food. High energy milk and high energy biscuits were widely used in feeding programmes at that time.

The general ration in reception centres is 500 g of cereals, 60 g of beans, 30 g of oil, 10 g of sugar per recipient per day

— about 2,200 kcal/day. Occasionally this has been augmented by salt, chilli pepper, onions and dates.

Until July 1985 distributions were not always regular. Since then, apart from disruptions due to rain, it would appear that the three basic items have been regularly distributed; salt, sugar and onions are only rarely distributed. Charcoal for fuel is sometimes distributed in some camps.

Early in the year water supply problems aggravated the situation in the camps, but since April/May 1985 this has improved and most (not all) reception centres have approximately 10 l./person/day. Also since June/July 1985 the majority of refugees have had tents or "Tukuls" to live in.

An outbreak of acute gastro enteritis in June, July and August, further disrupted the feeding programmes in reception centres.

The malnutrition figures in under five year olds now vary from 3—20% less than 80% wt/ht.

There are twenty-eight NGOs working with COR/UNHCR in the reception centres.

STUDY PROGRAMME

A review of the supplementary feeding programmes in Reception Centres in Kassala Province, was conducted between 1st October 1985 and 1st November 1985. The purposes of this study were to gather information about supplementary feeding programmes and to document beneficiary progress during the period mid-July to mid-October, also to review the improving nutritional status, taking into consideration the changeover in eight out of fifteen reception centres from on-the-spot supplementary feeding to dry, take-home supplementary feeding.

The review was performed by one mobile team consisting of a team leader and three support staff. The team was trained in questionnaire administration and in data extraction from feeding centre records.

Camps were selected for the study if they had followed one type of feeding programme for at least ten to twelve weeks, in order to monitor beneficiary progress under one system of feeding; for this reason the team was unable to collect data from Fau II and III, Kilo 26 and Wad Sherife II. In Wad Sherife I and Wad Kowli, feeding programmes did not have sufficient retrospective data available and were therefore, not included in the data study. Due to time constraints, Khashm el Girba, Um Rakoba and Hilat Hakuma II were not used for data collection.

Registration information on children under ten years enrolled in supplementary feeding programmes during a two to three week period extending from mid July to early August was gathered. Data on up to 200 children, under ten years, registered in S.F.P. was collected. During the course of the study, it became evident that insufficient data would be available from each camp, therefore data on additional children were collected from some programmes.

For each child, data on camp, ethnic group, age, sex, height on admission, weight on admission, oedema, last

Table 1. Eastern Sudan reception centres at October 1985

Camp	Estimated population	Ethnic group	Duration of Centres existence	NGO (health and nutrition)	Home visitors per population	Litres of water/person/day
Wad Kowli	32,000	Tigrean	12 months	SCF/U.K., IRC, MSF	1/250	12+river
Wad Sherife	120,000	Eritrean	12 months	ARC, Swiss RC	1/1,200 1/24,000	10
Shagarab I	9,491	Eritrean	5 months	LRCS	1/434	8-10
Shagarab II	19,174	Tigrean	5 months	CONCERN, CAA Christian Outreach	1/300	8-10
Shagarab III	800	Tigrean	3 months	MSF	n.a.	8-10+
Hilat Hakuma I	12,800	Tigrean	7 months	SCF/U.K., HTA	1/285	15-20
Hilat Hakuma II	15,270	Tigrean	7 months	SCF/U.K., HTA	1/350	15-20
Fau I	6,101	Tigrean	10 months	IRC, YMCA	1/400	15-20+
Fau II	8,035	Tigrean	9 months	IRC, CARE	1/401	15-20+
Fau III	6,472	Tigrean	8 months	IRC, CARE	1/293	15-20+
Wad el Hiliau	15,000	Eritrean, Tigrean, Ethiopian	12 months +*	Lalumba	1/1,000	4

Reception and settlement

Kilo 26	13,744	Eritrean	8 months*	LRCS	1/1,200	10+canal
Karkora	11,000	Eritrean	8 months*	SCC, SCF/U.S.	1/500	6-8
Khashm el Girba	10,000	Eritrean	8 months*	ARC	n.a.	8-10
Um Rakoba		Ethiopia	6 months*	SDR	n.a.	n.a.

Key to NGO

SCF/U.K. — Save the Children Fund (U.K.)	LALUMBA — LALUMBA
IRC — International Rescue Committee	SCF/U.S. — Save the Children Federation (U.S.A.)
MSF — Medicine Sans Frontieres	SCC — Sudan Council of Churches
ARC — American Refugee Committee	R.B. — Redd Barnen
SRC — Swiss Red Cross	SDR — Swedish Disaster Relief
LRCS — League of Red Cross and Red Crescent Societies	HTA — Help the Aged
	CARE — Cooperative American Relief
	YMCA — Young Mens Christian Association

*New refugees only.

Table 2. Comparative table of survey results (surveys conducted December/January 1985 to September/October 1985) — per cent malnutrition (confidence interval)

Reception Centres	December/January	February/March	April/May	June/July	September/October
Wad Kowli	31.7% (28.3—35.0)	50.0*	45.0†	—	14.6 (9.9—19.3)
Fau I	26.3 (20.7—31.8)	28.3 (23.4—32.6)	—	—	6.9 (3.9—9.9)
Fau II	—	30.4 (27.3—34.7)	—	18.0 (12.9—23.0)	2.3¶
Fau III	—	—	—	12.1¶	4.2¶
Wad Sherife	51.9 (47.4—56.4)	—	41.0‡	28.6 (22.7—34.4)	19.8 (14.8—25.0)
Shagarab I	—	—	41.0‡	—	6.1¶
Shagarab II	—	—	45.0†	—	6.4 (3.15—9.65)
Hilat Hakuma I (Safawa II)	13.8 (9.4—18.2)	—	21.0¶	—	5.2¶
Hilat Hakuma II (Safawa II)	—	50.0*	—	15.9 (11.1—20.6)	5.1¶
Um Rakoba	4.1 (1.3—6.1)	—	—	10.9 (6.1—15.7)	—
Wad el Hilieu	23.3 (18.0—28.6)	—	—	—	17.8 (12.7—22.9)
Karkora	—	—	—	—	13.8¶

* Screening of 830 children (SCF-U.K.) moved from Wad Kowli to Hilat Hakuma II, 2/20 — 2/28, 1985.

† Screening of 2,941 children (CONCERN) moved from Wad Kowli to Shagarab II, 4/25 — 5/15, 1985.

‡ Screening of 2,616 children (LRCS) moved from Wad Sherife to Shagarab I, 4/25 — 5/15, 1985.

¶ Survey report (hence confidence interval) not yet submitted by agency.

In this paper malnutrition is less than 80% wt/ht of children under five.

95% Confidence interval formula is $x = +1.96 \sqrt{p,q/n}$.

known weight, date of last known weight, and status after ten to twelve weeks was recorded. "Status" was defined as one of the following: gained weight (to 0.1 kg); same weight; lost weight (to 0.1 kg); discharged over 85% wt/ht irregular attender (those still in programme but no subsequent weights recorded); lost to follow up; readmitted to programme after discharge; referred to hospital or therapeutic feeding; other (usually taken as returned to Tigray). This information was recorded as documented in the feeding programme register for the ten to twelve week period of mid July to mid October.

In addition, twelve out of fifteen reception centres were visited by the team, in order to gather factual and anecdotal information about the feeding programmes and the camps, from the expatriate and refugee staff. A questionnaire was

administered to feeding programme supervisors in nine of the centres.

In five reception centres, a separate sample questionnaire was administered to 340 mothers/attendants of children receiving dry take-home supplementary foods, in order to determine the uses of the foods, and who consumed them.

Available monthly feeding programme reports from agencies, covering the period of the review, were also studied.

The detailed results of these questionnaire surveys are available in a full report to OXFAM (1985). Table 2 shows the percentage of malnutrition found by the nutritional surveys, and the confidence limits of the data. The rest of this report touches on some of the findings of the survey and other points to emerge from the study.

"ON-THE-SPOT" AND "DRY TAKE-HOME" FEEDING

In all the reception centres in Kassala province, East Sudan, a great deal of hard work has been done to provide adequate supplementary foods for vulnerable groups. Selective, "on-the-spot" supplementary and therapeutic feeding was initially used.

All agencies have used a high energy milk mixture, giving one calorie per cubic centimetre and a variety of other foods including corn soya milk. Weight for height is used for admission and discharge to programmes, although criteria vary; some using less than 80% wt/ht, some less than 85% for admission to supplementary feeding programmes; and less than 70% or 75% wt/ht for therapeutic programmes. The NCHS/CDC/WHO wt/ht tables are used by all.

All reception centres have opened supplementary and therapeutic feeding programmes, although many of the therapeutic centres were and are, only open for four to five hours per day. Fau I, II and III therapeutic centres have now closed due to the improved nutritional status in those camps.

During June and July, due to a combination of an epidemic of acute gastro-enteritis (which required more manpower); the onset of the rains, making the existing feeding centre buildings unusable; and financial constraints

preventing the construction of new buildings and the improvement in the general ration distribution, water supply and accommodation, many agencies decided to change their "on-the-spot" supplementary feeding programmes to "dry take-home" programmes. These "dry" programmes involved distributing a premix of CSM, DSM, oil and sugar, once a week to the selected beneficiaries, giving approximately 1,000 kcal per beneficiary per day.

These "dry" supplementary programmes have shown results comparable to the on-the-spot supplementary feeding programmes (there are wide variations in each type of programme between different camps). After some initial resistance to the "dry" take home programme — e.g. as documented by SCF (U.K.), this system of supplementary feeding has been accepted by the refugees. In some camps, however, there continue to be complaints that there is no "milk" to drink. This has been overcome in Fau and Wad Sherife by providing a daily "Milk Bar" giving diluted DSM to selected groups under controlled conditions. The "dry" take home supplementary rations have been seen by supervisory staff as a viable alternative to "on-the-spot" feeding in those camps that have stabilized, that is as far as population movement, water, rations etc. are concerned. Anxieties were expressed about who actually ate the food at home, and the questionnaire results show that the supplementary food is shared by all the children in the

Table 3. Ten to twelve weeks retrospective data collected from feeding centre records of children less than ten years old in supplementary wet and dry feeding programmes

	Karkora	Shagarab I*	Shagarab II	Saffowa	Fau I	Wad el Hiliau
Type of feeding	Dry	Dry	Dry	Dry	Wet	Wet
Gained weight	102(69%)	19(79%)	95(47%)	37(27%)	54(23%)	13(19%)
Same weight	2(1.3%)	2(7%)	4(1.9%)	3(2%)	1	—
Lost weight	2(1.3%)	1(3%)	4(1.9%)	16(11%)	5(2%)	16(23%)
Discharged over 85% wt/ht	31(21%)	4(13%)	77(38%)	79(57%)	156(67.5%)	3(4%)
Irregular attender	2(1.3%)	1(3%)	—	1	—	17(25%)
Lost to follow up	4(2.7%)	1(3%)	—	1	3(1.2%)	5(7%)
Died	1(0.6%)	—	—	—	—	1(1%)
Readmitted after discharge	1(0.6%)	—	—	—	—	—
Referred to hospital/TFC	3(2%)	1(3%)	22(10%)†	—	12(6%)	6(9%)
Other	—	—	—	—	—	7(10%)‡
Sample size	148	29	202	137	270	67

*Only one section of the camp had been reweighed.

†Referred at less than 75% wt/ht or not gaining weight.

‡Probably returned to Tigray.

family. Since the take home ration is 1,000 + kcal/day, the supplementary beneficiary should still get the recommended 300 to 500 kcal/day supplement, plus his share (2,200 kcal) of the family food.

The retrospective data (Table 3) shows 84% or more of the children gained weight or were discharged over a ten to twelve week period. Feeding programme supervisors felt that children in "on-the-spot" supplementary feeding programmes — especially where two high energy milks, plus porridge, plus dates, biscuits etc. are given, may not be getting their share of the family food. Also, that "on-the-spot" feeding over long periods can create a dependency on the feeding centre. This is an area that requires further investigation.

The feeding centre supervisors felt that the "dry take-home" programme was less disruptive to family life and gave more responsibility to the family for feeding the child. This factor may not be relevant in some camps, where there is very little to do, as all services are provided (water, fuel etc.) and so the community centre aspect of the "on-the-spot" feeding is missed. It was apparent, during the study, that little was being done to make the weekly visit, for the "dry take-home" ration, an opportunity for activities as well as teaching for beneficiaries. Where many "on-the-spot" programmes provided an entertainer and teacher, this was not done in the take-home programmes. The small daily numbers of a "dry" programme (200 maximum, most programmes had far less each day) should make such activities easier to arrange. If teaching, songs etc., can (and should) be done in "on-the-spot" feeding, the same applies to a "dry take-home" programme.

At all the feeding centres, staff expressed concern that children in the "dry take-home" programme are only seen once a week and therefore deterioration in condition may not be detected early enough. It was found, however, that in "on-the-spot" feeding, daily numbers in the centres are larger and attendance far poorer. In addition, in "on-the-spot" programmes sick children are usually kept at home and it was agreed that in a large centre it may be some time before the child's absence is detected and followed up.

Attendance by beneficiaries in "on-the-spot" feeding centres was originally a problem in all the programmes. Attendance improved dramatically (to 90%+) in the "take-home" programmes (excluding Wad Sherife II, 75%; no follow up of defaulters may be a factor there) and thus the beneficiary monitoring in terms of numbers regularly reweighed is much improved.

Fau I, II and III are the exceptions to the remaining "on-the-spot" feeding centres observed, with 94—84% attendance. These are smaller camps (6,000 to 8,000) and now have very low malnutrition rates (2—6%).

DISCUSSION

In spite of the improving nutritional status in the reception centres, there is still much to be done finding those children who are malnourished. The recent nutrition surveys showed that only in one camp — Fau II — were all the malnourished children in the survey sample registered

in a feeding programme. In others, as few as 50% of the malnourished were registered in programmes. In one camp only 67% of those children who should have been registered (3—7%) were registered, despite the fact that 43% of the under fives were enrolled in a feeding programme. This points to two problems, poor case finding and inadequate discharge criteria.

It is vital that case finding is vigorously pursued and procedures for identifying malnourished children reviewed. Only half the camps visited were using some form of anthropometry to identify the malnourished (mid upper arm circumference — MUAC — and in Shagarab I, wt/ht). The rest were examining the children by eye, using varying criteria.

Now that the overall conditions in East Sudan reception centres are less hectic, more comprehensive community screening could be done on a regular basis.

According to a recent MUAC/wt/ht survey in Darfur, West Sudan, by UNICEF/OXFAM, 13.5 cm is comparable to 82.7% wt/ht. Thus a MUAC cut off of 12.5 cm (the UNHCR recommendation) may be missing some children, and a cut off of 13.5 cm (WHO recommendation) could now be considered. Repeat training of home visitors in MUAC techniques would be needed.

The record keeping systems in feeding programmes varied enormously and it was frequently difficult to extract the information required for this review. In particular, retrospective records were poorly kept; i.e. cards of discharged children were not filed (either by village or numerically) and sometimes the whole pile had to be searched to find one card. This problem was highlighted for cases for children readmitted to the programmes after discharge, as their previous records were no longer readily available. Therefore they were given a new number and recorded as a *new* admission, not a *readmission*. It was common also to find supervisory staff spending all their time on a complex record keeping system; i.e. using several registers — one for attendance, one for discharges, one for weight gains etc. — and *not looking at the children*.

Inaccuracies in weight and height measuring were commonly found in the registers — some children growing and shrinking by several centimetres every two weeks! Few agencies regularly checked their measuring equipment or the accuracy of their staff's measuring techniques.

When recording the monthly statistics, weight gain and loss was not always looked at over time (one month) but by the number of gains and losses each reweigh (sometimes each week). Thus the numbers of gains and losses recorded were sometimes four times the number of beneficiaries registered. In such cases the information on monthly reports is useless in determining the impact of the programmes.

A series of workshops have been held by the COR/UNHCR nutrition unit, for expatriate and refugee staff, on how to conduct nutrition surveys and the general principles of nutrition, and running feeding programmes. Guidelines have been written for running nutrition programmes (in addition to the use of Selective Feeding Procedures by OXFAM health unit, and the Management of

Nutritional Emergencies in Large Populations). Unfortunately, due to high staff turnover — especially amongst expatriates and the fact that guidelines have been removed from the camps — much of this information has not been passed on to subsequent staff. Information sharing amongst expatriate and refugee staff is vital for feeding programme continuity and planning. Refugee staff should be trained at all levels and refugee supervisors increasingly involved in decision making relating to the feeding programmes.

The therapeutic feeding, since July, has improved, and most camps now feed for longer hours and have in-patient facilities for the most severely malnourished children. However, there are still many centres trying to cram four high energy feeds into a six hour period in the feeding centres. This does not allow adequate time between meals as three hours between feeds is the recommended time span. It is unlikely that severely malnourished children can consume 400 ml of high energy milk and/or porridge every 1.5 or 2 hours, plus dates, plus biscuits etc. etc. (does the mother/attendant "help out"?). If there are overriding constraints which preclude keeping the therapeutic centre open for ten hours each day, then at this stage of the emergency, it is possible, as in Karkora and Shagarab I, to have a two tier system. The children who are gaining weight and are free from disease (usually at 70% wt/ht and above) can stay for three meals in the centre and be given a premix (after due teaching and cooking demonstration) to provide two further meals to prepare in their homes. This system also conveniently leads into the dry supplementary take home ration when the child reaches 80% wt/ht. The most severely malnourished stay in all day (10 hours) or in in-patient (24 hours) therapeutic feeding.

CONCLUSIONS AND RECOMMENDATIONS

A number of findings have emerged as a result of this study; however the recommendations are not specific to the East Sudan and may be applied in other situations.

These findings are partially derived from the impressions gained in the course of the work in Eastern Sudan, as much as from the data acquired in the study, the full report of which should be consulted for more detailed substantiation. They tend to support the recommendations found in the UNHCR Handbook.

1. On-the-spot supplementary feeding

- It is only necessary to supply 300 to 500 kcal per beneficiary per day in centres where there is an adequate general ration (2,000 kcal); up to 1,000 kcal where general ration is less (see UNHCR guidelines).
- Where attendance is a problem, nutrition scouts should be employed (e.g. in exchange for food) to chase up defaulters daily, if the home visitors have many other duties.
- Rewards (e.g. soap) on achieving discharge weight may be used to avoid "missing out" on weighing days.
- Any child who has not significantly gained weight over a

4—6 week period, *must* be investigated for the cause (underlying illness, poor attendance etc.)

- More and smaller feeding centres improves attendance.

2. "Dry take-home" supplementary feeding

- Weekly distributions of premixed food minimizes storage problems and allows for education, outreach and community activity within the distribution centre, on a regular and frequent basis.
- Two-weekly weighing provides sufficient monitoring of beneficiary progress.
- A maximum of 200 beneficiaries, but preferably less, should be seen by each distribution team in one day, to allow sufficient time for screening beneficiaries, and other activities.
- An adult attendant must accompany the child.
- Children losing weight must be further investigated for the cause.
- Home visitors should attend with their section to give advice and to learn.
- Defaulters must be found on the day of the distribution.
- Dry rations may be initiated once the following criteria are established:

adequate general rations, water, fuel, cooking implements and some degree of community/home stability.

- Further investigation needs to be made of the following aspects:
 - (a) When dry rations are appropriate in refugee camps, e.g. at what stage of the emergency/relief programme?
 - (b) What allowance of food should be made for family sharing?
- Problems of supplementary food sharing should be minimized by:
 - (a) Constant, ongoing follow up and monitoring.
 - (b) Efforts to improve other foods available to the family through the general ration programme.
 - (c) Cooking demonstrations and involvement of mothers in practising and suggesting methods of food preparation.
 - (d) Allotment of additional amount of food for sharing i.e. 1,000 kcal/beneficiary/day.

3. Therapeutic feeding (those less than 70% wt/ht)

- A minimum of ten hours a day in the feeding centre is required, with three hours between feeds.

- Round the clock care for the most severely malnourished.
- Medical care for all therapeutic feeders within the centre.
- Mothers/attendants must accompany children and must be provided with food, or facilities to prepare their own food.
- Close follow up of defaulters on a *daily* basis.

4. General

- Constant monitoring of the nutrition and health status of the refugees in order to detect changes in nutritional needs. Nutrition and other surveys as well as monthly assessments of feeding programmes (in terms of weight gains and losses and overall numbers), following standard criteria, are essential (as stated in UNHCR guidelines).
- Given the high expatriate staff turnover, information, guidelines, criteria etc. *must* be passed on from one feeding programme supervisor to another. In addition, essential reading for new supervisors should be as follows:
 - (a) Practical guide to Selective Feeding Procedures by OXFAM Health Unit.
 - (b) The management of Nutritional Emergencies in Large Populations — WHO.
 - (c) UNHCR Handbook for Emergencies.
- The keeping of a simple diary by the centre supervisor assists staff in evaluating their progress and complements the verbal handover of information and official reports.

- All agencies should follow simplified recording systems, especially in consideration for the future, when refugee staff will be running the programmes. It is essential that important information is readily available for self monitoring and evaluation.
- Refugee staff should participate more fully in feeding centre planning, supervising and evaluation and this may require more training. Also more training and supervision of measuring techniques and checking of measuring equipment.
- More active case finding from house to house, and using a MUAC of 13.5 cm as the cut off point should be instituted, and therefore more training in MUAC techniques.
- Community involvement, from the start of new programmes and continued contact and interaction with community leaders, family members etc., is vital for the understanding and acceptance of feeding programmes.

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CASE STUDY IN REFUGEE NUTRITION

Preface: The following problem is presented as a point of departure for discussion. The problem has basis in fact but is a composite of places and countries which are placed in one country to facilitate discussion. Where descriptions and comments are not complimentary to the program, such descriptions are provided to represent the real-life situation and not to place blame on persons or organizations working in the field. (In specific programs which do not function "perfectly", usually there are multiple factors to explain the problems and placing blame on people / organizations is of little benefit to any or all involved.) Specific features of the problem may not be exactly relevant to other country / refugee settings and this should also be considered as a point for discussion.

The objectives of this Case Study are to provide a forum for discussion of:

1. methods of assessment of nutritional status and needs in refugee settings.
2. uses and limitations of data and data sources in assessing nutritional needs in a refugee setting.
3. components of an appropriate response to nutritional needs in a refugee setting.
4. priorities in nutritional interventions in refugee settings.

Nutritional Needs and Activities, Refugee Camp, Western Havenland

BACKGROUND: The refugee camp is a large "reception center" in western Havenland. Refugees have come from several regions of their home country and are generally of the same ethnic / tribal groups, but are of two major religious groups -- Moslem and Christian. The first arrivals came 6 weeks ago and the camp has swelled rapidly to an official population of 75,000. New arrivals come each day or every other day with numbers varying from 200 - 3000 per day. No population census has been done and three groups have been reporting numbers of new arrivals (the host country government camp coordinator, the refugee elders group and the medical team) and none of the numbers agree exactly. There was no initial plan for organizing the camp, so spontaneous dense settlement has occurred; the new arrivals are now being organized into various "sections" of the camp. The camp is far from major population densities in the host country, and roads are bad, and unpassable in the rainy season (coming in 3 months).

Water supply is from a river which has flowing water for 10 months of the year and is reduced to receding river pools for the remaining two months at the end of the dry season (it is now approaching the end of the dry season). Refugees collect water directly from the river or pools. No treatment of the water is available and receptacles for water (both large and small) are limited. Sanitation is also limited. Human waste disposal occurs in neighboring fields (fields which are rapidly becoming settlement areas for new arrivals). Non-human waste disposal is everywhere and is occasionally burnt (sometimes adjacent to the thatch housing).

A camp commander (a lesser government official on the rise) and his staff are "in charge" of the camp, and because it is a border area, there are a number of military personnel living in the camp and responsible for refugee movement from the border to the camp. The refugees have a group of elders which provide coordination of refugee - host country activities such as camp planning, food distribution systems, etc. There are three newly arrived foreign private voluntary agencies (PVOs) working in the health sector and a fourth agency is interested in coming in to help.

You are working with the UNHCR and are replacing the field officer that just completed her two year contract (she was an education officer but was transferred to the camp during the initial weeks of the emergency). She was ill on her departure and you were unable to discuss the situation with her before your arrival.

The three medical teams involved have divided the responsibilities. Team A is doing adult care and has opened a hospital and an outpatient clinic. Team B is doing child care and has opened a large outpatient service and a small in-patient service for day patient care (patients go home at night because there are not enough personnel to supervise the facility around the clock). Three supplemental feeding centers have opened and two more are being built, and more are planned. Team C is working on water and sanitation and screening of new arrivals. They are discussing training outreach workers, but the team has not decided on the actual responsibilities of such outreach workers. The fourth team (Team

D) is pestering the regional officials for a role in one of the camps in the region and they have come out to seek a "niche" in this camp, perhaps in supplemental feeding programs.

You have lots to learn about the new setting, but the regional director is very concerned about the nutrition / malnutrition problem in the camp as numerous verbal reports have come from the medical teams stating that mortality and malnutrition is widespread. You have been asked to make an initial assessment of the nutrition situation and report back as soon as possible.

You were able to obtain the following information:

The camp population as mentioned is listed at 75,000. That is based on a count estimate of people 4 weeks ago (38,790) and additions from new arrivals. If you use the reported new arrivals from the three mentioned sources, you find that the population estimate ranges from 69,000 (from the medical team) to 85,000 (from the refugee elders). The medical teams admit that refugees are probably entering the camps at night and are not counted.

Deaths are reported by 12 hour grave yard watching. The grave watchers record: name, age, sex, cause of death: measles, dysentery, diarrhea, cough, malaria, other, (see Table below). This system began 10 days ago. Before that, the public health team only knows that there were 980 graves counted and 612 were "short graves", suggesting young children. There may have been double burials - more than one body to a grave. Death rates have ranged from 8.8 to 6.1 / 10,000 population / day. Fifty percent of the deaths are in children < 5 years old and measles, diarrhea/dysentery, malaria, and "malnutrition related" are the common causes given.

The nutrition survey started this week; a quick glance at the data suggests that 30% of children <110 cm are < 80% weight for height and 9% are < 70% weight for height, but only 120 children are included in this sample. Vitamin A deficiency has been observed in new arrivals at the screening center. Other vitamin deficiencies have not been diagnosed but the pediatrician admits to limited experience with diagnosis of vitamin deficiencies.

QUESTION(S):

1. A refugee leader has sent word to you that his people are receiving less food this month than before and that his people are starving because of this. How would you begin to evaluate this?

What pieces of information do you need?

How will you obtain this information? Who will you ask? What can you expect in terms of completeness and accuracy of the information?

Section II

You find out that the population has increased slightly (from 75,000 to 85,000), but that the more important problem is that some food supplies have been directed to another large camp because of acute shortages there. Calorie needs were not evaluated when the food was diverted. The refugee diet in your camp was initially planned at 1800 kcal / person / day by using grain, oil, and pulses. You find out that the current refugee diet is:

- Grain: 250 grams
- Oil: 10 grams
- DSM: 30 grams
- (per person per day)

There are no pulses (lentils) presently in the camp and the nearest local market is 10 km away.

QUESTIONS:

1. How adequate is this diet?
2. How will you approach changing this regimen, i.e. what would you include or exclude from the present diet?

In the weekly medical coordination meeting, the medical coordinator of the camp breaks the news that yesterday, several physicians in the pediatric clinic identified a number of cases of a disease that appears to be scurvy. The UNHCR staff nutritionist had earlier reported that the vitamin C content of the diet that is currently being provided (both in general rations and in the supplementary feeding centers) is zero. The refugees' usual source of vitamin C is animal milk. But, most of their animals have died.

QUESTIONS:

1. What should your approach be to further evaluation and / or intervention in this problem?

Section III

Two months have passed and as one of the health workers has pointed out, "much has changed and much has stayed the same". The camp is now at a stable population, however, there is still movement of refugees with new arrivals equaling departures to other smaller camps. The staff of the medical teams has increased dramatically and there are a lot more medical service programs underway, including a community health worker outreach program, 8 supplemental feeding centers, two oral rehydration centers, and expanded out-patient and in-patient facilities for children and adults. The public health team is collecting a great deal of information, some of which is given below.

Nutrition Survey Information*

	Month			for group >110cm during 2nd month
	1st	2nd	3rd	
Total Number	363	240	573	197
≥85% W/H	53%	58%	60%	69%
80-84%	18%	16%	15%	16%
75-79%	13%	10%	11%	8%
70-74%	8%	9%	9%	4%
60-69%	6%	6%	4%	3%
<60%	1%	.8%	.7%	.5%

* samples taken in cluster sampling fashion in random areas of the camp

QUESTIONS:

1. What can you say about the status of malnutrition in the camp? Is malnutrition better, worse, or the same? Or do you need additional information to assess this?

There are two different agencies operating feeding centers (one team with 3 large centers and the other team with 5 slightly smaller centers). There is disagreement between the two teams regarding entry and exit criteria for children in SFP. One team is entering all children <85% W/H and the other team is entering all children <80% W/H. Both teams discharge after a child exceeds 85% W/H. The group with the higher entry criteria (<85%) is unhappy because children rejected from the other center come to them for admission.

QUESTIONS:

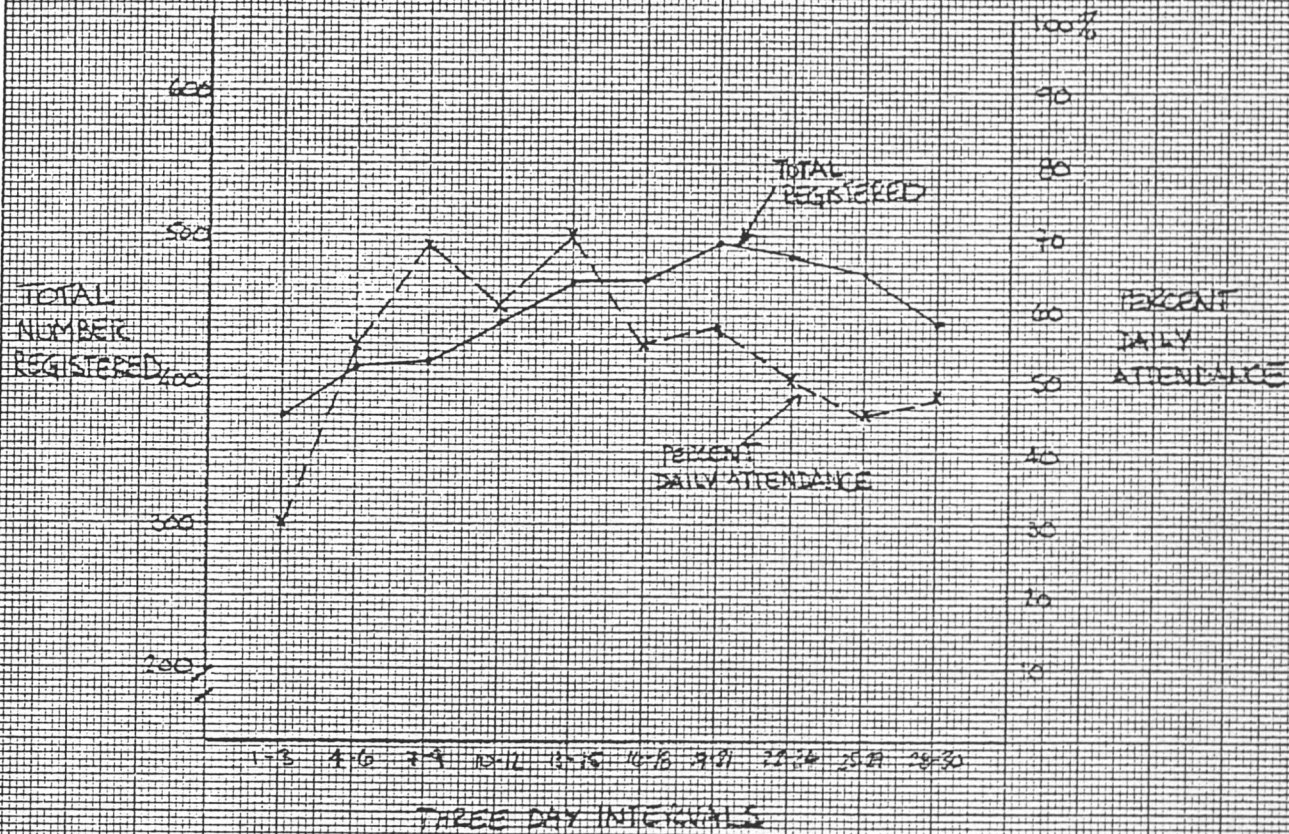
1. What are the effects of these different entry criteria? How would you propose to solve this difference of opinion?
2. The team doing pediatric care is concerned about the general rations situation (not enough food in general rations) and suggests that additional feeding centers be established to serve milk to all children <5 years (or <110 cm) twice a day. Alternatively, they suggest take home rations for this group of children. What is your response to these suggestions?

A graph of registration and daily attendance for children in a therapeutic feeding center is shown in Figure 1. This is representative of the experience in most of the supplementary feeding centers, except that larger centers generally have slightly lower attendance rates.

QUESTIONS:

1. What does this graph suggest about the operations in the feeding centers? Can you suggest additional activities for the SFP teams to rectify any problems?
2. What additional information would you like the SFP teams to be collecting at this point? What is the role of surveys, and population screening in this data collection? Should there be any more data collection, or should the SFP teams be attending to their malnourished / sick patients?

FIGURE 1. REGISTRATION & ATTENDANCE
THERAPEUTIC FEEDING CENTER, REFUGEE CAMP



REPORTS AND COMMENT

Food Targeting in Darfur: Save the Children Fund's Programme in 1986*

RUTH BUCKLEY

Emergency food aid has usually, if at all, been targeted through feeding centres. In Darfur, Sudan, SCF targeted food aid to the population on the basis of comprehensive household data. The decision to use this approach was taken in 1986 following the failure of both feeding centres and general distribution to meet emergency needs in 1984/85.

This report outlines the development of the food targeting system and the types of data used for making allocations. Further research is required in order to find solutions to questions raised by the experience, such as: How can NGOs and government authorities arrive at a definition of need which is acceptable to local government and donors?; What is the most practical method for implementing a targeted programme to a proportion of the population?; Should individuals be given assistance which will enable them to remain in non-productive areas?; and would direct market intervention, food for work, or cash distribution be a more effective and less disruptive form of emergency aid in famine areas?

INTRODUCTION

In October 1984 Save the Children Fund (UK) (SCF) was contracted by the United States Agency for International Development (USAID) to transport USAID sorghum to 49 rural councils within the 12 area councils¹ of Darfur region, Sudan, and to monitor its distribution. The contract was undertaken following other agencies' reluctance to take an operational role in the drought induced emergency.

Throughout 1985, each area council received an allocation decided upon by the

Food Aid National Administration (FANA) of Sudan. Although the Ministry of Health and Social Welfare was responsible for relief and emergencies, FANA was under the jurisdiction of the Ministry of Finance and it had no formal relationship with either the Ministry of Health or the Sudanese Relief and Rehabilitation Commission (RRC). FANA was established in 1982 with World Food Programme (WFP) assistance, to transport and distribute all food supplies in Sudan.

Theoretically, local government officials supplied information to FANA which was converted into a monthly list of food needs. In practice allocations of food aid to area councils were based upon population figures taken from the 1983 census, which took no account of the significant population movements occur-

* The opinions expressed in this paper represent those of the author and do not necessarily concur with SCF. Ruth Buckley worked with SCF in Darfur from May 1985 until August 1987.

ring in 1984/85. Durra Committees including local government officials and peoples' representatives allocated grain from area council stocks to rural councils and village councils. Guidelines for actual distribution at the village council level were such that the total quantity of grain allocated for the rural population was divided equally amongst all sectors of the settled population. Displaced people and nomads were excluded because their allocation was sent to their home areas or rainy season camps in order to encourage them to return to their fields.²

The Government considered general distribution for the entire population to be a fair and just method of allocation because everyone had suffered losses from the 1981-1984 drought. While attempting to discourage further population movements through the allocation system, 33% of all food aid grain delivered up to May 1985 was set aside for sale, at a subsidized rate, in urban areas. Allocation policy, coupled with the small quantities of grain available, meant that many people were forced to settle in makeshift camps around the towns of Darfur, which depressed labor prices and forced many individuals out of the informal sector.

THE REALITY OF GENERAL DISTRIBUTION

USAID initially provided food aid on the assumption that only a quarter of the population of Darfur was in need of assistance. Therefore supplies were insufficient to ensure that everyone had an adequate ration. In March 1985, a mission from the Relief Information and Coordination Support Unit in Khartoum found that few families received more than 2 kg of food aid per month.

In May 1985 donors agreed with the government and accepted that the target population was in fact 3 million (86% of the population). By then it was impossible to transport sufficient quantities of grain to

Darfur by road or rail before the rains. As a result the European Economic Community (EEC) started an airbridge using Hercules airplanes and USAID put three helicopters at the disposal of the relief effort.

In July when 38,000 MT of food aid grain (14% of the estimated requirements) had been distributed, the OXFAM/Ministry of Health nutritional surveillance and drought monitoring project reported that rural households were receiving 2-34 g per person per day (mean 21 g), equivalent to 31% of the recommended allocation of 12 kg per person per month. They also reported that 29% of the children under five in Northern Darfur were moderately malnourished (Eldridge, 1985; OXFAM/UNICEF, 1985).

Given that food aid was not officially targeted to areas with the most urgent requirements, though to some extent trucks were directed to fill the government allocation quotas in these areas first, SCF argued that 25% of all food aid received should be set aside as a contingency to meet emergencies. (To send additional supplies to areas where rates of malnutrition were unacceptably high, where farmers were too weak to cultivate or were without seed.) In addition several agencies such as Médecines Sans Frontières, League of Red Cross and Red Crescent Societies, GOAL and the Islamic Africa Relief Association started feeding programmes in order to supplement general distribution. Nonetheless, there were an estimated 95,000 excess deaths and starvation was averted on a wider scale only by the widespread use of wild foods and the resilience and resourcefulness of the population (de Waal, 1987).

By the end of 1985, 97,871 MT of USAID sorghum had been distributed in Darfur, equivalent to 28 kg per person or 2.3 months' supply of basic ration.

FOOD AID REQUIREMENTS IN 1986

The severe food shortages which gave rise

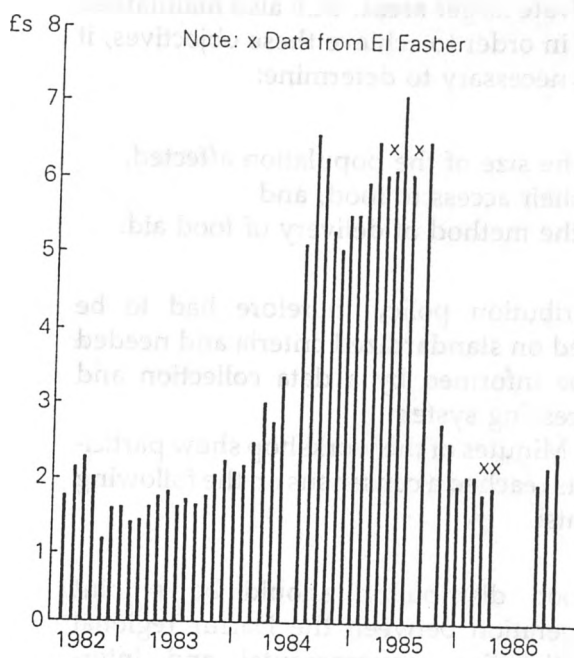


FIGURE 1 Mean monthly price of 1 mulwah of millet in Nyala market, Darfur, June 1982 to December 1986 (one mulwah = 8 rotls = 3.6kg)

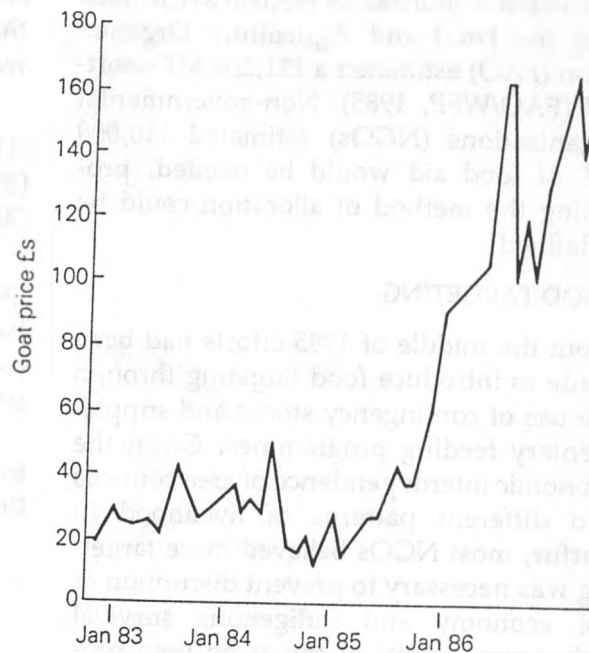


FIGURE 2 Mean monthly price of goats in El Fasher market, Darfur, November 1982 to December 1986

to the emergency relief programme in Darfur caused increases in market prices, illustrated in Figures 1 and 2. Millet prices rose from Sudanese pounds (£s) 2 per mulwah in January 1984 to £s 7 per mulwah in June 1985. However with every indication that there would be a better harvest in 1985 than for three years previously, prices fell to £s 6.50 and then to £s 1.80 by December 1985. At the same time livestock prices rose as distress sales ended and grazing became available.

Many factors contributed to these price changes, including the debt system whereby households borrowed money to purchase grain at £s 7 per mulwah and repaid their loans in grain when its value was £s 1.80 per mulwah or less. In late 1985 repayment of debts placed additional grain on the market, further depressing prices and depriving households of a significant proportion of their grain. Food aid also clearly had an impact. It was in August when prices began to fall because the population was confident they would

have a harvest that the bulk of food aid began to arrive in Darfur.

Despite price fluctuations, farmers who had wadi land and so could maintain their farms throughout the drought were better able to meet their subsistence needs in 1985/86 than they had been in 1984/85. Indeed surplus grain was produced in southern and western Darfur as well as in central and eastern Sudan. In many other areas rain continued to be unreliable and profound changes in Darfurian patterns of livelihood had occurred necessitating continued food distribution throughout 1986. The most severely affected sections of the population were pastoralists who had lost most of their livestock, people who had become displaced, farmers who had been unable to procure seed and therefore had not cultivated sufficient areas of land, and people who had become destitute after utilizing all their personal resources and natural wild food reserves, from the roofs of their houses to grain in termite mounds.

The Darfur Department of Agriculture

estimated a shortfall of 185,000 MT in 1986 and the Food and Agriculture Organization (FAO) estimated a 121,200 MT shortfall (FAO/WFP, 1985). Non-governmental organizations (NGOs) estimated 110,000 MT of food aid would be needed, providing the method of allocation could be redefined.

FOOD TARGETING

From the middle of 1985 efforts had been made to introduce food targeting through the use of contingency stocks and supplementary feeding programmes. Given the economic interdependence of area councils and different patterns of livelihood in Darfur, most NGOs believed more targeting was necessary to prevent disruption of the economy and indigenous survival techniques, whilst at the same time providing sufficient supplies of food where they were essential. They maintained it was neither possible nor desirable to continue general distribution of grain since the entire population was no longer dependent upon famine relief.

In response to changing conditions in Darfur, several SCF field officers negotiated an end to blanket distribution. In Zalingei and Jebel Marra, for example, SCF and local government officials met in October 1985 to draw up a list of village councils which continued to be seriously affected by food shortages. Nutritional surveys were undertaken in these villages and a revised allocation was agreed upon.

FOOD AID DISTRIBUTION IN 1986

General distribution throughout Darfur was halted in January 1986 when SCF hosted a workshop to discuss new initiatives for allocation and distribution. SCF defined the primary objective of food distribution as preventing people from dying of starvation. The secondary objective was to assist households which had lost their capacity to be self-sufficient to

cultivate larger areas. SCF also maintained that in order to achieve these objectives, it was necessary to determine:

- (1) the size of the population affected,
- (2) their access to food, and
- (3) the method of delivery of food aid.

Distribution policy therefore had to be based on standardized criteria and needed to be informed by a data collection and processing system.

Minutes of the workshop show participants reached a consensus on the following points:

- Food distribution should be a joint operation between the Darfur regional authorities, governmental and inter-governmental donors and volunteer agencies.
- Voluntary agencies and others, including food aid monitors, would be invited to submit information on the level of need in specific areas on a continuing basis to RRC/UNEOs (United Nations Emergency Operation Sudan) using agreed criteria and an agreed questionnaire.
- The distributing agencies should collate the data of needs in each area in the form of a draft outline distribution plan, including a schedule of priorities.
- This should be considered by a monthly meeting in El Fasher chaired by the RRC and including representatives of the Darfur regional government, donors and voluntary agencies.
- The monthly outline distribution plan agreed by this meeting should be implemented on the authority of the RRC.
- Distribution should be to the village level as soon as possible, but intermediate stores might need to be established pending an adequately firm distribution plan, or because of transport constraints.

No agreement was achieved on what constituted need, whether food should be targeted to areas or individuals, how distribution could be monitored and irregularities addressed, or on who was responsible for what and to whom.

INFORMATION NEEDED

Given that lack of harvest determined food shortages, but harvest figures give no insight into food security, no single indicator of need was defined. Rather, the criteria used to access the resource base of the population, their purchasing power and access to food were:

- population size
- nutritional status
- the 1985 harvest of grain and non-grain crops
- ownership of livestock
- availability of alternative indigenous food stuffs
- income generating activities

Several agencies in Darfur were collecting nutritional data and OXFAM in collaboration with the Ministry of Health established a standard methodology which was implemented by all agencies. Consequently SCF undertook to collect information on the remaining five criteria and to make recommended allocations on the basis of all the information.

SCF'S INFORMATION SYSTEM

Wherever possible local government officials and Sheikhs were consulted to find out where they thought the population needed assistance and how much food aid they considered necessary. In addition SCF field officers undertook qualitative assessments of the areas in which they worked. While they used a standard reporting format, their methodology varied.

To supplement information from nutritional surveys and field officers and to provide some statistics, SCF recruited and trained 14 teams of enumerators who administered a household survey throughout the region. The survey was designed to obtain quantifiable information on harvests, livestock, income generating activities, wild foods and household size.

THE HOUSEHOLD SURVEY

Field officers were asked to divide the areas where they worked into zones of similar agro-economic and social characteristics, in order to reduce the sample size necessary for the household survey. A stratified random sample was then taken to determine village council survey sites. Within these, cluster sampling techniques were used.

The accuracy of the survey was dependent upon the quality of the enumerators and the willingness of individuals to respond to sensitive questions concerning income and livestock. Responses were prejudiced by the knowledge that SCF was distributing food aid in Darfur. (For further information on both the methodology employed and the results see Buckley, 1986.)

RECOMMENDED ALLOCATION

Each month from March through July 1986 approximately 2000 households were interviewed. Results from the household survey were tabulated monthly and converted into grain equivalents. The total amount of grain estimated as being available to an individual was subtracted from the minimum requirement for each individual, based on the recommended ration, and a grain deficit or surplus was calculated. Provisional allocations of food aid were derived by multiplying the percentage of people having a grain deficit by the

population of the zone³ and the recommended ration.

Provisional allocations were discussed with field officers and adjusted, where necessary, in light of their qualitative assessment and the nutritional status of the population. The household survey did not however provide the final allocation figure. It defined the spread of resources and provided an effective and standardized means for evaluating field officers' recommendations. To some extent the survey also legitimized food allocations to the donors who were concerned about excessive distribution and subjective interpretations of need. As the amount of information available grew and its quality increased, the requirement for food aid in Darfur decreased to 66,000 MT for 1986.

Once recommended allocations were agreed upon within SCF, they were presented to the RRC for consideration. The RRC approved all allocations with little discussion. However, questions were raised concerning when food should be distributed, how often, and to what percentage of the population.

DISTRIBUTION POLICY

A sub-committee of the RRC met to discuss distribution policy. They concluded that:

1. During the busy agricultural months food aid should be allocated to zones where 20% or more of the population was defined as having a food deficit. During the dry season the cut off point should be 35%.
2. Food should be distributed on a monthly basis except in areas which would be cut off during the rains. These should receive their entire allocation at one time.
3. Food should only be distributed to individuals with a food deficit.
4. All people in the village council, includ-

ing the displaced, should be eligible for consideration.

The committee recognising the degree of variation between as well as within village councils, also recommended that SCF field officers with the assistance of local government officials, should determine what proportion of a zone's allocation should be delivered to each village council. Once delivered, it was the responsibility of the durra committee to manage the distribution. In most areas a larger ration was given to the "miskeen" (poor) than to other members of the community and in some areas "poor lists" were drawn up which provided the basis for distribution.

While the RRC confirmed recommended allocations and government committees at the village council level were directly involved in distribution, local government officials were not adequately consulted at rural or area council levels. Consequently many government officials, after their direct involvement in 1985, neither agreed with nor understood the distribution policy implemented in 1986. In addition there was often tension between the officials and SCF, whom the donors had made responsible for the storage and distribution of allocated grain down to the village council level.

CONCLUSIONS

Information was a vital component of the food targeting system which provided the basis for planning in 1986. SCF's transport department also rationalised the delivery of food aid which, coupled with the information, increased the efficiency of the relief operation ensuring that the quantity of food aid was similar to that which would have been produced in normal circumstances. Qualitative information from field officers informed and interpreted quantitative data from household and nutritional

surveys which in turn tested the hypotheses of the qualitative data.

A comprehensive data base should be a crucial component of project design and implementation for relief, rehabilitation and development programmes. In Darfur consistent data collection and analysis commenced over a year after the beginning of the relief operation. Had resources been available in 1984 for a rapid rural appraisal and specific surveys in crisis areas, food aid would have been more effectively managed, more lives would have been saved and the impact of food aid on the economy minimised.

Given the role of reliable information, experienced professionals should be hired to work in relief operations rather than relying entirely upon volunteers and poorly trained recruits. It is also vital that local government authorities play an active role as partners in the relief process which will have profound effects upon the economy of a region and the life and death of citizens. This is particularly important when attempting to target relief because of the politically sensitive nature of such an operation.

The method of food targeting used in 1986 was unique. Having been tested it requires modification. It went some way towards improving our understanding of food aid, at least in Sudan and among SCF staff.

Both the targeting methodology and the problems faced in implementing the Darfur relief programme should be thoroughly studied. If 60% of a population is in need, is it realistic to supply assistance to that precise 60% of the population? Or should everyone get a permanent 60% ration? Or should assistance be given 60% of the time? Should individuals be given assistance which will enable them to remain in non-productive areas, or should food aid be used to assist spontaneous resettlement? Would direct market intervention, food for work, or cash distrib-

ution be a more effective form of emergency aid in famine areas? How can the interference of the operation on the local economy be reduced?

Notes

1. The administrative structure of Darfur has five levels - regional, provincial, area council, rural council and village council.
2. The advisability of supplying food to areas where self-sufficiency is no longer attainable was frequently discussed but never resolved.
3. The RRC disagreed with SCF field officers' population estimates which were derived from village councils' population lists. Population figures for zones were therefore negotiated.

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REPORTS FROM THE FIELD

Intensive feeding in Sa Kaeo, Thailand 1979

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INTRODUCTION

The intensive feeding ward in the field hospital in Sa Kaeo Holding Centre for Kampuchean Refugees received the first patients on 2nd November 1979, two weeks after the Thai government permitted the refugees to enter Thailand, and one week after the establishment of the camp. There were approximately 30,000 refugees in the camp and most of them suffered from acute malnutrition combined with malaria which was apparently resistant to chloroquine. In the early days of the camp the death rate was more than 40 per day, but over 6 weeks it dropped to 1 per day.

No medical or nutritional survey was made prior to the establishment of the intensive feeding ward, but a cluster survey in the first days of November revealed that 15 % of the children below the height of 115 cm weighed less than 80 % of the median weight-for-height (Wt/Ht) in normal children (Jelliffe, 1966).

The daily food ration, on average 2,200 kcal/day/person, was distributed by 135 refugees from 7 points in the camp every second day and consisted of 500 g rice, 100 g vegetables, 45 g fresh meat or fish, 30 g vegetable oil and half an egg or dried fish. Supposing equal distribution and maximal utilization of the ration, every refugee should have received 400 g of carbohydrates, 50 g of proteins, 40 g of fat, 125 g of calcium, 8 g of iron and 0.9 g of thiamine a day (Holihan, 1979).

Supplementary feeding centres were in operation within the first week, providing food for children, pregnant and lactating mothers, and all patients in the hospital. As the protein and calorie content of the daily rations distributed in the camp was insufficient and the distribution of the food in the camp and the hospital was sometimes unequal, the intensive feeding ward and the supplementary feeding were given high priority.

The management, treatment and progress of the patients admitted to the intensive feeding ward during the first 6 weeks of the emergency period will be described here.

PRACTICAL ARRANGEMENTS

1. Staff. The intensive feeding ward was started by 5 nurses, 1 paediatrician and a nutritional adviser from the International Committee of the Red Cross (ICRC) jointly with 5 Thai female volunteers from the Foundation for Children (FFC) assisted by 10 Khmer refugees who spoke only Khmer. Two French-speaking former medical students from the camp served as interpreters. Five expatriate nurses, 1 Khmer paediatrician and 50 Khmer volunteers were added as the number of inpatients rose to more than 150, and a regular training programme for the volunteers was begun. Working languages were Khmer, Thai, French, Finnish, Danish and English. The night shift consisted of 2 nurses and 10 Khmer nursing aides from 6 p.m. to 8 a.m. Several visiting physicians and nurses were incorporated in the staff for shorter periods.

2. Housing. Patients were housed in 5 tents, 60 m² each, on plank beds placed on gravel, on average 24 beds per tent and 2 persons per bed. Each patient had two woolen blankets and a straw mat. One tent was used as the store room and diet kitchen. Deep trench latrines were located 100 m away. Chlorinated water for cooking and washing was available from 4 tanks with taps, containing 1,000 l. each and filled daily from trucks. Drainage relied on gravitation and evaporation. Waste was removed every day in open baskets. Weak patients defecated into enamel chamber pots or on wrapping paper from the local market.

3. Admission and discharge criteria. All patients referred from out-patients departments or other wards with clinical marasmus or kwashiorkor, mainly children, were admitted and treated until the following demands were met: (1) Absence of oedema; (2) The patient could walk himself; (3) Hct above 0.20; (4) Wt/Ht % more than 70 % or a substantial weight gain; (5) One comparatively healthy relative available in the camp.

Malaria, pneumonia, amoebiasis, helminthiasis (strongyloidiasis included), severe anaemia, wet beri beri, measles, diarrhoea, psychosis, prematurity and skin diseases were treated within the ward, whereas patients with meningitis, severe dehydration, tuberculosis and ailments needing surgery were referred to other wards. Nearly all patients came from the Khmer Rouge group.

4. Nursing administration. Every tent operated as an independent unit with a nursing station, equipped with weighing scales, tape-measures, drugs, height sticks, stethoscope, dressings, feeding tubes, syringes etc. The severe cases were kept in a separate tent where possible and the patients about to be discharged had their own units, each unit cared for 20 to 40 patients and their relatives. Ward rounds and a daily co-ordinating meeting

took place in the mornings. After initial difficulties and misunderstandings, the Khmer staff took over responsibility for all feeding procedures (tube feeding included), as well as medication and registration. The nurses gave highest priority to teaching the nursing aides, diagnostic procedures and intravenous treatment with saline and blood. Nurses were trained to diagnose and prescribe on their own.

5. Hygienic conditions. A reasonable hygiene routine was attempted by washing hands in 1% Chloramine-T in buckets which were replaced daily. Nevertheless, although the expatriate staff lost very few days through sickness, the patients apparently suffered from diarrhoea and fever of contagious origin. Feeding tubes, plastic and glass syringes, and steel instruments were boiled. Polyethylene plates, cups, and spoons were washed in hot water and common detergent after each meal.

6. Recording system. On admission the patients' name, age, clinical status, height, and body weight were recorded. Body temperature, body weight, diagnosis, prescriptions and laboratory results were put on the record card every morning. The amount of food eaten was recorded after consumption. Declared ages were not always correct but precise statements were not often obtainable.

7. Nutrition. On admission all patients received a high-protein, high calorie diet consisting of liquid K-Mix-II (from UNICEF), mixed according to the prescription on the package with vegetable oil (50% rice brand oil and 50% cotton seed oil, both containing around 70% unsaturated fatty acids). This mixture, which contains about 1 kcal/ml, was prescribed in quantities of 200 ml/kg of body weight/day, divided into 6 portions a day as an initial treatment to all patients. This makes 6 g protein, 3 g lactose, 11 g saccharose and 12 g fat per kg body weight to each patient daily.

Those who could not drink were fed by naso-gastric tubes and 50 ml plastic syringes. Patients who vomited and had severe diarrhoea were given intravenous fluid therapy if oral rehydration or diluted milk failed (low-strength paediatric solutions and drip sets were often not available which made adequate treatment impossible). Ferrous sulphate, folic acid, thiamine and vitamins A and D were added to the diet daily according to the supplies available. Solid food, a sort of post-kwashiorkor food mix, made up of fried rice mixed with egg or chopped meat was offered to patients as soon as they could eat by themselves. The patients' parents and siblings, who often showed varying degrees of malnutrition, were also offered K-Mix-II, but otherwise took the regular meals provided from the hospital kitchen outside the tents after the patients had been fed. All the patients' meals were prepared in the diet kitchen 6 times a day. Whole or packed blood was transfused to patients with Hct dropping below 0.15. Motherless prematures and newborns received milk-based formulas. Feeding-bottles, which initially were scattered all over the camp in

considerable numbers, were kindly but resolutely collected, destroyed, and replaced by spoons, where breast feeding could not be restored.

8. Use of drugs. Antibiotics: Penicillin, Ampicillin, Chloramphenicol. Anthelmintics: Mebendazole (one dose mass treatment). Antiprotozoals: Metronidazole, Quinine Sulphate, Chloroquine, Pyrimethamine with Sulfadoxine (one dose mass treatment). Anticonvulsives: Phenobarbitone, Diazepam. Antipyretics: Salicylic acid, Paracetamol. Rehydration fluids: Oralyte (UNICEF), Dextrose 5% in 1/3 normal saline (Potassium added in selected cases) dosages according to Jelliffe and Stanfield (1978).

9. Immunization. At the out-break of a measles epidemic half of the 1 to 5 year old in-patients, who had not already had measles were immunized with measles vaccine.

10. Laboratory facilities. Hct, blood grouping and cross matching, microscopical examination of blood smears for plasmodiae, stools for ovae and protozoal cysts, sputum for acid fast bacillae, spinal fluid for leucocytes and bacteriae were performed in selected cases. A haematological survey in 82 patients was done 3 weeks after the ward was started. Analysis was carried out at the Division of Haematology, Siriraj Hospital, Mahidol University, Bangkok.

11. Follow-up. After discharge, the patients were called to the intensive feeding ward once or twice a week for a nutritional check up and to receive supplementary high-energy, high protein meals. Later, home visits were paid to earlier patients combined with lessons in basic dietetic principles for the parents and older patients.

STATISTICS

1. Occupancy. In the 6 weeks following 2nd November, 425 patients received treatment in the intensive feeding ward, of whom 370 were severely malnourished the rest were among more than 300 relatives admitted as caretakers who needed medical care for infectious diseases. Length of admission for different categories of patient is shown in Table 1.

2. Age and sex. See Table 2.

3. Nutritional status. The severity of acute malnutrition on admission during the 6 weeks is shown in Table 3. As the patients seemed to be very stunted, which could be an expression of chronic malnutrition, their actual heights-for-ages are compared to similar values in a South Vietnamese rural population in Table 4. S-Protein at the survey was 66 ± 9 g/l. (S-Albumin 32 ± 9 g/l. and S-Globulin 34 ± 7 g/l.) (mean ± 1 S.D.).

4. Efficiency of intensive feeding. At first the oily K-Mix-II was not generally well accepted by the mothers, the

Table 3. Nutritional status of 370 malnourished patients admitted to the intensive feeding ward

Week of ward's existence	No. Admitted	No. of patients categorized into groups of percentage of normal weight-for-height						No. with oedema at admission	No. receiving blood during admission	Deaths after admission
		45-59	60-69	70-79	80-89	90-99	100-			
1st	103(18)*	6	34	32	9	3	1	19	14	17
2nd	109(8)	6	36	39	13	3	4	15	20	4
3rd	49(2)	2	9	23	11	2	0	10	10	0
4th	35(3)	0	4	11	13	3	1	10	9	0
5th	35	1	2	11	14	6	1	11	5	0
6th	39	1	2	11	19	5	1	7	10	0
Admission	370(31)	16	87	127	79	22	8	72	68	21
Discharged	335(15)†	0	8	70	127	69	46			

*In brackets, patients with heights not recorded.

†Fourteen patients were transferred to paediatric ward.

treatment. One patient with Hct 0.02 survived. As it was a couple of weeks before it was realized that one dose treatment with pyrimethamine and sulphadoxine was ineffective aggravation of anaemia was also caused by persistent malaria infections. *P. falciparum* infections were finally controlled by oral quinine 3 times a day for 7 days.

6. Bacterial infections. Besides the 33% with signs of pneumonia, an additional 18% received antibiotics for otitis media, skin infections, suspected typhoid fever, pyrexia of unknown origin, etc.

Table 4. Height-for-age in Khmer children admitted to the intensive feeding ward, Sa Kaeo, 1979

Age (years)	Heights in both sexes (cm)				
	Vietnamese standards*		Children admitted		
	Urban (mean)	Rural (mean)	Percentiles		No.
			(50)	(5-95)	
1	71	70	68	62-75	18
2	80	77	74	70-82	24
3	86	84	80	77-91	20
4	96	88	85	80-107	16
5	101	94	93	85-107	24
6	106	99	97	83-109	14
7	111	105	101	92-116	16
8	116	109	105	96-118	21
9	121	113	107	97-114	9
10	126	117	115	98-122	19
11	132	122	118	115-122	4
12	139	130	121	108-131	19
13	142	135	132	125-140	7
14	145	140	132	116-146	9

*Tran and Nguyen (1963); Tran (1974).

7. Tuberculosis. Around 15% of the patients had positive Mantoux-tests and acid fast bacilli were found in the sputum of 2 patients, who were referred to the tuberculosis ward and treated, together with 150 other patients with similar findings.

8. Intestinal helminths and protozoa. In a random survey the following species were found: Roundworm, whipworm, hookworm and *Strongyloides stercoralis*. *Amoeba histolytica* was found in bloody stools of several patients.

8. Hypovitaminosis. Scurvey, rickets, xerophthalmia and pellagra were not observed, but wet beri-beri responding to thiamine injection was found, and a dry-skin condition was also observed which however, responded to rubbing with vegetable oil.

COMMENTS AND RECOMMENDATIONS FOR FUTURE OPERATIONS

The experiences in the intensive feeding ward in Sa Kaeo Holding Centre for Kampuchean Refugees show that K-Mix-II, as recommended by WHO (de Ville de Goyet et al., 1978), is a reasonable nutrient for severely malnourished people of all ages in emergency situations. Immediate treatment with full strength K-Mix-II proved very practical in a situation where staff were limited and the numbers of new patients overwhelming. Avoiding brain damage must be a high priority and at least 5% of the energy should come from essential fatty acids, and therefore the inconvenience of oil on the surface of the K-Mix-II must be accepted by the staff and the patients. Explanations should be printed on the K-Mix-II bags. The side effect in the form of vomiting and diarrhoea seems acceptable, if the duration of in-patient treatment can thereby be kept down to 2-3 weeks for patients without chronic infections. The rate of hypoglycaemia in our patients is unknown, but should be estimated in a future action, to confirm a study from Biafra

Table 5. Effectiveness of and complications during intensive feeding of Khmer patients at Sa Kao, 1979

	Total	Emaciation only	Oedema at admission	Discharged patients	
No.	339 (31)*	272 (26)	67 (5)	317 (18)	
Average daily weight changes in percentage of standard weight-for-height during admission	Median (5-95) Percentiles Range	0.7 (-0.2-1.7) (-4.0-3.1)	0.8 (0-1.8) (-2.0-3.1)	0.5 (-0.4-1.4) (-4.0-2.0)	0.7 (0-1.7) (-4.0-3.0)
Diarrhoea requiring extra fluid orally or i.v.	15 %	15 %	14 %	13 %	
Vomiting demanding temporary stop for food intake	4 %	4 %	1 %	3 %	
Hypothermia (morning temp. below 36.0°C)	57 %	59 %	49 %		
Symptoms of lower respiratory tract infections	33 %	34 %	31 %	32 %	
Clinical malaria responding to quinine	42 %	40 %	53 %	45 %	
Deaths	6 %	6 %	4 %		

* Number in brackets indicates No. of patients without heights measured.

(Ifekgunigwe, 1975), which suggests that hypoglycaemia is rare in patients receiving K-Mix-II.

A specially designed pre-printed record card for intensive feeding with standard weight-for-height and space for daily changes of symptoms peculiar to acute malnutrition, was much needed, and it would be appropriate for the International Red Cross or UNICEF to design and deliver such a record card, which could also be used in nutritional surveys. Blood transfusions proved to be essential in treating the many patients with severe anaemia, which became worse after nutritional reconstitution. Such factors as protein, folic acid and iron deficiency combined with malaria, which causes haemolysis, may explain the extremely high frequency of anaemia. The drop in Hb after protein feeding has been observed in Uganda and has been explained as caused by the expansion of the blood volume after increasing amounts of protein in the blood (Adams *et al.*, 1967), but whatever may be the reason for the anaemia, blood transfusion sets should always accompany an emergency intensive feeding unit.

Most of the foreign staff had little or no experience of the principles and practice of intensive feeding and some

weeks passed before some aspects of intensive feeding were fully appreciated, which may occasion further recommendations to Red Cross societies and other voluntary agencies to update the training of their delegates in this particular field. A thorough knowledge of the treatment of the acute severely malnourished is necessary to a proper understanding of most relief actions all over the world. The feeding bottles distributed throughout the camp and the relative reluctance to withdraw the bottles shown by some expatriate staff demonstrates the problem very well.

The continuous stream of patients admitted with oedema and malnutrition proves that the basic rations of less than 2,400 kcal were insufficient for a population which had been starving for months. It should be possible to organize a reasonable supplementary feeding programme in the first couple of weeks. The inconvenience of a possible increase in black-marketing in the camp and among other low-income people surrounding the place of action should be tolerated for some weeks.

The finding of late wet beri-beri in the outpatients and the high rate of children with oedema admitted to the intensive feeding ward even in the 4th and 5th weeks

reminds us that acute malnutrition should always be considered as a state of insufficient nutrition, not only regarding proteins and calories; a lack of vitamins and minerals should be suspected until it has been proven otherwise. Multivitamin tablets or a sufficient vitamin content in the food should be ensured from the beginning of an operation.

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**Disaster
Management Center**

University of Wisconsin

Department of Engineering Professional Development

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

Presenter: Saeed Ahmad Akhtar

1. Topical Focus: Sacrificial Meat Distribution Operation
2. Country/Region: Pakistan (Peshawar-NWFP)
3. Problem Description: 400 M tons meat comes in 8 aeroplanes to Pakistan on Eidul-Azha in 5-6 days. It is to be distributed within four hours of its landing. Special emergency logistics are arranged. 160 persons with 42 vehicles and four separate encampments are planned and manned round the clock.
4. What was Learned:
 - A. Time is the most important factor because meat deteriorates beyond four hours.
 - B. Extremely detailed pre-planning and clear job-description is required.
 - C. A well organized team, prepared well in time, can face any emergency.
5. Special Comments:
 1. Peshawar's share - 8 planeloads, 270 M. Tons, 18,000 carcasses
 2. Vehicles employed--trucks 40, watertankers 2, jeeps and cars 15
 3. Camps supplied--60; beneficiaries 540,000, each family getting 4KG good meat from Mecca.
 4. Staff in camps on duty for six days -1040
 5. Carcass average weight 15KG
 6. Preplanning; very detailed at Central and Provincial level after many meetings; elaborate schedule and duty roster prepared and circulated to all concerned 4 days earlier; 5 special encampments for 1. control room, 2. vehicles/trucks, 3. security staff, 4. national logistic cell staff and drivers and 5, labor are arranged and all equipment and staff put on duty/ground at the Airport 24 hours in advance

7. Special telephones to control rooms
8. Supervisory teams on duty to avoid pilferage
9. Very proper documentation and vouchers for each truckload.
10. Each plane unloading and reloading into 12-15 trucks should not take more than 45-55 minutes.
11. Special contract for ice blocks--each truck has at least 15 blocks already loaded in it when it enters the airport.
12. Each carcass examined by a 12 member veterinarian team--unfit carcasses separated on each trip and destroyed.
13. Distribution made within 40 mile area.
14. Camp staff ready alert scheduled with refugee heads of families--one carcass given per four families.
15. Special lighting arranged at airport and camps
16. Scheme funded by Islamic Development Bank Jeddah-i.e. transport to Pakistan
17. Our internal operation cost at Peshawar US \$15000

Selective feeding programmes in Ethiopia and East Sudan — 1985/1986

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A survey of thirty-four feeding programmes in Ethiopia and East Sudan was undertaken. Wide differences were found between the two countries and also within Ethiopia. Irregular general ration distribution was commonplace in Ethiopia, thus placing an extra strain on selective feeding programmes. The principal admission criteria to Selected Feeding Programmes (SFPs) were weight for height categories. The cut-off points varied between programmes and also with the stages of the emergency. Useful comparisons between programmes were hampered by such differences, as well as by the different methods of reporting data.

The types of food used in programmes depended on availability and included high energy drinks, porridges, take-home pre-mixes and sometimes indigenous foods. A large number of foods originally destined for the western consumer market were found e.g. corned beef, chicken pâté, noodles, dates etc. Some added interesting variety and added nutritional value to the diet, while others caused more problems than they solved due to their low acceptability, inappropriate packaging, limited accompanying information and complex and costly preparation. The implementation of food aid donation policies by donors and consignees regarding appropriate foodstuffs and their recommended use was considered to be the major solution to this problem.

Key words: Ethiopia famine; East Sudan refugees; Food aid; Selective feeding; Admission criteria.

INTRODUCTION

Food distribution is necessary in time of severe food shortages, as was experienced by drought affected people in

Ethiopia and refugees in East Sudan during 1985 and 1986. The methods of food distribution will vary with each set of circumstances, depending on the operating relief agency, local conditions, the availability of food and the characteristics of the population affected by the food shortage (size, distribution, structure). This report describes the feeding procedures adopted in Ethiopia and East Sudan, including the distribution of general rations, admission and discharge criteria to feeding programmes and the types of food used. Its main aim was to provide a scenario against which the use of biscuits in these programmes could be examined (Young, 1986). However, in establishing this overview, the successes and also shortcomings of the varying programmes became evident. These features will now be presented and commented on in order to record for future reference the lessons of past experience.

METHODS

In Wollo and North Shoa, Ethiopia all feeding programmes in operation during November 1985 were included in the survey with the exception of those in Borena awraja (Table 1). Two agencies operating in Harerge and Tigray were also included. Wollo and North Shoa were chosen for study as they had the highest concentration of feeding programmes in Ethiopia. Of the nineteen feeding programmes in the Ethiopian survey fourteen were personally visited during December 1985 (Table 1). In East Sudan all of the eleven refugee reception centres were visited during January 1986 (Table 1). Structured interviews of the camp personnel supervising each of the feeding programmes were undertaken and where necessary other personnel were questioned to verify answers e.g. storekeepers and kitchen workers.

Disaster relief feeding programmes may be theoretically divided, according to order of priority, into general ration distribution aimed at reaching the whole population affected by food shortages and second, selective feeding programmes (SFPs) aimed at specific groups in the population who are considered more vulnerable to food shortages. As the SFP is intended to supplement the general ration, its value will be determined or at least influenced by the size and quality of the general rations.

By the time the feeding programmes were visited, all with the exception of Kombolcha, Haik and Shagareb 3, had been operating for at least eight months, by which time they were well established and the feeding protocols modified to suit local needs. Several programmes in Ethiopia were in the process of closing their SFPs and reinforcing their dry ration distribution, while many NGOs in East Sudan claimed to be in transition between disaster relief and more developmental work. As of 1st January 1986 three of the reception centres became official refugee settlements.

GENERAL RATION DISTRIBUTION

In Wollo and North Shoa, Ethiopia the distribution of general rations was undertaken by the Relief and

Table 1. Sites of feeding programmes included in the survey

Site		Type of ration*	Starting date of feeding programme
ETHIOPIA			
Wollo			
1. Harbu	Concern	W	October 1984
2. Korem	Save the Children Fund U.K. (SCF)	W	October 1983
3. Kombolcha	SCF (U.K.)	W	October 1985
4. Kobo	SCF (U.K.)	W	September 1984
5. Kobo	Mekane Yasus Ethiopian Evangelical Church	W	September 1984
6. Sanke	World Vision	W	February 1985
7. Alamata	World Vision	W	October 1984
8. Lallibella	World Vision	W	November 1984
9. Lallibella	German Emergency Doctors	W	May 1984
10. Bora	Oxfam	W/D	November 1984
11. Kundi	Philadelphia Church Mission	W	February 1985
12. Wagletena†	Oxfam	D	January 1985
13. Hail†	Ethiopian Orthodox Church	D	May 1985
14. Bati†	Ethiopian Red Cross	W	October 1984
N. Shoa			
15. Senbeti	Danchurch Aid	W/D	July 1984
16. Karakelo	GOAL	W	November 1984
17. Jeweha	World Church Service	W	January 1985
Harerge			
18. Errer†	SCF (U.K.)	W/D	
Tigray			
19. Mekele, Adwa, Idaga Hamus	International Committee of the Red Cross (ICRC)	W/D	
EAST SUDAN			
20. Wad Sheriffe	Swiss Red Cross	W/D	1978/1979
21.	American Rescue Committee	W/D	February 1985
22. Wad Kowli	SCF (U.K.)	W/D	December 1984
23. Shagareb 1	League of Red Cross Societies (LRCS)	W/D	April 1985
24. Shagareb 2	Christian Outreach	W/D	April 1985
25.	Concern	W/D	April 1985
26. Shagareb 3	Commission of refugees	W	November 1985
27. Fau 1	Young Men's Christian Aid	W/D	April 1985
28. Fau 2	CARE	W/D	April 1985
29. Fau 3	CARE	W/D	April 1985
30. Karkora	SCF (U.S.)	W/D	April 1985
31. Kilo 26	League of Red Cross Societies		
32. Wad el Hileau	La Lalmba	W/D	January 1985
33. Safawa	Help the Aged	W/D	‡
34.	SCF (U.K.)	W/D	

*Wet (W) or Dry (D) ration or both.

†Personnel were interviewed but the site of food distribution was not visited as they had recently closed or were inaccessible (those inside Tigray).

‡Two sites; old site 1983, new site February 1985.

Table 2. Examples of some of the general rations distributed in Ethiopia and the Sudan

Distributing organization	Ration size	kcal/person/day
R.R.C.	Per individual per month:	
	6 years: 3kg corn soy milk	380
	7-15: 7.5 kg wheat grain	875
	Over 15: 15kg wheat grain	1,750
Co-ordinating body of:*		
LWF	per family (5) per month:	
CRS	45kg bulgar wheat	
Ethiopian Evangelical Church, Mekane Yasus	45kg dried skimmed milk	
Ethiopian Catholic Secretariat	3.6kg oil	1,325
World Vision	per individual per month: 15kg wheat flour or grain 1 l. oil	1,780
ICRC	per person per month: 12kg wheat flour 2kg beans 1.2kg oil	2,026
Ethiopian Red Cross	per person per month 15kg wheat flour 1 l. butter oil 1kg sugar	1,793
SCF(U.S.)	per person per month: 15kg wheat flour 4kg soya fortified sorghum grits 2kg DSM 1 l. oil	2,484
CARE (Sudan)	per person every ten days: 5kg wheat flour or grain 0.6kg beans 0.3kg oil	2,230

*Previously known as Churches Drought Action in Africa.

Rehabilitation Commission (RRC) and a number of NGOs (Table 2). In September 1985 the RRC were assisting approximately 0.8 million people and the NGOs approximately 0.9 million in Wollo, making a total of 1.8 million people.

The quantity of rations distributed varied, depending on the distributing agency. The smallest ration was that distributed by Lutheran World Federation (LWF) and Catholic Relief Secretariat (CRS), which was given on a monthly basis to families or groups of five individuals. Their ration provided approximately 1,400 kcals per person per day, which they freely admitted was not enough to sustain

life for very long. The ration was given on the assumption that setting it for a "normal" family of five would mean that excess food would make its way onto the market from small families and thus become available to supplement the larger families' ration.

The other distributing agencies in Wollo gave out dry rations on an individual basis, which provided a minimum of 1,700 kcals per person per day. The largest ration was that distributed by SCF (U.S.); 2,484 kcals per person per day. All general rations in Ethiopia were distributed on a monthly basis.

Irregular dry ration distributions were reported by seven

of the nineteen programmes in the Ethiopian survey. An improvement in the regular distribution of dry rations was reported by camp personnel, to have occurred in certain areas since April/May 1985. This was attributed to the increased trucking fleets and availability of food. However, sites rendered inaccessible by either poor road conditions or security problems (in particular Lallibella) complained that general ration distribution was still irregular by December 1985. It was generally felt that families would only be encouraged to return to their homes if they were guaranteed a regular monthly ration. However, establishing the distribution of rations to people scattered over a large geographical area, much of which is inaccessible, is far more difficult than distribution to large numbers located in one spot close to a main road.

In reception centres in East Sudan general ration distribution was undertaken by CARE and food was supplied by Commission of Refugees (COR) and UNHCR. In almost all centres visited the distribution occurred on a regular basis every ten days and delays were rarely longer than two to three days. The size of the ration exceeded those found in Ethiopia, which was attributed to the absence of other food sources for newly arrived refugees. By December 1985, it had been decided by COR and UNHCR to reduce the general ration from 500 g cereal to 400 g per beneficiary per day. By this stage the nutritional status of refugees was no longer critical; less than 10% and in many centres less than 5% of children below five years of age were less than 80% weight for height.

SELECTIVE FEEDING PROGRAMMES

There were large differences between feeding programmes in Ethiopia and East Sudan and also within Ethiopia. This was a result of both the original causes and development of both emergencies (a refugee situation in East Sudan versus a scattered population affected by food shortages in Ethiopia) and also the varied responses by the governmental and non-governmental organizations and the international community.

In East Sudan an attempt was made by UNHCR and COR to co-ordinate and standardize the feeding protocols employed in the feeding programmes, covering admission and discharge criteria, methods of reporting results, ration sizes etc. In addition to the COR/UNHCR Guidelines, all operating agencies in East Sudan claimed to use the Oxfam's Practical Guide to Selective Feeding Programmes (1984). This guide was also widely used in Ethiopia (thirteen out of nineteen camps). Other guidelines used in Ethiopia included the Ethiopian Nutrition Institute Guide, the Churches Drought Action in Africa (CDAA) Nutritional Programme Guidelines and Emergency Food and Nutrition Programme Training Manual (CDAA, 1985). Thus, in Ethiopia the different agencies operated feeding programmes according to their own individual system, unlike the attempt at standardization in East Sudan.

Selective feeding programmes in Ethiopia were predominantly on site distribution of precooked rations (wet feeding), with two sites distributing only dry rations (Haiq

and Wagletena). A further four sites employed dry ration distribution for the less severely malnourished groups and wet feeding for the more malnourished groups (weight for height categories). In contrast, in East Sudan the system of using both wet and dry feeding in SFPs was universal. A comparison of wet and dry feeding programmes in East Sudan has been reported by Gibb (1985), including their effect on nutritional status and attendance. The adoption of dry ration distribution for supplementary feeding programmes (70—80% WT/HT) and pregnant and lactating women, was encouraged by COR and UNHCR, partly in anticipation of the rainy season hampering on-site feeding programmes and increasing the risk of transmission of disease and also because wet feeding of less malnourished groups was considered inappropriate and unnecessary. A "two-tier" feeding system was employed by SCF (U.S.) at Karkora and LRCS at Shagareb 1 for their 60—70% WT/HT group, where they attended for several feeds for part of the day and returned home with a quantity of porridge pre-mix. The advantages of the two tier system included less time spent in feeding centres by mothers and children who probably had other children to care for, transfer of responsibility for preparing food for the child to the mother, the opportunity to provide education programmes during attendance and an increased capacity at the centre itself.

In the early stages of both emergencies, feeding programmes had to supply total energy requirements on a wet ration basis as severe shortages of food and resources meant people were unable to prepare their own food. In East Sudan, the general ration distribution to the reception centres was soon established, which meant that the SFP had only to provide a supplement to the diet. The COR/UNHCR guidelines consequently recommended SFP ration sizes based on the assumption that the general ration was available and being consumed by beneficiaries. Despite this attempt at standardization all programmes visited in East Sudan were exceeding the COR/UNHCR recommended ration sizes, frequently by as much as 100%. The reasons for this were attributed as follows. The COR/UNHCR recommended wet ration for supplementary feeders was 500 kcals per beneficiary, while the recommended dry ration was 1,000 kcals per beneficiary, since sharing of the dry ration at home was assumed. Thus no allowance was made for sharing the wet ration with the attendant in the wet feeding programme. At least five agencies provided a larger wet ration for the beneficiary, since sharing was assumed or the attendant was provided with food of his own. The recommended wet ration for therapeutic wet feeding programmes was 1,000 kcals for the beneficiary plus 1,000 kcals for the attendant and they were expected to attend between 7 a.m. and 6 p.m. for a minimum of six feeds. This assumed that the general ration was also being consumed, but in practice the long hours spent in the feeding centre were found to discourage eating at home and so large rations were provided in the centre for the beneficiaries (2,000 to 4,500 kcals).

A few agencies were in the process of modifying their programmes to meet the Guidelines, particularly as the

amount of food they received from CARE was determined by the Guidelines (numbers of beneficiaries multiplied by the recommended amounts). Several agencies chose to maintain their larger ration size by means of their own personal food source, either by local purchases or donations of imported food.

In Ethiopia the irregular general ration distribution meant that many SFPs had to continue to provide total energy requirements to both beneficiaries and attendants long after the initial stages of the emergency. In at least six of the programmes in the survey this practice continued for more than a year after they were initiated. As this was provided on a wet ration basis, beneficiaries and their families must have suffered a loss of independence, as they were no longer responsible for any of the stages of their own food procurement. This system was also considered to be open to "cheating" as in some programmes families could receive a full wet ration for each family member if one met the admission criteria. Thus, at least one child would purposely be kept below the WT/HT admission criteria to guarantee a full ration for the whole family.

As a result of these factors many SFPs resembled "feeding institutions" rather than short term programmes aimed at supplementing the diets of vulnerable groups, who should have been receiving general rations. Obviously, the operation of a traditional SFP is inappropriate where there is no general ration to supplement, but if SFPs are going to be implemented then certain aspects of their operation must be rethought. In Ethiopia, this rethinking went as far as increasing the ration size to total energy requirements but in some programmes an on-going self-assessment, resulting in modifications to suit current needs, was slow to occur, as the continued emphasis on wet feeding indicated. Wet feeding programmes in particular should continually question the reason for their existence, thus speeding up the transfer of responsibility for food procurement and preparation to beneficiaries and the closure of the wet feeding programme.

ADMISSION AND DISCHARGE CRITERIA

Objective admission criteria to SFPs were not universally found. One operating agency admitted that on opening their camp the admission criteria were based solely on a visual assessment with no anthropometric measurements. Once the camp was established the necessary advice was sought and more objective criteria implemented. By the time the programmes were visited all used some form of weight for height (WT/HT) measurements, with the exception of Shagareb E3 where all the children in the reception centre were admitted (200 in total).

The WT/HT categories were either based on NCHS/CDC/WHO normalized reference WT/HT tables or a standard Master Chart (CDAA, 1985). The former calculated WT/HT percentages on an individual basis while the second method plotted all individuals on a master chart where they fell into five percentile groups. Most feeding programmes had at least two weight for height categories who received different rations; those below 70% and those

between 70 and 80%. A third weight for height category was sometimes included which was for the more severely malnourished below 60 or 65% WT/HT. The actual cut-off points for the groups varied between and within different agencies and also with different stages of the emergency. For example, at Kundi, the initial admission criteria was less than 80% WT/HT, but due to severe food shortages was reduced to 75% and then to 70% WT/HT. A similar problem was encountered by ICRC during the early stages of the emergency when admissions were so high that children below 60% WT/HT were not admitted as they had a low probability of recovery. However, as the general nutritional status of the population improved, numbers in SFPs decreased and so the cut-off points were raised (Jeweha, Bora, Wad Sheriffe (ICRC)). This occurrence was not universal; at Alamata, as the general ration distribution became established, the admission criteria was decreased from 85 to 80% WT/HT as families were encouraged to depend on the general ration rather than wet feeding programmes. The different groups have been described according to their admission criteria, since the terms used by the different agencies for the different WT/HT groups were often not in agreement and therefore confusing, e.g. therapeutic, supplementary, intensive, super-intensive etc.

Weight for age admission criteria were only found to have been used in one camp and then for only a limited period of time, since it was considered by the programme supervisors to underestimate the nutritional status of the beneficiaries and hence, on average, children remained in the SFP longer than compared with other feeding programmes operated by the same agency (SCF (U.K.), Wollo). Mid upper arm circumference (MUAC) readings were not found to be used as admission criteria to SFPs, but were frequently used for routine screening of the population in East Sudan (those below the MUAC limit were referred to the SFP to establish their WT/HT).

Other admission criteria generally found in all SFPs included oedematous children, pregnant and lactating women, medical and social referrals (the elderly, orphans, hospital in- and out-patients including TB and hepatitis patients). Pregnant women were generally accepted as soon as their pregnancy was confirmed. Lactating women received rations for between three and eighteen months (the average was twelve months).

Exceptions to the more common admission criteria were occasionally found; at Bati one of the WT/HT groups included all children above 70% WT/HT, which effectively meant that all children were being fed. In East Sudan three of the reception centres had "milk-bars" which enabled all children below 112 cm not admitted to other feeding programmes to receive at least one cup of plain milk or high energy milk (HEM) daily (Wad Sheriffe and Wad Kowli).

Discharge criteria from the SFPs for those admitted on a WT/HT basis were based on beneficiaries reaching and maintaining pre-set cut-off points for a specific number of weighings. As with the admission criteria these cut-off points varied but were generally the same as the admission criteria or 5% higher. The frequency of weighings varied

from every other day for those less than 65% (World Vision at Lallibella) to the more common bi-monthly weighings for those less than 70% and monthly weighings for those over 70% WT/HT. With the exception of programmes where children had only to reach the cut-of point to be discharged, the number of weighings at which children had to maintain a given WT/HT was generally two, hence the minimum duration of stay was two months (two monthly weighings greater than the discharge criteria). Height was checked monthly in most programmes and was a good indication of the accuracy of measuring as large deviations could be attributed to measurement error.

Once admitted to certain programmes children were rarely discharged, instead they graduated up through the different WT/HT groups as their nutritional status improved and were allowed to remain in the SFP, for example in the milk-bars in East Sudan reception centres, or the supplementary feeding programme in Bati where the discharge criteria was 95% WT/HT. After discharge at certain camps in Ethiopia, beneficiaries would be readmitted after their nutritional status or health deteriorated as a result of irregular or absent general ration distribution.

In Ethiopia a variety of admission criteria and WT/HT standards made it very difficult to compare SFPs in order to judge their effectiveness, as results would be reported either as the percentage of individuals gaining or losing weight or as the percentage of individuals whose weight change caused them to change their fifth percentile grouping on the Jelliffe Master Chart. The latter tended to give a lower percentage figure. The varying WT/HT categories also made it difficult to compare the numbers of children in the different WT/HT groupings. Many of the Ethiopian operations apparently "evolved" from the particular set of circumstances at the time of initiation, rather than implementing recognized standard procedures. Obviously local circumstances will indicate the most effective response to an emergency, but this type of undirected programme development is shortsighted and would mean that these programmes almost certainly repeated the errors of others and did not benefit from past experience.

In East Sudan, standardization (including standard procedures for nutritional surveys) facilitated the comparison of different programmes, by allowing the rate of decrease in the percentage of children below 80% WT/HT to be compared (see Gibb, 1985). However, despite guidelines and infrastructures to monitor and relay information on which to base policy decisions, regarding food aid requirements, appropriate feeding methods, admission criteria etc., the systems appeared to suffer from inefficient handling of data. For example, nutrition data on beneficiaries consists of large data sets which remain meaningless if not rapidly reduced to an easily presentable and understandable form. Trying to achieve this manually is both time consuming and laborious. In addition, cross checks are difficult to obtain and it is unlikely that all the useful information in the data is retrieved rapidly if at all. Obviously, at the camp level automated methods of data handling are inappropriate, but surely where nutritional surveys are being undertaken or analyses of data for the

purposes of rapid decision making, then automated methods must be used.

TYPES OF FOOD USED IN SELECTIVE FEEDING PROGRAMMES

Wet feeding programmes

Foods used in the SFPs may be broadly classified as nutritious drinks, porridges, indigenous foods or miscellaneous items. Most wet feeding programmes were limited to three or four food items; high energy drinks, porridges, miscellaneous items such as biscuits and occasionally an indigenous staple served on its own or with sauce.

The drinks formed the basis of all SFPs and were either based on mixtures of dried skimmed milk (DSM), sugar and oil or cereals, sugar and oil. All wet feeding programmes used some form of DSM drink, often referred to as high energy milk (HEM), even though HEM is generally only applied to milk drinks which contain in excess of 1 kcal/ml. High energy drinks (HED) based on cereals were also used by some programmes to overcome the problem of fasting days when some beneficiaries would not eat any meat or dairy products. Several variations of HEM recipes were found with the result that the calorific value of HEM could vary between less than 0.5 kcal/ml to 1.3 kcal/ml, depending on the recipe used. Several programmes reported reducing the oil content of the recipe due to the beneficiaries' inability to digest it or because of its unpalatability. As HEM formed the basis of the wet feeding programmes changing the recipe would have significantly affected the total energy and protein intake. For example, six milk feeds of 400 ml could provide between 1,200 kcals (at 0.5 kcals/ml) to 2,400 kcals (at 1 kcal/ml).

Even the COR/UNHCR recipe for DSM, oil and sugar drink was not the more commonly used HEM recipe as given by Oxfam's Practical Guide to Feeding Procedures (1984) and only provided 0.6 kcals/ml as compared to 1 kcal/ml, yet their Guidelines frequently referred to HEM, which added to the confusion regarding HEM.

The majority of agencies reported that problems of unpalatability of HEM and initial indigestibility of the oil could be overcome by giving new admissions diluted HEM and persistently encouraging beneficiaries to drink. It was noticed in some feeding programmes that the oil in HEM would separate from the milk. This was considered unpalatable by some beneficiaries who would try to decant off the oil, which would obviously decrease the energy density of the drink.

Where sufficient numbers of supervisors were available SCF (U.K.) in Ethiopia employed a method of "scientific" or "measured feeding," whose objective was to match the quantity of HEM provided with each child's requirement. This was calculated according to kcals/kg of body weight. Thus each child was weighed to determine their HEM ration size. Measured feeding was also practised by SCF (U.S.) in East Sudan and also was recommended for those children less than 70% WT/HT in Oxfam's Practical Guide to Selective Feeding Procedures (1984). Apart from the

increased practical problems of implementing this system, it is doubtful whether their calculated requirement was correct as the majority of malnourished children had other medical indications that would have affected their requirement. According to WHO (1985) Report on Energy and Protein Requirements appetite is probably the best practical guide where substantial amounts of extra protein and energy must be provided during famine. The individual attention received by each child undergoing measured feeding may have contributed to more efficient monitoring of the individual's progress. Some agencies provided as much HEM as the child was able to consume, which was often in excess of the amounts prescribed by measured feeding.

In addition to the food value of HEM and HED, the liquid they provided was valuable in overcoming and preventing dehydration.

The porridges were based on either cereals or cereal blends and were usually supplemented with oil, sugar and possibly DSM during their preparation. The cereals included whole wheat grain, wheat flour, bulgar wheat, sorghum grits, oats and rice. The cereal blends included corn soy milk (CSM), instant CSM, soy wheat flour, soy fortified sorghum grits and faffa. Faffa, CSM and ICSM were a blend of cereals, legumes, DSM and a vitamin/mineral premix. CSM and ICSM were imported blends, whereas faffa was produced on an industrial scale in Ethiopia. Faffa is based on local cereals and legumes, although during the height of the emergency the majority of ingredients were imported. The Faffa Food Plant, Addis Ababa had a bartering arrangement with some operating agencies including UNICEF, whereby cereals, legumes or DSM were part exchanged for faffa. Almost all wet feeding programmes served some sort of porridge depending on the cereal available.

Eleven out of nineteen programmes in Ethiopia and ten out of thirteen programmes in East Sudan provided a feed resembling an indigenous meal, comprising a staple and possibly a protein rich food or savoury sauce. The provision of this meal was generally limited to in-patient feeding, but included WT/HT groups in six of the programmes. The staple food in Ethiopia and also of refugees in East Sudan was a cereal based fermented pancake, "injera," which was eaten with wat (a protein rich sauce based on pulses, meat or eggs). The traditional cereal used to make injera was teff, but due to the small harvest in Ethiopia and resultant high prices and poor supply, other cereals were substituted, including sorghum, wheat flour and even faffa. After mixing the cereal with water, it is left to ferment for two days (no starter culture is added), prior to being cooked like a pancake. To reduce this time consuming operation some agencies substituted another indigenous product known as kitta, which has no fermentation step and may also be eaten with wat. Other alternative staples to injera included bread (bought locally or prepared on-site), rice, macaroni and lasagne (food aid donations).

The miscellaneous items covered a large variety of foods (Table 3), whose availability was variable. Some items were

Table 3. Miscellaneous foods other than cereals, cereal blends, milk powders, sugar, fats and oils used in feeding programmes included in the survey

General food	
Corned beef	Eggs
Tea	Dried soup
Raisins	Dates
Macaroni	Lasagne
Fish powder	Sardines
Tinned vegetable concentrate	Peanut butter
Tinned chicken paté	Tinned goulash
Tinned meat in brine	Marmalade
Pot noodles	Honey
Fruit vegetables	
Potatoes	Garlic
Onion	Peas
Chillis	Sweet potato
Tomatoes	Carrots
Egg plant	Pumpkins
Green leafy vegetables	Bananas
Okra	Grapefruit
Zucchini	
Baby milk products	
Cerelac rice	Cow and Gate tinned food
Prosobee	Protiblend
Similac	SMA baby milk

purchased locally, for example, in East Sudan, all fruit and vegetables and eggs were purchased by the operating agencies. Otherwise the miscellaneous items were food aid donations, some of which were more use than others in adding variety to the diet and increasing its nutritional value. Some products were incorporated into the porridge or HEM/HED recipes as no other use for them could be found, for example, the fish protein concentrate and some of the baby milk products. Accompanying instructions were rarely available so nutritional and other technical advice had to be sought as to their possible use. Some items incurred distribution problems to beneficiaries, for example, 25 kg boxes of very sticky dates and barrels of honey. Foods of doubtless nutritional value caused other problems in terms of their preparation or acceptability. A consignment of tinned meat in brine donated to World Vision in Ethiopia, had to be soaked in fresh water overnight to reduce the salt level, prior to lengthy cooking to tenderize the meat. Given the excessive use of fuel and water and the doubtful palatability of salted tinned meat the value of such a donation was questionable. The use of tinned corned beef in East Sudan was widespread, but before beneficiaries would eat it the meat often had to be blessed by priests as its origins may have compromised the beneficiaries' religious beliefs and also acceptable recipes had to be developed, which usually meant the purchase of additional items.

Biscuits were extensively used by all but one of the agencies (ICRC did not use biscuits in their SFPs as it was their policy to use only local foods). They were used as a nutritional supplement for the admitted groups, as incentives to attend educational or other types of programme and as nourishment for people travelling long distances. The use of biscuits in SFPs in Ethiopia and East Sudan and a comparison of the different brands available is reported by Young (1986). Biscuits were rarely used on their own and in wet feeding programmes were always distributed together with HEM or HED. Some SFPs limited the use of biscuits to the more malnourished groups, who were receiving a larger number of feeds and hence biscuits introduced variety.

Biscuits facilitated the job of the food programme supervisor, as no resources and few personnel were required for their preparation or distribution. However, they were freely available to operating agencies who therefore did not have to consider their higher cost in relation to other commodities (Young, 1986). This could lead to them being overused, when cheaper alternative foodstuffs were available.

DRY FEEDING PROGRAMMES

Dry rations were distributed by nineteen of the programmes visited, sixteen of which distributed a premix of CSM, DSM, sugar and oil. The proportion of the ingredients varied considerably between agencies in Ethiopia (CSM: 36—70%; DSM: 11.5—36%; oil: 12.5—18%; and sugar: 9—16%). In East Sudan the COR/UNHCR dry premix recipe for "Uganda" porridge (46% CSM, 23% DSM, 19% oil and 12% sugar) was used by all but one agency. The varying proportions of ingredients were probably a result of unavailability of specific ingredients causing changes to premix recipes.

The quantity distributed to beneficiaries per day varied between 200 and 530 g in Ethiopia and between 185 and 228 g in East Sudan (COR/UNHCR recommended 215 g per day for children less than 85% and 150 g for mothers and referrals). The variation in Ethiopia may partly be accounted for by the fluctuating size of the general ration in different areas.

Three programmes gave HEM premix in place of CSM premix. CSM was distributed on its own by three programmes and DSM was distributed on a dry basis by one programme in addition to 100 g CSM premix. The practice of giving DSM on its own has long since been frowned upon due to its potential misuse. Additional items such as biscuits, dates, dried soup and corned beef were also occasionally given as dry rations.

Confusion was widespread regarding weight/volume conversions of different food commodities and a reference guide was not found, which partly accounted for the varying proportions of ingredients and ration sizes. Some agencies

had calculated weight/volume proportions based on their kitchen equipment, which were then used to develop standard recipes.

The range of foodstuffs found in SFPs was diverse to say the least, varying from the more common food commodities (cereals, DSM, CSM and fats) to western style fast foods in the form of instant pot noodles. Unless donors and consignees develop a policy concerning food aid donations that state what is going to be useful or appropriate and then decline offers of food that do not comply with this (as the ICRC already have in the form of a food aid donations policy), then programme supervisors will have to continue to expect and deal with almost any food product imaginable, from 2 oz tins of chicken pate to individual packets of dried soup. The best use of these anomalies was usually a result of trial and error, with the emphasis often on the latter. A range of recipes were found, which had been developed in response to a paucity of information regarding the use of some of these commodities. In many cases there was no nutritional information or list of ingredients. Apart from the simple problem of "what do we do with it," some products were received with expired shelf-lives, thereby casting doubt on their wholesomeness. The solution to these problems must lie with both the donor, who supplies the product and also with the consignee for accepting it.

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*The African food crisis of 1982—1986**

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The crisis cannot be attributed to any one cause, but rather it was the product of a number of interacting factors whose precise combination varied between countries. Drought, internal political and economic factors and an unfavourable external economic environment were significant contributory factors. Civil war and externally financed insurgency were primarily responsible for propelling a food crisis into a famine in four out of the six worst affected countries. Within the literature, there is a tendency for writers to emphasize the relative contribution of factors within their own disciplines.

So far the literature on the responses, both within country and internationally, is comprised of eye witness accounts by journalists and evaluations by aid agencies of their performance. The international response by governments and the public was massive and unprecedented, but the response by governments, indigenous NGO's and the public within affected countries is often overlooked by the journalistic literature. Generalizations about "the African food crisis" have obscured the considerable diversity amongst countries. This is well illustrated by the experiences of Ethiopia, Kenya and Botswana.

This diversity indicates the biased perspectives that arise from focussing on the extreme famines, as in Ethiopia. Research priorities should include studies of systems that coped during the crisis, historical analysis of the crisis, the way early warning information is processed within bureaucratic institutions, environmental degradation and

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fully integrated analysis of food production and consumption systems.

Key words: Food crisis; Africa; Food security; Famine relief; Kenya; Ethiopia; Botswana.

INTRODUCTION

The autumn of 1986 is perhaps still too soon to provide a "balanced" review of the recent "African food crisis." Until much more research is done the situation is ripe for conflicting interpretations of issues such as the relative importance of the causal factors and the effectiveness of the international early warning systems that were put in place after the food crisis of the early 1970s.

We have attempted to survey those academic contributions that are available, together with some of the extensive, but generally unavailable material produced by the various institutions involved in the response to the crisis. These include the governments of the affected countries, the various multi-lateral and bi-lateral donor agencies and the non-governmental organizations (NGOs). Our intention is to clarify the scope of the debate on the nature of the crisis, its causes and issues raised by the response to it. We also highlight areas that are considered to be in particular need of further research.

A problem of the existing published literature commented upon by several authors (e.g. Allison and Green, 1985) is the extent to which the diversity of economic, political and environmental conditions in Sub-Saharan Africa is obscured by the attempt at generalizations for the whole region. Even a cursory review of the existing documentation reveals that the recent food crisis and the responses to it have involved widely differing experiences within, as well as between, countries. Our approach, which allows us to show the problem raised by generalizations about "the African food crisis," is to consider selected cases. We have focussed in the second half of the paper on the specific experiences in Ethiopia, Kenya and Botswana. The concentration on three cases better documented in the English language literature has made our task of review more manageable. This case approach we hope will identify "issues" for further research and a subsequent attempt to synthesize recent experiences.

STATISTICS AND DEFINITIONS

Food production

Using data provided by the U.S. Department of Agriculture, the World Bank (1984) produced an index of per capita food production for the period 1961—1965 to 1983 comparing trends in Sub-Saharan Africa, Latin America and Asia (Fig. 1). The decline in Sub-Saharan Africa's per capita food production appears in stark

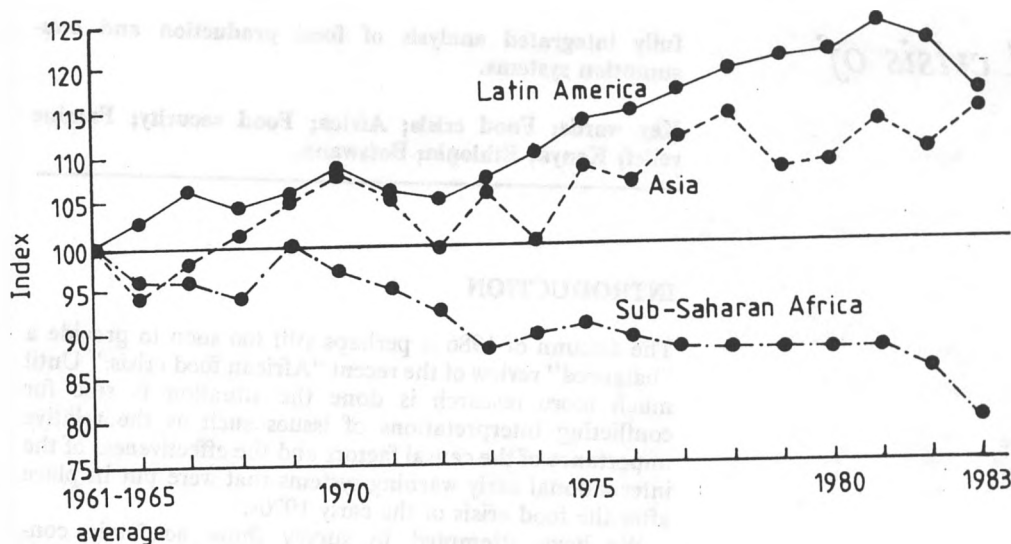


Fig. 1. Index of per capita food production 1961—1965 to 1983. 1961—1965 average is 100.

Source: World Bank (1984).

contrast to the increases in the other two regions. The rate of decline during 1969—1973 was severe, corresponding roughly to the period of severe drought and famine in many Sahelian countries and Ethiopia. Between 1973 and 1981 aggregate food production approximately kept pace with population increase. After 1981, however, the index falls dramatically, that between 1982—1983 being steeper than any fall over the previous two decades. Comparable data for 1984 show that the fall levelled off in that year (USDA, 1985). When complete data for 1985 is available these will probably show a recovery (World Bank, 1986; UNOEOA, 1986). In some countries, such as the CILSS group, Ghana, Zimbabwe and Kenya, the recovery appears to be dramatic, with record production levels being recorded in 1985 and 1986 (Club du Sahel, 1985). Consequently international food policy discussions are currently as much dominated by problems of short term surpluses as they are by considerations of scarcity.

Food imports

Food imports to Africa, both commercial and food aid, have increased significantly since the 1960s. Annual average cereals imports which were 1.18 million tonnes during 1961—1963 and 2.35 million tonnes during 1969—1971 increased dramatically to 8.7 million tonnes during 1980—1982 and peaked at 12.7 million tonnes in 1984/1985 (World Bank, 1984; Benson, 1986).

Food availability

An important question is whether food imports managed, in aggregate terms, to offset the decline in domestic food production. Treating cereals separately, recent data prepared by the World Food Programme (using a slightly different definition of Sub-Saharan Africa than that used by the World Bank), shows that per capita availability during

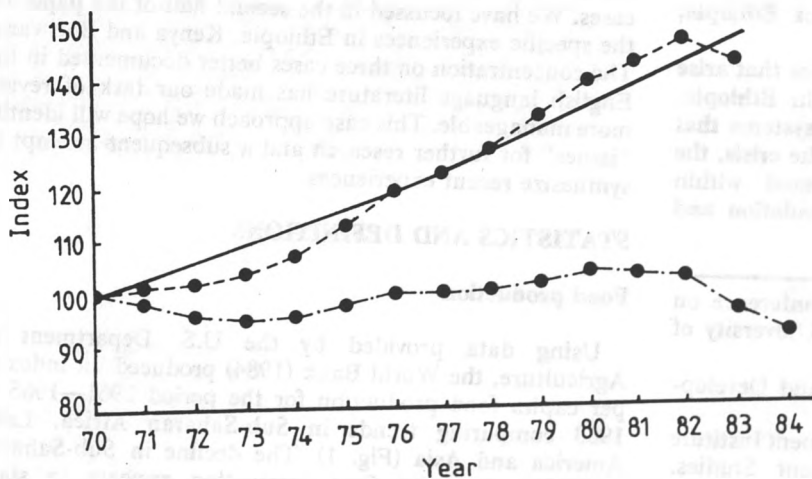


Fig. 2. Indices of apparent total caloric food consumption, population and per capita caloric consumption 1970—1984 in the twenty acute food shortage countries identified by the FAO/WFP. 1970 is 100.

Source: Benson (1986)

- Food consumption of all commodities in calories, total
- Population
- Food consumption of all commodities in calories, per capita

the period 1979/1980 to 1984/1985 peaked at 147.9 kg in 1981/1982. Thereafter, the figures show a significant fall to 136.8 kg in 1982/1983 and 123.4 kg in 1983/1984 (Benson, 1986).

Of course cereals contribute only part of the total food supply in Africa. In an attempt to see what the trends in total food availability were in the twenty worst affected countries (as defined by the FAO/WFP Task Force), WFP have compiled indices for "apparent total caloric food consumption" (Fig. 2). Care does need to be taken in drawing any significant conclusions from such data as they are bound to obscure considerable variations between and within countries. Nevertheless, per capita calorie consumption in the twenty countries appears to have been below 1970 levels up to 1976 and above 1970 levels between 1978 and 1982. Thereafter the per capita index fell steeply. In view of the recovery in production in many countries noted earlier, it is realistic to expect that when the index is updated it will show a fairly steep increase during 1985 and 1986.

The definition of a food crisis

As the statistics above show, Sub-Saharan Africa was considered to be experiencing a problem of stagnant or declining food production long before the dramatic declines between 1982—1985 which many understand to be the "food crisis" proper (FAO, 1983). The literature on the chronic food problem was extensive before the food crisis began in earnest. Though some referred to this as the Agrarian Crisis (Berry, 1983), others discussed it in terms of the Economic Crisis because of the two-way relationship between the state of the agriculture sectors and the national economies (World Bank, 1981). Occasionally all the crises were lumped together under the term "The African Crisis."

So what is meant by the term the "African food crisis?" Are we to use it to describe the chronic problem or the acute problem that appears to have occurred between 1982 and 1985? Curiously, we have not come across satisfactory definitions of the specific term "food crisis" in the literature. Definitions are available for "famine" (Cutler, 1985; Sen, 1981) and for "food security" (FAO, 1984a; Lipton and Heald, 1984; World Bank, 1986a). Those for food security emphasize *access* to sufficient food. Thus a recent Policy Study by the World Bank defines food security as "access by all people at all times to enough food for an active and healthy life." The same study distinguishes between "chronic" and "transitory" food insecurity and sees famine as "the worst form of transitory food insecurity." In view of the overuse of the word "crisis" in relation to Africa, transitory food insecurity is probably the more useful though less wieldy term to describe the phenomenon referred to as the "African Food Crisis." For the purpose of this paper we take the period covered by the food crisis to be from 1982—1986. The implicit definition of this crisis in most writing is of a process in which governments and ultimately the international donor community became involved in extraordinary actions or responses to what was perceived to be famine and the risk of famine in many parts of Africa.

It is worth noting here the working definition of emergencies used by a major institutional actor in the response system, the World Food Programme. Emergencies are defined as:

"... urgent situations, in which suffering or loss of livestock has occurred and which the Government concerned has not the means to remedy; and it is a demonstrably abnormal event which produces dislocation in the life of a community on an exceptional scale"
(WFP, 1970).

The emphasis on a Government's ability to cope with a situation is to be expected of an agency of the United Nations, a family of institutions which regards all governments as sovereign. Nevertheless there is considerable ambiguity over whether or not a Government requires external assistance in order to cope. For instance during the present drought Botswana has received substantial tonnages of food aid, even though it maintains its international financial reserves at a very high level. Thus in 1984 Botswana's gross international reserves were equivalent to 6.3 months of import coverage whilst the average for Sub-Saharan Africa was 1.6 months coverage (World Bank, 1986c). When such ambiguity is combined with the severe economic difficulties experienced by most countries (see below) and the increasing tendency of Governments and donors to view food aid as a significant economic resource (Stevens, 1986), it does raise the possibility that some governments might have exaggerated the extent of an emergency to gain access to the resources of the International Emergency Food Reserve (IEFR) and bilateral emergency assistance. The lack of alternative sources of finance to cope with the short term balance of payments and economic adjustment problems, makes emergency food aid a more attractive additional resource.

The validity of the statistics

The two main sources of Africa-wide production data are the Food and Agriculture Organization (FAO) and the United States Department of Agriculture (USDA). Both rely heavily on data provided by African governments. In terms of historical production data, the FAO publishes data supplied by the governments with little modification, since United Nations specialized agencies use the data provided to them by member states. The USDA makes some adjustments on the basis of its assessment of the reliability of the data and their historical consistency (Paulino and Tseng, 1980). However, with regard to the data used in its Global Information and Early Warning System, it should be noted that the FAO uses information from a variety of government and non-government sources when making its estimates of expected production. Such estimates are revised throughout the crop cycle as more information becomes available.

Several writers note that the accuracy of African food production statistics is seriously open to question (Berry, 1984; ODI, 1985). In many countries the overwhelming proportion of food produced is for own consumption by

farming households. Agricultural censuses and sample surveys are subject to many sources of error. Increased government regulation of agricultural marketing during the 1970's provoked widespread resistance and evasion by producers and traders. The result appears to have been varying combinations of: the development of illegal or "parallel" markets; higher consumption levels by subsistence households; and some decline in output (Harriss, 1979; Hyden, 1983). These factors lead Berry (1984) to suggest that:

"It is likely that official statistics have diverged further and further from actual output in recent years, but we do not know the magnitude or, in many cases, even the direction of the divergence."

The temptation for a government to manipulate production data to increase the size of its food deficit for aid negotiation purposes has already been noted.* Equally, some governments appear to have accepted initially excessive estimates of production shortfalls and, acting in good faith, overcommitted their own scarce financial resources. Africa did experience a food crisis. The incidence of famine is proof of the most awful kind that there was a severe food crisis in several countries. However, the unreliability of the data implies that researchers should re-examine with care prevailing notions of the extent and sources of the crisis at a country and regional level.

The extent and severity of the crisis

The drought-induced or drought-intensified food crisis appears to have been the worst for several decades. Whereas the severe drought of the early 1970s affected countries in the Sahel and the Horn, the recent crisis affected not only these, but also countries in Southern and Eastern Africa (Christensen and Witucki, 1986). Indeed only those countries in the central western part of the region appear to have remained unaffected.

According to the FAO twenty-two African countries were facing serious food shortages by May 1983 when the Director General launched a special appeal for increased aid to the affected countries. By the end of 1983 this list had increased to twenty-four countries. This increased to twenty-seven by September 1984 and fell to twenty-one in December 1984 (FAO, 1985b). Only Cape Verde, Ethiopia, Sudan, Angola, Mozambique, Botswana and Lesotho remain on the list at the time of writing (FAO, 1986b).

According to Gill (1986) the lists were "almost certainly too long" and came in for public criticism from the staff of U.K. based NGOs (Foreign Affairs Committee, 1985). It was not until early 1985 that the FAO highlighted the worst affected countries (FAO, 1985a). Sudan was left off the list until late 1984, even though it was clearly experiencing severe food problems before then, apparently because the Government was reluctant to acknowledge that it had a

problem. Gill comments:

The respect for international sensibilities that kept Sudan off the list for far too long may also have contributed to getting other countries onto the list for handouts.

(Gill, 1986)

The problematic nature of such lists is further illustrated by the case of Cape Verde. This small island state has experienced continuous drought since the late 1960s and is dependent on imports for over 90% of its food grain consumption. Most of these imports are satisfied by programme food aid. Intensification of drought in 1985 made only a minor difference to the overall food balance (Binsbergen, 1986).

How severe was the crisis? Severity is virtually impossible to assess objectively. No reliable estimates are available of the numbers who died as a direct result of the food crisis. Journalists occasionally talk of "up to three million" (e.g. ITN News, 5th September 1986). Some 250,000 are estimated to have died in the Sahel drought and Ethiopian famine of the early 1970s (Wijkman and Timberlake, 1984; Rivers *et al.*, 1976). In February 1985 the UN Office for Emergency Operations in Africa estimated that 150 million people living in twenty critical countries were affected, of which thirty million were seriously affected and of which ten million had abandoned their homes in search of food and water (cited UNOEOA, 1986). There is general agreement that the worst hit countries were Ethiopia, Sudan, Mozambique, Chad and Mali where famine or widespread starvation occurred (FAO, 1985a; ODI, 1985; Devres, 1986).

SOURCES OF CRISIS

A range of overlapping and interacting factors have been cited as contributing to the food crisis (Berry, 1984). Some factors such as abnormal rainfall patterns clearly have a direct causal link, whilst other factors, such as the erosion of traditional coping mechanisms or the international debt crisis, have a less direct link but have undoubtedly contributed to an increased level of vulnerability of many countries or of groups within these countries.

At the outset it is worth pointing out that four out of the five worst affected countries were beset by civil war or externally financed insurgency. In looking for the sources of the crisis we need to look not only at these five, but also at the issue of why so many areas were affected and what it was that made rural populations more vulnerable.

In reviewing the literature, we feel it helpful to say in advance that we do not see any one cause of the crisis. However, within the literature there is a tendency for contributions to give particular attention to certain facets of the crisis and its underlying causation, which very often reflect the background discipline of those making the contributions. Thus, environmental scientists are more likely to explore and lay greater stress on questions such as climatic change and land degradation. In contrast economists attach greater importance to the impact of a sharply deteriorating external environment since 1979. For our part we do not claim to be objective but, recognizing contributions by researchers writing within different discourses, we can offer a "map" of the debate on the crisis.

*These problems are not unique to Africa. Both deliberate manipulation and unintended systematic biases resulting from "rule of thumb" procedures have been documented elsewhere, for example in Bangladesh (Boyce, 1985).

Rainfall and climatic trends

All writers agree that poor rains and drought were a significant factor in contributing to the food crisis.

Most accounts describe a common pattern. For example:

Poor rains in 1982, 1983 and 1984, in the southern African countries, led to the worst food crisis of the century. The Sahel countries . . . and the countries in the horn of Africa . . . had more localized droughts in 1983 followed by widespread drought and famine in 1984, especially in Chad, Mali, Sudan and Ethiopia.”

(Overseas Development Institute, 1985)

However, there is disagreement over the relative importance of the poor rains and inconsistency between the chronologies given. For instance, in mid-1983 the U.S. Department of Agriculture reported that:

Favourable weather across coastal West African countries led to slight increases in cereal production in 1982/1983 for most of the region, excluding Gambia and Ghana.

(UDSA, 1983).

Christensen and Witucki writing over two years later describe the situation in the same period and region in rather different terms:

Abnormal weather patterns disrupted crop production in many countries throughout 1983. Coastal regions from the Ivory Coast to Nigeria suffered from an unusually severe dry season during late 1982 and early 1983.

(Christensen and Witucki, 1986).

There are several reasons why such differences can occur. First, few countries in Africa are well covered by rainfall recording stations. In some cases the coverage has worsened as a result of the economic crisis. Thus the Meteorological Services Department in Ghana was only able to pay its staff intermittently and recording equipment was not maintained. During 1983 only four of the twenty-two synoptic stations were reporting and the Department had only one functioning vehicle (Ussher, Acting Deputy Director, Meteorological Services Department: personal communication, 1985).

Secondly, rainfall in arid and semi-arid areas of Africa is highly variable both spatially and temporally (Jones, 1986). Localized droughts can occur in areas not covered by the rainfall recording network. A few high intensity storms can precipitate an entire seasons rainfall, making the aggregate totals appear “normal,” yet crops may fail due to the long dry periods between such events. Taken together, such factors make it difficult to use such terms as “good,” “bad” and “normal” with any real objectivity.

Agro-meteorological models offer a more accurate method of measuring the effect of highly variable rainfall on cereal crops than simple recordings of rainfall. An example of such a model is that developed by Frere and Popov that measures the moisture satisfaction indices for the main crops throughout the growing season (FAO, 1979). The FAO is presently assisting several African governments to

set up such monitoring capacities as part of national and regional early warning systems (e.g. FAO, 1983). However, will such systems will be maintained once external funding is phased out?

In a recent review of climatic trends, Wigley and Farmer (1986) show convincingly that for Sahelian Africa there has been a general decline in rainfall that began in the mid-1950s and note the “unprecedented length and severity of the [recent Sahel] drought compared with other droughts of the instrumental period.” For eastern Africa, trends in average rainfall are less clear (Ogallo, 1984). Recent work in central and eastern Kenya failed to discern any strong trends or cycles within the instrumental period though acknowledged that “dramatic changes [had occurred] on the time scale of a century or more” (Downing, Mungai and Muturi, 1985). In southern Africa, Tyson has asserted the existence of a quasi-twenty year oscillation of ten predominantly wet years being followed by ten predominantly dry years and in 1979, on the basis of this model, predicted with unerring accuracy that southern Africa would experience:

a series of below normal rainfall years in the eighties and that extended droughts of the kind experienced in the sixties will again be experienced in the eighties

(Tyson, 1979).

For those trends that have been identified on the continent, numerous causes have been hypothesized such as increasing levels of carbon dioxide, sea surface temperatures and atmospheric dust. None have been conclusively proven (Wigley and Farmer, 1986). The possibility of human activities accentuating existing climatic trends, through what are referred to as biogeophysical feedbacks, has attracted considerable interest. Thus Charney (1975) has suggested that vegetation changes caused by overgrazing or deforestation would cause albedo (surface reflectivity) changes which could act to amplify or prolong an existing drought.

The economic crisis

All agree that the severe economic problems experienced by Sub-Saharan Africa contributed significantly to the food crisis (e.g. Timberlake, 1985; World Bank, 1986c; Lofchie, 1986; Office of Technology Assessment, 1984).

Sub-Saharan Africa is very poor. Of the thirty-six countries classified as low income by the 1986 World Bank Development Report, twenty-two are in Sub-Saharan Africa. According to the World Bank (1986c) low-income Africa is poorer in 1986 than it was a generation ago in 1960. Because of the extent of poverty in the region it is considered to be more vulnerable to disasters than richer areas of the world, less able to cope without external assistance and more likely to experience a higher death toll as a result of disasters (Wijkman and Timberlake, 1984; Cuny, 1983).

Per capita annual GDP which had been growing by an average of 2.75% in the first half of the 1970s, slowed down to 0.2% during the second half of the decade. Thereafter per capita GDP has consistently declined, the average for

1980—1984 being minus 4.4% (World Bank, 1986c). The effect of the declines experienced by most countries has resulted in severe cuts in government expenditures and shortages of foreign exchange. Thus the level of public service provision has been reduced and shortages of even the most basic goods have become a way of life in many countries. The effects of the economic problems on the levels of support to African farmers, health care, and poverty have been well documented (UNICEF, 1984; Chambers, 1985; Howell, 1985).

There is now a substantial body of literature on the economic crisis in the region and much of it has been in the form of contributions to the extensive debate stimulated by the publication by the World Bank in late 1981 of the report "Accelerated Development in Sub-Saharan Africa: An Agenda for Action" (World Bank, 1981). Although not a totally new analysis of SSA's economic problems (Allison and Green, 1985), the report's emphasis on "domestic policy inadequacies" and an implicit preference for an enhanced role for markets and a consequent reduction in the role of the state, were controversial.

The subsequent debate has been between those who see the economic crisis as primarily a product of external shocks (e.g. Helleiner, 1984 cited in Green, 1986) and those who see the problem largely in terms of the failures of domestic policy (e.g. Sender and Smith, 1984). Gradually the two camps have moved from their original positions and there is now a large measure of common understanding (Allison and Green, 1985; Sender and Smith, 1984). In reflecting on the debate, Colclough (1985) notes that, "protagonists on all sides have been particularly prone to erect "straw men" in their contributions" and blames this partly on the poor data available and the high degree of generalization employed. Though some have deplored the fact that "as the flow of words has increased the crisis in Africa has deepened" (Please and Amoako, 1984), many would probably agree that "the dialogue . . . has clearly been necessary and in many respects positive" (Allison and Green, 1985).

Recognizing the risk of considerable oversimplification, it is useful to set the context in terms of a brief account of the background to the economic crisis, beginning with the external environment. In the mid-1970s many of the non-oil exporting countries experienced a boom and bust cycle in the prices of their main export earners — coffee, cocoa, groundnuts, beef, sugar, sisal and phosphate (World Bank, 1984). Public revenues increased dramatically in many countries and governments sharply increased their spending. Some borrowed heavily from abroad on the strength of their creditworthiness and in the expectation of continuing high export earnings. Much of the additional revenue and credit went into large public investments, many of which contributed little to economic growth or generating foreign exchange (World Bank, 1984).

When the collapse in prices came, it was exacerbated for the oil-importing countries by the oil price shocks of 1973—1974 and 1979—1980 which resulted in dramatically increased fuel import bills and substantial falls in the level of foreign exchange reserves. Governments were reluctant to

reduce their spending and some, tempted by interest rates that then appeared attractive, continued to borrow, thereby storing-up debt-servicing problems for the future. Estimates of the total external debt in 1984 are as high as \$130—135 billion, giving an average debt service ratio in the region of 35% (Green and Griffith-Jones, 1985). With the deep recession in the western industrial economies between 1980—1982 the terms of trade for non-oil primary commodities continued to fall, declining by 27% in current dollar terms between 1980—1982. This was equivalent to a 2.4% decline in GDP for the low-income group of countries in the region (World Bank, 1984).

During the 1970s many governments pursued policies and managed their economies in ways that were distinctly biased against agriculture (Bates, 1981). Thus, at the beginning of the downturn in commodity prices many governments delayed in reducing the high export taxes imposed during the boom period (Roberts, 1986). They were also slow to adjust their official exchange rates as a result of their desire to keep imports (primarily for consumption in the urban areas) cheap. Exchange rate overvaluation was particularly severe for example in Ghana, Tanzania and Nigeria (World Bank, 1986b). The result was an uncompetitiveness of many African exports and a lack of incentive to producers of export crops to maintain their productivity. This led to reduced output, smuggling into neighbouring countries offering higher real producer prices and declines in the shares of the markets held by several African countries. This exacerbated the balance of payments and foreign exchange problems.

Following independence many governments became heavily involved in agricultural marketing as a way of preventing exploitation of producers and consumers by private traders. In many countries "de jure" public monopolies sell agricultural inputs, market the outputs and in some cases monopolize the sale of consumer goods (Bates, 1981). The performance of many of these parastatals has been poor and in some cases has accounted for a significant proportion of government spending (e.g. Ellis, 1982). Prices to urban consumers have often been held down, effectively taxing rural producers. As noted earlier, the result has been to reduce the amount sold through official channels. With the reduction in government revenues and the foreign exchange difficulties in the late 1970s so the performance of parastatals worsened, farmers were poorly supplied with inputs and shortages of even basic consumer goods became common — probably leading to an even greater withdrawal of producers from the money economy. In consequence, many countries and their rural populations were, by 1981/1982, highly vulnerable to further shocks.

Demographic pressure

The population of Sub-Saharan Africa is growing at 3.1% per annum, faster than that of any other continent and its 1980 population of 359 million, will probably double by the turn of the century and significantly more than triple by the year 2020 (World Bank, 1984). This is unprecedented

in human history and exerts considerable pressure on the region's natural resources and social systems.

Environmental degradation

Opinion is divided as to the overall quality of the region's soils. The long held view has been that they are inherently of poor quality and fragile (e.g. Gourou, 1953; Kamarck, 1976; Lofchie and Commins, 1984). Some soils, such as the volcanic soils of the Kenyan Highlands, are recognized to be rich in nutrients, but are often seen as exceptions to the rule (Office of Technology Assessment, 1984). However, Moss (1980) has questioned the commonly held view that tropical soils are inherently more fragile than elsewhere, by pointing to the numerous instances from more temperate areas where deforestation, overgrazing and overcultivation have resulted in "ecological disasters."

Most agricultural systems in Africa are rainfed and are considered to make extensive use of land (i.e. to be "land intensive") as a result of the widespread practices of shifting cultivation and long fallow periods (Levi and Havinden, 1982). Only limited use is made of manure and off-farm inputs (Ruthenberg, 1980). Irrigation plays an insignificant role in arable production in the region. In most countries, less than 5% of the cultivated area is under irrigation, compared to around 30% in India. In only two countries (Madagascar and the Sudan) does irrigated land account for more than 10% of the cultivated area (World Bank, 1981; Eicher, 1985). Thus most agricultural production in Sub-Saharan Africa is considered to be of the "low-input - low output" type and yields per hectare of staple crops are lower in Africa than in Asia or Latin America (Office of Technology Assessment, 1984).

The danger that rapidly increasing human and animal populations may lead to reduced crop or grazing yields, physical degradation and ultimately to the loss of topsoil through erosion or desertification is widely recognized (e.g. Boserup, 1965; UN Conference on Desertification, 1977; Lagemann, 1977; Blaikie, 1985). Some writers have placed considerable emphasis on the contribution of environmental degradation to the food crisis. Both Timberlake (1985) and Tinker (1985) use the phrase "environmental bankruptcy" to describe the situation. Tinker comes dangerously close to stating that human disasters are caused primarily by environmental mismanagement (Tinker, 1985). Despite the extraordinary difficulties of quantifying the extent of the problem McPherson (1984) has estimated that with the current rate of soil loss, Africa could experience a decline in its potential rain-fed crop production of about 15% during the next two decades.

The relationship between population growth and environmental degradation is however extremely complex and, to make matters more difficult, several authors have noted the lack of comprehensive and quantified studies on the subject (Sandford, 1983; Eicher, 1985). Agricultural systems in the region are by no means static, there being numerous examples of innovation and adaptation in response to increasing population densities (Gleave and White, 1969; Gleave, 1980; Ruthenberg, 1980). Despite such

adaptations, it is nevertheless quite possible that, in many instances, they are simply unable to keep pace with the additional demands being exerted by the unprecedented rates of population growth being experienced. It is probably reasonable then to agree with the World Bank (1984), "that part of the decrease in agricultural output per capita in the 1970s can be explained by population pressure on arable land."

The failure of agricultural research

The inability of domestic food production to keep pace with the rate of population growth and the successes of the "Green Revolution" in Asia has led to a questioning of why agricultural research in Africa has not emulated the Asian experience. Spending on agricultural research and extension in Sub-Saharan Africa appears high in comparison with South Asian countries. Other factors are therefore identified to explain the poor performance of agricultural research in the region: a low output of research in relation to the high cost of the scientists (many are donor-funded expatriates); the spread of scientists between a large number of small research stations (reflecting the number of countries with comparatively small populations and the lack of regional co-operation); and the high turnover of both local and expatriate staff (Lipton, 1985). Even more significant in terms of food production in the region is the bias towards export crops and "rich peoples products" (Pinstrup-Anderson, 1982).

Social transformation

A prominent theme in radical writing is the effects of capitalist penetration on African agriculture (Berry, 1984; Palmer and Parsons, 1977; Hart, 1982). Evidence points to the fact that the process often results in the breakdown of indigenous social structures and practices that afforded a significant measure of food security to the members of such societies (Cliffe and Moorson, 1979). In many cases, modern structures have shown themselves to be unable to replace the levels of food security formerly enjoyed (Appeldoorn, 1981). A problem of such analyses is that data on the degree of security afforded by the original structures is hard to come by. We do know, however, that Ethiopia, for example, has been famine-prone for several centuries (Aseffa, 1986). Even if it can be proved for other countries that the pre-capitalist structures did cope, it is questionable whether they could have coped with the much larger populations now living in the more arid areas. Not everywhere has the process led to a reduced level of food security. For example, the people of rural Botswana have probably fared considerably better during the present drought than during droughts of equal severity during the pre-colonial era.

Wars, refugees and superpower rivalry

Sub-Saharan Africa is generally considered to suffer from considerable political instability (World Bank, 1984; Office of Technology Assessment, 1984). According to Tinker (1985), the past twenty-five years have seen over seventy

coups and the assassination of thirteen heads of state. Another expression of the degree of instability is the high proportion of refugees in Africa. With only one tenth of the world's population, Africa contains at least one quarter of the world's refugees (World Bank, 1984). In 1982 there were just under 2.7 million in Africa (UNHCR, 1982; cited in ODI, 1983) and the number has almost definitely increased since. According to the Overseas Development Institute, the numbers have grown rapidly over the last ten years, as the result of increased armed conflict and civil strife coupled with natural disaster and economic instability (ODI, 1983).

As well as being a product of the region's instability, Africa's refugees must also count among one of its contributory causes for, despite the assistance provided to them by the UNHCR and WFP, a large refugee population can place an "enormous strain on already fragile economic and social systems and limited natural resources" (ODI, 1983). Though the aggregate statistics show one in 200 Africans to be a refugee (World Bank, 1984), this hides the very high concentrations in a few countries. Thus in 1982 the figures were one in seven in Somalia, one in twenty-one in Burundi and one in thirty-two in Sudan (UNHCR, 1982, cited in ODI, 1983). The environmental impact of Somalia's large refugee population has been described by Young (1985).

Students of African politics and international relations tend to see the root causes of such instability in terms of the problems of post-colonial African states (i.e. tribalism, nonsensical borders etc.) and the exploitation of these problems by foreign powers (Hyden, 1983). The two superpowers are identified as the major exploiters of such problems and it is seen as no coincidence that the strategically important Horn of Africa should account for well over half of Africa's refugee population (Halliday and Moyneux, 1986). Other states within the region, such as Libya and South Africa, are also seen as causing instability, apparently without any direct support from either of the superpowers.

Instability is considered to have contributed to the food crisis in a variety of ways. For example, in Ghana political instability contributed to the decline in food availability, partly by making it more difficult for farmers to market their produce. However, it was often difficult to separate the role of political instability from that of economic factors (Borton and Shoham, 1986).

In countries experiencing civil war it is far more than the farm-to-market trade that suffers. Crops can be destroyed by opposing forces or go untended through fear of attack or the farmers' absence. Critical as such events may be, the crucial factor is the disruption caused to the transport system and efforts to bring food into the area from outside. Within the literature, there is almost unanimous recognition of the role of the civil wars in Ethiopia, Chad, Mozambique and Sudan in propelling what were food crises resulting from drought, environmental and economic problems into full blown famines (ODI, 1985; Office of Technology Assessment, 1984; Devres, 1986; WFP, 1986; Tickner, 1985).

RESPONSE TO THE CRISIS

The literature which is presently available on the response to the crisis can be broadly divided into two categories. The output by journalists working in the affected areas has been prolific but often sees the response in terms of theatre and protagonists. A formal literature of agency performance in certain countries is now available, written either by the agencies own staff or by independent researchers working on commissioned studies (WFP, 1986a; Devres, 1986; Pearson, 1986; Borton *et al.*, 1986). Therefore we can only review what happened using these sources of information.

Much of the journalistic literature tends to describe the response purely in terms of the unprecedented levels of external assistance provided by donor agencies, NGOs and the general public in the wealthier countries. The internal response by the governments, indigenous NGOs and the general public (both those directly affected and those less affected) is often overlooked. Many governments used scarce foreign exchange reserves to import food on a commercial basis. Thus Kenya purchased some 378,000 tonnes of maize in 1984/1985 at a cost of U.S.\$60 million (World Bank, 1986d). Tanzania purchased some 84,000 tonnes of maize from Thailand in 1984 (Borton and Holt, 1986), at a time when its foreign exchange reserves were reduced to only nine days import coverage (World Bank, 1986). In Kenya the President set up a National Relief Fund which has apparently been well supported by citizens. In Sudan's severely affected Darfur Province, York (1985) has noted how branches of the Red Crescent Societies spread rapidly across the Province as local community leaders, teachers, health workers and merchants formed relief committees and later chose to turn them into local Red Crescent branches.

Nevertheless, the international response was undoubtedly massive (World Bank, 1986c; Foreign Affairs Committee, 1985). Information on the amount of food provided for relief is more readily available than that for financial assistance which can be difficult to separate from normal flows of financial assistance. Totals cereals food aid to Sub-Saharan Africa averaged 1.13 million tonnes over the five years from 1975/1976 to 1979/1980 and from 1980/1981 to 1983/1984 it averaged 2.58 million tonnes. In 1984/1985 it increased dramatically to 4.95 million tonnes (Benson, 1986). The proportion of food aid approved for emergency relief also increased sharply, from only 14% of receipts in 1979/1980 to 51% in 1984/1985 (Benson, 1986).

Financial donations by the western public were unprecedented — totalling several hundred million pounds (Twose, 1985). The level of the response is thought to have been increased above those to previous famines by the unprecedented involvement of western pop musicians in fund-raising and public shock at the contrast between famine in Africa and the growing "grain mountains" in the EEC. Pressure by the public is thought to have been a significant factor in increasing the level of response by western governments (Gill, 1986).

Among the points to be raised by the evaluative literature are that the timing of the response by donors was often poor

— particularly in Ethiopia (WFP, 1986a). There was a greater degree of information sharing among donors than during previous emergencies. The creation of the Africa Task Force Secretariat within WFP in early 1985 enabled donors to see when and where the gaps in the requirements would occur (WFP, 1986a). At the country level agency co-ordination varied considerably, being thought to be excellent in Ethiopia but poor in the early stages in the Sudan (WFP, 1986; Gill, 1986). The success of NGO fundraising, combined with a preference by donors to rely on NGO's rather than untrusted or incapable agencies of host governments, resulted in unprecedented demands being made on the capacity of certain NGOs (Finucane in Clay and Everitt, 1985). Too great a reliance on resources provided by one donor can jeopardize the effectiveness of an NGO's response (Borton *et al.*, 1986). More resources should be put into ensuring a higher level of preparedness in the future (WFP, 1986a; Devres, 1986, Borton *et al.*, 1986).

THE CRISIS IN THE CASE STUDY COUNTRIES

Kenya

Kenya experienced its worst drought for several decades during 1984 (World Bank, 1986; FAO, 1984; Ray, 1984; Cohen and Lewis, 1985). The feature that made the drought so unusual was the failure of the 1984 "long rains" in Central Province, the country's arable heartland.

Estimates of the cereal import requirement were gradually revised down throughout 1984. When making its initial appeal to donors in the third week of June, the Government of Kenya estimated the total cereals import requirement to be between 1.3 and 1.5 million tonnes (FAO, 1984b). Eventually the donors, following FAO recommendations, supplies some 359,000 tonnes and the Government purchased a total of 520,000 tonnes (FAO, 1986a). The Government's ability to purchase such a substantial proportion of the additional requirements can be partly attributed to the low world cereal prices since 1984. However, the fact that Kenya's ability to purchase contrasts with many other countries in the region must also be due in part to the maintenance of tea and coffee exports during 1984 at levels comparable with previous years and the substantial increase in world tea prices during 1984 (World Bank, 1986d).

As a result of some of the imports arriving late and the bumper harvest in 1985, maize stocks rose to the unprecedented level of 800,000 tonnes in February and Kenya was forced to re-export 126,000 tonnes of the less popular imported yellow maize at a considerable financial loss (World Bank, 1986d). This problem of lagged response and excess stocks after good rains is now widespread in the region.

The response strategy adopted by the Government was to give priority to "market relief," i.e. to maintaining supplies of the staple cereals through the existing marketing channels. It was intended that relief to those badly affected would be through the creation of temporary labour intensive public works schemes and in areas not covered by such schemes by way of free-food distributions (Ray, 1984; Borton and Stephenson, 1984).

Comprehensive and objective assessments of the performance of the whole relief operation are still not available. Nevertheless, it is widely considered that the crisis was comparatively well handled by the Government and most accounts emphasize the commitment and promptness of its actions (World Bank, 1986d; Cohen and Lewis, 1985). For example, the early decision to make an initial purchase tided the country over until donated supplies began arriving towards the end of the year, and a Task Force was created to co-ordinate all the operations (Borton and Stephenson, 1984). Substantial Government funds were released for the Programme to cover most of the inland transport costs, the accelerated programme of labour intensive public works projects and, most significant of all, the costs of the commercial food imports.

In stressing the positive role of the Government, there is the possibility that the level and promptness of support by the donor community may be underestimated. The readiness of western donors to support the Government's relief programme in the months immediately following its appeal in June 1984, has been contrasted by journalists to the support offered to Ethiopia during the same period. Another problem with the above assessments is that they take a macro-perspective. The effectiveness of the Programme at the district and village levels remains to be conclusively established. For example, significant increases in malnutrition were detected during the second half of 1984 by a nutrition research project operating in Embu District (Neumann *et al.*, 1986).

Some writers have pointed to the rather "ad hoc" nature of the Government's response. There appears to have been little investment in the information systems and administrative structures designed to enable the effective management of a food crisis; the Task Force was an entirely new creation; and the crop forecasting and nutritional surveillance systems were poorly developed (Borton and Stephenson, 1984). Cohen and Lewis (1985) have contrasted Kenya's success in averting a famine with the absence of the kind of permanent institutional structures designed specifically to cope with national food crisis. They then go on to argue that Kenya's experience demands that international agencies should rethink their advocacy and support for the creation of such structures in drought-prone countries.

Botswana

Botswana has been experiencing a severe and prolonged drought since the failure of the 1981/1982 rains. The drought has caused significant increases in livestock mortality rates and dramatic reductions in domestic crop production and the income of rural households. Though the drought broke in many of the neighbouring countries in 1985, the 1984/1985 rains in Botswana were well below the long term average and the country remains on the FAOs list of "Affected Countries." Despite this it is questionable whether the country has been experiencing a food crisis in the way that the term has been applied elsewhere, for starvation has been averted and increases in the prevalence of malnutrition have been limited (Morgan, 1985; Hay,

Burke and Dako, 1985). Botswana's experience is therefore in contrast to that of many other countries and is worth examining to see why this should be the case.

Much of the country falls within the Kalahari Desert and rainfall is not only low but is very erratic. Consequently, the country is unusually drought prone (Sandford, 1979). Major regional and nationwide droughts have been experienced during ten of the twenty years since the country attained Independence (Borton, 1986). In such conditions crop production is subject to extreme variability. Though average production of the four main food crops is around 50,000 tonnes, it has reached as high as 120,000 tonnes, yet between 1982—1985 has averaged only 14,000 tonnes. With total demand for cereals presently being around 160,000 tonnes imports are necessary even in years of good production and most of this is carried out by private sector traders buying in South Africa.

The primary reason for Botswana's success in mitigating the effects of the drought has been the unusually comprehensive and effective relief programme mounted by the Government that has attracted praise from a variety of sources (Borton, 1984; Holm and Morgan, 1985; Bush, 1985; Hay *et al.*, 1985; World Bank, 1985a). The Relief Programme has four main components, namely food relief, cash for work projects, water relief and agriculture/recovery projects.

The food relief component involves the distribution of approximately 40,000 tonnes each year to some 600,000 beneficiaries, equivalent to 60% of the total population. Approximately 90% of the food is donated with the remainder being supplied by the Government to fill any gaps occurring in the arrival of donated shipments (Borton, 1986). The food is provided as free supplementary rations to groups considered to be particularly vulnerable to undernutrition living in the affected rural and peri-urban areas. The effectiveness and wide coverage of the distribution system has been shown by a recent survey of six rural villages in different parts of the country (Hay *et al.*, 1985). The exceptional outreach of the feeding programmes is largely attributable to the heavy investment in rural infrastructure (schools, health facilities and water supplies) by the Government of Botswana during the 1970s and early 1980s (Borton, 1984; Hay *et al.*, 1985).

The second component of the Relief Programme, the Cash-for-Work (referred to locally as Labour Based Relief) Projects, involve the creation of temporary public works projects in most villages in the country. These provide some 50,000—70,000 participants with temporary work each year and it has been calculated that the wages paid during 1984 and 1985 have replaced an estimated 35% of the value of the crops lost due to the drought in those two years (Morgan, 1985).

The Water Relief component of the Programme involves the acceleration of the Central Government's borehole drilling and equipment programme and the allocation of funds to District Councils to provide water to villages whose normal sources have dried up.

The Agriculture/Recovery Projects involve a package of measures designed to help reduce stock losses and assist arable farmers to be prepared to take full advantage of the

rains when they arrive. They include the distribution of free seed packages to all farmers; the provision of grants to pay for the labour costs of clearing land of bush; the provision of a subsidy for hiring tractors to plough; the provision of free vaccinations and vitamin injections for livestock; the provision of subsidized livestock feed; the purchase of old and cull cattle at guaranteed prices to use the meat in the Primary School Feeding Programme.

Obviously the Relief Programme is not without its problems (Borton, 1984). The World Food Programme intends to reduce its level of assistance to the Programme as a way of encouraging the Government to introduce targetting to those within the Vulnerable Group category who are more seriously affected (WFP, 1986b).

Nevertheless, the achievements of the Relief Programme are many. The literature identifies the following as the main strengths of the Programme.

1. The effective national Early Warning System enables the prediction of the likely harvests as early as the February of each year and this gives almost four months notice before the start of each year's Programme. Such time is crucial in initiating the "gearing-up" process and in enabling an early request to donors for assistance (Morgan, 1985; Borton, 1984).
2. The early commencement of the Programme (in the June of 1982 at the time when the first failed harvest was being gathered) "bought time" for the system to gain momentum and for early problems to be resolved before the performance of the Programme became critical. Similarly, it enabled relief to be provided in the villages at a stage well before people were forced to leave their homes in search of food and before participants in the Labour Based Relief Projects became too weak to work (Borton, 1984).
3. A non-drought supplementary feeding programme had been operating in the country since the 1960s and this meant that the food distribution component of the Relief Programme built on pre-existing systems (Borton, 1984).
4. The prior agreement on the beneficiary groups within the Government avoided the need for a time consuming clarification and assessment process by donors.
5. The sound committee structure at both the central and local government level.

In looking for the underlying factors accounting for the Programme's success, the following points have been emphasized:

1. Internal stability (Colclough and McCarthy, 1980).
2. The comparatively wealthy and well managed economy (per capita GDP is U.S.\$960 — World Bank, 1986b) has given the Government considerable flexibility in the design and implementation of the Relief Programme (Borton, 1984; Harvey, 1985).
3. There is a strong commitment by the Government to the Programme (Cutler, 1986; Holm and Morgan, 1985).

4. Despite its relative wealth Botswana continues to enjoy popularity with the western donor community. In 1984 per capita net receipts of Official Development Assistance were U.S.\$102, whereas the average for Sub-Saharan Africa was only U.S.\$18 (World Bank, 1986b).
5. The comparatively small size of the population (940,000 at the time of the 1981 Census), whilst presenting some logistical problems, make it easier for the Government to mount an effective Programme and for donors to make donations which, measured in their terms, are small but which to Botswana are highly significant (Borton, 1984).
6. The excellent regional transport infrastructure (Borton 1984).
7. Because the country experiences drought so frequently, the Government has had considerable incentive to develop an effective Relief Programme. The Government has been prepared to accept criticism of its efforts and to integrate the lessons from each Programme into the design of the next (Holm and Morgan, 1985; Borton, 1984). Taken together, this has enabled a gradual perfection of the system.

In conclusion, the Programme involves a comprehensive set of measures with good coverage of the country, that can be expanded as required. The key elements of a successful response system, outreach and flexibility, are therefore present.

Ethiopia

Following the 1972—1974 famine and the almost simultaneous famine in the Sahel, there were calls in international fora, such as the 1974 World Food Conference, for the creation of structures to predict and prevent famine. It was felt that if such structures existed, national and international resources could be mobilized earlier to prevent a recurrence of the situation. In Ethiopia this resulted in the creation of the Relief and Rehabilitation Commission (RRC) which, even before 1984 was a large and powerful government agency (Cutler and Stephenson, 1984). Given the resources put into the RRC and similar, though smaller and less ambitious, agencies in other countries in Africa, a crucial question is why the system failed. Several reasons have been given in the literature.

Part of the answer must lie in the atrocious statistical base of food production and availability in Ethiopia. For instance, according to both FAO and USDA, indices of per capita food production stood at levels above those of their base year periods (1974—1976 in the case of FAO and 1976—1978 in the case of USDA) until 1984 when they both fall substantially, the FAO index to ninety and the USDA index to ninety-eight (FAO, 1984, 1985; USDA, 1985). Such "food balance" indices do need to be treated with considerable caution, as they obscure regional differences, include areas outside Government control and rely on out of date population estimates. First reports of starvation in Wollo came in 1983 just one year after a bumper harvest that had supposedly produced the highest index for a decade (Baulch, 1985). The FAO Production Yearbook of

1983 took the total population to be 33.7 million, whilst the country's first ever national census carried out between March and September 1984 produced a figure of 42 million (World Bank, 1985b).

A widely held view in the literature is that the RRC was guilty of exaggerating its food aid requirements in the years up to 1984 and that this had resulted in a growing scepticism amongst donors, possibly fuelled by the unpopularity of the Mengistu regime, about the RRC's appeals during 1983 and 1984 (Cutler, 1985; Gill, 1986). There were certainly strong incentives for the RRC to do so. Although Ethiopia is the poorest country in Sub-Saharan Africa (World Bank, 1986b), in 1983 the country received the lowest levels of development assistance (World Bank, 1984). In addition the Government in Addis Ababa was devoting considerable resources to waging the wars against secessionist movements in Eritrea and Tigray. No less than 40 to 50% of the GNP is estimated to be expended on the wars (Cutler, 1985; Baulch, 1985). In these circumstances, emergency assistance was the only channel of bilateral aid not severely constrained by the lack of an agreed framework between the government and donor agencies.

Controversy continues on the precise chronology of action in 1984 and, by implication, on the balance of responsibility for the tragedy. The relative importance of the Government's revolutionary celebration in diverting national efforts and resulting in imposition of travel restrictions on foreigners, and the failure of external assessments (most notably that by the FAO/WFP in May 1984) to highlight Ethiopia's more serious plight during a continent-wide crisis, are examples of issues in the debate (Gill, 1986; Aseffa, 1986; Lemma, 1985). This is a subject for further study by contemporary historians of Ethiopia and international affairs.

However, some issues concern social science analysis more directly. For example, Cutler and Stephenson (1984) focus on response and uses of information by government and agency officials in Ethiopia. Within bureaucratic donor institutions, individuals were preoccupied with palliative responses to a progressively deteriorating situation. Only media intervention precipitated a global awareness and triggered a massive response commensurate with the gravity of the situation. Social science research on famine warning systems have been primarily concerned with technical problems of identifying and calibrating improved indicators (see for example, Cutler, 1985). In contrast little attention is accorded to how information is processed and filtered within bureaucratic institutions.

The role of the media in the international emergency response process had already been raised by Shawcross (1984) in a study of the Kampuchean emergency. The Ethiopian famine has once again shown this to be a rich and important subject for research.

Political factors appear to have played a significant role in the failure to respond to the numerous early warning signals. That this should be the case in the most extreme food crisis for a decade, should not lead to a perception of early warning systems as attempting technical fixes to political problems. The cases of Kenya and Botswana show

that early and decisive action is important in determining the effectiveness of response. Early warning is clearly a necessary but not a sufficient condition for effective response.

Perhaps the understandable interest in the Ethiopian famine will pose a wider problem for research. A pathology of extreme cases is a potentially dubious basis for a wider generalization on important issues of public policy. One could question therefore the usefulness of a concept such as famine studies as distinct from social science analysis of food security problems and policy practice. For example there is a need for a more systematic review of drought preparedness strategies, from household to national levels, covering a wider range of country experiences.

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The food crisis was the product of a number of interacting factors. The permutations of these factors varied significantly between countries. Drought, internal political and economic factors and the unfavourable external economic environment were significant contributory factors in most countries. However, the external environment was not entirely unfavourable, for the world cereal markets were overhung with surpluses and it was possible for some countries, such as Kenya, to buy their way out of serious problems. This had not been an option during the "World Food Crisis" of the early 1970s.

Retrospective evaluations do suggest that food aid mitigated the situation. The early warning systems put in place since the early 1970s were helpful where the internal political context and relationships with the international donor community was favourable.

In this review we have deliberately given attention to two of the "success stories." We would ask whether it would be more useful, where we are examining highly complex systems, to give more attention to those that in some sense are functioning, rather than become preoccupied with the extreme cases. The process of understanding the causation for complex systems is difficult and the debate may remain inconclusive. Witness for instance the continuing acrimonious debate on the Bengal Famine of 1943.

We therefore suggest for discussion, that priority areas for research should include countries such as Botswana, Kenya, Zimbabwe, Cape Verde and areas where the system held up in Ethiopia. Again in West Africa, the experiences of Niger and Burkina Faso are just as significant as those of Mali and Chad.

We have drawn attention to the incomplete nature of evidence in the environmental debate. Here is an area that requires systematic and multi-disciplinary research. Agricultural systems are comparatively well researched, whereas the food system viewed as an integrated production and consumption system is less well understood. We will never know with any degree of accuracy how many people were affected and how severely. We believe that the study of how food systems respond to stress and interventions to provide food security and post-disaster relief should be a high priority for research.

One lesson of the recent crisis is that rural development cannot be sustained without putting in place a robust system of food security. A lesson of the previous food crisis is that agencies very quickly take a view on what institutional changes are required to improve response and then their interest soon lapses. Research is needed to keep the issues alive.

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The development of aid agency policy on the use of imported biscuits in emergency relief

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During 1985 more than 5,000 tonnes of biscuits consisting of twenty-eight different brands were sent to Ethiopia and Sudan for emergency relief feeding. They were freely available to recognized agencies operating feeding programmes. Biscuits were popular with programme supervisors as few resources (fuel, staff and personnel) were required for their preparation and distribution. They were also popular with beneficiaries.

Different aspects of biscuits were examined and characteristics considered important included: nutritional composition, acceptability to beneficiaries, packaging, the biscuit dimensions, shelf-life and accompanying information (nutritional composition, ingredients and guidelines for use).

The results of a field study indicated that biscuits have a limited, but useful, role to play in the early stages of emergency relief. Based on the study, guidelines for both donors and users, on the use of food aid biscuits were developed, which emphasize their joint responsibility in minimizing the misuse of biscuits.

Keywords: Biscuits; Selective feeding; Food aid; Donors.

INTRODUCTION

Aid agencies operating selective feeding programmes (SFP's) rarely procure the food used in their programmes. Instead they accept food aid consignments direct from donors or request supplies from local distributing bodies. Few agencies have defined policies regarding the foods they are prepared to accept and how they should be used. This paper will illustrate how such a policy was developed by

Oxfam with regard to the Oxfam Energy Biscuit (OEB) and how this was extended to develop guidelines for other prospective donors of food aid biscuits and also for users in the field.

The OEB was developed in response to some of the problems associated with SFP's. In the absence of adequate supplies of indigenous foods, foodstuffs must be imported. The use of biscuits overrides the need for many of the resources required to establish a SFP in the early stages of an emergency, for example, fuel, cooking and serving equipment, trained personnel etc. Biscuits possess a long shelf-life and their low moisture content limits microbial growth. The OEB was designed to provide a concentrated energy source containing adequate amounts of protein in a palatable form. The packaging specification took into account the problems of transport, storage and distribution both within the country and at the field level. Young *et al.* (1985) describe the development of the OEB.

Since November 1984, 1,365 tonnes of the OEB have been purchased for use in the Sudan and in Ethiopia. Up until July 1985 at least £1.8 million had been spent on purchases of the OEB. Further costs would have been incurred by transport, distribution and storage. As the OEB represents a new concept not previously considered in Oxfam's recommended feeding procedures (Oxfam Health Unit, 1984), an evaluation of the use of the OEB was essential. The objectives of the evaluation were to examine the role played by biscuits in emergency relief in Ethiopia and Eastern Sudan, with the aim of determining whether biscuits were an appropriate and cost-effective response for agencies to adopt in their SFP and also to determine whether all biscuits were equally useful. Decisions regarding the future of the OEB were based on the results of this work, together with more general recommendations and guidelines regarding the use of biscuits in emergency relief.

METHODS

A field study of thirty-four feeding programmes in Ethiopia and East Sudan provided a scenario of the use of biscuits in selective feeding programmes. An overview of these programmes is presented by Young (1986).

The quantity and source of biscuits found in Ethiopia and Sudan were determined by means of the World Food Programme (WFP) computer summaries of food shipments (Addis Ababa and Khartoum). Other sources of information included the Relief and Rehabilitation Commission, Addis, the Christian Relief and Development Association (CRDA), Addis, the League of Red Cross Societies (LRCS), Addis and Khartoum, UNHCR, Khartoum and UNICEF, Khartoum and Addis.

Details of the actual donors were obtained from the consignees and also from bills of lading, where available. The manufacturers of the biscuits were ascertained from the donors. Details of costs, nutritional value, ingredients, packaging, shelf-life etc. were requested from manufacturers. Consignees were also questioned regarding biscuit distribution and transport.

RESULTS

The quantity and source of biscuits found in Ethiopia and Sudan

In Ethiopia between September 1984 and November 1985 approximately 3,667 tonnes of biscuits, comprising eighteen different brands, were donated to relief programmes. In Sudan approximately 1,900 tonnes (sixteen different brands) of biscuits were donated between January and October 1985.

There were five main groups of donors who contributed towards the purchase of biscuits for use in Ethiopia and Eastern Sudan:

1. Food manufacturers donated biscuit consignments or part consignments. Two examples of this were Irish Biscuits, Dublin, who give Sweetmeal biscuits to Concern operating in Ethiopia and also Fox's Biscuits, Batley, who contributed towards the cost of the OEB for use by Oxfam.
2. Governments donated biscuits to relief agencies, for example the Italian gift of more than 800 tonnes of biscuits to UNHCR, for use in Sudan, the Norwegian donation of forty tonnes to UNICEF, Sudan and also several Japanese donations to UNHCR in Sudan and also to WFP, Addis Ababa.
3. Charities involved in relief work of relief agency sister organizations not directly involved in relief either purchased or gave money specifically for the purchase of biscuits to relief agencies. For example, Band-Aid purchased more than 190 tonnes of the OEB and donated them to the Christian Relief and Development Association (CRDA; a distributing body in Addis Ababa). Carritas Netherlands and Interkerkelijk Stichting Ethiopie, Holland gave more than 1,500 tonnes of biscuits to CRDA for use in Ethiopia. Sister societies of the League of Red Cross Societies (LRCS) donated biscuits to the local Red Cross Society in Sudan and Ethiopia. Radda Barna purchased sixty-three tonnes of biscuits for use by their sister organization, Save the Children Fund, U.K. (SCF).
4. International bodies made funds available for the purchase of biscuits by relief agencies, for example, the EEC's grant to UNICEF, who purchased 87.7 million tonnes of biscuits for use in Ethiopia. The EEC have a grant available for prospective donors specifically for the purchase of food aid biscuits.
5. Actual operating agencies purchased biscuits for their own programmes, as Oxfam did in both Ethiopia and Sudan.

In Ethiopia approximately 43% (1,589 tonnes) of the total amount of biscuits arrived between December 1984 and January 1985. By this point just over half of the feeding programmes visited were established and so this early stage of the emergency would have been the time when biscuits

were most useful. In contrast in Sudan the largest consignment (from a single donor) representing 49% (921 million tonnes) of the total, was received in August 1985. By the time this consignment was cleared from the port and dispatched to the supplementary feeding warehouse in Gedaref (January 1986) all reception centres had been operating for at least eight months and many SFP's had been closed down or reduced (levels of malnutrition amongst refugees were well below 10%). The use of a biscuit at this time was unnecessary and wasteful of resources as other cheaper food commodities were readily available and resources for their preparation were well established. The quantity of this donation should also be noted as it far exceeded any other and was expected to last two years if used according to the COR/UNHCR Guidelines on feeding procedures (1985). Clearly, alternative uses would have to be found to prevent wastage through spoilage. Consideration by donors should therefore be given to the situations where the use of a biscuit is appropriate and represents value for money and to appropriate consignment sizes.

The use of biscuits in selective feeding programmes

Biscuits were extensively used by all but one of the agencies interviewed, even during the time of the survey when many camps had been established for up to one year. The International Committee of the Red Cross did not use biscuits in their SFP's as it was their policy to use only local foods.

Biscuits were rarely used on their own and in wet feeding programmes were always distributed together with high energy milk (HEM) or high energy drinks (HED). Some selective feeding programmes (SFP's) limited the use of biscuits to the more malnourished groups. Several agencies reported that the anorexic children or "fussy eaters" found biscuits more palatable than many of the other foods and would slowly chew or suck at them and in time regain their appetite and take other foods. Occasionally biscuits were distributed as part of the take-home supplementary ration in Eastern Sudan. This was unpopular with most programme supervisors as biscuits were considered a prestigious food and were therefore liable to be resold by beneficiaries possibly for less than their monetary value. Biscuits were found on local markets, which was partly attributed to resale by beneficiaries, but more likely due to interception of consignments before they reached the beneficiaries.

The amounts of biscuits per beneficiary depended on the biscuit brand and the general availability of biscuits, and varied between programmes. The nutritional value of the biscuits was not always included in the calculations of the nutritional value of the feeds, partly because the energy value of many biscuits was unknown and partly because the brands would change, rendering the calculations incorrect. A common ration size was one handful and was assumed to contain 500 kcal, which was an incorrect assumption as the energy density varied considerably between brands.

Biscuits were especially popular as the first feed of the day in wet feeding programmes, as they needed no lengthy preparation. Biscuits facilitated the job of the feeding programme supervisor, as no resources and few personnel were required for their preparation or distribution. They were freely available to operating agencies who therefore did not have to consider their higher cost in relation to other commodities. This may have led to them being overused, when cheaper alternative foodstuffs were available.

Apart from their use in SFP's biscuits were also used in the following ways:

1. As incentives to attend feeding centres to collect dry rations (a handful of biscuits and a cup of HEM would be given),
2. As incentives for certain groups to attend educational programmes e.g. mothers attending childcare and primary health care classes.
3. For providing nourishment to people who had travelled long distances to attend medical clinics or general ration distribution and then had to return home. Biscuits were distributed to repatriated refugees prior to their journey home from Eastern Sudan to Ethiopia.
4. In hospitals to supplement the diet of in-patients and convalescing patients.
5. In schools and orphanages.
6. As rewards for good attendance at SFP's or withheld from beneficiaries because of late arrival at the centres!

Biscuits were rarely in short supply, although availability of different brands varied. Some agencies preferentially used certain types. Different brands were not always used interchangeably due to their different characteristics. For example, a savoury cracker product in Eastern Sudan was considered by many supervisors to have no "nutritional value" and therefore was distributed with the aim of using them up rather than to contribute to the ration, in which another biscuit type may have been included.

A profile of biscuits used in emergency relief in Ethiopia and Sudan

Twenty-eight brands of biscuits were found in feeding programmes or warehouses in Ethiopia and Sudan. Of these biscuits, only ten brands arrived in consignments of over forty tonnes and therefore the remaining brands were of lesser importance in terms of their contribution to the relief effort (Table 1).

The most frequently found biscuit in Ethiopia was the Dutch VIB biscuit, which constituted 48% (1,765.4 tonnes) of the total biscuits in the country. The OEB was the next most commonly found biscuit in Ethiopia with 23% (768 tonnes). Prior to the arrival of the Italian biscuits in August, the OEB was the most frequently found biscuit (approximately 370 tonnes, 20%).

Where the manufacturers were identified, they were approached for details of the products. Not all products

Table 1. Biscuits used in feeding programmes in Ethiopia and Sudan

Biscuit	Country of Manufacturer	Where found	Number of SFP's using this brand
Albert Kekes	Yugoslavia	S	—
Australian milk biscuit	Australia	E* and S	4
BP-4 and BP-5§	Norway	E and S	3
Bruin	Holland	E	3
Calorie Mate	Japan	S	3
Cinbis sticks	Japan	E	3
Detic Djecji	Yugoslavia	S	—
Dutch VIB§	Holland	E	16
Frukost Kex§	Sweden	E	3
Grovkiks	Denmark	S	2
hgm HP biscuits§	Germany	E	1
Interaid HP§	Belgium and Holland	S	13
Irish sweetmeal	Ireland	E	3
Japanese Hard Biscuits	Japan	E	3
Kosmaj Kekes	Yugoslavia	S	—
Liga rusks	Germany or Holland	E and S	6
Mellin biscotti§	Italy	S	—
New Zealand biscuit	New Zealand	E	1
Novofood	France	E and S	2
O.E.B.§	U.K.	E and S	23
Oxford Biscuit	Denmark	S	—
Petivers§	Italy	E	2
Plasmon§	Italy	E and S	9
SCFB	Switzerland	S	3
Whole Milk Biscuits	Switzerland	E	1
Survival cookies	Quebec	E	2
Vitabis	Belgium	E	1
Yamazaki Crackers§	Japan	S	9

§Consignments over 40 million tonnes.

*E = Ethiopia.

S = Sudan.

found in the field are continually available to donors, for example, the Dutch VIB biscuit (the Dutch government biscuit) was produced in 1965 and the closest currently available product is the Jamin food aid biscuit.

The range of biscuit food aid consignments found in Ethiopia and Eastern Sudan were extremely diverse and included compressed products, emergency rations for defence or other purposes, western style infant rusks and sweet or savoury products originally designed for the western biscuit market. Two products had no accompanying instructions stating their intended use or nutritional

composition or ingredients and did not resemble products on the western consumer market (the product or the packaging).

The various attributes of the different biscuits will now be considered in an attempt to establish whether all biscuit brands were equally useful.

Nutritional value. The most important aspects of nutritional composition of relevance to relief feeding programmes were considered to be energy density, protein content and vitamin and mineral content. An in-depth comparison of the ingredients and nutritional value of the different biscuits found in Ethiopia and Eastern Sudan and others available on the market is given by Young *et al.* (1987).

The energy density of the field samples ranged between 117 and 481 cm³ (OEB; 174 cm³) of which the compressed products were the most energy dense products and the infant rusks and savoury crackers were the least energy dense. The number of biscuits required to provide 500 kcal also varied enormously from four (the OEB) to ninety-four! Fewer biscuits per beneficiary facilitates distribution and increased energy density reduces the volume needed to be eaten to give a set number of kilocalories and is less demanding of transport and storage space. All but five of the biscuits were supplemented with protein rich ingredients in order to raise the level of protein and eleven biscuit brands were additionally supplemented with extra vitamins and minerals.

Packaging. Packaging is an important product component as it will influence the:

- i. Rate of spoilage and hence shelf-life,
- ii. Resistance to mechanical damage,
- iii. Ease of distribution to both the programmes and the beneficiaries,
- iv. Security of the product (liability to theft),
- v. Final cost of the product,
- vi. After-uses on-site.

Figures on shelf-life were only available for thirteen biscuit products. Twelve months was the most frequent figure given (nine out of fourteen brands). The Australian Milk Biscuit had a shelf-life of nine months and the Liga eight months. Four products had a shelf-life in excess of twelve months; Plasmon (eighteen months), Bruin (five years) and BP-4/BP-5 rations (five years). Figures on shelf-life of the Dutch VIB were obtained from the date of manufacture stamped on the tins found in the field (1965). Its long shelf-life was assumed attributable to hermetically sealed tins flushed with nitrogen gas prior to sealing.

The setting of shelf-life dates is usually a decision based on the point at which biscuits are no longer considered acceptable by the consumer. Biscuits do not constitute a public health risk unless they have been allowed to become damp and so support microbial growth. If their dry state is maintained their shelf-life will be determined by the

development of off-flavours or odours, the acceptability of which will vary with different consumers and may be extendable in an emergency.

In an emergency situation goods may be subjected to extreme environmental conditions (temperature, humidity and light) and also rough handling and therefore to ensure optimum product quality and minimum losses through spoilage the packaging specification must be able to withstand such abusive conditions.

The unit size of biscuit packs arriving at the port, determined their ease of handling. Transport of goods from warehouse to truck was invariably manual, therefore any item in excess of 80 kg (the approximate carrying capacity of two men) caused problems and generally had to be split into smaller units, which was time consuming and awkward. If the unit size was below 10 kg the efficiency of handling and stacking was again reduced and the small unit size was thought to increase the ease with which they may be stolen, as would unsealed cartons or tins.

Inside the outer case, biscuits were contained in smaller packs. Some products were simply packed in a plastic liner (hgm and Inter Aid high protein biscuits), so once opened, the carton had to be used up quickly before they spoil. Smaller cardboard cartons wrapped in film were used to package Detic, Grovkiks, Mellin and Plasmon and were probably originally designed with western supermarket shelves in mind rather than emergency relief. Calorie Mate Blocks and BP-4/BP-5 rations were vacuum packed in foil laminates and contained in a cardboard box, which represented one ration (Calorie Mate — 400 kcals (79 g) and BP-4 — 1,000 kcals (230 g)). Bruin Biscuits, Novofood and Yamazaki were also packed in foil laminates. Biscuit "sleeves" (film encasing biscuits with two end seals and a vertical seal) were used to pack Irish sweetmeal. Small tins (<1 kg) were used to package Cinbis sticks, Whole Milk biscuits and SCFB.

The OEB, Survival cookies, Liga, VIB, Bruin, Calorie Mate and Novofoods were all in individual packs of less than 130 g, which were thought by programme supervisors to facilitate distribution to beneficiaries, also children had less chance of dropping or losing their ration in comparison with a handful of loose biscuits. Within these twelve packs the number of biscuits ranged from one to twelve.

The after-uses of the film or cardboard packaging were limited as they soon disintegrated. The tins and plastic tubs were considered useful by all the camps visited, although complaints were received regarding the large proportion (up to 90%) of plastic OEB tubs that were received broken. Unbroken plastic tubs and tins were used for water containers or carriers, rubbish bins, payment of volunteer workers, general storage vessels, gifts or incentives for beneficiaries and plant pots. Plastic tubs were additionally used for first aid boxes in both Ethiopia and also in Sudan, where they were given out during repatriation of refugees. Also the tubs were used as "potties" or bed pans and were of great assistance during cholera epidemics. Tins were also used to make chimneys and stoves. At Safawa, Eastern Sudan a local metal worker made items out of the large OEB tins. At Korem, Ethiopia, the stove chimneys consisted

of VIB tins fastened together. Tins were used to cook in and their lids used as baking trays.

Information accompanying biscuits. In general, most biscuits had little or no accompanying information. Two products had no label or leaflet at all and were unidentifiable. A further seven products were simply accompanied by their brand names. Less than half of the biscuit brands (eleven) indicated their ingredients. Those brands listing ingredients did not always specify the fat source, which was an omission as the term animal fat may cover marine and fish oils, butter oil or beef or pork fat, not all of which have the same cultural significance.

Details of the nutritional composition varied between brands, thirteen brands disclosed their energy value (either per 100 g and/or for a given number of biscuits), twelve brands gave their protein content and eleven their fat and carbohydrate content. Only seven included details of vitamin and mineral content. This paucity of nutritional information must have hindered the job of the feeding programme supervisor in assessing the contribution of different brands to their feeding programmes. Consequently many supervisors tended to use products with nutritional information preferentially to those without.

The date of manufacture was stamped on leaflets accompanying Petivers and also some tins of Dutch VIB biscuits. Sell by dates were found on five brands, two of which had been exceeded.

Guidance on the use of particular products was limited to Liga biscuits, the OEB, the Novofood bar and the BP-4/BP-5 rations. The quality of the information varied from the advantages of using biscuits to general advice on feeding children, ration sizes, recommended ration sizes etc. The Oxfam leaflet accompanying every tin or tub of biscuits was the only one to stress the situations where the use of biscuits was appropriate; "early emergency situations as a supplement to the general ration when: (a) other foods are not locally available and (b) logistics, cooking facilities and water supplies are inadequate or difficult to organize rapidly."

BP-4/BP-5 presented information in visual images on each pack together with their nutritional composition and weight in three languages. Liga were the only other biscuit to be accompanied in the field by information in more than one language.

Acceptability of biscuits. All feeding programme supervisors interviewed felt that the acceptability of biscuits was high and that children "would always eat them." However, despite their popularity, supervisors of programmes serving indigenous foods felt that these were more consistently preferred by beneficiaries to biscuits.

Distinctive flavours and odours such as the Calorie Mate Block, which was a compressed product containing cheese, were initially disliked by some beneficiaries. However, after persistent encouragement most beneficiaries would eat them. Many biscuits tasted stale by western standards, but this did not appear to affect palatability.

Costs. The costs to be considered when using biscuits in SFP's include product costs, costs of packaging and distribution and storage costs. Also worthy of consideration is the reduction in fuel and possibly labour and equipment costs as a result of using biscuits.

Product costs (as of January 1986) for twenty-three biscuit brands are shown in Table 2. For comparison, costs have been given in pounds sterling (rates of exchange are given). Prices range from £811/tonne for Irish Sweetmeal to £10,008/tonne for Calorie Mate Block. The compressed type products were far more expensive (average cost £4,443.5/tonne) than the traditionally baked products (average cost £1,294/tonne). Five products cost less than £1,000/tonne; Grovkiks, Irish Sweetmeal, Oxford biscuits, Petivers and Survival cookies.

Costs were sometimes influenced by the volume purchased, for example, the cost of the Survival cookie was up to 6% less if more than 5,000 cases were ordered (51.0 tonne). Petivers varied between £965 and £1,052/tonne depending on the size of the order.

The packaging specification will also influence the product cost. For example, the OEB cost £960/tonne packed loose in a carton, £1,114/tonne in packets of two in a 10 kg carton, £1,286/tonne in a plastic tub and £1,383/tonne in a 4.8 kg tin. The increased costs of using tubs, tins or buckets should be offset by the reduced losses of biscuits through spoilage and also the increased number of after uses on site, which is not possible to cost in monetary terms but was considered an advantage by camp personnel interviewed.

DISCUSSION AND CONCLUSIONS

Initially, it had to be established whether biscuits were useful in emergency relief, in particular selective feeding programmes. From a logistical point of view biscuits possess a long shelf-life and are therefore useful as a buffer stock in case of emergency; also, given reasonable packaging, they require no specialized storage conditions, as their low incidence of spoilage indicated. Their nutritional composition may be modified to increase levels of protein from that of ordinary biscuits and/or to increase energy density and also to act as a vehicle for vitamin and mineral supplementation. At the same time a palatable product may be achieved. The use of biscuits reduces the demand for local resources that may be in short supply (fuel, staff and equipment). The immediate need for imported equipment such as the Oxfam feeding kits may also be reduced. The dry nature of biscuits means they will not sustain the growth of pathogenic micro-organisms, unlike the ideal conditions for growth in left-over porridge or HEM. Finally, biscuit packaging may be designed so that many useful alternative after-uses on site are possible.

Counter arguments for the use of biscuits include their high financial costs; the average cost of traditionally baked biscuits was £1,294/tonne, which was approximately double the cost of cereal blends used as porridges in selective feeding. The purchase of biscuits also requires

Table 2. Cost of biscuits found in Ethiopia and the Sudan
(as of January 1986)

Brand	Cost per tonne in currency of country of manufacture	Cost per tonne in pounds sterling	Source of information and rates of exchange
Australian HP	Aus\$4,000.0	1,937	c2.06
BP-4	NOK26,304.35	2,529	c10.4
BP-5	NOK24,200.0	2,327	c
Calorie Mate	Y1,899,000	7,505	c253
	Y2,532,000	10,008	
Detic Djecji	U.S.\$2,110	1,465	c1.44
Dutch VIB	Dfl4,000	1,061	a3.77
Frukost Kex	SEK10,900	1,029	a10.6
Grovkiks	U.S.\$1,235	857	a
hgm HP biscuits	DM3,550—	1,063—	c
	3,880	1,162	
Irish sweetmeal	I£875	811	c1.08
Jamin food aid biscuits	Dfl3,770‡	1,000	c3.77
Jamin high protein biscuits	Dfl3,270—	867—	c
	3,600	954	
Liga rusks 10% protein*	Dfl4,250	1,151	c3.69
14% protein*	Dfl5,150	1,395	c
18% protein*	Dfl5,600	1,518	
Novofood	FF48,889	4,683	c10.4
Oxfam Energy Biscuits		960—	
		1,383	c
Oxford Biscuit	U.S.\$1,400	972	a1.44
Petivers	LIT2,200,000	965—	c2,280
	—2,400,000	1,052	
Plasmon	LIT5,080,000	2,228	c2,280
SCFB	Sfr9,700	3,464	c2.8
Whole Milk Biscuits	Sfr8,080	2,886	c
Survival cookies: protein	Can\$1,860—	930—	a2.0
	1,980	990	
Survival cookies: high protein	Can\$2,050—	1,025—	
	2,110	1,055	
Van Melle: Provita plus	Dfl8,000	2,168	a3.69
Van Melle: Provita	Dfl5,000	1,355	

*General biscuits, Netherlands.

†Nahrungsmittel GmbH, Germany.

‡In tins.

a. UNICEF, Addis.

b. CRDA, Addis.

c. Manufacturer.

foreign currency and hence is a stimulant to the economy of developed nations rather than the less developed nations or the country where the emergency is occurring. Transport costs to the country must also be taken into account, as they are not incurred by the use of indigenous foods such as *faffa* in Ethiopia. The use of biscuits had no or very little educational value, on occasions they were even found to discourage children from eating their staple food at home. In contrast, many lessons may be taught while using indigenous foods, such as food hygiene and preparation of nutritionally well balanced weaning food etc. A western style biscuit in a feeding programme may implicitly

encourage beneficiaries that western foods are "better" and as a perceived high status product, biscuits may have a high saleable value and therefore be more liable to pilferage during transport and distribution or resale by beneficiaries.

It is clear from the above points that the advantages of using biscuits are obtained during the early stages of an emergency, but become redundant or less important as the situation improves, at which time their use should be reduced and finally stopped altogether. The unnecessary use of biscuits at this later stage represents a wastage or misuse of financial resources by donors. Organizing the despatch and arrival of biscuits to coincide with the early

Table 3. The characteristics of biscuits destined for emergency relief

i. Nutritional composition

They should contain 500 kcal in a volume of less than 250 cm³ and in a weight of less than 110 g. The protein content should be greater than 8% of the total weight. Fortification with vitamins and minerals would be an advantage.

ii. Acceptability

Traditional oven baked biscuits are preferable to compressed or extruded products as they are likely to be more familiar to beneficiaries. Distinct flavours and odours should be avoided.

iii. Ingredients

Protein sources should be complementary. Consideration should be given to the cultural significance of biscuit ingredients and also any associated harmful effects e.g. lactose intolerance.

iv. Unit size of individual biscuits

The unit size of biscuits should be greater than 10 g in order to minimize the number of biscuits in one day's ration and facilitate distribution to beneficiaries.

v. Packaging

The outer packaging should be able to withstand extreme climatic conditions, attack by insects, rodents and other pests, and mechanical damage caused by manual handling and poor road conditions. Tins are preferable as they are more able to meet the above requirements. The unit size of the outer packaging should not exceed 80 kg (approximately the average carrying capacity of two men) or be less than 10 kg. Individual packs of biscuits should be equivalent to one day's ration (approximately 100 g) or multiples thereof.

v. Information accompanying each carton or tin of biscuits in the field

- Name and address of manufacturer, donor or consignee,
- Gross and net weights,
- Proportions of ingredients (including fat source),
- Nutritional composition,
- Date of manufacture and shelf-life or best before/sell-by/eat-by/dates,
- Guidance on its use in the field including appropriate situations for use, recommended rations and alternative uses as porridge etc.

stages of an emergency is no easy task. Grants may be applied for from the EEC, which may take months to process and be awarded. Tenders must be submitted to manufacturers, products have to be selected and then produced and finally the product is sent to the country. Shipping freight could take weeks and air freight is significantly more expensive, thus incurring additional costs. It may suffer further delays at the port of arrival. By the time the product finally arrives, it may only be useful as a means of adding variety to the diet in the already well established feeding programmes. At this stage the advantages of using biscuits will probably not outweigh their less desirable attributes or their expense.

The only means of getting round the problem of ensuring biscuit consignments arrive when most needed is, first to ensure that a reasonable product is readily available, preferably in the form of an emergency buffer stock, and second, to encourage donors to consider the positive and negative aspects of using biscuits and so develop a well thought-out policy, based on their ability to make the best possible use of biscuits. Grants specifically for the purchase of food aid biscuits are not a good idea as they encourage the purchase of biscuits irrespective of whether they represent the most effective response to a situation.

Direct responsibility for the availability of biscuits during an emergency lies first with the donors and second with the distributing bodies, who should provide only where an obvious need exists. Oxfam have developed guidelines for donors of food aid biscuits, which emphasize the negative effects associated with food aid and especially biscuits. If donors still consider biscuits to be the appropriate response, guidance is given regarding appropriate stages of an emergency when biscuits may be needed, consignment sizes, types of biscuit that should be sent and how their use could be evaluated (Young, 1987).

With regard to the types of biscuit that should be sent, the guidelines do not recommend the "best" biscuits. This is because all biscuits found in the field had their shortcomings and also because manufacturers' biscuit specifications are liable to change, rendering recommendations invalid. It was considered more important for donors to be aware of the desirable characteristics of food aid biscuits, which are summarized in Table 3 and to consider these aspects when selecting a product to purchase.

As a result of this study the OEB is being fortified with additional vitamins and minerals and its packaging specification is being improved by means of a better quality tin, to obtain a shelf-life of at least five years. This will allow the existence of an emergency buffer stock.

Once the biscuits arrive in the field it is either very difficult or costly to withdraw them from use. In Ethiopia and Eastern Sudan biscuits were freely available on demand to recognized operating agencies. With few exceptions, technical information and advice on the use of biscuits in the field was not readily available (even from donor representatives). Once approached, manufacturers were

able to supply additional information on ingredients, nutritional composition etc., but most of their material adopted a marketing approach, where the positive aspects of the product were emphasized and precise information blurred by unclear and ambiguous messages. This was considered unhelpful to inexperienced programme supervisors and may have encouraged the use of biscuits instead of available indigenous foods. Partly in order to overcome the problem of over-use in the field, Oxfam Users Guide to the OEB emphasizes the financial implications and negative educational effects associated with biscuits and encourages users to curtail their demands in favour of indigenous foods.

Oxfam is the only relief organization supplying biscuits for emergency relief feeding that has overall control from the product and packaging specifications to the final distribution of biscuits in an emergency to beneficiaries or other operating agencies. Most biscuits follow a route from manufacturer to donor to consignee to operating agencies and then to beneficiaries. There is greater likelihood with this latter route that responsibility for either deciding consignment size or appropriate situations for use or ration sizes etc. will be diminished. In contrast, Oxfam's position should allow them to respond quickly to an emergency situation, sending biscuits when they are most needed. Through the manufacturer Oxfam can influence who is able to purchase the OEB and when, thus ensuring resources for disaster relief are not misused and that the stricken region is not flooded with unwanted OEB's. At the field level, the information for use of OEB's in selective feeding programmes that accompanies all tins and tubs of biscuits, will provide guidance as to the correct use of the OEB. In this position of overall control, Oxfam should be able to

influence the use of biscuits in emergency relief, by ensuring that the policy as well as the product has been designed to the best advantage of the country in need.

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CASE STUDY

CONTAINMENT OF A CHOLERA OUTBREAK IN A REFUGEE CAMP
IN SUDAN (1985)

INTRODUCTION:

Refugee camps whether transitory settlements have a characteristic pattern of health and disease. Communicable diseases such as dysentery, hepatitis, cholera, typhoid etc, represent 80% of all diseases in the refugee camps. These diseases are directly related to poor sanitary conditions usually found in refugee camps. Depending on existing environmental health conditions, these diseases may occasionally turn into epidemics thereby threatening the health of the camp population. During the emergency phase of a refugee programme, sanitation is not usually considered to be of primary importance. The argument usually put forward by planners and administrators is that refugees arriving in a new place need food, medicine, shelter, and water. However, in attempting to provide these basic needs, sanitation which is also a basic requirement, is often forgotten even after the emergency phase is over. Experience gained from the field have demonstrated that sanitation should be an integral component of any phase of the refugee programme. A conscious effort on the part of planners to recognize the need for sanitation will greatly minimize past mistakes whereby refugees were shifted to areas with poor soil condition making it difficult, if not impossible to construct sanitary disposal facilities for these refugees.

This case study describes various sanitary measures which were undertaken to prevent the outbreak of CHOLERA in a refugee camp in Eastern Sudan (1985). The refugee camp, located in EL-FAU (5 hours drive from Khartoum) was comprised of 8000 refugees from Ethiopia. Many Voluntary Agencies - International Rescue Committee, Save the Children Fund (UK), Japanese Relief Organization etc participated in the control effort.

DEFINITION:

By way of definition, Cholera is an acute intestinal disease characterized by sudden onset, profuse water stool, vomiting, rapid dehydration and circulatory collapse (Benenson 1985). Cholera is transmitted by ingestion of contaminated water. It represents a classical water-borne disease.

NEED FOR ACTION:

1. A Sudanese village (village 36) (population - 20,000) located 9 km away from the refugee camp had an outbreak of cholera epidemic. By the time it was brought to the attention of the Volags working in EL FAU, fifteen people had already died from the disease in village # 36. Since the Sudanese village had no medical facility (the nearest hospital or health centre was

50 km away) they had to come to the refugee camp to receive medical care.

Water supply for the refugees was obtained from the Rihayd Canal which runs parallel to the camp. Village 36 inhabitants also obtained their drinking water from the same canal. Village 36 was also located parallel to the canal. The canal flowed through village 36 before reaching the refugee camp. Apart from using the canal as a potable water source, some of the inhabitants of Village # 36 also took their bath in the canal. Some villagers defecated near it. Animals (cattle, sheep, donkeys and goats) drank from the canal and also defecated inside and around the canal. Although the water from the canal was chemically treated before distribution to the refugees, it was felt that the outbreak of Cholera in a village 9 km away from the Refugee camp constituted a grave danger to the refugee health.

2. Open defecation: The host government (Sudan) did not allow the construction of latrines for the refugees. Therefore, the refugees used the open field for defecation. Open field defecation is not problematic in a hot climate such as in the Sudan. The high temperature and aerobic conditions treat and dry the waste in a relatively short time period. But something unexpected happened. It started raining and it rained throughout the month of July and August, 1985. The rain considerably slowed down the dessication of the fecal matter in the field. The resultant effect was that the entire camp became infested with flies. The outbreak of Cholera in a nearby Sudan village in conjunction with poor sanitary conditions in the refugee camp, therefore, became a catalyst for immediate action. It has to be noted that the Sudanese government never officially admitted to the outbreak of Cholera in village 36. The reasons were obvious.

OBJECTIVES:

- (A) TO PREVENT THE OUTBREAK OF CHOLERA IN EL-FAU REFUGEE CAMP.
- (B) TO CONTROL THE SPREAD OF CHOLERA WITHIN THE REFUGEE CAMP IN THE EVENT OF AN OUTBREAK.
- (C) IMPROVE PUBLIC HEALTH STANDARDS ON A CAMP-WIDE BASIS.

STRATEGIES:

THE FOLLOWING APPROACHES WERE TAKEN IN AN ENDEAVOUR TO PREVENT CHOLERA OUTBREAK IN EL-FAU REFUGEE CAMP IN 1985. THE GUIDING PRINCIPLE ADOPTED BY THE ENTIRE STAFF WAS THAT CHOLERA EPIDEMIC WAS PREVENTABLE IF THE FAECAL-ORAL TRANSMISSION CYCLE COULD BE BROKEN AND ALSO, IF REFUGEES GAVE THEIR FULL COMMITMENT TO THE GOALS AND METHODS TO BE USED IN ACHIEVING THE STATED OBJECTIVES.

I. DELINEATION OF RESPONSIBILITY:

EACH STAFF (EXPATRIATE AND LOCAL) WAS ASSIGNED A SPECIFIC TASK TO PERFORM. EVERY ATTEMPT WAS MADE TO ASSIGN PEOPLE IN THEIR AREA OF SPECIALIZATION. EACH STAFF THEREFORE KNEW PRECISELY WHAT HIS/HER ROLE WAS.

II. TRAINING:

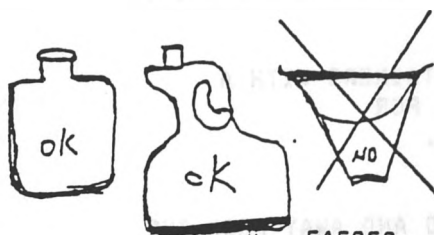
EXISTING COMMUNITY HEALTH CARE WORKERS WERE RETRAINED. NEW COMMUNITY HEALTH WORKERS WERE RECRUITED AND TRAINED TO CARRY OUT SURVELLANCE IN THE CAMP. SURVELLANCE IS THE CONTINUOUS MONITORING OF ALL ASPECTS OF THE DISEASE.

III. COMMUNITY WIDE CAMPAIGN:

IN COLLABORATION WITH THE REFUGEE LEADERS, A CAMP-WIDE AGGRESSIVE CAMPAIGN WAS INITIATED. THE CAMPAIGN WAS AIMED AT CREATING AWARENESS AMONG THE REFUGEES ON THE ETIOLOGY OF CHOLERA AND THE ROLE OF CONTAMINATED WATER AND POOR HYGIENE IN THE SPREAD OF THE DISEASE. THE CAMPAIGN USED POSTERS, LEAFLETS AND DISCUSSIONS TO CONVEY HEALTH INFORMATION TO THE REFUGEES.

IV. BREAKING THE TRANSMISSION CYCLE:

A. WATER:



- (1) PROTECTION OF SOURCE - FENCING OFF THE TWO SIDES OF THE CANAL.
- (2) CHEMICAL DISINFECTION TO OBTAIN 03 MG/L OF FREE RESIDUAL CHLORINE.
- (3) REPLACEMENT OF VESSELS FOR COLLECTION OF WATER.

B. FAECES:



THE FOUR F-CONNECTION

- (1) ENSURING THAT REFUGEES DEFECCATED ONLY IN DESIGNATED AREAS AND BEYOND A RED FLAG.
- (2) BURIAL OF FECAL MATTER FROM CHILDREN AND THE SICK, ESPECIALLY, AROUND THE TENTS.
- (3) CONSTRUCTION OF PIT LATRINES AT STRATEGIC LOCATIONS - FEEDING CENTRES, HOSPITALS AND TEA HOUSES.
- (4) SPRAYING OF PERMETHRIN (20 GM IN 10 LITRES OF WATER) TO REDUCE FLY POPULATION.
- (5) HAND WASHING AFTER DEFECCATION (55 GALLON DRUMS WITH SPIGOTS WERE USED. A DISINFECTANT ADDED TO THE WATER (98 ML. OF DETTOL TO 112.5 LITRES OF WATER).
- (6) HAND WASHING BEFORE EATING FOOD.

C. GARBAGE DISPOSAL:

RELIANCE WAS PLACED ON BREAKING THE BREEDING CYCLE OF FLIES THROUGH IMPROVEMENT IN REFUSE COLLECTION AND DISPOSAL METHODS.

CAMP DIVIDED INTO ZONES. EACH ZONE WAS PROVIDED WITH A COVERED BIN FOR DUMPING REFUSE. BINS ALSO PROVIDED IN HOSPITALS AND FEEDING CENTRES. SANITARY WORKERS COLLECTED REFUSE FROM EACH ZONE, THE HOSPITAL AND FEEDING CENTRES. DONKEY-DRAWN CARTS WERE USED TO HAUL THE REFUSE TO A DUMPING SITE (.5 KM AWAY FROM THE CAMP).

COMBUSTIBLE MATERIALS - BURNED

NON-COMBUSTIBLE MATERIALS- BURIED.

D. HYGIENIC FOOD HANDLING:

- HAND WASHING BEFORE TOUCHING FOOD IN THE FEEDING CENTRES.
- HAND WASHING BEFORE AND AFTER TOUCHING A PATIENT OR ANYTHING IN THE HOSPITAL.
- REPLACEMENT OF OPEN WATER CONTAINERS WITH A COVERED CONTAINER. (SEE FIG.) FOR HOSPITALS/FEEDING CENTRES/T.B. CLINIC/MCH/KITCHENS.
- ALL FOOD STORED OFF THE GROUND AND AWAY FROM THE WALLS.
- DISHES/POTS/PANS WASHED, RINSED AND SANITIZED USING 14 GM OF 5% CHLORINE SOLUTION IN 4.5 LITRES OF WATER (288 PPM)

E. CONSTRUCTION OF A NEW HOSPITAL WARD (CHOLERA WARD).

- NEW WARD AWAY FROM THE CAMP.
- FENCED OFF WITH ONE GATE FOR ENTRANCE AND ONE FOR EXIT.
- SUSPECTED CASES OF CHOLERA WERE SENT TO THIS WARD.
- A SPECIAL SOAKPIT WAS CONSTRUCTED FOR DISPOSAL OF WASTE WATER/VOMIT/RINSE WATER/SANITIZING SOLUTION FROM THE CHOLERA WARD.
- ALL BUCKETS USED IN THE WARD WERE PAINTED WITH A RED COLOR TO ENSURE THAT THEY WERE NOT USED ANY WHERE ELSE OR FOR ANY OTHER PURPOSE.

INSIDE THE CHOLERA WARD.

- ALL DEBRIS ON THE FLOOR REMOVED AND BURIED CAREFULLY.
- REFUSE CONTAINERS EMPTIED TWICE DAILY.
- FLOOR RAKED AND SWEPT AS NEEDED. (WE HAD MUD FLOOR)
- HANDWASHING BUCKETS EMPTIED EVERY TWO HOURS OR AS NEEDED.
- GLOVE WORN BY WORKERS WHO EMPTIED AND WASHED HANDWASHING BUCKETS/VOMIT PANS.
- BED PANS, EXCREMENT BUCKETS AND BEDS WASHED WITH SOAP AND SANITIZED WITH 28g OF 5% CHLORINE SOLUTION ADDED TO 9 LITRES OF H2O. THREE DIFFERENT CONTAINERS WERE PROVIDED FOR WASHING, RINSING AND SANITIZING.
- GUARDS WERE STATIONED AT TWO POINTS - ENTRANCE DOOR AND EXIT DOOR TO ENSURE THAT ONLY THE PEOPLE SUPPOSED TO BE IN THE HOSPITAL WERE THERE. ALSO REMINDED PEOPLE TO WASH THEIR HAND BEFORE LEAVING THE CHOLERA WARD.

RESULTS:

THERE WERE 71 SUSPECTED CASES OF CHOLERA-38 CHILDREN, 25 FEMALES, AND 16 MALES. THESE PEOPLE WERE TREATED IN THE CHOLERA WARD UNTIL THEY WERE FULLY RECOVERED. LABORATORY RESULTS INDICATED THAT THERE WERE ONLY TWO CONFIRMED CASES OF CHOLERA IN THE REFUGEE CAMP. THERE WERE ONLY TWO DEATHS. IT WAS NOT KNOWN IF THE DEATHS WERE FROM THE CONFIRMED CASES OR SUSPECTED CASES. THE TWO DEATHS WERE TWO OLD REFUGEE MALES.

NUMBER OF SUSPECTED AND CONFIRMED CHOLERA CASES
ACCORDING TO AGE AND SEX - SUDAN 1985

<u>NUMBER OF CASES</u>	<u>CHILDREN</u>		<u>SEX</u>		<u>TOTAL</u>
	<u>1-14 YEARS OLD</u>	<u>MALE</u>	<u>FEMALE</u>		
SUSPECTED CASES	38	16	25		71
CONFIRMED CASES	-	-	-		2

OF THESE, THERE WERE TWO DEATHS.

FROM THE ABOVE RESULTS, THE CAMP STAFF CONCLUDED THAT THE MAIN OBJECTIVE OF PREVENTING THE OUTBREAK OF CHOLERA IN A REFUGEE CAMP WAS SUCCESSFULLY ACHIEVED. IN ADDITION, ENVIRONMENTAL HEALTH CONDITION IN THE REFUGEE CAMP WAS DRAMMATICALLY IMPROVED.

A MAJOR LESSON LEARNED FROM THE SUDAN EXPERIENCE WAS THAT THE DEMONSTRATION OF SPONTANEOUS CO-OPERATION AND ENTHUSIASM AMONG (A) THE REFUGEES AND (B) VOLAGS.

FACTORS THAT CONTRIBUTED TO THE SUCCESS OF THE CHOLERA CONTROL PROJECT

- FROM A SOCIO-CULTURAL STANDPOINT, BOTH MALE AND FEMALE STAFF MEMBERS WERE ALLOWED INTO REFUGEE TENTS TO TALK ABOUT THE DANGERS OF CHOLERA. THE FAMILIES OF ALL THE 71 SUSPECTED CASES WERE VISITED EACH DAY BY COMMUNITY HEALTH WORKERS UNTIL THE PATIENT WAS DISCHARGED FROM THE HOSPITAL.
- CO-OPERATION ON THE PART OF REFUGEES AND AWARENESS OF THE DEVASTATING EFFECT OF CHOLERA AS DEMONSTRATED BY THEIR WILLINGNESS TO CARRY OUT BASIC SANITARY MEASURES AROUND THEIR TENTS.
- SOUND OF MUSIC: THE ETHIOPIAN REFUGEES LOVED THEIR MUSIC. YOU COULD TAKE ANYTHING AWAY FROM THEM BUT NOT THEIR MUSIC. IF ANYTHING COULD BRING 88% OF THE REFUGEES TOGETHER IN A RELATIVELY SMALL TIME PERIOD, IT WAS MUSIC. WE CAPITALIZED ON THIS BY ORGANIZING PLAYS WHICH DEMONSTRATED THE RELATIONSHIP BETWEEN POOR SANITARY CONDITION AND CHOLERA. THE PLAYS WERE STAGED WITH RICH MUSIC AND THE CAST SANG AND DANCED WITH THE REFUGEES. THE CHOLERA CAMPAIGN WAS SEEN AS A SOCIAL OUTLET BY THE REFUGEES BECAUSE IT BROUGHT MANY PEOPLE TOGETHER AND HELPED TO MINIMIZE THE GRIEF INHERENT IN REFUGEE LIFE.
- INTENSIFICATION OF HEALTH AND HYGIENIC EDUCATION THROUGH THE USE OF AUDIO-VISUALS WHICH REINFORCED THE MESSAGE BEING CONVEYED BY HEALTH WORKERS.
- CO-OPERATION AND EFFECTIVE CO-ORDINATION AMONG THE VOLUNTARY AGENCIES.

CONCLUSION:

A CASE STUDY WAS USED TO DEMONSTRATE HOW SANITARY MEASURES COULD HELP TO PREVENT THE OUTBREAK OF AN EPIDEMIC IN A REFUGEE CAMP. THE STRATEGY APPLIED IN THE SUDAN REFUGEE CAMP IN 1985 FOCUSED ON ORGANIZING AND ESTABLISHING EFFECTIVE SYSTEM FOR BREAKING THE FAECAL-ORAL TRANSMISSION CYCLE OF CHOLERA, PROTECTING SUSCEPTIBLE HOSTS AND MOTIVATING REFUGEES TO CONTRIBUTE TOWARDS PREVENTIVE ENVIRONMENTAL HEALTH MEASURES.

FINALLY, THE NEED FOR ORGANIZING AND ESTABLISHING A SANITATION PROGRAMME AT EVERY PHASE OF THE REFUGEE PROGRAMME CANNOT BE OVER-EMPHASIZED. AWARENESS OF THE WIDER CONTEXT IN WHICH ENVIRONMENTAL HEALTH PROBLEMS EXIST IN THE REFUGEE CAMPS WILL INVARIABLE CONTRIBUTE TO THE OVERALL SUCCESS OF THE REFUGEE PROGRAMME.

THANK YOU.

REPORTS FROM THE FIELD

A comparative analysis of water provision in four Thai refugee camps

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INTRODUCTION

Specialized problems are inherent in providing water of adequate quantity and quality in a refugee camp. The author became aware of these constraints during the 15 months he worked in Thai refugee camps. The significance of these problems become more apparent as field level experience increased, and professional contacts were developed. It became apparent that each camp had developed practices and policies independently. As a result, water rations, water quality, and means of delivery varied greatly from camp to camp.

This study was undertaken to determine what these differences were, and make a comparative analysis of the various methods of water provision used in Thai camps. Investigation indicated that systems had evolved primarily in the context of donated foreign equipment and expertise. Operational and maintenance requirements were given lesser consideration. The needs of the refugees for an abundance of washing and bathing water were also given lesser consideration. On the other hand, there was an emphasis on ensuring that the small quantities of water provided were of high potability.

METHODS OF FIELD STUDY

A systematic survey was made of water supply systems in four Thai refugee camps. These camps were selected for their diversity of geographic, ethnic and water delivery systems; and for their accessibility to the author. In three of these camps, the author was, at one time or another, a sanitation consultant. The author visited the fourth camp, Khao I Dang, for observations and discussions with the resident sanitarian.

In assessing the water delivery systems in each camp, refugees, resident sanitarians (Thai and expatriate), UNHCR officials, Thai government officials, and voluntary agency personnel were consulted. Consultations were generally on an informal basis in the course of the days' work, though once the study was undertaken in late 1983, appropriate persons were approached with specific questions.

The following camps were surveyed (see also Fig. 1).

Ban Nam Yao

Ethnic groups: Highland Lao (Hmong, Mien, Htin)
Population: 10,000 — 13,000
Date established: 1976
Water sources and estimation of relative importance:
Hand-dug wells: 70%
Water system: 30%
Water rationing: None.

Sikkhiu

Ethnic group: Vietnamese
Population: 0 — 8,000
Date established: 1976
Water sources and estimation of relative importance:
Water system: 0% (not operational at time of study)
Trucks: 100%
Water rationing: 40 l. per refugee per day.

Khao I Dang

Ethnic group: Cambodian (Khmer)
Population: 50,000 — 150,000
Date established: 1979
Water sources and estimation of relative importance:
Water system: 0% (not operational)
Hand-dug wells: 0 — 40%
Trucks: 60 — 100%
Water rationing: 15 l. per day per refugee.

Phanat Nikhom

Ethnic groups: Cambodian (Khmer), Lao, Vietnamese
Population: 13,000 — 23,000
Date established: 1981
Water sources and estimations of relative importance:
Water system: 70%
Trucks: 15%
Hand-dug wells: 10%
Rain catchments: 5%
Water rationing: 12.5 — 20 l. per day per refugee.

FINDINGS

Ban Nam Yao

This camp is built on the slope of a steep mountain which makes water delivery by any method difficult. Pumping costs for the gas-powered pumps are high, and wells are far from the houses, which are concentrated on three adjacent ridges. Indeed, refugees living near the crest of the ridges obtain most required water from the piped water system, while refugees living further away from the pipeline, i.e. nearer the streambeds, typically obtain water from wells.

The refugees have dug over 100 wells in the four stream beds draining the camp. Initially, most of these wells were unlined, or lined with wood. Cement linings, however, have



Fig. 1. Map of Thailand showing locations of refugee camps discussed.

been installed in most wells since 1979, using concrete rings purchased by the UNHCR and voluntary agencies. Donations of cement, sand and stone have resulted in the pouring of skirts at many well sites. Many of the wells used by the ethnic Hmong are private, and have been fitted with covers and locks by the refugee owners. Wells of the Mien and Htin refugees are without locks and are used communally.

Water is pumped to the camp at the rate of about 60 cubic metres per day. However, the system has often proved unreliable because of maintenance and management problems. The pipeline of this system follows the crest of the three ridges on which the camp is situated.

Chlorination of piped water is intermittent at best because of conflicting values between the voluntary agency providing the chlorine and the refugee consuming the water. Caught in the middle are the refugee workers responsible for the reservoir above the camp. Pressures applied by voluntary agency sanitarians generally result in over-chlorination by the workers, which in turn prompts "forgetfulness" in the addition of chlorine. A middle ground has not been found, a condition caused by the inability of inadequately educated refugee workers to fully understand the chlorination programme. Irregular pumping schedules (i.e. variable volumes which do not permit a standardized "cookbook" approach to chlorination) further complicate the situation.

Parts for the pumps and water system were available in the provincial capital, one hour's drive from the camp. Other parts were ordered from Bangkok. Breakdowns requiring such parts have resulted in system breakdowns of up to five days.

Complicating the maintenance problems was the frequent absence of the one Thai technician hired (at a relatively low salary) to maintain the system, and the expatriate manager of the programme who was often out of town on business. For a short time, there was also a camp policy of not providing piped water on Sundays so that the one technician could have the day off. In the event of system breakdowns, all refugees used well water for all uses.

Khao I Dang

Water in Khao I Dang is provided by truck and hand-dug well. The official ration for trucked water in 1983 was 15 litres per person per day, which is only slightly higher than the 13—14 litres provided in early 1980 (Buist, 1980). Piping and water towers for a water system were installed in 1980—1981, though this water system has never been operational.

Water has been trucked to Khao I Dang from distances of up to 100 kilometres. At one time, the water was chlorinated in the truck. At the time of the study however, it was chlorinated at the distribution points. The distribution points are stations of 30—40 water tanks (1,700 litres each) which serve each refugee section.

The water table at Khao I Dang is two to three metres below the surface in most areas and, as a result, ground water is readily available. An estimated 2,000 wells have been hand dug. However, until recently, all wells were unimproved. Well improvement projects were begun in 1982, and at the time of this study were being installed. It is planned that by the end of 1983, there will be over 400 improved wells.

Pot chlorinators have been installed in Khao I Dang wells. The acceptance of the chlorinators is mixed. Over dosage of the chlorinators with chlorine results in bad odours and tastes which prompt the refugees to remove them.

The improved wells at Khao I Dang are 80 centimetres in diameter with a cement cover and lid. The lid is wide enough for only one bucket to be used at a time. This is an attempt to limit bucket-borne surface contamination, by making use of more than one bucket at a time a physical impossibility. The current well-construction project goal of providing one well per 80 persons should also limit the number of buckets used in any one well.

The camp water system was installed with the intent of using pumped sub-artesian wells. However, test drills conducted after the system was installed indicated that the amount of water available was insufficient for the projected needs. As a result, the installed water towers and pipelines remain unused.

Phanat Nikhom

No provision for water was made when Phanat Nikhom camp was established in 1980 as the Processing and Transit Centre for refugees emigrating to third countries. As a result, all water was trucked into the camp until early 1982. Small amounts of water were also available from unimproved wells dug in a flood plain through which the camp wastes flow, and water could also be purchased from Thai villagers who have houses and wells adjacent to the camp. The ration from legitimate sources, i.e. trucked water, was 12.5—15 litres per day.

A 30,000,000 Baht (U.S. \$1.3 million) water system was installed in 1982 as a gift from the Japanese government. The construction project included a 79,000 cubic metre reservoir, modern water treatment facilities, two 15 cubic metre water towers, in-camp pipelines and seven pumps.

The various pumps were co-ordinated by a modern automatic switching system. With the completion of this water plant, delivery of water by truck was curtailed; deliveries continuing only for agency offices, and other areas of the camp not served by the pipeline. As before, small amounts of water were available from unimproved wells.

Engineers designed the new water system to provide a water ration of 15 litres per day per refugee, assuming a 33,000 person population. The water treatment facilities installed insured that the water was not only highly potable but also included additional steps to produce a highly palatable product. The quality produced was, in fact, much higher than that found in the water systems of most Thai municipalities.

In practice, the Phanat Nikhom water plant has provided approximately 650,000 cubic metres of water per day on a 14—16 hour pumping schedule. Because the population has not exceeded 23,000, the actual water ration from the plant has been, in practice, about 20 litres per refugee. In addition, an unrationed supply is pumped for the hospital, kitchens, and a few offices. Use is lower on rainy days when refugees substitute rainwater collected from roofs for part of their ration.

During 1983, the first full year of operation for the system, problems in operation and maintenance were experienced despite the state-of-the-art technology. In fact, the modern technology was the source of several problems, especially breakdowns in the automatic switching system.

Management of the system was complicated by the absence of any of the persons, primarily foreigners, who had designed it, and the failure to leave as-built plans or blueprints in Phanat Nikhom. As a result, hot season rations were not geared to take advantage of the available water.

An example of the management errors that plagued the system is provided by the establishment of the dry season water ration in March, 1983. Before the arrival of the as-built plans in April, 1983, in-camp administrators were unaware of the assumptions engineered into the system, i.e. the available volume in the reservoir, and the predicted length of the dry season. As a result, the refugees had a lower ration than necessary, because of conservative "guesstimates."

The consequence of this planning error was that the daily water ration was limited to 12.5—15 litres per refugee per day during the critical hot season months, even though the system could have provided a ration in excess of 20 litres. The ration provided, it should be noted, is significantly below the 20—30 litre international standard recommended by Simmonds *et al.* (1983). It is also sparse given the high value that Southeast Asians place on general cleanliness and frequent bathing, particularly during the hot season. Priorities used in the construction of the water system instead focused on providing a highly potable product, in less than abundant quantities. Similar priorities were noted at Khao I Dang during this study (see above), and Haynal (1981) made similar observations during visits to seven other Thai refugee camps in 1981.

The water plant operators at Phanat Nikhom are paid wages comparable to those earned by similar technicians working for Thai municipal water systems. Salary

comparisons, however, are more often made with Thai and expatriate workers working inside the camp, than with other water works technicians in Thailand. Thais working for agencies inside the camp are paid, generally, 2—5 times the standard Thai wage. Expatriate workers often receive considerably more. This discrepancy was the source of morale problems which were reflected in the implementation of operational and maintenance policies at the water plant.

Wells at Phanat Nikhom have been dug by refugees since the opening of the camp, especially during the dry season. These wells are used for domestic purposes, and watering gardens. They are occasionally lined using 60—100 centimetre diameter culverts discarded from the camp drainage construction project.

A well chlorination project was begun for improved wells in 1983. The wells are manually chlorinated by a refugee worker each evening. The effectiveness of this programme has not yet been assessed, though some complaints about the taste and smell of the chlorine were noted.

Well water is used by refugees primarily for bathing and washing, while piped water is used for drinking. However, water from wells which have a reputation among the refugees for "good taste" and cleanliness are also used for drinking by some families.

Water is trucked from the camp reservoir to some in-camp offices. Several major offices, such as the UNHCR, and the Thai administrative facilities, were not included in the piped water project because camp officials at the time of construction were concerned that not enough water would be available in the reservoir if it were piped to offices as well. As a result, water from the reservoir is trucked to the camp.

Water is also trucked to the camp kitchen where the volume of water received through the pipes is insufficient. The kitchen has been responsible for the daily meals of up to 9,000 refugees, and requires approximately 30 cubic metres of water per day.

Rainwater is collected from the roofs of refugee houses during the rainy season. Refugee housing at Phanat Nikhom has metal roofs to which gutters have been attached. Rainwater is a major source of water during the rainy season, from May until November. On rainy days, the consumption of water drops by about 100 cubic metres.

Sikkhiu

Water in Sikkhiu Camp is trucked from a reservoir two kilometres from the camp. The reservoir provides a consistent and generous water ration. The refugees report receiving "as much water as we can use." The Thai Camp Commander, who is responsible for providing the water ration, indicated that the actual ration was about 40 litres per day per refugee, significantly higher than either Khao I Dang, or Phanat Nikhom. From the trucks, the water is pumped untreated into water basins and tanks from where it is obtained by the refugees.

The water at Sikkhiu camp is distributed without treatment. During the years that the reservoir has been used as a source of water for the camp, and also for the surrounding Thai villages, there has been no reported

Table 1. Relative costs of water provision at Phanat Nikhom refugee camp*

	Start-up costs	Continuing costs	Yield (m ³)	Continuing costs/m ³	Potability
Wells	\$110/well	Negligible	10—12 per well	Negligible	Low
Water system	\$1.3 million	\$23,500 per year	650/day	\$0.10	High
Three trucks	\$61—90,000	\$12,600 per year	150/day	\$0.23	Medium

*Figures taken from proposals by the Catholic Office for Emergency Relief and Refugees to the UNHCR, Water System plans, and observations by the author.

epidemic of water-borne disease. This observation has been the source of resistance by the Thai camp officials to the initiation of a general chlorination programme for the refugee water supply. If such a programme were started in the camp, water quality standards for refugees would be higher than for nearby Thais, a situation considered politically undesirable.

A water system was installed in Sikkhiu by the Japanese government in late 1982. Operation awaits arrival of a converter for the 110 volt pumps so that they can be connected to Thailand's 220 volt electrical supply.

The soil at Sikkhiu is too rocky for well digging in the vicinity of the refugee camp.

Relative costs of water provision

Trucked water is the most expensive of the various sources of water used in the four camps surveyed. Cost estimates obtained from Phanat Nikhom indicate that continuing costs for the provision of trucked water are U.S.\$0.23 per cubic metre, over twice the cost of water piped to the camp by the water system (Table 1).

Continuing costs for the maintenance of hand-dug wells are negligible. Wells are dug, lined and skirted at a one time cost of approximately U.S.\$110.00. Well yield varied with depth, soil type and construction specifications. However, experience at Phanat Nikhom where the soil has a high clay content, indicate that wells of standard construction (100 centimetre diameter) can provide 10—12 cubic meters of water during the dry season.

Well water, which is the cheapest to provide, is often of the lowest potability. To meet international standards (see, for example, Simmonds *et al.*, 1983), well water must be boiled or chlorinated before drinking. However, local standards for water potability are often different, both in Thailand and Indochina where the refugees came from. Well water, for practical purposes, is often used for drinking.

Trucked water which has been chlorinated, such as is found at Khao I Dang and Phanat Nikhom, is of only medium potability despite the high cost. The chlorine destroys bacteria and viruses. However, since the surface water for the trucks often comes from surface sources, there has been no provision for the elimination of parasite cysts.

Water which has been treated, filtered and chlorinated, such as is available to refugees at Phanat Nikhom, is of the highest potability and quality. Provision is made in the system for the elimination of bacteria, viruses and parasite cysts.

DISCUSSION

The provision of water is critical in any community. Refugee camps are, of course, no exception to this rule. However, with the establishment of refugee camps, special problems for the provision and distribution of water often arise. It is necessary to provide sufficient quantities of water of adequate quality for people living in an unnatural and often crowded environment, at a minimum cost. The availability of water in the community must be assessed to take optimal advantage of the available resources. Experience in Thailand has demonstrated that these assessments must be made in the context of (1) physical constraints imposed by the camp site, (2) the availability of water to host country nationals, especially in the immediate vicinity of the camp, (3) social, cultural and biological needs of the refugees, and (4) the donation of equipment and expertise from foreign donors.

The experience in Thailand, where water delivery has been primarily provisioned by the use of water systems, water trucks, and hand-dug wells, are briefly discussed below.

Water systems

The experience with water systems in Thai refugee camps has not been particularly good. Systems in all four camps surveyed were plagued with management and/or design problems. Most notable are the systems at Khao I Dang and Sikkhiu, both of which remained unused because basic surveys of local conditions were not made by equipment donors, or recipients, prior to installation. The Ban Nam Yao system suffered from management and maintenance problems which resulted in prolonged breakdowns.

The water system at Phanat Nikhom is the major source of water in the camp. It has been managed comparatively well, and there have been no prolonged breakdowns. However, there have been planning and operational

mistakes. Perhaps the biggest flaw in the planning was the provision of sub-optimal water rations to refugees, while making the capital investment to provide an unnecessarily high quality of water. The failure to install pipelines to offices in the camp which, instead, must use expensive trucked water was also a planning error.

Water systems in Thai refugee camps have typically been designed and/or managed by foreigners. An unfortunate byproduct of this general practice has been that systems are built that are not particularly appropriate in the context of the resources available in the community. For example, despite the fact that functional water systems have been fixtures in Thai communities for many years, the plants have not been designed to take advantage of locally available parts, or locally available labour. In the case of the Ban Nam Yao system, this oversight has resulted in shut-downs of several days while parts are ordered from Bangkok. At Phanat Nikhom, extra expense has been incurred when purchases of rare foreign-manufactured parts are necessary.

Wells

Hand-dug wells provide a reliable source of water in three of the camps studied. In Ban Nam Yao, hand-dug wells are the major source of water, and at Khao I Dang, wells are a significant source. At Phanat Nikhom, wells provide a supplement to the piped system.

Well-digging projects have typically been organized spontaneously by refugees upon establishment of the camps. Only after the wells have been dug have the UNHCR and Voluntary Agencies responded by financing projects to improve sanitation and safety. The lag-time for well-improvement projects has ranged from two years at Phanat Nikhom, to five years at Ban Nam Yao.

Hand-dug wells are used as a water source throughout Southeast Asia, including Thailand. The refugees are generally familiar with maintenance procedures, and generally good sanitation practices were observed. Given these factors, it is surprising that refugee assistance agencies have not placed greater emphasis on simple well-improvement and development projects.

Trucked water

Trucking is traditionally used in emergency situations as a short-term alternative until cheaper and more manageable means of water can be developed. In the Thai refugee camps surveyed, particularly Sikkhiu and Khao I Dang, trucked water has continued to be the major source of water four to seven years after the camps have been established. This continued use of water trucks is necessary because of the apparent disinterest in developing wells as an alternative water source, and the failure of water systems in both camps.

CONCLUSIONS AND RECOMMENDATIONS

The experience with water supply in Thai refugee camps has offered several lessons. Future refugee camp planners might take note of the following points.

1. Successful water provision for refugee camps should be

modelled after systems already functioning in the local community. While donated equipment of foreign origin can make this difficult, acceptance of such equipment should be made only after careful consideration has been given to future maintenance and operation costs, in the context of locally available labour and spare parts.

2. If hand-dug wells are a major water source in the local community, they should also be considered for use in the refugee camp.

3. Realistic standards for the provision of water should be established soon after establishment of the camp, in the context of practical, political and cultural considerations. International standards, such as those published by the UNHCR and Simmonds *et al.* (1983) can be used as a guide, but local conditions have to be considered also. Field-level sanitations from Thai camps suggested the following local standard for water quality and quantity in late 1983:

A quality of 7—10 litres per day of highly potable water (e.g. water with 0.1—0.5 ppm residual chlorine), is recommended and 20—30 litres of water, not necessarily potable, for bathing and washing purposes. Hand-dug wells were considered to be a practicable source of this bathing and washing water. Regular water testing under field conditions was not considered practical. However, it was recommended that testing be done in the event that new sources of potable water were developed.

4. Use of expensive trucked water should be quickly phased out as water becomes available first, from adequate numbers of hand-dug wells, and later, perhaps water systems.
5. Water systems should be installed only after local technicians, who will inevitably play a long-term maintenance role, have been consulted. Surveys should include the yields of local wells and streams measured during the dry season. The characteristics of the local electrical system, locally available operational and maintenance technicians and spare parts need also to be considered.
6. Consideration should be given to equalizing salaries paid to water system technicians with other personnel working in refugee camps.

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CASE STUDY IN SOCIO-CULTURAL ASPECTS

Preface:

In the search for generalizations that apply to all refugees at all times and in all places, we must not ignore the enormous range of differences among societies. We must also be aware of the demographic composition of the population. The following questions are for discussion, based upon the group members' experiences. You are involved in social analysis and assessment of socio-cultural aspects. You have to make a proposal using these elements to complement the views of your colleagues working in sectoral areas (housing, health, productivity).

Questions:

1. Shelter/housing

- (a) To provide shelter is a basic action in the physical planning during emergencies. Which social and cultural aspects should be considered when proposing a shelter solution? In which sense can these aspects affect the whole programme? (positive/negative)
- (b) A house construction programme needs to be started. How were the houses built by the group before? Should the refugees be paid? In kind or cash? What incentives could be used? How to select the participants? Would all adults have a chance to benefit from these incentives or payments? Would this drain resources from other priority areas? How can this decision affect other sectors? Give examples.

2. Productive activities, community-based actions

(a) After the initial distribution of goods has taken place, the refugee committee has asked for materials, tools or basic equipment needed to duplicate household goods and utensils and to make women's and children's clothing and footwear. Are there socio-cultural aspects related to such requests? Should these activities be allowed since some aspects could be solved through donations? Would these activities be contradictory to the emergency programme? Could you illustrate the advantages or disadvantages giving examples of your experiences in the field? Would the demographic profile of the population be an influence on the decision?

(b) The host government has agreed to initiate a limited range of productive activities. You have had a successful experience in pottery-making and poultry-raising in another situation. Are these activities relevant and present in the refugee community? Is participation by sex relevant or irrelevant to these activities? If the activity is not part of the "cultural background" of this group, should it be started? How would this affect other economic and social aspects of the community life? (Availability of food/proteins, storage of water or grains, social differentiation, participation, etc.) Give examples.

3. Food, nutrition, diet

(a) Food preferences and food taboos exist, but are not alike. Eating patterns and food preparation are important elements in the daily life of all communities. How can socio-cultural elements related to these aspects influence the emergency planning? What aspects should be considered? Could you offer examples from your experience? Are vulnerable groups affected by these aspects in particular?

(b) A food donation has been offered. The "item" differs from the food the refugees are used to cooking and eating but it fits in with diet requirements. How could this be handled? Would the decision to accept the donation affect other areas of the emergency programme? Which "socio-cultural" elements should be used as a frame of reference in this analysis? Would the demographic composition of your population influence your decision?

4. Education and training

You have discovered that a good percentage of the emergency caseload is young children of primary school age.

(a) What information needs to be given to young children in an emergency situation?

(b) What types of "emergency services" could be delivered to young refugees who have been organized into groups? What children's activities can contribute to camp life?

(c) At what stage of an emergency could you propose primary education activities?

(d) Is it an advantage to organize these children into groups?

(e) Who would organize the groups? What are the considerations as to the composition of groups?

(f) What human resources should be identified in the community to organize different activities?

(g) What could you use for teaching materials in an emergency environment?

A general assessment of the environmental impact of refugees in Somalia with attention to the refugee agricultural programme

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This paper attempts to examine the broad features of Somalia's harsh physical environment into which several hundreds of thousands of refugees, with mainly a nomadic or semi-nomadic life style and culture, dramatically descended six years ago. The thirty-six rural camps in which at least half of them live are described as is the refugee agricultural programme which is training several thousand families so that they may be "self-supporting." The four regions where the camps are located are each briefly summarized in terms of their soils, their climates, their natural vegetation, and the type of agriculture which the refugee farmers practice. A more detailed analysis is then given on the following critical environmental concerns: Vegetation and erosion on refugee farms, the growing problem of refugee livestock, the destruction of trees, and irrigation practices and salinity on refugee farms. The paper concludes with an argument to preserve Somalia's environment from careless and destructive exploitation, which is leading towards desertification, and calls for an in-depth study of the situation.

Keywords: Somalia; Refugees; Environment; Desertification; Deforestation; Salinization; Agriculture.

PROFILE OF A POOR COUNTRY

The Democratic Republic of Somalia is one of Africa's least developed countries. From 1960 to 1981 there has been little real growth in per capita GNP, which in 1981 was U.S.\$280.00. With limited natural resources and troubled by war and drought Somalia's total outstanding debt was U.S.\$1,070 million at the end of 1982; that is seven times export earnings. Moves to improve the economy have been

at the expense of development expenditures and the importation of materials like fertilizers and pesticides, and spare parts for machines. The international donor community finances the country's development efforts since revenue generation has an extremely narrow base. Livestock exports to the Middle East, limited exports of bananas, sugar cane and fish, plus 600 tons of forest products such as frankincense, myrrh and gum arabic, provide Somalia with revenue.

Three-quarters of Somalia's surface area of 6.38 million square kilometers is savannah steppe or natural range land. It is here that the wealth of the country, its domestic livestock, are supported. Figures from the 1975 Human Population and Livestock Census indicate that there were 15.3 million goats, 9.4 million sheep, 5.3 million camels, and 3.7 million cattle. These figures are two and one half times the estimates made in 1964. Nomadic pastoralism is practised by over half of the population. Herdsmen follow rainfall in a systematic search for pasture grasses, browse and water. Over recent years many pastoralists have become semi-nomadic with a home-base from which they cultivate crops such as sorghum during the rainy seasons and then follow the rainfall with their animals during the dry seasons. The low rainfall on the range lands has determined this pattern; mean annual rainfall is less than 300 mm which is insufficient to support dense stands of vegetation or quick vegetative regrowth after grazing. The range lands are very vulnerable to over stocking.

Meagre and irregular rainfall is one of Somalia's major environmental problems; this is not compensated for by good ground water reserves. The evapotranspiration rate is over four times the mean monthly rainfall for each month of the year in most of the country. Maize and sorghum are the cereal crops cultivated in the better favoured parts (mainly the southern area between the two permanent rivers the Juba and Shabelle) and yields of 800 and 400 kg/ha respectively are common. Higher yields under irrigated conditions using two improved varieties of maize developed by the Ministry of Agriculture hold out some promise for the future. Droughts occur frequently in Somalia; the last were in 1973 to 1974, 1979 to 1980 and 1983. Below-average years outnumber above average years. Variability in both monthly and seasonal rainfall is pronounced; for example in the capital Mogadishu April's rainfall may vary between 5 and 245 mm. For Somalia, variability and drought are unfortunately "normal."

Somalia's climate may be described as consisting of two rainy seasons each followed by a dry, windy season. The dominant peak of the bimodal rainfall pattern is from April to May (the Gu season). A secondary peak is from October to November (the Der season). From December until the Gu rains begin the remarkably hot and dry North East Monsoon blows (the Jilaal). After the Gu rains finish the South West Monsoon begins (the Hagai). This wind is relatively cool in the southern part of the country and brings occasional light coastal showers; elsewhere it blows hot and dry until the Der rains commence in October. Strong and desiccating winds are a major factor in Somalia's environment.

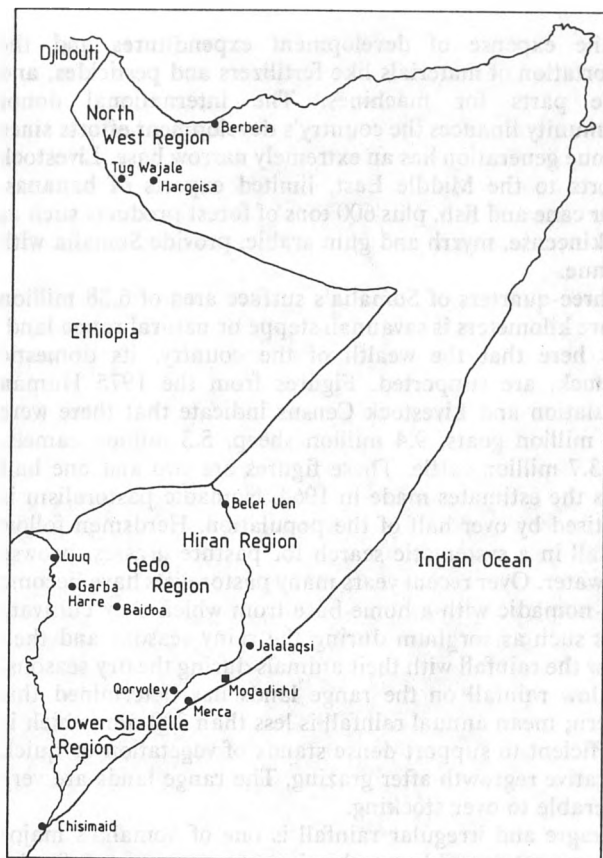


Fig. 1. Location of refugee camps in Somalia.

SOMALIA'S ENVIRONMENT BEFORE THE REFUGEES

Somalia is a country particularly vulnerable to ecological damage. The strong prevailing winds, erratic rainfall and frequent drought, and the weakly developed structure of large areas of soil are some of the hazards which must be considered by field workers and planners. In this environment which can sustain only cautious use, wander millions of domesticated livestock exploiting the natural vegetation in a surprisingly organized and systematic manner. Due to the improved availability of water and veterinary knowledge, and the monetization of the livestock system, the numbers of animals have increased in recent decades up to a level where some authorities doubt that the range can support them at a sustained and productive level.

The demand for firewood and charcoal has increased with the natural growth of the population, which given a crude birth rate of over 50 per thousand and a death rate of 20 per thousand is around 3.0% per annum. Urban dwellers prefer charcoal to firewood which is cleaner to burn and allows women to cook inside their homes. Charcoal sales

have increased from 50,000 tons in 1976 to 80,000 tons in 1980; during this period the price increased over three times due, in part, to the longer distances between the forest areas and the urban markets. Although the sale and production of charcoal is officially controlled through co-operatives, there are no government regulations controlling widespread firewood harvesting and sales — firewood being the cooking fuel for the more traditional sectors which make up the majority of the population.

Man's role in transforming the environment through the processes of over-stocking the range lands and the deforestation of large tracts of territory were in operation long before the burden of hundreds of thousands of refugees descended on Somalia. K. Curry-Lindahl (1974), who visited Somalia in 1972, wrote: "Somalia is badly devastated and on the verge of disaster. . . Enormous areas have become deserts or semi-deserts in less than a century."

In 1950, P.E. Glover, a British botanist, wrote that in the northern part of Somalia soil erosion due to over-stocking and tree destruction had become very serious. He reported that the soil was being "denuded of plants at an appalling rate" (Glover, 1950). It should be noted that the national population (now officially estimated to be five million) which placed this strain on the environment was famed for its rural simplicity and spartan values.

Without much doubt the pressure on Somalia's environment has now increased. The major drought of 1973 to 1974, the diversion of resources to fight a war, and the influx of refugees concentrated in rural areas around the country, often on easily destabilized sites, have aggravated the environmental problems which have existed for some time. Although some areas of land may be on the verge of being irreversibly damaged there is still time to act. However a realistic appraisal of the problem and a desire to act will be required.

THE REFUGEES

The refugees in Somalia came from the Ogaden region. Most came from the sub provinces of Degh Bur, Kebri Dehar, Kalafa and Werder in the Harar province. Other refugees came from the more southern provinces of Bale and Sidamo (see Fig. 1). The large majority of refugees are ethnically and linguistically Somali, the rest are mainly Oromo people who speak their own language. The majority of the refugees in the thirty-six camps in Somalia followed a nomadic pastoral way of life in their homelands. Domestic livestock were the means of support and hence the culture and life style of these people reflect their fundamental importance. A smaller group of refugees were semi-pastoralists who practiced some agriculture, usually rain fed, and a minority were sedentary farmers. Although refugees from various places and with various backgrounds are somewhat mixed in the camps some differences can be seen. In some of the camps of the North West region groups of refugees have come from agricultural areas around Jigjiga, similarly in Qoryoley many refugees came from the southern provinces and practised agriculture, whereas in the camps of Jalalaqsi (Hiran region) the refugees have a strong nomadic pastoral tradition.

The influx of refugees began in 1978 after a large battle with Ethiopia over disputed territory ceded to Ethiopia by the colonial powers after the Second World War. At the beginning of 1982 a refugee population estimate of 700,000 was reached by the parties concerned; as many again are estimated to be outside the camps living in rural and urban areas. Table 1 gives a regional breakdown and compares refugee camp numbers with the natural population.

Table 1. Regional breakdown of refugee numbers

Region	Refugees	Nationals
Lower Shabelle	41,000	500,000
Hiran	209,000	439,000
Gedo	200,000	446,000
North West	250,000	930,000

It should be noted that in Hiran and Gedo regions camp refugees account for nearly 50% of the regional populations. Given official figures, the total number of refugees make up over 20% of the national population.

The refugee camps are made up of thousands of densely packed *Aqals*, small dome huts made by stretching woven grass mats or canvas sheets over a curved wooden frame weighing about 30 kg. *Mundals* are the next commonest structures; they are round wattle and daub houses with conical thatched roofs, well over 100 kg of wood goes into their construction. The larger camps cover several square kilometres and may have official populations of over 30,000 people. The total area occupied by all the camps is in the vicinity of 80 km². Some camps, like Dam camp in the North West region, are beginning to take on a more permanent aspect but most camps however appear to be very temporary associations of displaced people. Spatially the camps and their associated farms may be adjacent to each other or separated by distances of a few kilometres. In Hiran and Gedo regions there are several large camp clusters hence one would expect that the impact of the refugees on the environment is more pronounced. In the North West region several camps are up to 80 km from their nearest neighbours.

The camp locations were mostly chosen by the Somali Government. Many sites given to the refugees were near large state-owned farms which had been organized prior to 1976 with the assistance of Soviet advisers. These sites are on level land with deep soils and close to permanent water, supplies of fuel wood and timber were reported to have been abundant. Other camp sites developed more spontaneously where the refugees stopped, or could be quickly transported, after a gruelling trek on foot from the war zone. Many of these sites are on arid lands with limited access to water. Because of the large number of refugees and the general limited availability of arable lands in the areas of the camps, there is in all but two cases (Tug Wajale and Qoryoley) an imbalance between camp populations and the amount of farm land available for refugee activities.

CULTURAL ATTITUDES

Women have always had an important role to play in nomadic pastoral society since they are the sellers of milk and milk products, as well as trading in forages and animal feedstuff in markets throughout Somalia and the Ogaden region. Visual observations on all camp populations indicate that females over fifteen years old make up about 30%, children of under fifteen years are in the majority and constitute 60%, whereas men compose 10% of the camps. The predominance of women has, to some degree, facilitated the work of some of the refugee programmes, especially health and to some extent agriculture. In the early days of the camps refugee men from a pastoral background showed a reluctance (or cultural bias) against agriculture. The payment of incentives and inducements were often thought necessary in order to win their co-operation to help in most forms of physical labour related to agriculture. This old bias still exists, though to a reduced extent. Because women had been the meeting point between nomadic society and the cash economy they were among the first to see the possibilities of being involved in small-scale agricultural production on the refugee farms. They proved often to be more careful and co-operative workers than men.

An attitude that has accompanied refugee status is a concern about shorter term interests rather than gains over the longer term. This has serious implications for the conservation of the environment. Refugee households in the Qoryaley district were questioned about their major problems by Caffrey (1983), sixty-three out of sixty-eight mentioned the scarcity of fuel wood; when asked to suggest a solution three replied that more trees should be planted, whereas forty-one saw the solution being terms of more transport to allow them to go further afield for collection. A similar study in Belet Uen by Castro (1984) made in three camps gave the same results. Of 177 households cited in three camps, 75%, 96% and 79% respectively saw the solution to their fire wood problem in terms of more transport; 20%, 0% and 1% respectively saw the solution as planting more trees.

THE REFUGEE AGRICULTURAL PROGRAMME

This programme was devised in 1980 as a means to train refugees in crop production so as to allow them to supplement their food rations provided to them by the international community, and to train them in a useful skill. The land was given to the refugees by the Somali Governments and inputs and experts were provided by the international community. The established farms which were taken over by the refugees were worked as co-operatives, in 1981 they were divided up into family plots of average size about one third of a hectare. Today there are forty-two registered farms, usually located close to or adjoining the camps, and perhaps twenty other farms where refugees have entered into a share-cropping arrangement with local land owners.

There are approximately 11,000 refugee families (at least half of them led by women) cultivating a total of 4,105 ha of

land. All but two farms are irrigated by diesel pumps. The farms are now divided between those managed by a decreasing number of voluntary agencies (six from the end of 1984) and those managed by the Refugee Agricultural Unit of the Ministry of Agriculture. The unit suffers from a lack of direction and organization, communication with field staff is weak. As a whole there is an inadequate understanding of Somalia's environment and how the ecosystem functions. What successes the programme has had may be reversed if care is not taken to reduce the strain on the fragile environment.

REGIONAL ENVIRONMENTAL SUMMARIES — THE NORTH WEST REGION

There are now ten camps and six associated farming areas in the North West region. The camps are spread out around the regional capital of Hargeisa and the distance between neighbouring camps varies from 50 to 80 km. Only two camps, Tug Wajale and Dam, have any significant amount of agricultural land nearby (600 and 26 ha, respectively); neither have surface or ground water resources. Seven other camps are located on the banks of "tugs"* where there is usually limited supplies of good quality ground water at a shallow depth. There are very small pockets of alluvial soil along the tugs being cultivated by a few hundred refugee farmers in five of these camps. A new camp has recently been organized to support a number of people who are claiming asylum, its status is under discussion at the time of writing.

Six of the North West camps are sited in arid places where the soil is predominantly coarse to medium textured sands with silts interspersed with stones. Along the sides of most of the tugs there are pockets of loamy soils mixed with medium-grained sand. These are depositional soils with an undeveloped profile and like many of the soils in the North West region they are usually shallow with low water holding capacity and organic matter status. Tug Wajale, the largest refugee farm in Somalia, is located on a treeless steppe with deep, uniform and fertile soil. Dam, located on the eastern part of the steppe, has similar soil on a sloping, dissected land between a narrow tug and a rocky escarpment.

In the arid locations of the North West region the mean annual rainfall is about 230 mm and the evapotranspiration may be well over 2,500 mm. Rainfall is unreliable and drought is common. Boothman (1975) reported that from 1918 to 1960 eight droughts and famines took place. Glover (1950) quoting an experiment to measure soil temperature stated that in an open and denuded area the soil surface reached 56°C at midday, one inch down the soil profile the maximum temperature was 45°C two hours later, and at 24 inches down the profile the temperature was a constant 24°C. The narrow belt of steppe country which stretches about 100 km west of Hargeisa, on which four camps are located, is over 1,200 m high and is one of Somalia's better favoured agricultural areas. The mean annual rainfall is

416 mm and the evapotranspiration rate is 2,135 mm. The mean monthly temperature is 22°C, recorded at Hargeisa.

There is now little natural vegetation around any of the camps and farms in the North West region. The refugees' need for firewood and timber has denuded a circle of between 7 to 15 km around all the camps. Most of the refugee households now keep one or two small ruminants, usually goats, on which they depend for milk. Shallow-rooted perennial grasses show signs of over-grazing as do many herbaceous species in the vicinity of all camps. A great deal of vegetational degradation had occurred before the refugees had arrived. Glover (1950) refers to forests of dead trees, mainly *Acacia bussei*, which he considered to be victims of over-stocking, trampling and wind erosion. These trees have long since vanished.

The clusters of refugee gardens, now numbering about 265, along the banks of the tugs grow fruit and vegetables by abstracting water with buckets from shallow hand-dug wells which are shared. Recently funds were allocated to buy six small diesel pumps from Djibouti; this input may influence the attempted introduction of "Rower pumps," a slow, manually operated pump imported from Bangladesh. The mean size of the gardens is 100 m², fertilizers or organic manures are not added to the soil.* Salt accumulation in the sub soil from the irrigation water is a future possibility; crops are grown while water is available in the shallow wells. In the hot and windy Jilaal, the water level is low and the gardens are left bare and therefore exposed to wind erosion. No trees or wind breaks are grown. Tug Wajale grows one crop of rainfed sorghum each year, three tractors with disc ploughs prepare the land during the Jilaal before the Gu rains. Disc ploughs tend to break up and pulverise the soil and are unsuitable for areas susceptible to wind erosion, however these are the only ploughs available in Somalia. Because of a shortage of tractors, aggravated by breakdowns, fuel shortages, and the fact that night ploughing in this border area is forbidden, tillage is not usually done at the best soil moisture content. Apart from the four month growing season the land remains fallow with no cover, there are no wind breaks or trees. No organic material or fertilizers are added to the soil. Dam farm is similar producing two rainfed crops per year, however some diversification into fruit production can be seen.

HIRAN REGION

In this region there are ten camps and ten farms. Five camps and four farms are located close to the banks of the river Shabelle at Belet Uen, the regional capital. About 50 km downstream is a large camp with two farms at Bo'co; a further 100 km downstream is a cluster of four farms and four camps at Jalalaqsi. Most of the refugee farms were once the sites of government farms which were prepared by

*A tug is the sandy bed of a seasonal stream

*About 5,000 tons of fertilizers are imported annually into Somalia, which go to the banana and sugar cane plantations which produce crops for export.

clearing the woodlands associated with a thin strip of flood plain adjacent to the river. The farms in Hiran region vary in size from 25 to 180 ha, all are flood irrigated with large diesel pumps. Schistosomiasis (Bilharzia) which is endemic in Somalia had an infection rate of 24.2% in 1972 at Belet Uen.

The farms are sited on recent alluvial soils deposited by the river. Moderately heavy-textured clays and silts predominate although there are areas of sandy loams of lighter textures. In the past the river has meandered on its flood plain hence these depositional soils are sometimes mixed with sands which are probably remnants of old levees. All the soils are deep and have low organic matter content. Dickenson (1980) who organized a soil analysis on the Belet Uen refugee farms detected the presence of salts, sodium, gypsum, and calcium carbonate deposits in high concentrations in the profile of some of these soils. In general, soluble salts, gypsum, and sodium appeared to be in the heavier textured soils and calcium carbonate deposits were in the sandier units. Dickenson recommended the installation of adequate drainage facilities, which have yet to be constructed.

All the refugee farms in Hiran are in marginal rainfall zones. Mean annual rainfall in the region varies from 206 mm around Belet Uen to about 350 mm further eastwards. An examination of rainfall data from 1926 to 1975 indicates that there is a 27% probability that rainfall will be less than 75% of the mean in Belet Uen. Evapotranspiration rates are high, the mean annual total is around 2,150 mm. There is a severe water deficit each month which makes irrigation essential. The climate is hot and semi arid with mean monthly temperatures around 29°C, midday temperatures are often greater than 40°C in the windy Jilaal season.

Generally, all the riverine woodlands which grew in a thin strip along the river have been destroyed within 10 to 25 km of the camps. Similarly the xerophilous bushlands, dominated by *Acacia* thorn trees, beyond the riverine strip has been denuded creating a bleak, empty landscape around the older camps. The refugees now own numbers of livestock and large areas of bare ground where shrubs and desert grasses have been removed or trampled are commonly seen in the vicinity of the camps.

The farms are cultivated to maize in the Gu season and sorghum and some sesame in the drier Der season. Despite irrigation, refugee farmers still cultivate with the rainy seasons. Intercropping with legumes (cowpea, *Vigna sinensis*) is encouraged but only done on a relatively small area. There is a strong tendency to monocrop with maize, most refugees are disinterested in vegetable crops. No fertilizers are available and residual organic matter is fed to livestock usually away from the farm lands. As stated there is still no drainage and irrigation water management in terms of measured amounts, efficient application and timing is in most cases poor. There are no windbreaks on any of the farms despite the strong and desiccating monsoonal winds which blow twice each year. All land is prepared by tractors using disc ploughs; some effort is now being made to encourage the refugees to prepare their

usually small family plots, about one quarter of a hectare, by hand.

GEDO REGION

In this region there are a total of twelve camps and the largest number of refugee farms. In Luuq district (north Gedo) there are eight camps and eleven farms varying from 13 to over 100 ha. There are another seven farms organized entirely by small groups of refugees which are receiving support from the agricultural programme, numerous other small refugee farms also exist in the district along the river Juba. In Garba Harre district (south Gedo), about 50 km south of Luuq, there are four camps and five associated farms on the banks of the Juba. These farms vary from 25 to 220 ha. Apart from the spontaneous farms found in Luuq, most of the refugee farms were once the sites of government farms. They have been expanded at the cost of the riverine woodlands which once formed a thin verge on either side of the river. All the farms are flood irrigated by diesel pumps. The Schistosomiasis rate of infection is not known, but was measured in Bardera in 1972 as 38.0%.

All the refugee farms in Gedo Region are on alluvial soils deposited from the river Juba. The soil profiles are weak and show textural variations due to depositional rather than pedogenic processes. The process of soil formation was complex, but essentially due to flood waters depositing coarser materials near the banks as water velocity slightly decreased, and finer material further out. Hence there are sandy loams and clays and patches of medium textured sands. In Luuq district there is also a surface layer of aeolian sand on part of the land. Land form is almost level which does not assist natural drainage. There is a sub surface gypsum layer known to exist on some of the farms and the accumulation of soluble salts in the profile is most likely. There are still no drainage systems constructed on any of the farms.

In Luuq district the mean annual rainfall is 313 mm and the annual rate of evapotranspiration is recorded at 2,440 mm. No climatic data has been seen for the camps in Garba Harre district, but it may be assumed that the figures are similar. Rainfall is erratic and unreliable, deficiencies are frequent and droughts appear to be cyclical. Temperatures are high, the mean monthly temperature being around 31°C. Wieland (1984) recorded the soil temperature on bare ground during the Jilaal period in Luuq district as being 56°C at 2.00 p.m. In this region wind speed is very high during the dry periods and large quantities of dust and sand are transported.

The natural vegetation has been cleared around the camps and farms right up to the verge of the river. The riverine woodlands with many large *Acacia* species reaching up to 15 m high has been removed in most areas within eight kilometers of the camp. Beyond the woodlands, which may be over one kilometre thick, is xerophilous thornbush, with mainly *Acacia* and *Commiphora* species interspersed with small shrubs and trees. In the vicinity of the camps and for several hundred square kilometres there is an absence of herbaceous ground cover and grasses due to small



Fig. 2. Wood market in a refugee camp in Hiran Region. The materials collected here are for construction use, the firewood market is in another part of the camp. The use of donkey carts has increased the radius of collection considerably.

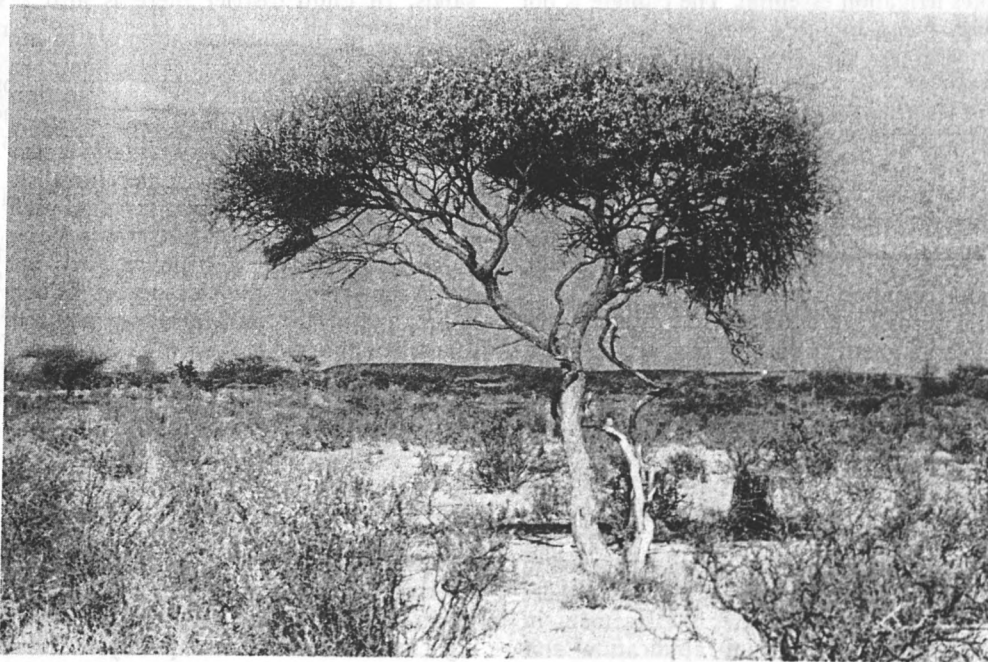


Fig. 3. Seven kilometres from a refugee camp in Hiran region. Deforestation is still evident, only scattered trees remain

ruminants, mainly goats, probably owned by the refugees.

The farms are cultivated to maize in the Gu season and sorghum in the Der. Intercropping with cowpea has been encouraged but on an area basis not widely adopted by the refugee farmers. Some vegetable crops are being grown in the farms supervised by the voluntary agencies and there is more control over intercropping and rotation. Maize and sorghum stalks are sold as fodder for goats and sheep which are being kept by increasing numbers of refugees. It has been made illegal in Luuq district for refugees to cultivate maize or sorghum just for fodder production. No fertilizers are available and very little plant residue remains on the land, several of the smaller farms under voluntary agency supervision are applying animal manure from refugee livestock on the soil. At least 15% of all maize is attacked by stalk borer (*Chilo partellus*), the rate of infestation may be increasing due to the tendency to monocrop with maize and the erratic availability of insecticides. Only one farm has grown some trees as wind breaks on part of the land, the attempts of other farms have failed due to goats owned by refugees consuming the young trees.

THE LOWER SHABELLE REGION

This region is generally considered to be the most attractive for refugee resettlement. Most of the refugees are in three almost adjacent camps located near the town of Qoryoley. An irrigated farm of 320 ha is under development by a voluntary agency and a further 470 ha is being cleared for rainfed farming. Two other refugee farms are in the Lower Shabelle, one is completely spontaneous and the other is assisted by a voluntary agency. Schistosomiasis infection rates in Qoryoley district vary from 28 to 68% depending on the presence of irrigation canals.

The refugee camps and farms are located close to the river Shabelle on a complex alluvial flood plain. The river has frequently altered its channel and the succession of recent depositional layers show a mixture of soils and textures. Generally the soils are medium to heavy textured grey-brown clay. No detailed soil analysis yet exists, although the soils are known to be deep, reasonably fertile, and with good water retention capacity.

The mean annual rainfall is around 500 mm although the amount of rainfall varies greatly from year to year, the driest years can have as little as 149 mm and the wettest 1,045 mm. FAO probability graphs showing the accumulated rainfall during Gu and Der seasons in relation to their frequency of occurrence over 25 years indicate that a partial or complete failure of rainfed crops due to inadequate rainfall is likely to occur as frequently as two years in five in this 500 mm isohyet. In addition to the two wet seasons, which extend for an extra month longer in this region than at Belet Uen, the Hagai coastal showers occur during July and August. Temperatures are relatively uniform and mean monthly temperature is around 26°C. Evapotranspiration rates are around 1,748 mm per annum, which is the least value for all regions where there are refugee activities.

Over several generations human activity around the Qoryoley district has deforested much of the land, especially

near the river. The riverine woodlands have vanished through destructive exploitation, so it is difficult to know what the original vegetation was like. A map of the area dated 1912 shows broad wooded grasslands with a few small cultivated patches. Today, dense xerophilous bushlands with many thorny Acacia species are found from three to five kilometres from the river. The dry land farms are sited in these bushlands which are being cleared by bulldozer and by hand; strips of natural vegetation are being left on some of the land.

Activity has been limited on the Qoryoley refugee farm while the irrigation and drainage canals have been under construction. Some rainfed maize and sesame has begun over the last four seasons. The scheme will be in operation from early 1985 when four crops per year will be grown in rotation. The spontaneous refugee farms are similarly developing, only one is in production cultivating maize and sesame irrigated with a large diesel pump donated to them.

VEGETATION AND EROSION ON REFUGEE FARMS

It is almost standard agricultural practice in Somalia to remove all natural vegetation from farm land. Large areas of land, which are usually cleared by government or private bulldozers working with their blades set at ground level, are scraped clear of trees or border strips of bush land. The results of this practice can be seen on all the refugee farms except the newest. On the majority of rainfed or irrigated farms in Somalia, apart from the Genale area of the Lower Shabelle, no wind breaks or shelter belts of trees are established to compensate for the lack of natural protection against solar radiation and the power of the wind. Four refugee farms are making attempts to grow trees (mainly *Leucaena leucocephala*) along their irrigation canals, providing the land some partial protection. Two voluntary agencies have established tree nurseries for eventual out-planting. However there remains a strong belief among refugee farmers and local agriculturalists that trees and natural vegetation on a farm serve no useful role, and that as well as competing with a growing crop for space and water, they harbour destructive birds and insects. Their positive role of providing a sanctuary for beneficial birds and insects and protection against dry monsoonal winds is not generally appreciated.

The temperatures recorded on bare ground by both Glover and Wieland are sufficiently high to affect the organic matter found in the top part of the soil which is associated with the essential biological processes which help determine the soil's fertility and structure. Micro-organisms such as rhizobia bacteria associated with Acacias and mycorrhizal fungi which help facilitate the uptake of essential plant nutrients may also be adversely affected. The colloidal organic matter which forms soil granules and also stabilises them will undergo changes so that raindrops or the trampling of animals and man will more easily crush the soil granules into their individual particles. This effect on soil structure is apparent on a number of refugee farms in Gedo and Hiran regions and on land near to the camps which has become denuded of vegetation. The fine fraction

of soil particles from broken down granules may be blown into the cracks and tubules in the top of the soil, filling them and helping to produce a relatively compact surface layer which will, at the time of land preparation, require greater energy to break. This helps justify the use of tractor-drawn equipment rather than reliance on manual practices and animal traction.

The monsoonal winds of the Jilaal and Hagai periods have a mean wind velocity of around 3.0 m/s recorded at a height of 2 m at Afgoi in the Lower Shabelle, by the FAO. The Jilaal blows from the north east for about four months and the Hagai blows from the south west for the same period, the velocity of the winds are reduced as the rainy seasons approach. Except for the southern coastal belt in the south during the Hagai period, the time of the winds coincides with the driest parts of the year in Somalia. Thus the potential for serious sheet erosion is very great. Soils which may have a broken down and powdery upper layer and are unprotected by wind breaks, shelterbelts or a standing crop will clearly be vulnerable to wind erosion. At the time of the monsoonal winds most of the refugee farms are usually fallow, there may be some vegetable growing during the Hagai showers in the south. There are no crops on the land due to the lack of moisture, also the refugee farmers' custom of only sowing before the rains despite there being irrigation facilities on most of the farms, and, most often, sufficient water in both the rivers Juba and Shabelle for abstraction. There are no crop residues such as trash incorporated into the soil or stumps of maize or sorghum rooted into the ground, due to the fodder requirements of the sheep and goats now being kept by the refugees — and whose numbers may be increasing. Thus large quantities of dry top soil is picked up and transported by the strong monsoonal winds twice each year. The thick clouds of dust blowing through the refugee camps during these unpleasant seasons testifies to the quantities of top soil being transported by the winds. According to Faniran and Areola (1978) up to 53,000 tons of top soil per cubic kilometre of air may be transported depending on the velocity of the wind. The weakly structured sands and loams which are found along the rivers and tugs, developed from recent alluvial deposits (Fluvisols), which are found on the majority of the refugee farms in the North West region, Hiran and Gedo regions, can loose as much as 195 to 300 tons of top soil per hectare per year by wind erosion, according to the Soil Conservation Service of the U.S. Department of Agriculture's "erodibility values" for similar soils. It can be expected that the progressive thinning of the top soil layer year after year will lead to a reduction in fertility and crop yield.

Another problem associated with wind erosion is the surprisingly rapid build up of wind blown or aeolian deposits. Whether this happens or the top layer of soil is scoured off depends on the land's topography. In Luuq district both processes can occur simultaneously on some of the refugee farms; the more fertile top soil is scoured away and later replaced by a fine-textured sand. This results in a net change in the composition of the top soil. Since sand does not supply any nutrients to growing plants the

incorporation of bi-annual deposits of sand will reduce fertility levels which essentially depend on the amounts of silts, clays and organic matter in the soil. After one Jilaal season in 1983 an average of 75 cm of wind transported sand was observed to cover about 26 ha of Ali Matan farm in Luuq district. Across the river, about 15% of Halgan farm has also been covered by a layer of sand. The sand has lifted up the level of the land thus reducing the efficiency of the irrigation systems which are essential to productivity in a semi-arid climate where evapotranspiration is approximately eight times mean annual rainfall.

Another effect of sand on irrigation, which may now be apparent on a number of refugee farms in Gedo region where the deposition of wind blown sand is more noticeable, is the crop need for irrigation water at shorter intervals. Since water retention in sandy soils is low (less than 10% on a dry weight basis), then an increase in sandiness will reduce the ability of the soils to hold water for growing plants to exploit. Although three irrigations have usually been given to maize in the past on most refugee farms, a number of farms are now providing five. This has resulted in some increased costs, and if the water is applied under poor management it may increase the loss of nutrients from the soil. This effect may be working on all the farms vulnerable to the effects of the monsoonal winds and unprotected by shelter belts of trees. It should be noted that the effects of an increase in sandiness can be masked by weak rainy seasons which make the refugee farms more dependent on irrigation.

The refugee farmers' practice of removing the entire maize or sorghum plant from the ground, usually by chopping just under the base of the plant with a *yambo* (hoe) and then pulling can have a destructive effect on the soil. The clumps of roots which are often removed with the stalk would help to bind the soil for the dry windy seasons which follow the rains. The soil is also robbed of organic matter; hence soil analysis shows less than 0.5% of organic matter in the farm soils analyzed. The entire plant, often with some roots, is used as fodder for the refugees' own livestock or sold for cash income in town markets. During dry periods cereal stalks command a high price as much as U.S.\$0.30 each (1984 prices). The lack of livestock control on the refugee farm lands ensures the final removal of any crop residue which may be left behind (weeds are systematically removed during the growing seasons and also fed to the livestock). The refugees' livestock are kept at night in the camps and so much of their dung and urine is deposited away from the farms. A surface cover of crop residue, such as cereal stumps in rows perpendicular to the direction of the prevailing winds, on the weakly developed soils often found near the rivers will reduce wind velocity at the soil surface and absorb some of the wind's power to erode. When incorporated into the soil, crop residue increases soil moisture storage capacity and promotes a more stable granular structure. Under the high solar radiation conditions found in Somalia a surface cover may encourage micro-biological activity. At present, the farming practices of the large majority of the refugees are preventing this from happening, even despite some extension training. Land degradation will eventually be the inevitable outcome.

REFUGEE LIVESTOCK: A GROWING PROBLEM

As has already been stated, the majority of the refugees came from a pastoral background where mixed herds were maintained. The men were responsible for larger ruminants, whereas the women and children cared for the sheep and goats. The small ruminants are traditionally used to supply milk to post-weaning children and were sold by the family whenever there was a need for money. Hence given that women and children make up the majority of the camp population, it is not surprising that small ruminants are now being found in increasing numbers. Over the last two or three years, according to most expatriates and local staff working in the camps, a large number of refugee households in all camps are rebuilding their herds. Goats are the most commonly seen and it is not unusual for families to own up to five animals. As noted by Castro (1983) small fenced enclosures for livestock are often found in the camps at Belet Uen, as they are in all other camps.

Relative to the size of the previous herds no doubt kept by the majority of the refugees in their homelands the number of small ruminants is a tiny fraction. However the trend is probably towards an increase. In 1983 ration supplies in the refugee camps all over Somalia were often critically short due in part to international shipping delays and shortfalls on food pledges from the donor community. The refugees perceived that their food security was weakening and hence began to build up their herds as much as they could, which is the traditional response to such situations. The cash that enters the camps by way of men working in the towns, or from the sale of agricultural produce from the refugee farms, may have been invested in livestock, especially small animals like goats which are easy to control and have a high survival capacity.

The effects of an unknown number of small ruminants on the land around the camps and refugee farms is quite visible to an observer. The protective understory of vegetation is being removed for a radius of often up to ten kilometres. Goats and sheep feed together in dense groups in the vicinities of the camps on land used as a communal grazing area. Although no studies have yet been made on the species of plant preferred as food, Edwards (1948) working in the semi-arid regions of Kenya listed sixty-seven species which he had observed goats eat. Fallen leaves and twigs were also eaten in the dry season. Observations made near the refugee camps in Somalia indicate that goats are not overly selective and will eat most green plants found, a few species are eaten to the full extent available. Generally browse plants (especially *Acacia tortilis*) are preferred but what is selected depends on what the goats are in the habit of eating and on their hunger. The restrictions imposed by camp life do not permit the migratory movement of livestock according to the seasons as under nomadic management systems; nor are any systems of rotational grazing practised. This results in a constant grazing pressure on the vegetation around the camps without a rest for regeneration to occur. Bare patches of soil without vegetative cover are common. Herbaceous plants and grasses are continuously eaten back to the extent that their

food reserves stored in the roots are so depleted that regrowth is slow to occur or the plant is killed. The consumption of flowers and seed pods will not allow renewal in the next wet season, hence there are no future generations. There may also be alterations occurring in the combinations of plant species since the less palatable species will have a survival advantage and so their populations may increase.

There is inadequate information available regarding the botanical composition and its habitat around the refugee camps and farms in the four regions of Somalia. It is therefore uncertain if irreversible changes are occurring, and if so over what sized areas. Wieland (1984) working in Luuq district, measured the area of vegetational disruption around the camps there as 2,076 km² due to deforestation and grazing pressure. He concluded that the chances for seedling survival in this area was minimal, and that in terms of vulnerability to wind erosion large areas are "on the verge of being irretrievable." It is a fair assumption to make that a similar situation exists around the other camp clusters which are the same age as Luuq and with the same number of people. There are four roughly similar camp clusters — Garba Harre district, Belet Uen, Jalalaqsi, Qoryoley district.

Since livestock are brought back into the refugee camps every night, the radius of grazing is determined by the distance which they can travel in a day. However this pattern could change as refugees decide to leave the main camps and develop smaller settlements based on agriculture at varying distances from these camps. Since twenty-seven refugee camps are located within easy access to the two permanent rivers the availability of water, which is a major determinant of livestock numbers in Somalia, presents no difficulty. If watering points are made along the rivers and the refugees organize herders to care for their amalgamated flocks, then the radius of intense grazing pressure could increase if livestock numbers are not controlled.

A factor to monitor concomitant to the keeping of livestock is the cultivation of livestock fodder on refugee farms. A marked tendency towards monocropping with maize may be partially explained by the fodder need of refugee livestock. Although it is now forbidden to cultivate cereals only for animal fodder, it appears that some refugee farmers may have grown stands of maize so densely that their objective had really been bio-mass production not grain. If range deterioration in the vicinity of the camps continues, the refugee farms may be turned from directly producing human food into producing animal fodder. This will reduce the trophic levels of refugee agriculture by as much as 83% in terms of calories produced from an unit area of land.

THE DESTRUCTION OF TREES

There is a treeless circle with a radius of up to 20 km around some of the older refugee camps. Today all the camps are situated in a treeless landscape which contributes to an impression of desolation. In most cases the deforestation around the camps is directly attributable to

the refugees' need for fuel wood and construction materials. Castro (1983) was told by refugees in Belet Uen that when they had arrived in 1978 the preferred species of trees for fire wood and construction timber were abundant and dead wood could be collected close to the camps by the women and girls. This situation has altered in all cases. Now refugee women must go collecting back-loads of firewood (up to 20 kg) three to four hours walking distance from the camps. In the North West region the camps sited in the arid locations now suffer from a serious fuel wood crisis, women spend the better part of a day collecting sticks. Caffrey (1983) found that refugee women in Qoryoley made from two to four trips per week looking for fuel wood, and each trip lasted from six to eight hours. Local villagers complained that now they too had to walk increasing distances since the advent of the refugees and that the cost of fuel wood had also increased. Smale *et al.* (1984) were informed by a Womens' Committee in Gedo region that the price of fuel wood had risen at a faster rate than the price of any other single item of consumption. It has been noticed that many refugee women now go out collecting fuel wood carrying axes. It is therefore likely that living trees are being cut down to satisfy the daily need for fuel of tens of thousands of people.

Refugee men sometimes own donkey carts which allow them to extend further afield in the collection of firewood. The loads brought back to the camps for sale cost between 180 to 220 Somali shillings (about U.S.\$8.00, 1984 prices) and supply well organized fuel wood markets. The availability of donkey carts may allow the refugee consumers to be more selective in the wood which is harvested, since there are definite preferences for certain tree species over others whose wood may not burn as hot or be very smokey and spark.* In the other hand, donkey carts may increase the radius of the treeless circle around the camps and increase the destructive exploitation of the remaining forest. Smale *et al.* (1984) working in two refugee camps in Luuq district, calculated that the average per capita consumption of fire wood is slightly under one kilogram every four days. On this basis an estimate can be made on the amount of fuel wood used each year by the official camp population of 700,000 refugees as being over 63,236 tons. This is three times the amount of fire wood supplied to Mogadishu by the marketing co-operatives in the first nine months of 1983.

A major use of trees is in the construction of dwellings and fences. Apart from the Aqal, already described, at least three other types of buildings made from bush materials can be found in the refugee camps. These require round wood, posts, poles, small sticks, and bush-bundles. Castro (1983) counted eight different species of tree which provided building materials in the camps at Belet Uen. The long, straight roots of *Acacia* species which radiate laterally out from the desert-adapted tree are also used as a building material by the refugees. Christensen (1982) observed

*The species usually preferred for fire wood include medium sized *Acacia* trees such as *A. nilotica*, *A. bussei*, *A. tortilis*, *A. senegal* and *A. reficiens*.

fencing erected in the camps which were then three or four years old in order to demarcate family living space and keep livestock; a newer camp, about one year old, had no fencing. Today, fencing made from sticks, posts and bush is found in all the camps.

In Hiran and Gedo regions and in Qoryoley district the riverine woodlands associated with the rivers Juba and Shabelle have now vanished within about ten kilometres of most of the camps and farms. Small patches of degraded woodlands remain in pockets but many of the trees, some over 15 m in height, have had parts of their bark stripped off and many of their branches removed. An apparently little known law which states that a strip of woodland 20 m wide must be left at the verge of the rivers has been ignored by all parties, and as far as is known, has never been policed. The significance of the loss of riverine woodland may not become fully apparent until the next river floods (the last one being around 1981 when the town of Belet Uen had to be evacuated) which, since the flood plains have been denuded of their protective vegetative cover, may create erosion problems around many of the refugee camps and farms.

The destructive exploitation of forests to satisfy the essential needs of the refugees will continue. As supplies of fuel wood dwindle within a day's walking distance from the camps donkey carts will supercede women carrying backloads. Firewood harvesting may hence become a business with refugee women buying their supplies from a market within the camp. Although there are government regulations controlling charcoal manufacture (charcoal production has been officially stopped in Luuq district due to the scarcity of trees), firewood is cut and collected in an uncontrolled pattern since there are no regulations governing it. Under these circumstances making a business out of fire wood will be at a serious long term cost to the environment. Reforestation of trees which are grown for fuel but cultivated as a crop is the only solution. However at this time only a handful of agencies are involved in reforestation projects and although their work is of good quality the amount of fuel wood planting being done is exceedingly small compared with the need. Probably less than 300 ha of exotic tree species have been planted out up to now. Problems abound for these projects, the major one being the destruction of young trees by goats owned by refugees, and the high cost of imported fencing materials and the labour needed to water the trees until they are established. A major discouragement is the fact that a majority of refugees do not yet see the need for planting trees, and there is no sense of urgency from either the government or the donors.

IRRIGATION PRACTICES AND SALINITY ON REFUGEE FARMS

All the refugee farms except Dam and Tug Wajale in the North West region and the rainfed section of the Qoryoley farm, are irrigated. Thirty-four of the farms are irrigated from the waters of the rivers Juba and Shabelle. The catchments of both rivers are in the Ethiopian Highlands where certain types of rocks weather, releasing mineral salts

which are dissolved in run-off water after the first rains and then carried into the rivers. Both rivers carry salts in high concentrations after the first rains in their catchments. Salt content is measured by the water's conductivity in micromhos per cm (μ/cm). Water is considered safe for irrigation when its Electroconductivity (EC) is under 1,600 μ/cm , over this limit crop quality and yield are impaired.*

The EC of Juba river water varies from 300 to 2,000 μ/cm , but usually only exceeds 800 μ/cm for less than a 15 day period. The Shabelle river is saltier than the Juba, and has a relatively high concentration of sodium sulphate. Its salinity increases downstream as it approaches the Lower Shabelle region. The EC varies from 500 to 4,000 μ/cm , but it is usually under 1,000 μ/cm . For both rivers peak salinity occurs in April to May, which is the beginning of the Gu season, very high levels have been recorded. There are usually two peaks; the first between 15th April to around 25th April when the EC can be as high as 7,500 μ/cm , followed a few days later by a secondary peak of 12,000 μ/cm . After this period of salinity hazard the waters are of satisfactory quality for irrigation purposes — provided that care is taken. The presence of tiny salt crystals on the top soil on most of the refugee farms and patches of deflocculated clay around the irrigation canals testify that not enough care is always taken. The salinity hazard occurs at the time when the Gu season crop is sown hence there may be an immediate need for moisture which is not always satisfied by natural precipitation. Although the field staff of the agricultural programme are aware of the dangers they are sometimes unable to prevent refugee farmers abstracting water from the rivers according to their own schedule.

The quantity of salts put on to the refugee farm lands in a season can be estimated. If during a Gu season water with an EC of 750 μ/cm is applied then every cubic meter of water will contain 1.5 kg of salts. The amount of irrigation water applied to maize or sorghum in a normal growing season is around 3,500 cubic metres per hectare, hence each season 1.75 tons of soluble salts are placed on each hectare of farm land. This is a considerable quantity which must be removed if the soil is not to be made too toxic for plant growth over the years.

Drainage is the usual method employed to prevent accumulated salt build up but, unfortunately, none of the refugee farms have drainage systems (except for the incomplete irrigated farm at Qoryoley). Drainage is an essential component of any long term irrigation system, however it can be time consuming and expensive to install

*Work conducted in Tunisia on irrigation with saline water under semi-arid conditions showed a yield decrease of 40 to 50% in most crops when water salinity increased from 250 to 4,400 μ/cm . Tomatoes suffered from blossom end-rot which reduced their quality and there was a 50 to 70% yield decrease. Tomatoes and peppers (two of the major vegetable crops cultivated on refugee farms) carry fewer fruit per plant and show a decrease in fruit size when irrigated by saline water.

and results will not be visible since at this stage its use will be for preventing a situation arising rather than reclaiming one. This has not encouraged the non-technical donors to outlay the relatively large sums of money required to pay for the work.

It has been suggested that the light nature of many of the refugee farm soils will allow the dissolved salts to pass through the profile away from the root zone. It is not known if this is indeed occurring in all cases or if there is a net build up of salts through the evaporation of the water from the capillary tubules which open onto the soil's surface. In order to determine any change in salt status there must be a regular system of soil analysis done for every farm every year. This has not been done systematically because for the last two years it has not been possible to analyze soils chemically within the country. Dickenson (1980) in his work on the Belet Uen soils reported a high salt and sodium hazard 20 to 150 cm down the profile on the predominantly clay soils of Crash and Sigalow farms. No hazard was however recorded on the sandier soils of Luuq Jelow. Other soil tests show a similar pattern for other farms: the heavier soils having salt accumulations building up in their profiles and lighter, sandy soils possibly showing build up at a slower rate. Although rainfall will leach away the accumulated salts especially on the lighter soils, the frequency of bad seasons implies a greater reliance on irrigation water and less rainfall to flush out the salts in the profile. In this situation salt build-up may be accelerated.

The application of additional irrigation water may tend to wash out the accumulating salts, however the water needs to be applied uniformly over the cultivated area. Failure to do this may create greater salinity problems. Generally the water delivery systems on the refugee farms are inefficient, especially on the larger farms at the tail-end of the canals. In other semi arid countries such as Pakistan and the Euphrates Valley in Syria and Iraq large tracts of arable land have been damaged by attempting to irrigate too large an area in relation to the water supply available. Conveyance losses through seepage in the unlined canals on the refugee farms and occasional spillages, plus evaporation losses, can account for large quantities of water. Kraatz (1971) measured seepage losses in sandy loams, which are commonly found on the irrigated refugee farms, and found that 300 to 450 l./day/m² of wetted perimeter was usual. A loss of this magnitude could account for over half of the irrigation water applied and make it very difficult to supply a uniform and correctly measured amount of water over the land. It could therefore be anticipated that salts are accumulating in the soil profile on parts of most of the refugee farms.

The construction of small basins (10 to 20 m²) which may be filled with water one after the other may give the best efficiency and uniformity of application. This system has a high requirement for manual labour and farmer supervision. Much more training and the correct type of motivation will be required. This will involve an increase in effort and expense on behalf of the implementors and donors. Failure to understand what may be happening on the irrigated farms and not taking the necessary steps against it may result in grave problems in the near future.

CONCLUSION

One of the curious paradoxes of agriculture and even human existence is that its careless practice may threaten the natural resources on which it totally depends. These resources are soil, water, natural vegetation, and both terrestrial and aquatic organisms. Their conservation within the framework of a wise agricultural policy will ensure that man will have *continued* use of them; conservation is a very clear form of enlightened self interest. The failure to protect non-renewable resources from over-use or destruction will drastically reduce man's productive options, and in a country with an easily destabilized ecological balance with few other alternative resources like Somalia, the outcome may be further difficulties and impoverishment. Not only in Somalia, but all over the world in both developing and industrialized countries, planners, policy makers, and staff with a narrow based technical training fail to place agriculture and related matters in their proper ecological context. This has, during the course of this century, led to the ruin of vast areas of good land, the pollution of water resources and the spread of disease, the destruction of forests and the subsequent reduction of biological diversity; not to mention the colossal wastage of man-hours and money.

The primary purpose of this paper was to indicate that given the nature of Somalia's environment and the increased load with which it must now bear, the probability of an ecological problem is becoming more serious with the passage of time. Fleeting, the paper touches on some ideas towards reducing the strain on specific parts of the environment; there are also some implied solutions (e.g. there should be some consideration given to the national control of fire wood harvesting, as there is with charcoal), but the essential purpose was to give an assortment of evidence showing that there is another, so far little thought of, dimension to refugees living in camps and farming in Somalia, and that it should be examined in all its parts quickly.

The government is already aware of the problems of environmental degradation and the threat of desertification. The National Range Agency was created in order to attempt to control and rationalize the exploitation of non-renewable resources on which Somalia's economy so squarely stands, and on which the vast majority of the people still depend for a living. Is there a structure or a linkage which could be developed in order to regulate the effects that the refugees

are having on their immediate physical environment, and which can plan and execute a programme of reclamation? The first step is an in depth examination of the problem by local authorities as soon as possible.

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CASE STUDY: WAD WASSI AND KAFFIR EL SHIEK (A)
THE NGO AGENCY IN A REFUGEE EMERGENCY IN AFRICA

Introduction

The events described in the following case actually happened. The principal agency, NGO Agency, and the disaster-stricken country have been disguised to maintain the anonymity of persons involved. Although these events happened sometime in the past, the case has been written so as to bring the reader to a point in the present when difficult decisions need to be made. The case is not intended to illustrate effective or ineffective handling of a refugee emergency, but rather to provide the basis for group discussion.

To the degree possible, the case has been written in a value-neutral way; the burden of making value judgements has been placed on you. When you finish reading the case, the situation will be largely unresolved. It will be up to you to define the problem or problems and set goals. You should consider yourself to be a member of the NGO agency staff, but you are not obligated to accept the judgments that your co-workers have made up to now, nor to accept their advice on action to be taken in the future.

The Case

A drought which has affected crops throughout much of Africa began two years ago. The crop failed entirely last year, leading to famine conditions by early in the current year. In

the area of Hostcountry we will examine, by the end of September it was apparent that there would be very little yield from the main staple crop, sorghum. Unfortunately, similar conditions affected all of Hostcountry, and crops failed everywhere except in the largest of the irrigation schemes. As the people from the rural areas noticed the already familiar pattern of famine emerging once again, they sold their remaining domestic animals, boarded up their homes, and took to the road. The famine was compounded by this movement of large numbers of people from their farmland to towns or roadsides. In areas where the local people might have survived longer if left to their own resources, the presence of so many outsiders desperately looking for water or food, or both, so depleted those commodities that the locals joined the outsiders on their journey. At the same time, the influx of refugees from Neighborcountry increased dramatically.

The improvement of agriculture had been a major objective of the Hostcountry government. The famine presented a major political as well as social crisis to the government which tried initially to suppress news of the famine. The government then published edicts threatening dire punishment for hoarders and speculators, but government policies did little to prevent hoarding and export of what few grain reserves existed. The president was deposed in a coup d'etat five months into the famine.

Both the old and new governments of Hostcountry have maintained a policy of welcoming refugees, despite the strain on its own resources. No refugee groups have ever been forced to leave, although since the establishment of the new government, local resentment of refugee competition for unskilled jobs in the towns has resulted in public discussion of more restrictive policies.

In some instances, the government has provided land to refugee settlements. Over the last ten years, the government of Hostcountry established 17 such settlements. However, the amount and quality of land made available varies considerably. In addition, the plots allocated to each family also vary, from about 1 hectare to 4.5 hectares. One hectare equals 2.47 acres, and 10 acres is the approximate amount needed to support an average family in this semi-arid region. The provision of land to refugees reflects a government policy of looking for longer term means for providing basic needs without constant donation of food rations. Rations from international donors have been targeted for the refugees from Neighborcountry.

All refugee programs in Hostcountry are operated under the auspices of the Board for Refugees (BFR), part of the Ministry of the Interior. The United Nations High Commissioner for Refugees (UNHCR) provides funding and technical support services to many programs. Many programs for refugees are implemented by private voluntary organizations or non-governmental organizations.

Although there are many agencies operating in the area, this case concentrates on the NGO Agency.

The area around Kaffir El Shiek and Wad Wassi is a flat clay plain of marginal fertility and rainfall, although commercial farmers in the area have been able to grow crops, especially sorghum, profitably, given adequate rainfall. The terrain is quite bleak, except during the rains. Wad Wassi was established as an agricultural settlement in 1973 and Kaffir El Shiek in 1978. Today, the population in the two camps was 7,000 in Wad Wassi and 4,000 in Kaffir El Shiek. The Board for Refugees (BFR) provided the original refugee settler families about 10 feddans each (1 feddan = 1.04 acres). A BFR agricultural service provides yearly cultivation services and seeds. Although a significant number of refugees leave the settlement to seek seasonal employment in Sakkala or other large towns or in the larger agricultural schemes, most of the older settlers depend on their agricultural efforts to support their families. This has not been possible since last year as drought and insect infestations have destroyed most, if not all, crops. Regular rations of sorghum, beans, oil, and milk have sustained people.

Earlier this year, BFR planned to bring large numbers of new settlers to both Kaffir El Shiek and Wad Wassi, which would add some 20,000 people to each settlement. As it actually happened, only 7,000 new people were brought to Kaffir El Shiek only. The

reason for the limitation is disputed, although there is some indication that landowners from the area objected. In any case, none of the new arrivals have received farm land, and must subsist on the ration and on the few vegetables they can grow in small plots around their houses in the camp. According to NGO Agency information, a larger proportion of the new settlers were nomads with little or no farming experience. Clearly the conditions, especially in Kaffir El Shiek were difficult prior to NGO Agency's arrival in April of this year. An NGO Agency program document describes the situation in this way:

When NGO Agency arrived in Wad Wassi and Kaffir El Shiek, the situation was grim. In Kaffir El Shiek, when hundreds of new refugees were arriving daily from a large border reception center, there was a clear emergency. Half of the arriving children were suffering from moderate to severe malnutrition, and were therefore particularly vulnerable to fatal diseases. Measles and subsequent complications claimed the lives of many small children. The new refugees lived in crowded, squalid conditions, with inadequate housing, food, and medical care.

The Kaffir El Shiek community exhibits many of the conditions common to other refugee camps in Eastern Hostcountry. The description above reveals serious concerns in the physical area, particularly regarding health, the primary sector for NGO Agency work. NGO Agency prides itself on the way it deals with the interdependency of preventative and curative medicine in its programs. NGO agency staff have communicated to you their concerns in the physical area include the following:

Access to land
Rainfall and soil fertility
Health and sanitation
Ration provision
Lack of income sources
Dependency on mechanized cultivation
Insect infestation
Agricultural skills

a) Access to land: As already mentioned above, the first settlers to Kaffir El Shiek and Wad Wassi received about 10 feddans each, sufficient area to support a family in good years. However, the later arrivals were not formally allocated any land at all. BFR officials interviewed indicated that they hope to be able to provide land in the future, although there are no immediate prospects for making additional land available to refugees in Kaffir El Shiek. For this reason, 7,000 people, out of a total of 11,000, are dependent on the distribution of rations or on scarce jobs in nearby towns or large agricultural schemes (for which they compete with Hostcountryese). Until some amount of land is made available to each family, prospects for even marginal self-sufficiency in food for the community will be dim.

b) Rainfall and soil fertility: Even if refugee families were provided adequate land, there is a debate in the community as to whether the land is really viable in terms of fertility and regular rainfall. For the past few years, crops have been poor or nonexistent, due surely to failed rains, but also partly to poor soil fertility. The area should be adequate for sorghum

production, but in below average years, crops will always be poor. The land being used by refugees was exploited in the early 1970's by commercial farmers. Some speculate that their use of the land without any fallowing or crop rotation may have contributed to the decreased fertility of the soil. Coupled with the scarcity of land, the rainfall and fertility issues again raise questions about longer term self reliance for the refugee community.

c) Health and sanitation: Many of the refugees in the two camps come from nomadic backgrounds, and have not experienced life in close quarters with thousands of other families. Regular personal health and community sanitation practices have not been a matter of survival in their past and must be learned in this new setting. The new refugees who arrived in Kaffir El Shiek in early this year were in poor physical condition and therefore susceptible to disease. In fact, there was an acute outbreak of cholera in Kaffir El Shiek in June of this year, a major health problem which occupied all of NGO Agency's attention during the first few months of the program. Hostcounty Council of Churches (HCC) has been running health services in the two camps for several years, but these have focussed on curative measures and child health. Greater attention to the public health and, specifically, preventitive measures in the two communities is alleged to be crucial.

d) Lack of alternative sources of income: When asked what the biggest problem for the camp was, sheikhs in Kaffir El Shiek responded that it was the lack of jobs for the people, especially the newer refugees who lack land. Some refugees leave the camps and travel to Sakkala, Federgad, or one of the other towns (including the capital city) to get jobs. Others work as seasonal labor on the large mechanized commercial farms in the area. But these jobs are few and require separation of families. Refugee leaders would like to see some form of regular employment based in or near the community.

e) Mechanized cultivation: Farmers in the two camps depend on the BFR tractor service for cultivation of their lands. There have been complaints that the BFR service is not dependable; it does not reach everyone or it is not provided on a timely basis. (There is some indication that farmers in Wad Wassi are able to secure better service, perhaps because they are in joint agricultural ventures with BFR officials). In any case, the BFR tractor service is not provided on an economic basis - i.e., farmers could not afford to pay the real costs of running the service. Therefore, farming in the community is not run in a manner that could be sustained if farmers were forced to purchase cultivation services from private tractor services. Few farmers have been using hand cultivation methods.

e) Insect infestation: This year, much of the sorghum crop in Kaffir El Shiek and Wad Wassi was lost due to locusts, even though the rains had been adequate for a good crop. Refugee farmers have less access to the authorities who can bring in pesticides in time to save the crop. Many reported losing all of their crop. NGO personnel have commented that several of the factors cited above, threaten crops and decrease the refugees' motivation to plant a crop, particularly so long as ration distribution is likely to continue. Refugee leaders claim that this is not the case, and that those people who have a tradition of planting wish to continue to do so.

f) Lack of agricultural skills: BFR officials have commented to you that many of the refugees in the two camps come from nomadic pastoralist traditions and lack a base of experience and skills in farming. While some experience has been gained in the several years since they started farming in the area, many farmers still have need of sustained and effective agricultural extension services.

In one staff meeting, you heard one NGO Agency field staffer comment that they found the formal leadership structures in the refugee community (provided by the shiekhs) to be strong and articulate. The sheikhs were supposed to be "eager, creative, willing to debate among themselves in our presence." Another staffer responded that the shiekhs are corrupt. "They keep an

method, this process seems to be working well for them. In their own country prior to the famine, the refugees had been characterized by a fierce independence. This attribute had sustained them for centuries but it is being abandoned because it is no longer applicable to the situation in which they now find themselves.

NGO agency operates in most of its programs under a set of program principles. All of these program principles emphasize the process of involving a community in defining its own needs, participating in solving problems, and making a contribution towards implementing solutions.

The challenge for the program at Kaffir El Shiek and Wad Wassi was to take these principles which had been devised for a development setting and apply them in an emergency situation. The initial Field Directors were convinced that it could be done, but also knew that the choice of a program site would have a profound effect on the prospects for implementing a successful development program in an emergency refugee setting.

A. Site Selection

NGO Agency used the following assumptions and/or criteria for selecting a site for work with refugees in Eastern Hostcountry:

- 1) The refugee settlement was likely to remain in existence for five to ten years.

- 2) There should be adequate resources so that economic self-sufficiency is a possibility. Available resources should match the skills of the refugees.
- 3) Refugees have demonstrated self-help initiative.
- 4) There should be sufficient ethnic homogeneity to minimize divisiveness during needs assessment and project planning.
- 5) There should be an opportunity for NGO Agency to play a lead role as a development agency, to ensure that NGO Agency project would not be undermined by conflicting policies of another agency.
- 6) There should be local host government interest in development.
- 7) There should be UNHCR interest and support.
- 8) There must be funding available for the site.

The sites at Kaffir El Shiek and Wad Wassi met most of the above criteria, although in the months since the project began, there has been considerable debate over some of them. Present field staff question whether real self-sufficiency will be possible, especially for the landless late comers of Kaffir El Shiek. Some even question whether those with adequate land can become self-sufficient, since crops have been poor or non-existent for the past four years.

NGO Agency is now encountering some difficulties with the local government regarding development projects. NGO Agency received good cooperation and support from the local BFR administration, but there has been some resistance at higher levels in BFR to NGO Agency initiatives for development

activities, trying to restrict them to their mandate in the area of health and sanitation. Most actual projects have been approved, however.

NGO Agency is currently involved in a heated conflict with the Hostcounty Council of Churches which runs clinical health programs in the camps. The conflict centers on agency roles and authority in the two camps. It is important to note that HCC did not participate in elaborating the NGO Agency list of program criteria, and does not feel obligated to accept their dictates. HCC staff have defined their mission as "caring for the refugees' (and particularly the refugee childrens') spiritual and physical needs. NGO Agency defines their mission as "helping the people help themselves." NGO Agency had been told - incorrectly - by BFR that Hostcounty Council of Churches would be leaving the camps and no longer providing health services. NGO Agency has sufficient health care professionals and nutritionists to staff both camps. It turned out, however, that HCC very much preferred to remain in the camps. Tomorrow there are going to be negotiations between the two agencies regarding a division of responsibilities for health in the two camps.

THE PROBLEM

1. Define the problems which you see facing the NGO Agency right now.
2. Set goals for the agency. Please differentiate between short-term and long-term goals.
3. Identify a strategy or course of action that you believe will result in the attainment of each of the goals that you have chosen.
4. What problems do you anticipate given your choice of strategy? What do you intend to do if these problems occur?

ARTICLES

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Rural refugees in Africa: Past experience, future pointers

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Rapid change in rural Africa raises new policy problems in dealing with mass influxes of rural refugees. Self-settlement in agriculture has become less feasible and is less acceptable now that its disadvantages are better understood. Organized smallholder settlement can be a better solution where it is economically viable, refugees have freedom of movement, and staff are suitable. But growing land shortage means that increasing proportions of refugees are being placed in camps. To offset this trend, more attention is suggested to programmes for groups of refugees, categorized by time of arrival, by ability to self-settle or to farm, and by skills and experience. Practically-oriented social science research can contribute to these and other approaches which will require imagination and ingenuity. Solutions to future rural refugee problems should be linked with programmes of social and economic development which will make easier the achievement of humanitarian objectives.

Keywords: Africa, refugees, rural settlement, development.

INTRODUCTION

This paper examines some past experience with rural refugees in Africa and tries to identify pointers and questions for the future. In doing this, it faces two problems:

The first problem is nomenclature. The use of terms to describe rural refugee situations is often loose. To make this paper clearer, the following categories and meanings will be used:

Rural refugee means a refugee in a rural area in a host country

Urban refugee means a refugee in an urban area in a host country

Self-settling describes refugees who seek livelihoods outside organized settlements or camps and without sustained official assistance.

Organized settlement is where refugees are provided with a place of residence and a means of livelihood. Most organized settlements are agricultural and almost all of these are smallholder settlements.

Camp refers to an administered refugee centre where refugees are provided with all or part of their subsistence without prospect of their becoming fully self-supporting in that place.

These categories are not always distinct.

The second problem is the speed of change. Africa is the only continent in which the rate of population growth increased during the 1970s: growth per annum now stands at over 3%, and in Kenya it is nearly 4%, with a doubling time of 18 years. Much of the additional population has to be supported in the rural areas, with the consequence of dramatically swift agrarian change and growing land scarcity. Simultaneously there has been a sharp rise in levels of literacy and education. In appraising these and other changes, the observer is usually out-of-date. Publications by social scientists about rural conditions in Africa are permanently behind the times because it takes so long to conduct research, analyse it, write it up, and then get it into print. An average time between research and publication would probably be in the range of 3 to 6 years. In attempting to reduce the timelags of perception, I have been helped by research reports (Betts, 1980; Hansen, 1979a and b, 1980; Lugusha, 1981; Terrill, forthcoming), official sources (e.g. NCAR, 1980a) and accounts by those who have worked with refugees (Cowan, 1979; Johnson, 1979; Wright, 1980) and by journalists (Grand, 1981; Woldegabriel, 1981).*

Measures to deal with refugees in Africa can be seen historically as a defensive administrative campaign to prevent mass problems becoming individual problems. The tens and hundreds of thousands of refugees in the mass rural movements of the latter 1960s and the 1970s defied individual threatment. A tiny elite minority identified themselves as urban and educated refugees, and received an utterly disproportionate share of administrative attention, humanitarian concern, educational opportunity, and financial aid. The great undifferentiated mass remained largely unperceived and were, and to an extent had to be, treated as guesstimates towards whom food, tools, seeds and the like were sometimes directed. The first solution was "spontaneous integration," in which tribal people settled among their kin and solved the problem in their own way. As situations arose where that could not be managed (with Rwandese BaTutsi in Tanzania and Zaire, for example) because there were no kin among whom to settle, the next

* I am especially grateful to T.W.F. Betts and Christopher Terrill for generously sharing with me and allowing me to make use of the findings of their research on rural, and especially self-settling, refugees.

solution was camps leading to organized agricultural settlement. More administration was required, but individuals were still not dealt with, but households, and the households were treated in a uniform manner, each receiving the same tools, the same amount of land, and the same inputs. And although both are becoming more difficult, "spontaneous" self-settlement and organized agricultural settlement are still seen today as the two major means whereby rural refugees may become self-reliant and achieve adequate livelihoods.

But in the 1980s land is much scarcer, refugees are more educated, and more refugees are of urban origin. Influxes on a scale which earlier in Zaire were largely self-settling have, in Somalia and Sudan, made huge demands and posed major, enduring problems of settlement. Somalia has lacked the resources or opportunities to absorb or support the refugees it has received. Sudan has faced new problems of urban refugees on a scale unprecedented in Africa, a warning of what may come to other countries later. Refugees have survived, and been enabled to survive, to a declining degree through rural self-settlement or organized agricultural settlement and to a greater degree through camps, migrant labouring, and urban self-settlement. The problems of Sudan in the early 1980s may well be the problems of other African countries in years to come.

In analysing the past and looking to the future, it is prudent to be modest and tentative. I shall first review some experience with self-settlement and smallholder settlement (as by far the most common form of organized agricultural settlement), and derive some lessons; and then consider a possible complementary approach to help meet the new conditions.

THE DEBATE: SELF-SETTLEMENT VERSUS SMALLHOLDER SETTLEMENT

Much debate about rural refugees has concerned the merits of self-settlement versus smallholder settlement. In the 1960s and the first half of the 1970s, the balance of opinion favoured self-settlement where possible, with smallholder settlement as an alternative where necessary, especially where otherwise refugees would have to be in camps. More recently opinion has shifted, as reflected in the resolutions of the 1979 Arusha (SIAS, 1981) and 1980 Khartoum (NCAR, 1980b, p. 9) Conferences, towards regarding self-settlement as harsh and unacceptable, and smallholder settlement as preferable.

Until recently, self-settlement was by far the most common mode. During the past two decades, however, smallholder settlements have become much more common. When for humanitarian or security reasons refugees were moved from border areas of self-settlement, or otherwise rounded up, mass solutions were required. In default of voluntary repatriation, these were sought in agricultural settlements. At first, failure was common. But experience was gained, and in some countries with spare land and adequate rainfall some stable and modestly prosperous smallholder settlements were established. Those in voluntary agencies and governments who administered such programmes came to regard them as preferred solutions.

and despite their cost, they became a standard reflex.

The debate on the relative merits of these two approaches continues. The main arguments can be reviewed, drawing on evidence newly available through the comparative research on self-settlement being conducted by Betts (1980). Since much less has been known about self-settlement than smallholder settlement, more space will be given to it here.

Self settlement

The case for self-settlement once appeared persuasive. The argument was that many refugees simply crossed borders and resettled themselves with ethnic kin, often close by. Providing there were no serious security problems this presented no official difficulties. African hospitality, it was believed, took care of the refugees. They soon had land and huts and reestablished themselves. Official intervention was neither desired by the refugees, nor necessary. The generosity, adaptability and resilience of African rural society handled the crisis. The process was 'spontaneous integration,' a felicitous phrase which suggested a natural and desirable process. Well could and should be left well alone.

There were, and still can be advantages for both officialdom and for the refugees in this approach. The case for self-settlement includes:

Administrative convenience: Little needs to be done by the host government.

Low cost: Self-settlement makes low financial demands. It may place additional burdens on local services, but the cost of these will be slight compared with the cost of an officially administered programmes of camps or smallholder settlements, with their typically long period of reliance on special funding.

Self-help and independence: Able-bodied self-settling refugees generally work hard and are independent and self-reliant. They do not develop the syndrome of complaint and dependence which locks onto those exposed for long to camp conditions and feeding.

What people prefer: Many rural refugees may prefer struggle in a familiar environment to dependence in a strange one. Small familiar things mean much to the quality of life, especially to older people. So some refugees may see self-settlement as their best solution especially if the alternative is life in a camp or restricted movements or both.

These arguments still carry weight, but not only have the perceptions of self-settlement changed, but also the underlying reality. Twenty years ago there was more uncultivated but cultivable land; markets in land were less developed; and self-settlement in subsistence agriculture was more feasible and more acceptable. But not much was known, except by the refugees themselves and their immediate hosts, about the conditions under which they 'integrated.' If we examine the evidence (see Betts, 1980; Hansen, 1979a, b, 1980; Chambers, 1979; Eriksson et al.,

1981), there is now a strong humanitarian case against self-settlement. This rests on four main points.

1. Instant impoverishment. Refugees often arrive with almost nothing. The first refugees to come may bring domestic animals and goods, but refugees who flee acute crises bring less. Money is realized at adverse rates of exchange (10 piastres for one Ethiopian dollar at Wad el Hilayew in Sudan in 1975, against an official rate of 25 piastres, representing an instant loss of 60% of savings). To survive, refugees often have to live off whatever meagre capital they have brought with them. In Zambia, for example, some Angolan refugees had to begin trading their possessions almost immediately on arrival (Hansen, 1980, p. 22). Moreover, as rural levels of living rise in Africa, so the trauma of this impoverishment becomes worse as more is lost. With almost no capital resources, re-establishment through self-settlement can be exceedingly difficult, or impossible.

2. Access to land. No land may be available. There was no land for many of the Barundi refugees in South Kivu in Zaire from 1972 onwards, or for the Eritrea refugees at Wad el Hilayew in Sudan when that was a major refugee centre. If land is available, it is likely to be small, economically marginal, and tenurially insecure.

Smallness is to be expected where population is pressing on land resources, as with very inadequate plots to which refugees gained access in Bas Zaire (Grenfell, 1967) and for those who did manage to cultivate in South Kivu.

Economic marginality of land also seems almost inevitable. The better land is already cultivated. Lugisha (1981, p. 30) reports that Barundi refugees in Kigoma in Tanzania were allocated land which was vacant precisely because it was marginal. For Angolan refugees in Zambia, Hansen (personal communication) found that some of the land available was a long walking distance from the settlement; and this (whatever its fertility) made it economically marginal because of the time required of hard-pressed families to go to the fields and return, let alone guard their crops. Economic marginality is also greater where payments, in cash or kind, have to be made to be allowed to cultivate in the first place.

Insecure tenure is a pervasive problem. Refugees are politically weak and easy to exploit and dislodge. They may be driven off land by those from whom they rent it, as happened to some of those who gained access to small plots of land in South Kivu, and to others in Uganda. The insecure status of self-settling refugees also makes them vulnerable to being identified and moved by the host government. The border areas which they often occupy are especially sensitive. Again and again refugees who have tried to settle themselves have been identified individually or rounded up *en masse*, and moved to camps or settlements. When this happens, they lose whatever they have already invested in breaking and cultivating land, leaving the benefit to their hosts. Fear of being rounded up is a disincentive to efforts to get securely established.

3. Labour, wages and exploitation. The labour which rural refugees bring is a resource which the less poor and more powerful among the host population may readily exploit. In his study of Rwandese refugees in Tanzania, Gasarasi (1976, p. 161) criticises the policy of sending refugees into the villages of the indigenous people immediately after their arrival. He notes that in such circumstances

“the local community will tend to establish exploitative relations with [the refugees], since at this particular point, they will have no choice other than trying to earn a living at any cost. As a result, the local community, realizing that the livelihood of its uprooted guests is under its mercy, will tend to develop some kind of contempt over them.”

Many refugees have nothing to sell but their labour. If they do not receive relief food supplies, their demand for food drives local food prices up. At the same time, their abundant labour and need for work drives wages down. The terms of trade for labour against food then shift sharply against them. In Sudan, low wages were noted around Wad el Hilayew when that was a refugee site: the agricultural schemes nearby “paid excessively low wages and employed mainly women and children” (Johnson, 1979, p. 420). In Zaire, a voluntary agency staff member has written that Cabindan self-settlement close to the border could not last long or give satisfactory results

“because the Zairois used refugees to carry out refugee labour at very low rates. The social condition of the Cabindans living in these villages could in fact be labelled ‘servile.’ It also happened that the local administrative authorities tended to oppose the grouping of the refugees in our settlements because we should have deprived them of a very cheap labour force.”

quoted in Betts, 1980, p. 68

In Zambia, the extremity of the struggle for food has been described thus:

A husband and wife, if both worked a normal work day every day, would earn only enough to feed themselves. If they had any children or other dependents who could not work, or if one of the two people became ill and could not work, they had to eat less than the normal quantity of food and a less desirable relish.

Hansen, 1979a, p. 373

Driving wages down and food prices up can also hurt the poorer among the host population. If the poorer hosts also have to rely on labouring for their livelihoods, they may be even worse off than the refugees if the refugees get free food and they do not. In such circumstances, the plight of the poorer ‘hosts’ may well be desperate.

4. Harrassment and fear. Self-settling refugees’ fear of harrassment is neither well-documented nor well-recognized. Although self-settlers have been by far the majority of African refugees, lawyers (that most urban profession) have

paid negligible attention to them. Yet when investigations are carried out, they often reveal fear and persecution. Self-settling refugees are wary of officialdom. They fear the unknown — being rounded up and moved off to a camp or settlement. They are vulnerable to blackmail — to threats of being reported to the authorities. In South Kivu, some were forced to carry equipment for the army in the mountains; others were repeatedly subject to theft — of ducks, fish and the like — against which they had no effective appeal. Refugees tried to remain inconspicuous, and to avoid any display of even modest wealth which might provoke appropriations. Self-settling refugees are not just poor; poverty is their strategy. The situation is worse when all refugees are by regulation meant to be in camps or settlements. This was the policy of the Zambian Government, with adverse effects for successfully self-settled refugees:

If a refugee became too successful and aroused any enmity, or if a refugee attracted too much official attention, he ran the risk of being reported and sent to a camp. This continual political vulnerability operated against the village refugees. They had continually to weigh this factor into their economic decisions.

Hansen, 1979b, p. 378

So, if they cultivate, self-settling refugees have every reason not to plant long-term cash crops (coffee, cashew, or the like). Their insecurity prevents their becoming less poor. The cruellest cut is when their hosts dismiss them. As soon as a drought came, Cabindans who had self-settled as labourers were considered a burden by their hosts and expelled (Betts, 1980, p. 68). When things go wrong, self-settling refugees are made the first to suffer.

Smallholder settlement

Smallholder refugee settlements have been established in many African countries including Angola, Botswana, Burundi, Cameroun, Central African Republic, Ethiopia, Rwanda, Somalia, Sudan, Tanzania, Uganda, Zaire and Zambia. Smallholder settlement has been more fully studied and evaluated* than self-settlement. Here I shall only summarize the main points.

There have been three main arguments against smallholder settlement:

1. Total institutions. Smallholder settlements have sometimes been run on authoritarian lines, with restrictions on freedom of movement, and with refugee settlers as inmates subject to unnatural constraints.** The comparison is made with other total institutions such as ships at sea, hospitals, prisons, asylums, and boarding schools. Support for this interpretation comes from studies of settlements which have indeed had something of this character, where the settle-

*See, for example reports of implementing agencies such as AIDR, TCRS, and ZCRS, and Chambers et al., (1971).

**For this theme see Feldman (1971); Gasarasi (1976); Gosselin (1970); Moris (1967); Sokiri (1972). For analysis of total institutions, see Goffman (1962) and also his subsequent book *Asylums*.

ment manager is called a commandant, and is a Prisons or Police Officer, where he and his staff wear uniforms, and where refugees are confined to the settlement and captured and returned if they run away. Both Sokiri's (1972) analysis of Ibuga in Uganda and Gasarasi's (1976) of Muyenzi in Tanzania present some of the features of total institutions.

2. Failures. With early refugee settlement in the 1960s there was a high rate of failure in the sense that continual subsidies and support were needed, refugees were not self-reliant, and services broke down. Land sometimes proved infertile, and water supplies failed. Refugees voted with their feet, or remained, miserable and dependent.

3. Cost. Smallholder settlement has been a high proportion of total refugee costs, and its cost has not diminished. As it now increasingly becomes necessary to make payments for land for settlement, costs will rise sharply. They will be even higher where settlement has to take place in environments which require mechanization or irrigation for economic viability.

The case for smallholder settlement is well known and often repeated. Against its critics, it can be shown that there are settlements which have not resembled total institutions — Katumba in Tanzania and Etsha in Botswana (Potten, 1976) for example where refugees have been free to move and where the economic base has been adequate. And although the financial cost may be high compared with self-settlement, it is low compared with individual urban cases or permanent dependence in camps. Successful smallholder settlement also enables refugees to establish themselves in a self-reliant manner in a reasonably familiar environment and with familiar livelihoods, contributes both to the economy and the social infrastructure (through schools, health clinics, roads, etc.) of the host country, and makes the management and control of refugees easier. The existence, in several host countries, of secure and stable settlements of refugees, some of whom are now naturalized citizens, and the practical experience gained in how to make settlements succeed, do, in my view, show that smallholder settlement can be a good solution.

Many lessons have been learnt. The mistakes of the 1960s (authoritarian management, excessive social services, doing too much for settlers and undermining self-help, and so on) were quite largely corrected in the 1970s. The **supreme requirement was found to be the economic viability of smallholder agriculture for the refugees**; without this only failure follows. Neldner (1979) has summarized the lessons from Eastern African experience, covering topics such as feeding, housing, health, education, training and agricultural development. Much other experience is not recorded but is in the minds of administrators, voluntary agency staff, and others.

Three points, often misunderstood or neglected, deserve attention: freedom of movement; the organization of production; and the selection and training of settlement staff.

1. Freedom of movement. The more successful settlements

have allowed refugees freedom of movement. There may be security reasons for restrictions. But confining, or attempting to confine, agricultural settlers to a delimited settlement area has many adverse effects including:

- reducing their ability to learn local agricultural and other practices from their host neighbours.
- inhibiting integration and the sharing of services with their hosts.
- reducing their ability to supplement their incomes and food supplies through agricultural or other labouring, petty trade, and the like, and thereby reducing both household incomes and the economic viability of the settlement.
- inducing a dependent state of mind, and inhibiting self-reliance and willingness to invest time and energy in agricultural development.
- reducing the bargaining power of refugees who do get out and try to get work, since they can be threatened by potential employers with exposure to the police.
- requiring or encouraging the exercise of authoritarian controls by settlement staff, and shifting social and organizational relations towards those of a total institution, with its adverse effects.

2. Organization of production. A recurrent problem with agricultural settlement schemes has been the temptation to use them as an opportunity for creating an ideal or model form of organization which corresponds with a planner's or politician's idea of what is good for others but not with settlers' ideas of what is good for themselves. This has taken the form of planning and requiring collective agricultural production. Refugees may seem an easy group upon whom to impose such a form or organization because they are so powerless. But the record speaks for itself. Early attempts at collective production in Zambia failed outright. It was tried with Angolan refugees at Lwatembo Settlement in Zambia in 1968/1969 and collapsed, the refugees (like most small farmers in the world) preferring to work on individual plots (Betts, 1980, pp. 26—28). In Tanzania, the collective production of *ujamaa* was not a success. Only with exceptional conditions of leadership, discipline, dedication, and economies of scale, does collective production stand a chance. Yet among its many humane and sound recommendations, the Arusha Conference of 1979 stated that in order to achieve integrated settlement one component which must be taken into account is "effective integration into the economic structure of the host community through co-operatives for production and marketing etc." (SIAS, 1981, p. 22 — recommendation 10 (3) (c)). Co-operatives for inputs and marketing are one thing; co-operatives for production are quite another. For ordinary mortals, and especially for weak and vulnerable refugees, they are irrelevant and best avoided. Almost all the successful rural settlements of which I am aware have been based on smallholdings. There may be common

services for input supply and marketing; but the basic economic unit is the independent small family farm which is what settlers want.

3. Selection and training of staff. Managing an agricultural settlement for refugees is difficult. It is much harder than, say, running a state or company farm. It requires agricultural and administrative competence, and a willingness and ability to listen to, understand, and communicate with the refugee settlers. On top of all this, refugee settlement managers have to deal with the local population, the local administration, and their head office.

This requires people of exceptional ability and humanity. It is usually not a popular job as it may involve living in a remote area with poor communications and without urban facilities. It may be a penal posting, a punishment for some departmental misdemeanour. The wrong sort of department (Army, prisons, police) can be a disaster. To be sure, one can find Army, Prisons and Police officers who are balanced, broad-minded and sensitive, and staff in Departments of Agriculture and Community Development who are intolerant, narrow-minded and insensitive. But generally, the latter have professional concerns and training and a style and content of administration which are better suited to managing settlements. It is, however, attitudes that are most important. Here are the views of Gasarasi in the conclusions of his study of a smallholder settlement in Tanzania:

... refugee administration is a very difficult task. It is difficult in the sense that the administrators have to deal with frustrated human beings who can respond to their frustrations by refusing to accept reality, by acting emotionally, etc. . . . the personnel acting on behalf of the host government and the various aid agencies ought to be carefully selected. At least a top settlement official like the Settlement Commandant should be a person who has been long in some senior administrative post, who is conversant with the principles of human psychology in order to overcome weaknesses like prejudice . . .

... I am making this point because one often hears that a certain Settlement Commandant or any other leader has told the refugees things like "I was told how difficult you people are before I came here." This suggests that prejudice can affect the relationships between leaders and the refugees. A person who cannot resist prejudice can be unnecessarily harsh to a certain category of refugees right from the start, simply because he came with an informal warning to beware of their rudeness . . .

... The ideal leader in a refugee settlement is one who is void of superiority and inferiority complexes. If he has some superiority complex, there is a danger of treatment refugees as nonentities who, because of their wretchedness, cannot be expected to have any say in the decisions related to their own lives. If he has some inferiority complex, he will tend to interpret even the most harmless disagreement on the part of refugees as rebelliousness, and he will retaliate with undue harshness. Both kinds of complexes normally result into authoritarian administration. Once this state of affairs is reached, the

relations between the settlement administrators and the refugees deteriorate and the former resort to intimidation. In the case of Muyenzi some settlement commanders have at times told the refugees threateningly that they would hand them over to the Rwanda regime if they did not behave well, or that they would put them in jail.

Gasarasi, 1976, p. 157

Beyond the careful selection recommended by Gasarasi, training has a contribution to make. The opportunities for those engaged in refugee administration in Africa to visit other African countries, endorsed by the Arusha Conference (SIAS, 1981, p. 24, recommendation 10,4) is one step. But further than this, there is a case for some suitable international body setting up ad hoc training for those who manage rural refugees and refugee settlements. One part of such training might include simulation games in which staff play refugees and learn from the inside, as it were, what it is like to be a refugee.

FOR THE FUTURE: GROUPING REFUGEES

Perhaps the most important lesson is that each situation should be examined afresh. There are no universal solutions to refugee problems. There will still be situations where sensitively assisted self-settlement will be the best policy, or where liberally administered agricultural settlements will be feasible. But the tragic trend has been towards placing more and more refugees in camps. As with many of the refugees in Somalia, this is in danger of meaning semi-permanent or permanent dependence. The search is on for alternatives to camps. These alternatives must not be too demanding of administration or finance. Where there are tens of thousands of refugees, for example, individual attention may be almost unthinkable. The question is whether, besides self-settlement and organized smallholder settlement, there are other administration-sparing approaches.

In the interests of both refugees and host governments, these may be sought through identifying and working with different sorts of groups. Three will be considered here: groups by time of arrival, by ability to self-settle or to farm, and by skill.

1. By time of arrival. In any refugee situation, different sorts of refugees come at different times. A pioneering and meticulous study by Terrill (forthcoming) throws fascinating light on one refugee sequence, and suggests practical questions to be asked of others. Terrill studied Acholi refugee movements from the South Sudan into Uganda. He has found that the refugees who crossed into Uganda from 1955 to 1972 came from two groups — the Lobong and the Kal. The Lobong were poorer and feudally dominated by the Kal who controlled the land. On the basis of extensive in depth interviews, Terrill distinguishes four phases and four types of refugee:

i. Opportunist. When refugees from further north began to cross into Uganda, the frontier was open for the Lobong also to cross. Although not refugees in the sense of international law, they took advantage of this opportunity to

escape from their Kal overlords. Their attitudes were positive, and they resettled themselves or went to settlements.

ii. Anticipatory. Later, as physical danger approached, other refugees crossed, anticipating imminent hostilities.

iii. Acute. These were refugees actually displaced by military activity, and were predominantly Kal, who had remained partly because they had more to lose by moving. Their attitudes were dependent and negative, and many ended up in camps and settlements.

iv. Normative. These were later refugees who, although fearful, had remained in the Sudan and who crossed the border when they learnt of the advantages being enjoyed by the kin who had crossed earlier.

There is a parallel here with Hansen's findings with migrants and refugees from Angola coming into Zambia (1979a, pp. 371—372). Earlier migrants (perhaps some of them equivalent to Terrill's opportunist and anticipatory refugees) were able to change their monetary savings at the border, and either sell their cattle before leaving, or drive them into Zambia. In the acute phase, it was dangerous to drive cattle because the Portuguese were bombing anyone they saw in the free fire zones which had to be traversed, and refugees "could only carry smaller less valuable items (clothes, blankets, tobacco, axe heads etc.)" (Hansen, 1979, p. 372), and money could no longer be changed.

Terrill's and Hansen's accounts indicate that refugees arriving at different times differ in motivation, in resources, in how much they have lost, and in ability to fend for themselves. This, in turn, suggests that far from there being an imperative to treat rural refugee influxes as uniform, there is an opportunity to separate out different groups at different times with different needs and abilities. This opportunity may, however, often be obscured by standardized and uniform administration, and by the pressures of an emergency.

2. By ability to self-settle or to farm. Analysis of differences by time of arrival points to marked differences in motivation and ability to self-settle. Opportunist migrants or refugees coming in good order and bringing capital with them are better placed to fend for themselves, and in the early stages of an influx there is less pressure on the receiving population and environment. To sweep all of them up into a uniform programme — of camps, or of smallholder settlement — may be neither what they want, nor what makes sense for the host government. In contrast, those who come in an acute phase, in distress, with very little or no capital, and having lost a lot may require a mass programme of relief. There will be more pressure on the receiving population and environment; and they may be less inclined and able to fend for themselves, having lost and suffered more. Both the circumstances of their departure and those of their reception are likely to induce dependence.

Within any refugee population coming at the same time there will also be marked differences between individuals

and between households in ability and willingness to self-settle or to farm. At one extreme there are widows, female-headed households, orphans, and the sick, starving and injured; at the other, there are strong able-bodied families eager to start at once the struggle for self-sufficiency. The former cannot be expected to settle themselves without support; but the latter, with some temporary assistance, may be much better able to do so, whether through self-settlement or through smallholder settlement.

3. By skills. Refugee populations also contain a wide range of skills. These are easily underestimated or undervalued. A quick survey (like that carried out in South Kivu in the mid-1970s) can be used to identify people like teachers, carpenters, tailors, barbers, fishermen, herders, masons, drivers, clerks, and traders. Such groups can then be provided with the tools of their occupations — sewing machines, boats and nets, carpentry or masonry tools and blackboards or employed on refugee administration.

The practical implication here is that the composition of a refugee population may permit a first screening which will reduce the later case load. Those who can settle themselves may then be encouraged to do so. They will tend to be found among those who are:

- i. Opportunist or anticipatory refugees.
- ii. Less poor, having capital (cash, animals, tools of their trades, etc.) with which to reestablish themselves.
- iii. In host countries which are known to permit and encourage self-settlement, thereby reducing or removing the disincentives of fear and harassment.
- iv. In areas with high demands for labour around the year.
- v. Able to gain secure access to the means of production, whether land or equipment.
- vi. In areas which are ethnically similar to those they came from.

If this is the first screen, the second may be smallholder settlement for those who remain, keeping the administrative burden manageable while still achieving humanitarian objectives.

This amounts to an argument against, in the new circumstances of the 1980s, the blanket solutions sometimes adopted in the past — allowing **all** refugees to self-settle, or putting **all** refugees into smallholder settlements or camps. In contrast, one strategy which might be pursued consciously, is suggested by Zambian experience. This is to have camps or settlements which act as safety nets to catch and support those who cannot make it in other ways. Hansen suggests that despite the unpopularity among self-settling refugees of the Meheba smallholder settlement, those who failed in the attempt to settle themselves did make their way there (1979b, p. 380). If self-settlement is encouraged as a means of reducing the burden, safety nets may also be badly needed.

Beyond this, there are the specialized group solutions proposed or already implemented in Sudan (for range and livestock, poultry, irrigated horticulture, fishing, and even settlements for agricultural labourers (NCAR, 1980a, pp. 7—10)). Learning from the experiences with such group approaches should provide lessons of value. A major question may be whether the administrative demands exceed the capacity that can be mustered, and if so, whether there are ways in which those demands can be reduced (for example through refugee participation and management) so that such group approaches can be spread more widely.

ISSUES FOR RESEARCH AND POLICY

Urban refugees are more likely to be researched and written about than rural: they are politically more visible and vociferous; and they are more convenient for researchers. The more difficult and more important research concerns policy for the rural refugees who will remain the great majority in most countries. Six areas can be suggested.

1. Sequences in refugee situations. The research of Terrill and observations by Hansen outline the changing characteristics over time of those who cross borders and become refugees. Is the sequence which Terrill found — opportunist, anticipatory, acute, and normative — common? Analysing more refugee situations over time, would one find similar or different patterns? What are the characteristics of the different types of refugee? How do officials and others perceive the stages, and adapt their responses to the different types of refugees that come at different times? Are there other practical implications, for example, for monitoring a refugee influx?

2. Self-settling refugees. Research to find out more about self-settling refugees was recommended by the Arusha Conference (SIAS, 1981, p. 24, recommendation 10, 6). Four aspects can be listed for special attention, besides those already mentioned:

- i. Which refugees manage to settle themselves, and how, and which do not?
- ii. How are they differentially affected in self-settlement? Are women affected differently from men, as shown for north east Zambia by Spring (1979)?
- iii. How administration — sparing and effective can group specific assistance be to self-settling refugees? For example, the provision donkeys for women who live by fetching water (Wright, 1980), or of tools of their trade to fisherpeople, tailors, carpenters, labourers and others?
- iv. Is it practicable to catch skilled people at the early stages of a refugee influx, before they become habitually dependent on official support, and to enable them to become self-sufficient? Does this imply a new and different sort of organization or staff for dealing with refugee influxes?

The completion of the comparative analysis already begun by Betts (1980) will shed more light on this subject, and can be expected to raise additional questions.

3. Refugee livelihoods. Very poor people often adopt one of two strategies for survival. Either they become totally reliant on one source — a patron, an employer, or with refugees a government feeding programme; or they cobble together a livelihood out of bits, improvising here, migrating there, fitting together a sequence of seasonal work to secure more or less adequate flows of food and income round the year. Officials in government agencies and workers in voluntary agencies may be inclined to see both of these as undesirable. With the first strategy, there is no argument: dependence on being fed, usually in a camp, is demoralizing and costly, and no one supports that unless for security reasons or because there is no alternative. With the second, one may ask whether enough is known. More, perhaps, than any other African country, conditions in Sudan have allowed refugees to opt for this strategy, taking advantage not least of the opportunities of patterns of seasonal employment in and near Kassala Province in Eastern Sudan. Some have combined smallholder settlement (on Qala en Nahal, for example), with construction work on roads and agricultural work on irrigation projects. With its short cultivation season, the Eastern Sudan is, indeed, not an easy place for secure agricultural settlement without other sources of income.

Research here might investigate the strategies used by households to secure livelihoods, and assess how crucial are freedom of movement and of employment. The experience of refugee labourers restricted to Suki in Sudan (Cowan, 1979) suggests that freedom of movement can make the difference between on the one hand fatalism and apathy and on the other active attitudes and self-reliance. Many of the poorest rural people in the world survive through seasonal migration. To restrict refugees in a highly seasonal agricultural environment is liable to condemn them to dependence, denying them the option which they may prefer of combining seasonal work elsewhere with seasonal work at the camp or settlement. Year round case studies of refugee households might here provide invaluable new insights. An excellent model of the sort of case study required can be found in Leela Gulati's book *Profiles of Female Poverty* (1981).

4. Refugee participation. "Participation" is more often advocated than practised. It is difficult when there is a polarization, as is inherent in refugee situations, into "us" and "them" — "us" being outside observers, officials and workers in voluntary organizations, and "them" being refugee clients. The temptations of paternalism — of "us" saying what is good for "them" — to which I have repeatedly succumbed in this paper — are difficult to resist. Yet if refugees are to participate, reversals to the top-down flow of values, ideas and orders are necessary. It is difficult for a commandant of a camp, or even a manager of a smallholder settlement, to feel empathy with the point of view of refugees when they appear as an opposing team. Perhaps here some sensitive participant-observation by researchers

who identify with neither side could help. It would not be enough simply to study relations and communication between refugees and others. It would be important to go further and become involved in action research, in the improvement of communications, in the growth of institutions, and in training. This would be asking a lot of the researchers, the managers, and the refugees, but might shed new light on old problems, and show how refugees can be more involved in the management of their affairs and how flows of communication and understanding can be two-way.

5. Monitoring, evaluating and comparing new approaches. The first smallholder refugee settlements in Africa were pilot projects, and several were disasters. But gradually the lessons were learnt and performance improved. Similarly, it would be surprising if there were not problems with some of the new approaches being forced on African governments by new situations, such as the semi-urban settlements and rural labour settlements in Sudan. In order to learn the lessons of these approaches quickly, research, monitoring and evaluation are needed. This requires restraint and generosity both from the official side and from those who research, monitor and evaluate. There is no place here for the negative social science which looks only for what has gone wrong. There are always positive as well as negative lessons. If these are fed back to policy and practice, improvements should come faster than with the earlier self-settlement and smallholder settlement.

Various models are possible for such monitoring. One is for a refugee agency itself to set up a monitoring cell, but this may not have the independence or incentive to do really useful work. Another model is the pattern of research and feedback established with the pilot village settlements of Tanzania in the 1960s, in which individual Ph.D students did their fieldwork in different settlements, and wrote informal reports. The research contributed to crucial decisions about the village settlement programme. Most of the researchers at that time were foreigners but national universities or research institutes should now be better placed to conduct such programmes.

6. The refugee's eye view. I have a vivid and shameful memory of Wad el Hilayew in Sudan. As evaluation officer of UNHCR I was making a (typically short, rushed) two-day visit. With a party of officials I was walking round the huts. Three young men wanted to talk to us. They were agitated. It was evident that if we stopped to listen to them, we would face a problem. The whole group of us got into our vehicles and drove off to another point. The young men followed us running, and tried again to talk to us. In the meantime, our own attitudes had hardened. To listen to them now would be to give in. What is more, they were now angry, besides out of breath. Our pride was also engaged, as it is when one refuses a beggar, and the beggar persists. We never listened to them; and I have wondered since what resentments and problems our refusal built up and what I did not learn because I would not break from my colleagues and listen.

The point of this anecdote is to illustrate the built-resistance and obstacles to seeing things from the refugee's eye view. It is exacerbated not just by such reluctance to

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listen, but also by what weak fearful or angry refugees will say when dealing with powerful, intimidating or unsympathetic officials from whom they hope to secure benefits. It suggests that much more time is needed than officials usually have available, and that a third party, from whom favours cannot be expected, may be able to help. Those who are or who have been refugees, but who have a certain detachment, may be the best people. Sokiri (1972) had a refugee background and did his student dissertation on the basis of long vacation research in the Ugandan settlement where he had relatives. Gasarasi (1976) had a similar advantage. More research should be conducted by refugees themselves, no least to enable those of us who are not refugees to gain a fuller understanding and a more balanced view.

CONCLUDING: REFUGEES AND RURAL DEVELOPMENT

Agricultural settlement, both self-settling and organized, is becoming, and will continue to become, more difficult. The rapid growth of population in Africa, south of the Sahara, increasing urbanization, the pressure in many places on the little remaining common land, and raising levels of literacy and aspiration, will transform the nature of refugee problems in the next decade, as indeed they have already done in Somalia and Sudan. These two countries face today problems which other African countries will have to face and try to solve tomorrow. The old solutions — self-settlement, and organized agricultural settlement — should not be written off. But the proportions of refugee populations that can accommodate themselves, or be accommodated through such means will diminish.

This points to two conclusions:

1. There is a need for imagination and ingenuity in devising more ways of assisting refugees. These have to be intermediate between mass solutions as these become more difficult (widespread supplies of basic requirements for self-settlers, or large smallholder settlements), and individual solutions which are impossibly administrative-intensive (as with urban counselling). This points towards the development of a wide repertoire: training programmes; standard assistance to all people with a category skill (fisherpeople, tailors, carpenters, masons, teachers, and so on); rural programmes for livestock, poultry, irrigated horticulture, fishing, forestry; credit; self-help packages of equipment or materials; the provision of sites and basic amenities where refugees can live and work.

2. Economic and rural development are of overriding importance. If for example, the terms of trade shift against the rural sector, rural settlement becomes that much more difficult, and rural opportunities sparser. Here the recommendation 12(4) of the Arusha Conference deserves to be taken seriously. The Conference called upon UNHCR

to go beyond its present temporary and short-term assistance policies. To this end, assistance programmes related to the socio-economic development of regions inhabited by refugees who cannot be repatriated should

evolve with the support of the UNHCR and other refugee-serving agencies.

SIAS, 1981, p. 28

More and more, refugee settlement will require and will only be possible through opportunities generated by development. The appalling danger is that African countries, failing to develop, may drift into conditions like that of Bangladesh where there is no spare land and no jobs for refugees, where through the practice of supplying too little food, over ten thousand Burmese refugees died, starving in camps (Aall, 1979). One way to avoid such disasters is through development which creates labour demand and employment and which makes it easier for governments to be generous. This points towards exploiting refugee situations for the purposes of development. Refugees are not just a problem. They present also an opportunity to mobilize resources — national and international, financial and human — in order at one stroke to achieve both humanitarian objectives and social and economic development; and the more social and economic development is achieved, the easier the humanitarian approach will be.

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The response to drought of Beja famine refugees in Sudan

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INTRODUCTION

This report presents the results of a short survey carried out among Beja famine migrants in Red Sea Province, Sudan during January 1985. The purpose of the survey was to investigate the sequence of events leading to the distress migration and partial dependence upon relief, of households that were previously economically independent. It was postulated that through an understanding of this process indicators of severe stress could be derived which would have validity for future assessment of famine risk among the Beja. A basis for this premise was the kinds of drought and famine responses identified for Ethiopian famine victims (ENI, 1974; Wood, 1976; Cutler, 1984a; Cutler, 1985), and it was considered that these were likely to be relevant to agro-pastoralist communities elsewhere (see, for example, Hogg, 1980; O'Leary, 1980; Campbell and Trechter, 1982). Studies of the sequence of household responses to drought can be used for the identification of famine indicators which are likely to give more location-specific and time-specific early warning. This contrasts with the generalized information derived from conventional crop forecasting and food balance sheet assessments which can be equivocal or actually mask potential famine (Seaman and Holt, 1980; Sen, 1981; Cutler, 1984b). A basic pattern of household response to drought, which may be taken as a general model of the development of famine conditions, is described below.

In the Sahelian zone, severe crop failures are likely to persist for several years prior to the onset of famine (Cutler, 1985). Grain prices rise, often unseasonally, and ultimately to exceptional heights (Seaman and Holt, 1980). Peasants and pastoralists are increasingly forced onto the market in order to gain their means of subsistence. They are able to survive through utilizing a number of adaptive strategies. These include: the sale of livestock, labour migration, self-employment (through producing commodities, services or

trading) and ultimately the sale of key productive assets such as land, tools or prime breeding animals, as well as sundry household belongings (Campbell and Trechter, 1982; Dirks, 1980). Severe crop failures and associated grain price inflation are therefore typically followed by an increase in the volume of livestock offered for sale (often coming onto the market at unseasonal times); an associated fall in the price of livestock; a marked increase in the number of peasants migrating to offer themselves as wage labourers on commercial farms; a rise in the incidence of petty commodity production and trading; an increase in the demand for credit; falling real wages (and sometimes falling money wages also); consumption of "famine foods;" sale of household assets, such as tools and draught animals; and migration of households to towns and roadsides in search of charity. Mass migration overwhelms the resources of local people, while the State typically fails to provide adequate means of subsistence, having neglected to plan preemptively for disaster (Seaman and Holt, 1980). The crowding of rural refugees by the roadsides facilitates deaths from hunger and disease, with infants and old people being among the first to succumb.

It is postulated that this sequence of events (several of which are concomitant) can be used as a useful basic framework for designing rapid surveys aimed at assessing the risk of famine for a given population. However, the precise configuration of events and responses to them will differ according to the specific circumstances of the region in question; and indeed may change within the same area over time.

The survey considered below was carried out using a questionnaire based on a similar survey of Tigrayan and Eritrean famine refugees on Sudan's eastern border (Cutler, 1985). Interviews were carried out by the author accompanied by an interpreter. Information was sought on household size and composition; recent experience of mortality; experience of crop failure; livestock mortality and sales; retail prices of grain; employment history; migration patterns; access to credit; and consumption of famine foods. Owing to materials, personnel and time constraints, the sample size was small, at thirty-one households. Thus the survey is best taken as an example of a "rapid rural appraisal" technique (RRA) under emergency conditions. As Chambers has remarked, "these techniques have been widely practiced but until recently little written about" (Chambers, 1983, p. 199). As a result, RRA has not been formalized, but remains an attempt to collect "fairly quick and fairly clean" information (Chambers, 1983, p. 200). In this case, random sample surveys were attempted at each of four sites, although sample sizes varied with location, mostly depending upon the amount of time available at each place. While the sampling may have lacked statistical rigour, there does seem to have been a considerable homogeneity of experience among the people interviewed. This is to be expected given a common experience of severe drought and the limited range of options available to households for survival.

THE SITUATION AT THE TIME OF THE SURVEY

Destitute nomads and semi-nomads from the Hadendawa tribe, one of four major tribes making up the Beja peoples of north-eastern Sudan and western Eritrea, began to settle along the highway running from Port Sudan to Khartoum as early as June 1984. Their plight was largely ignored until early October when an urgent appeal for assistance was made by the regional authorities in Red Sea Province to the League of Red Cross Societies (LRCS) in Geneva. In response, a team from the Swedish Red Cross (SRC) was sent to survey the area. Following the survey, the LRCS appealed in November 1984 for support for 25,000 mothers and children over a twelve month period, asking for medical supplies, vehicles, and 4,100 mt of food. By early November, the regional government estimated that 70,000 Beja were destitute. Of these, 10,000 had already migrated to fourteen sites along the highway between Port Sudan and Derudeb, with the major concentrations of victims being at Sinkat, Haiya, Tohamiyam and Derudeb itself. A further 40,000 to 60,000 people were estimated to be scattered in groups up to 70 km off the road in groups of four to six families. Most had little or no food, and the Swedish Red Cross team noted that the victims by the roadside were suffering from measles, diarrhoea, pneumonia and vitamin A deficiencies. Scurvy quickly emerged as a further problem. The SRC team carried out a nutritional survey of two camps and one settlement in a remote area, noting that one-third of the surveyed population was suffering from "moderate malnutrition" and one-third was in the "severe" category. The Swedes recommended that "remote feeding centres" should be set up to prevent people from migrating to the road.

The relief effort was established relatively quickly, but was grossly undersupplied. By 15th December, only 236 mt

of foodstuffs had been delivered (by UNICEF, LRCS, Sudanese Red Crescent, Oxfam and the World Food Programme) to the 5,000 families in the four main feeding centres. This amounted to only thirteen per cent of estimated requirements for the period. However, local donations certainly added to the total, although going largely unrecorded by the authorities.

MORTALITY AMONG THE MIGRANTS

A total of thirty-one households were surveyed at four sites (Sinkat, Tohamiyam, Haiya and Derudeb, see Fig. 1) between 4th and 11th January 1985. The average post-migration household size was 2.13 adults and 4.39 children. Pre-migration it was 2.16 adults and 5.6 children. Although the sample was small, it was found that there had been a very high death rate among children at three of the camps — Sinkat, Tohamiyam and Haiya. For example, forty-six per cent of children from households sampled in Tohamiyam camp had died of undernutrition and related diseases (see Table 1). No child deaths were reported for Derudeb, yet the situation there appeared to be much worse because severe undernutrition was common. At the time of the survey the camp was filmed by a British independent TV crew for a documentary programme entitled "The Worst is Yet to Come." The presenter, Richard Kershaw, described the camp as a "vision of hell" which was not journalistic hyperbole. In general, the population at Derudeb consisted of famine victims who had arrived relatively late compared with the other camps. At the time of the survey, child mortality in this camp was low, but morbidity was very high.

Only one adult death was recorded among the thirty-one surveyed households, although seven households reported leaving wives and children behind in their home areas, some of whom had probably died in the interim. In some cases

Table 1. Experience of mortality and abandonment among Beja households in Sudan

Camp	Number of households surveyed	Deaths in past year		Abandoned dependents	
		Adults	Children under 15 yrs	Adults	Children
Tohamiyam	16	1	28	5	20
Haiya	3	—	4	—	—
Derudeb	5	—	—	1	6
Sinkat	7	—	5	4	6
Total	31	1	37	10	32

Arrival date	Number of households	Number of deaths	Deaths per household
0—2 months	5	2	0.4
3—4 months	13	12	0.9
5—6 months	7	14	2.0
7+ months	5	9	1.8

Note: Arrival date of one household not recorded.

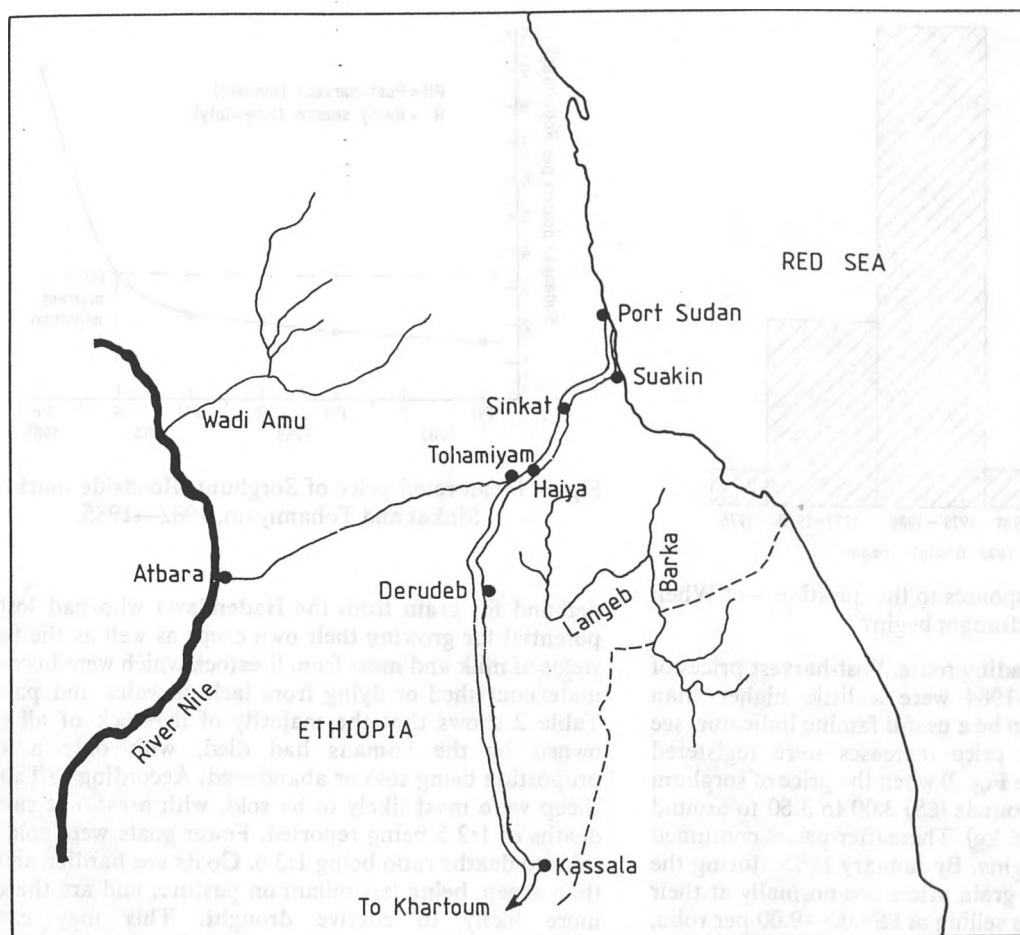


Fig. 1. Location map showing sites surveyed.

abandonment may have been a survival strategy, especially where a man with two or more wives would abandon one "family" and take the other to the road in search of relief. Household mobility was also restricted by the deaths or weak condition of camels.

In normal times the Hadendawa live in scattered dwellings, often several kilometres away from one another. This settlement pattern was reflected in the spacial arrangements in camps which had been deliberately kept off the road by the authorities. This was most notable in the "outer" camp at Tohamiyam, where new arrivals had kept their distance from each other, fearing the spread of disease. The new arrivals were not generally in such bad condition as the people who had been there for several months. Table 1 indicates that the death rate increased with length of stay, with peak number of deaths per household five to six months after arrival. Curiously, the incidence of deaths seems to have been a little lower for those who arrived before this date, perhaps because they had first claim on available relief supplies and local charity. According to the categorization in Table 1 the majority of the sample (61%) arrived between three and six months before the survey was undertaken.

HOUSEHOLD RESPONSE TO DROUGHT AND FAMINE CONDITIONS

According to the respondents in the sample, the drought was of long standing. Figure 2 shows that a large majority (82%) of respondents located the genesis of the drought five to seven years before migration. One respondent reported that drought began as many as eight years before, and two reported drought as having begun only three years previously. It seems therefore that the Hadendawa have developed considerable resistance to drought and can survive the complete loss of sorghum cultivation for several years. Ten households reported having grown sorghum in the past, all having abandoned cultivation five to seven years before migration, except for one household which reported sorghum cultivation three years earlier. Before the drought, the amount of sorghum harvested by each household varied between 1.5—30 sacks of grain (1 sack = 45 kg), although a harvest of 4 to 8 sacks might be regarded as typical. However, crop failures throughout the normally grain surplus eastern region only registered a dramatic effect on sorghum prices during 1984. There was a fairly uniform pattern of prices along the road, as might be

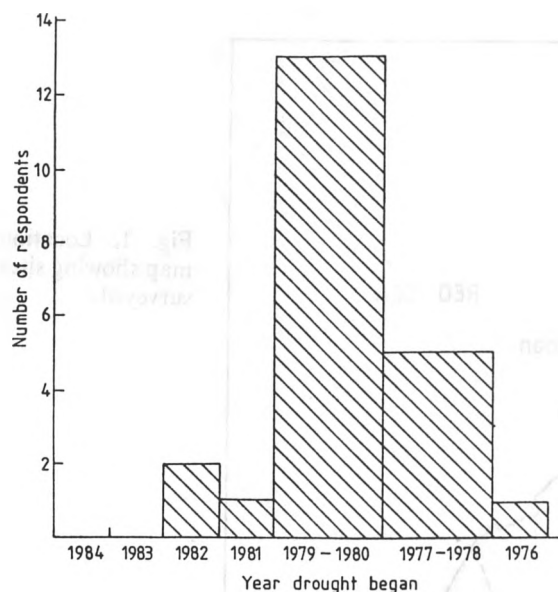


Fig. 2. Beja sample — responses to the question — “When did the drought begin?”

expected along a major trading route. Post-harvest prices of December-January 1983-1984 were a little higher than pre-harvest prices (this can be a useful famine indicator, see Cutler, 1985). Dramatic price increases were registered during June-July 1984 (see Fig. 3) when the price of sorghum jumped from Sudanese pounds (£S) 3.00 to 3.50 to around £S5.00 per robo (1 robo = 6 kg). Thereafter prices continued to rise to exceptional heights. By January 1985, during the post-harvest period when grain prices are normally at their lowest levels, sorghum was selling at £S8.00–9.00 per robo, 400–450 per cent more than during the same period a year previously. It is notable that the sharp mid-year price hike coincided with the arrival of the first distress migrants on the highway.

LIVESTOCK SALES AND PRICES

The inflated price of sorghum not only reflected severe crop failures in the region, but also reflected the increased

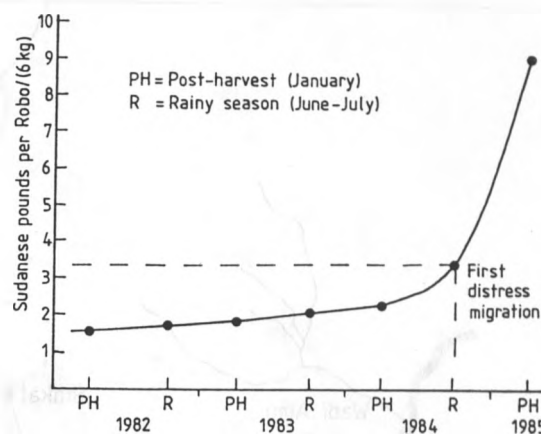


Fig. 3. Mean retail price of Sorghum: Roadside markets of Sinkat and Tohamiyam, 1982–1985.

demand for grain from the Hadendawa who had lost the potential for growing their own crops as well as the falling yields of milk and meat from livestock which were becoming undernourished or dying from lack of water and pasture. Table 2 shows that the majority of livestock of all types owned by the nomads had died, with only a small proportion being sold or abandoned. According to Table 2, sheep were most likely to be sold, with a ratio of sales to deaths of 1:2.5 being reported. Fewer goats were sold; the sales to deaths ratio being 1:3.6. Goats are hardier animals than sheep, being less reliant on pasture, and are therefore more likely to survive drought. This may explain households' reluctance to sell them. There was even more reluctance to sell camels, which are essential beasts of burden in a nomadic or semi-nomadic society; the sales to death ratio for these animals was 1:22. Camels were vital for trading, a major fall-back strategy for the Hadendawa.

The deteriorating condition of livestock and the increased volume of animals being offered for sale led to a decline in livestock value in both absolute and real terms. Table 3 shows that the modal price of sheep as assessed by the

Table 2. Beja sample: Status of livestock holdings as of January 1985

Type of livestock	Number of households reporting ownership	Deaths	Sales	Abandoned	In camp	Total
Camels	24	65 (88%)	3 (4%)	6 (8%)	—	74
Sheep	23	281 (66%)	111 (26%)	36 (8%)	1	429
Goats	29	562 (79%)	156 (22%)	—	3	721
Cows	1	7*(28%)	18 (72%)	—	—	25

Note: Three households did not differentiate sheep from goats, so the fate of these animals is not included here. Figures for abandoned sheep and goats are inferred from deaths and sales figures.

*These cows were eaten.

Table 3. Sheep, goat and sorghum prices over a period of drought (£Sudanese)

		Pre-drought*	January 1984	January 1985
Sheep	Range	40—50	23—27	4—25
	Mean	54	25	13.5
	Mode	50	25	12
Goats	Range	25—50	20—25	1.5—15
	Mean	33.7	22.5	8.3
	Mode	30	23	8
Sorghum (per 6 kg)	Range	1.5	1.8—2	8—10
	Mean	1.5	1.9	9
	Mode	1.5	2	9
Exchange rate (modal prices)	Sorghum/Sheep	33.3	12.5	1.3
	Sorghum/goat	20	11.5	0.9
Index of exchange rate	Sheep	100	38	4
	Goat	100	57.5	4.5

*Note: As assessed by interviewees.

interviewees fell from £S50 before the drought to £S25 in January 1984. One year later, the modal price of a sheep was down to £S12, or twenty-four per cent of the pre-drought price, and there were cases of people receiving as little as £S4 for their animals. If we compare the price of sheep with the price of grain over the same period (see Table 3), the decline in real value of sheep is even more dramatic. A sheep would buy more than thirty-three robo of grain (200 kg) prior to the drought and just over one robo by January 1985 (about 8 kg). Thus the index of exchange for the two commodities had fallen from a base of one hundred in pre-drought times to only four by 1985. In other words, sheep had lost ninety-six per cent of their pre-drought value.

Much the same situation existed for goat sales, with real values in terms of exchange rates for sorghum falling less dramatically at first — being at 57.5 per cent of pre-drought levels by January 1984 — but reaching very low levels of 4.5 per cent by January 1985. Not all of the twenty-three

households who reported having owned sheep or the twenty-nine households who reported having owned goats actually sold their animals. Only fourteen households sold sheep, and nineteen households sold goats. The remainder watched their animals die, either because the markets were too far away and the animals were too weak to make the journey, or because households were unwilling to reduce their stockholdings voluntarily. Even so, most households that did sell, marketed only a few animals. Of the total sheep and goat sales, sixty-eight per cent were made by only a quarter of the households (seven) in the sample.

ALTERNATIVE SOURCES OF INCOME

Most of the households relied upon woodcutting, charcoal burning and mat making (including sale of *saf*, the raw material for this activity) to make up income lost from agriculture. Table 4 shows that fifteen households reported

Table 4. Beja sample: Households reporting ancillary occupations prior to migration (n = 23)

Occupation/ Household number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Woodcutting	*	*	*	*																			
Charcoal making	*	*	*		*	*	*	*	*	*						*							
Mat making	*			*				*	*	*	*												
Saf cutting												*	*	*									
Rope making															*								
Labouring												*				*	*	*	*				
Water selling																					*		
Swordsmith																						*	
Camel herding																							*
Begging																							*

Nine households reported two or more occupations.

being involved in one or more of these activities. The remainder reported engaging in a variety of service activities including water selling, rope making, camel herding and sword making. Five households found work as labourers, and one household survived by begging alone.

The rewards of trading plummeted during the last years of the drought. During 1984, the price of charcoal fell from £S3.00 per sack to £S1.5—2.00. It takes five to six days to cut and burn enough charcoal to make up a camel load of three to four bags. This would buy about 12 kg of sorghum during June to July 1984 compared with about 36 kg six months previously. Mat-making gave even lower returns to labour. It can take up to two months for women and girls to weave a camel load of mats, which is about ten sheets. Each sheet fetches only £S2, so two months work by all female household members might generate only 24 kg of grain, which is 3 kg per month less than the standard adult famine ration of 15 kg.

Even with all household efforts devoted to getting cash with which to buy sorghum, the diet began to suffer in terms of both quantity and quality. Many families turned to supplementing their diet with the pulp of the *dum* palm tree (*Hyphaena Thebaica*), which was a desperate measure as the tree also provides the raw material for mats and rope making. Eventually families would be prevented from further trading by the death of camels, combined with the dearth of available sources of wood. One respondent reported having travelled for up to four days to and from the wood source before the death of his camels prevented further journeys.

Labour migration is often a useful source of supplementary income for farmers and semi-nomads in the Horn of Africa. However, it was not widely reported among the sample population. This may be the case because they had little history of being involved in the labour market in past years. In other parts of the province, a great deal of migration of able-bodied men to the commercial farms on the Gashe delta near Kassala was reported. In one village, Balak near Derudeb, it was reported to Red Cross relief workers in January that 200 men had left for work two months previously (David Ellaway, personal communication). They left behind 600 dependents from seventy households. There had been no remittances at the time of the report, and the villagers were by now entirely dependent upon the inadequate relief effort for survival. We should note that labour migration from the Red Sea Hills Province and other parts of the Eastern Region would have coincided with a huge influx of refugees from Ethiopia, by now more than 200,000 in number, many of whom were also seeking work in the area. As a result there was intense competition for employment which presumably exerted downward pressure on wages. Unfortunately, the author was unable to investigate conditions of employment on commercial farms in the region. However, it was reported that on at least one large commercial farm locally wages had been forced down to one quarter of previous levels owing to competition between Sudanese nationals and migrant labourers from Ethiopia (Desmond Lapsley, personal communication).

ACCESS TO CREDIT AND FOOD AID

Prior to the widespread loss of livelihoods, it seems that many Hadendawa had entered into trading relationships with roadside merchants who would extend them credit, particularly in the form of grain, in return for guaranteed sales of livestock and other commodities produced in the rural hinterland. As the practice of making interest-bearing loans is considered non-Islamic, the trader would recoup his "interest" by purchasing goods from the debtor at a price which would guarantee him a high profit. For example, at the time of the study charcoal would typically be bought for £S2 per bag by merchants and resold in the same place for £S3.50 per bag. Mats which fetched £S2.00 each could be resold in Port Sudan for £S8.00 each, a considerable mark-up even allowing for transport costs.

However, with the loss of so many livestock to disease, and with the death or weakness of camels, these petty trading and credit relationships came to an end, signalling the termination of the Hadendawa's ability to support themselves. Only one household reported having received credit in the past few months, this came from a merchant who was also a relative and amounted to only £S2-3, given upon the arrival of the whole household in Haiya. Twelve households reported having received credit from merchants in the past, but this source ended with the loss of collateral. One household reported having previously borrowed as much as £S30 at a time from merchants, although it seems to have been more common for "a robo's worth" of cash (about £S2) to be loaned to poorer families.

The famine migrants were not entirely left to their fate upon arrival. Thirteen households reported having received some aid from the local authorities or the aid agencies operating in the area. Of these households, eight had arrived five months or more earlier, which might suggest that earlier arrivals had a better chance of receiving available aid. However, it should be noted that it is possible that some households may not have wanted to admit to having received aid in the hope of being registered as deserving cases. Those who did admit to having received help reported sporadic distribution of highly variable amounts of aid, ranging from "some milk and supplementary food for children" (four respondents) to distributions of two 20 kg bags of sorghum (one respondent). The remainder reported only sporadic distributions of a few kilogrammes of sorghum only once or twice since arrival. If this actually had been the case (bearing in mind the fact that very little food was distributed by either the authorities or foreign agencies), then households must have been quite successful in getting income, at least during the early stages of the emergency.

The latter observation deserves further comment. At the time of the survey, a large U.S.-sponsored relief operation was under way, with some 82,000 tonnes of sorghum being delivered to populations in western Sudan. This grain was transported by truck along the road frequented by the starving Beja. To the author's knowledge, none of this grain was diverted to them. At the same time, and despite their

reputation for truculence (Paul, 1954), the Beja do not appear to have attempted to hijack vehicles carrying food or to loot storehouses. Perhaps they were too weak and disorganized to do so.

While the local authorities attempted to give what little succour they could to the famine victims, supported by a handful of personnel from non-governmental organizations (NGOs) and meagre amounts of food and medical supplies from official agencies, an adequate response to the famine awaited media exposure and lobbying from concerned individuals and organizations. Both the government and the official aid agencies clearly failed in their duty to relieve famine in the Red Sea Hills. While elsewhere poor communications infrastructure and vast distances militated against an effective relief operation, this was not true of the Red Sea Province. The famine victims lined Sudan's best communications link very close to the country's only port. One cannot but conclude that the Beja were of little political importance to the patrons of aid, despite their physical proximity to its source.

SUMMARY

At this point, it may be useful to summarize the main points arising from the above analysis. These are as follows:

1. the majority of respondents located the drought and crop failures as beginning five to seven years before migration.
2. the semi-nomadic Beja households were very dependent upon livestock for their incomes, and consequently were unwilling to sell the majority of their animals, instead keeping them until they died of starvation and disease.
3. the prices of livestock which were sold had fallen to approximately one-quarter of pre-drought levels by January 1985.
4. at the same time, the price of the staple grain, sorghum, had risen to six times its pre-drought level. Nearly all of this rise was accounted for during the second half of 1984.
5. as a consequence of the dramatic fall in livestock prices and simultaneous rise in grain prices, the livestock for grain barter terms of trade fell enormously, to as little as four to five per cent of pre-drought levels.
6. households were forced to rely on self-employment to a far greater degree than had previously been the case. Woodcutting, charcoal-burning and mat-weaving seem to have been the most widely practised means of self-employment. An increase in labour migration from nearby villages was also reported.
7. access to traditional lines of credit through merchants collapsed as collateral (livestock) disappeared.
8. mortality and morbidity among households who had migrated to the roadside were high. This was a reflection of the extremely inadequate provision of public relief to the victims. Serious attempts at relief did not begin until some eight months after the first famine migrants arrived at the roadside.

DISCUSSION

It has been the object of this report to examine the usefulness of a basic model of pre-famine behaviour as applied to Beja famine migrants in Sudan. As with peasant-cum-pastoralist households elsewhere, Beja households have demonstrated considerable resistance to long-term drought through the use of various fallback strategies. Although there appears to have been reluctance to dispose of livestock which represent the main source of livelihood in normal times, some animals were marketed. Sheep and goats were gradually disposed of over the drought period, while generally camels were kept until the eve of migration. Increased self-employment (through petty trading, commodity production and services) and labour migration augmented household incomes to a greater degree than previously. Famine foods were important sources of calories over many months of severe crop and pasture failure.

There are important differences in responses to drought between predominantly peasant and predominantly pastoralist modes of production. Pastoralists appear to be generally unwilling to sell or slaughter livestock; whereas those households which rely mostly on crop production for food are likely to be more willing to part with their animals. Pastoralists are so dependent upon their camels for transportation that these animals are sold only when all other assets have been exhausted, or are left with relatives. The propensity to sell camels appears to be particularly low for the Beja, indicating that petty trading is an important fallback strategy for this tribe.

A number of potential indicators emerge from the study. During 1984—1985, foodgrain retail prices provided some warning of the development of famine conditions. The failure of the post-harvest price of sorghum to fall below pre-harvest levels in 1984—1985 appears to have given six months lead time to the migration of the first famine refugees onto the roadsides. The scale of livestock deaths was extraordinary, and the decline in livestock values was precipitous. Again, conditions in early 1984 were very poor, while by early 1985 they were dire — as we have seen from the grain/livestock price indices. These may suggest a threshold — perhaps fifty per cent of pre-drought values — as a trigger for administrative concern and action. By the time the index has fallen to twenty-five per cent or less, mass migration will probably have already begun.

The importance of a questionnaire framework which considers labour markets and self-employment opportunities, but which does not assume a uniform response to drought, is demonstrated by the differing approaches of segments of the sample population. Many of the Beja interviewed had no history of labour migration, and turned to petty trading in the face of crop and pasture failures. However, it is apparent from informal reports that others did have a tradition of regular seasonal labour migration down to commercial farms around Kassala. In both cases indicators could be derived to allow for these varied experiences.

Finally, there is the common experience of the collapse of credit and gift exchanges, necessitating the consumption of

famine foods as a major fallback strategy. Not all of these foods will be inferior substitutes — some may be considered delicacies in normal times. Eventually, desperate people will consume toxic plants, and may even rob insect colonies for grain. The consumption of *dum* palm trees by the Beja represents a form of disinvestment, as the trees provide raw materials for mat and rope making. Clearly, the resistance to drought and famine demonstrated by households is the product of a mixture of different strategies. Risks are spread through households dividing and pursuing different sets of options — such as when some wives and children are taken to the towns, while others are left to subsist as best they can in the rural hinterland. Indicator sets derived from these strategies must therefore be capable of referring to common features of the overall response.

The choice of an indicator — that is a cut-off point in variables such as food prices or wage levels — is governed not only by technical considerations but also by political and administrative considerations, which in turn reflect the influence of interest groups and moral values in a given society (Dowler *et al.*, 1984). Famine prevention might be seen simply as the better planning and siting of relief goods and services in advance of mass migration; or it may be seen as measures taken to prevent mass migration. In the latter case, these could be considered as extraordinary relief measures, such as the provision of regular food supplies to affected households, or they might be considered as combinations of relief and development efforts, such as public works offering extra employment during times of stress.

In the Sudanese case, there is some prospect of pre-emptive relief planning now that a special Relief and Rehabilitation Commission has been set up, although the prospects for long-term rural development in marginal areas are not as yet optimistic. Much forward relief planning is likely to be organized by foreign agencies rather than by the government (Cutler and Shoham, 1985). Famine monitoring using several of the indicators discussed above has already been carried out by agencies working in western Sudan (Taylor, 1985). It may be that the next serious drought will find Sudan better prepared for the onset of famine. Perhaps this report has highlighted some of the areas requiring more attention if the information system available to relief planners is to be improved.

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13. Voluntary Reparation

 Disaster
Management Center

University of Wisconsin

Department of Engineering Professional Development

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

Presenter: Serge Male

1. Topical Focus:
2,000 refugees wishing voluntarily to repatriate to their places of origin in a conflictive area.
2. Country/Region:
3. Problem Description:
 - A. Negotiations with countries of asylum and origin
 - * Reinforce the principle of Volrep
 - * Promote tripartite commissions or agreements: origin/asylum/UNHCR

 - * Negotiate conditions of repatriation and reintegration
 - documentation
 - logistics
 - assistance
 - amnesty
 - * Emphasize legitimate concern of UNHCR for returnees
 - B. UNHCR actions
 - * Insure/increase UNHCR presence
 - * Inform extensively the refugees about the situation
 - * Organize individual registration
 - * Accelerate repatriation process
 - * Insure individual/group protection: accompany to the border in an asylum country - receipt in border in country of origin
 - * Insure follow-up missions and report about situation of returnees

4. What was Learned:

What UNHCR should do?

A. Always respect and respond to refugees decisions

B. Promote:

1. Worldwide the voluntary repatriation principle (in any situation)
2. Best conditions for the re-integration especially
 - amnesty
 - follow up and UNHCR presence in country of origin
 - legal guarantees
 - facilitation of documentation
 - right for refugees to settle where they wish
 - creation of a network

C. Share concern with all concerned parties

CASE STUDY

A

VOLUNTARY REPATRIATION CASE

I. INTRODUCTION

1. This was the third "mass" voluntary repatriation of Salvadoran refugees from Honduras. Two other movements had taken place in October 1987 and August 1988 respectively. It took place in early November 1988. A contingency plan had been prepared to ensure the successful execution of this repatriation. The context of this movement was as follows.

II. CONTEXT

2. The Salvadoran refugees in Honduras are kept in closed camps where they suffer harrassment and persecution, including killings and torture at the hands of Honduran security forces. They are seen as a grave security problem by the authorities of the country of refuge. They are sympathetic to the Salvadoran guerrillas and are therefore viewed as dangerous by the authorities of both countries.
3. In the country of origin, the situation has not changed fundamentally. The conditions which led to the refugee exodus are still there. The Government looks upon the refugees as guerrillas, although that perception has improved since the first repatriation exercise.
4. The refugees' decision to repatriate is not devoid of political motives: they and their supporters back home want to make a political statement. The authorities of the country of origin also have their political motives in agreeing to the repatriation.
5. In view of the above, the High Commissioner issued on 30 August 1988 a statement which said, inter alia:

Para 2: Practical modalities based on the agreement with the 2 Governments and normal existing criteria on the matter, will be determined by the UNHCR and governmental authorities. These modalities will be shared with the refugees. UNHCR and the governmental authorities will carry out the operations exclusively with those agencies and institutions whose participation has been agreed upon.

Para 3: UNHCR must be able to count on the cooperation of governmental authorities and concerned agencies to permit it to exercise the functions entrusted to it by the International Community and to permit it to preserve the strictly humanitarian and non-political character of its mandate.

Para 4: UNHCR will do its best to see that these points are agreed to as soon as possible and the Office will not be in a position to commence operations of return until such agreements have been reached. In the event that the operations are jeopardized as a result of initiatives contrary to these points, UNHCR reserves the right to re-examine its participation in such repatriation.

III. THE MOVEMENT

6. The plan was for the refugees to move from Mesa Grande camp in Honduras, cross the border at El Poy, then follow a road which runs through La Palma, Aguilares, the outskirts of the capital San Salvador, the vicinity of Ilobasco, then through San Isidro, Sensuntepeque, Victoria, to their village of Santa Marta in troubled Cabañas Province.
7. With the agreement of all concerned, including the refugees, Salvadoran immigration officials were allowed to come into Honduras to do the registration of the repatriants. 801 refugees had signed up by 4 November 1988 to return. In fact only 763 actually showed up to leave, a number having desisted at the last minute, while others volunteered, also at the last minute.
8. A 9-person Salvadoran church delegation which was to accompany the refugees back into El Salvador was stopped at the Colima Bridge on 4 November and had to return to San Salvador. Having then finally received the safe-conduct from the armed forces, they were able to cross the border and reached Mesa Grande on 5 November in the early morning. The churches had been instrumental in convincing the Salvadoran authorities to allow assistance to reach Santa Marta before the returnees' arrival to avoid complications.

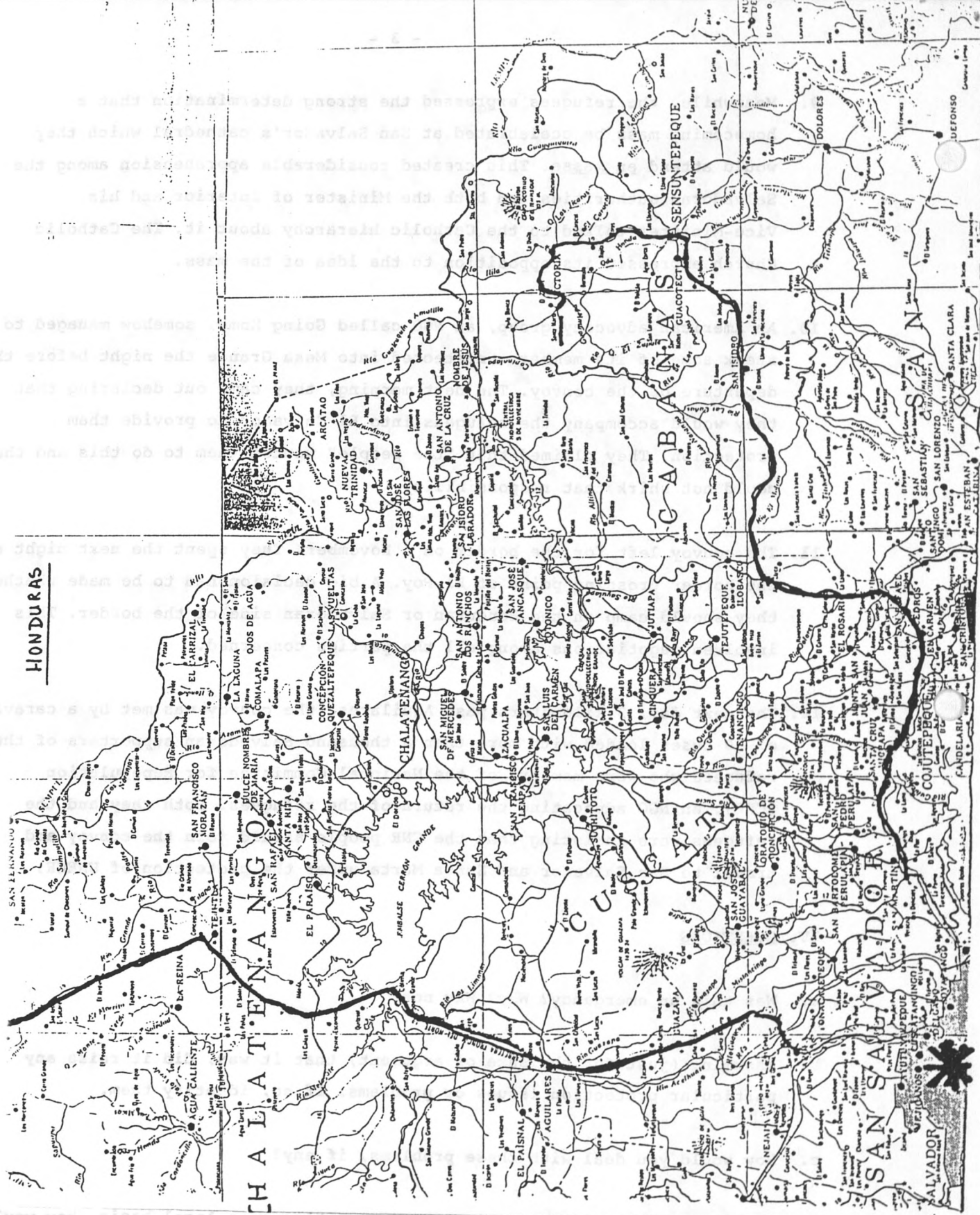
9. Meanwhile, the refugees expressed the strong determination that a homecoming mass be celebrated at San Salvador's cathedral which they would attend en masse. This created considerable apprehension among the Salvadoran authorities and both the Minister of Interior and his Vice-Minister talked to the Catholic hierarchy about it. The Catholic Church expressed its opposition to the idea of the mass.
10. An American advocacy group, an NGO called Going Home, somehow managed to sneak some of its members undetected into Mesa Grande the night before the departure of the convoy. The next morning, they came out declaring that they would accompany the refugees into El Salvador to provide them protection. They claimed that "the people" wanted them to do this and they could not shirk that responsibility.
11. The convoy left for the border on 5 November. They spent the next night at the border crossing point of El Poy. A big decision had to be made whether they should camp on the Honduran or Salvadoran side of the border. This involved negotiations among all the parties concerned.
12. The next day, 3 kilometers past Aguilares, the convoy was met by a caravan of 30 buses loaded with more than a thousand Salvadoran supporters of the refugees who were members of the National Committee for Repopulation (CNR), an NGO advocating the return of the refugees. Both they and the refugees were insisting that the CNR people should join the convoy and travel to San Salvador and Santa Marta under the protection of UNHCR.

IV. QUESTIONS

- a. Was this an emergency? Why? Why not?
- b. Assuming (just for the sake of argument) that it was, did it raise any particular protection issues or problems. If so, identify them.
- c. How would you deal with these problems, if any?
- d. If you were called upon to justify your action on a legal basis, how would you do so?

HONDURAS

GUATEMALA



CASE STUDY

B

You are a UNHCR Protection Officer in country A. You are in charge of refugees arriving by boat from country B who for the past 10 years or so have for the most part been allowed to enter country A and to obtain temporary asylum there pending the finding of a durable solution.

Over the years, this system has worked pretty well. Although there have been from time to time incidents of push-off of refugee boats, the boat asylum-seekers were usually allowed to land and then sent to a refugee camp to await resettlement after a short stay in beach reception areas. The numbers of arrivals were declining over the years, while the refugees caseload was steadily declining due to resettlement in third countries.

In recent years, however, the resettlement intake began to decline. As long as the number of arrivals was also declining, the complaints from country A were not accompanied by a change of policy.

A year ago, however, the number of arrivals started increasing explosively. Furthermore, an increasing number of asylum seekers were arriving by a shortened route, foregoing the direct but longer and more dangerous sea route directly from country B in refugee boats, travelling instead by land through country C and then taking a short chartered boat-ride from country C to country A. To make matters worse, the new mode of arrival involved not only people smugglers, but also the alleged complicity of government officials in countries A, B and C.

Country A reacted by interdicting the entry of asylum seekers from country B. It mobilized its navy, its marine police and even private fishing craft in blockading its coast to asylum seekers and even forbidding the rescue of those whose boats either sank accidentally or were deliberately sank by the occupants. There have even been reports of refugee craft rammed and sunk by boats from country A.

In addition, those asylum seekers who managed to land on islands off A's coasts were left stranded there in a precarious situation with little or no assistance.

As for those who landed in the main land, they were kept in detention areas without access by UNHCR, to be transferred later not to their regular refugee camps, but to displaced persons camps along the border between A and C, amidst displaced persons and refugees from C, in a war zone where troops from A, B, C and guerillas from various factions from C confront each other intermittently.

Country A authorities also decided that henceforth, new arrivals from country B were economic migrants; not refugees, and therefore would not be eligible for resettlement.

QUESTIONS

- a. Was this an emergency? Why? Why not?
- b. Assuming (just for the sake of argument) that it was, did it raise any particular protection issues or problems. If so, identify them.
- c. How would you deal with these problems, if any?
- d. If you were called upon to justify your action on a legal basis, how would you do so?

CASE STUDY

MASSIVE VOLUNTARY REPATRIATION MOVEMENT

1. On October 5th 1987, some 4,300 salvadoran refugees in Honduras publicly announced that on the 10th of that same month they would massively return to their country of origin. This decision was going to be carried out even without the acceptance of the Government of El Salvador.
2. The UNHCR Offices involved were the B.O. in Honduras, the OCM in El Salvador, the R.O. in San Jose (which covered El Salvador) and, naturally, the Head of the Regional Bureau (RBLAC) who, in consultation with other senior managers at Headquarters, was ultimately responsible for deciding the UNHCR course of action vis à vis the refugees imminent repatriation.
3. The following information had to be kept in mind when taking this decision:

A. Situation of the Refugees

Salvadoran refugees had been living in Mesa Grande camp since 1981. This was a "closed camp" with heavy military surveillance where refugees could not leave the camp except for medical evacuation. For this group, repatriation was a long-desired solution. As early as January 1987 they had expressed their wish to repatriate in mass during 1987. Through UNHCR they carried out negotiations with their government and waited for a positive reply.

B. Attitude of the Governments

The Salvadoran government was part of a tripartite commission established in 1986 (SAL/HON/HCR) that had been exploring the possibilities of voluntary repatriation. However, in its view, the sudden arrival of a large number of refugees would pose serious problems considering the civil strife which had affected the country since 1981. The government thus insisted upon a small-scale, gradual movement and offered two sites as "holding centers" instead of allowing the return to their places of origin, many of which were located in areas of conflict. This proposal was contrary to the refugees' will.

The Honduran government believed in the refugees' right to return and requested UNHCR involvement to facilitate this movement transporting them to the border.

C. UNHCR

Taking into account the announcement made by the Salvadoran refugees, UNHCR had envisaged a contingency plan for the movement. Preparations to ensure logistics, protection, administration, accompanying of convoys and communications had been made at both sides of the border.

4. In spite of several demarches made by UNHCR with all parties, at all levels, to find an acceptable solution, the situation remained blocked by the 9th of October, a day before the announced movement.

D. QUESTIONS

- a. Was this an emergency? Why? Why not?
- b. Assuming (just for the sake of argument) that it was, did it raise any particular protection issues or problems. If so, identify them.
- c. How would you deal with these problems, if any?
- d. If you were called upon to justify your action on a legal basis, how would you do so?

Iftikhar Elahi

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Influx of 7253 refugees from Afghanistan into Pakistan in December 1987 and January 1988.
2. Country/Region: South East Asia, Pakistan
The group was settled in Essa Khel S/D.
3. Problem Description:
Physical verification and registration of the refugees.
Needs assessment for health.
Settlement of the above-mentioned group in Essa Khel sub-division.
4. What was Learned:
 - A. B.C.G. scar was used as an identification mark to pre-empt bogus or double registration.
 - B. Certain statistics like malnutrition level, incidence of malaria and tuberculosis were collected for later planning. First doses for EPI were given during screening.
 - C. Needs: Pregnant ladies and under 5 children were registered and identified for MCH services.
5. Special Comments:
An exercise of health screening was planned as hostilities escalated in the east of Afghanistan and the fresh migration started. The activities of the health teams were co-ordinated with Essa Khel camp administrator and NGOs. No family was issued a Ration Pass unless they produced the screening proforma (see Annex 1).

Measles vaccination was carried out up to the age of 12 years, instead of 5, aiming at mass or herd immunity.

The screening proforma enabled the health teams to reduce paperwork by combining 6 different types of activities and recording them on one sheet.

CASE HISTORY SUMMARY: EMERGENCY MANAGEMENT

1. Topical Focus: Evacuation of Refugees
2. Country/Region: Lesotho, Southern Africa.
3. Problem Description:

Lifting of economic embargo on Lesotho by S. Africa conditional on (i) refoulement of refugee military operatives, (ii) expulsion of refugees affiliated to liberation movements, (iii) due to fuel shortage two-day deadline for implementation. Constraints: no suitable plane locally available; chartered flights can be intercepted; finding country of resettlement; non-cooperation by refugees resulting in use of force; growing incidence of personal attacks on refugees.

4. What was Learned:
 - A. Since a similar incident occurred in 1981, UNHCR/ government should have drawn up a contingency plan. (None exist today.)
 - B. Get the refugees involved through sharing information; organization of pre-departure ?? group protection monitoring.
 - C. Realize limitation of UNHCR whose political considerations are important. Know when to bring other into play.
5. Special Comments:

Root causes: Geopolitical situation; complete economic dependence; political posture at variance with status of economic dependence.

Proximate causes: Information available to S. Africa of military training camp being run by Liberation Movement. Denial by Lesotho refusal to discuss issue/ investigate/rectify.

Trigger: Commando type attack killing 7 S. Africans (including 4 refugees) and 2 nationals; diplomatic offensive by Lesotho; imposition of economic blockade coup d'etat by pro-South African officers in Lesotho Armed Forces.

DONOR AND MEDIA RELATIONS IN
AN EMERGENCY SITUATION

CASE STUDY

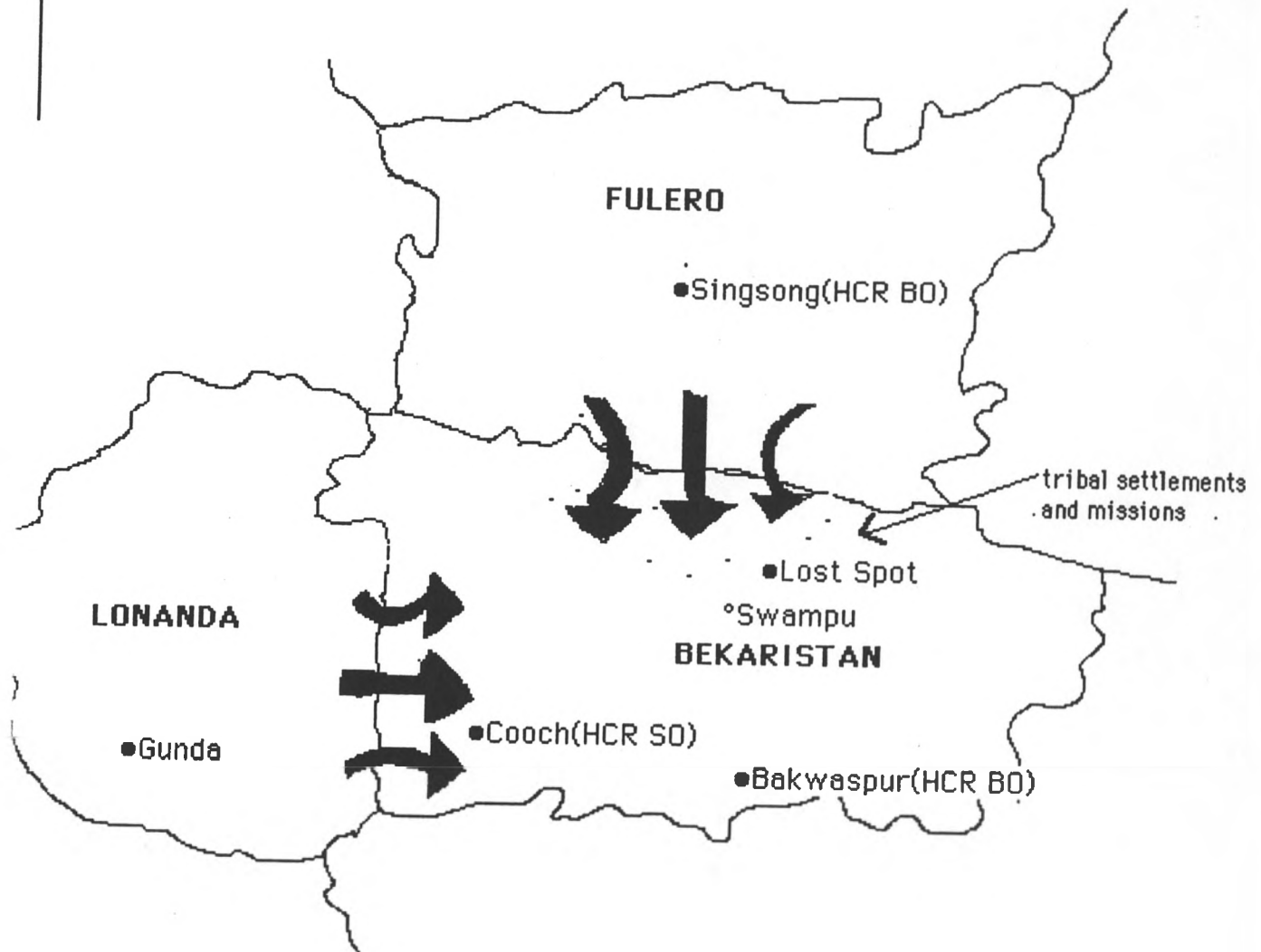
EXERCISE

Read the Case Study beforehand and, in groups, attempt the following:

1. Identify the actions/events which had a negative impact on relations with donors and media, and their consequences. This should include mistakes in the general conduct of the emergency.
2. In each case, what would you have recommended in order to avoid these problems and thus ensure a positive response from donors and media?

REGIONAL MAP

N



CASE STUDY

INFLUX OF FULERIAN REFUGEES TO BEKARISTAN

December-March

General situation reports and press clippings received at UNHCR Headquarters in Geneva from the Branch Office in Fulero indicate growing discontent, soaring inflation and mounting guerrilla activity. Political troubles are nothing new in Fulero, however, and the clippings are routinely circulated at HQ. It seems, though, that this time the government could fall, placing in jeopardy the rural population in its traditional support base, the southern border region. The guerrillas have often denounced the ethnic composition of the present government, which is overwhelmingly dominated by Fulacks from the South, and reprisals against the Fulack population may be expected. The Representative in Singsong draws HQ's attention to this possibility, and the resultant likelihood of Fulerian refugees of Fulack origin fleeing the country should the guerrillas triumph. The Desk Officer circulates this memorandum on file to the Desk Officer covering the neighbouring state of Bekaristan, who in turn copies it to the UNHCR BO in Bakwaspur for information. No other action is taken. During this time the Permanent Mission of a major donor, the United Republic of Amrikistan (URA) approaches UNHCR at consular level to enquire about the situation. It is well known that the URA itself has an influential Fulack minority which takes an interest in Fulerian affairs; the URA is a major financial supporter of the present Fulero government. The UNHCR

Deputy Head of Bureau replies orally that the situation is being closely monitored and that UNHCR will not hesitate to contact the URA should the need arise.

March-April

The guerrilla war in Fulero worsens. However, both UNHCR HQs and the BO in Bekaristan have their hands full already at the Western border, where floods have caused widespread damage to the existing settlements of refugees from neighbouring Lonanda, and little attention can be spared for a hypothetical problem from Fulero. At a Post Review Group meeting at Headquarters, conscious of donor pressure to cut posts, the Public Information Officer post in BO Bakwaspur is cancelled in exchange for the creation of an Associate Programme Officer post at the same level in SO Cooch, near the Lonanda border.

April 23, 1am

Guerrilla forces in Fulero storm government buildings and all communications cease. At 8:00 am the new president goes on radio to announce the fall of the government and the arrest of all leading Fulacks in the deposed cabinet. Throughout the following days reports of large-scale unrest and police action in the south begin to reach the outside world. Fulack farmers are selling their cattle at below-market prices.

May 1

The Branch Office in Bekaristan begins to receive calls from the social service and missionary agencies operating among the tribals in the isolated jungle region in the North of the country that large numbers of rural refugees - estimated to be several hundred - have crossed the border, fleeing from Fulero. The BO quickly cables a brief report to UNHCR HQs summarizing the information available, and requesting an additional allocation for basic relief items. The Programme Officer is on Home Leave and the Representative feels he must remain in the capital to receive reports from the West and the North, so no mission to the north can be planned.

May 2

Reports now multiply, speaking of several thousand arrivals in total. The UNHCR Representative calls a meeting the next day to be attended by the government and welfare agencies. Callers from donor embassies are given this information; press callers are not.

May 3

At the meeting it is decided that representatives of the Government, UNHCR and its national operational partner HELF will visit the affected region by plane. Meanwhile, rumours of the influx are widespread among the local and locally-based international press, and the representative's secretary spends most of the afternoon receiving calls or visits from the press and advising them that little information is as yet available; however a visit is being planned.

May 4

Headlines in the local paper announce the influx of thousands of refugees and speak of a "crisis." The local welfare agencies are praised for providing assistance on the spot and it is noted that UNHCR has shown little interest. Pressmen who request a place on the plane are referred to the Government, which turns down the request. The UNHCR representative sends a press communique to the local papers reaffirming his organization's concern for and willingness to assist the refugees. The URA Ambassador in Bakwaspur calls on the Ministry of Foreign Affairs and pledges his Government's support for assistance to the unfortunate Fulerians. At the BO a cable has arrived from UNHCR HQs, replying to the cable of May 1, and requesting further information before action can be taken. The interagency group takes off for a quick visit to the affected area.

May 5

The interagency group returns in the late afternoon from the North. Owing to heavy rains the plane was only able to land at the mission at Lost Spot, where some two thousand refugees were found sheltering under plastic sheets. Local food and medical supplies are running out fast and the situation is clearly critical. A total of approximately 6,000 to 10,000 people appear to have crossed altogether, and on the basis of radio contact with other settlements it seems the situation is equally critical throughout the zone.

May 6

The UNHCR representative assigns two of his staff from the Western programme to Northern Bekaristan to undertake an assessment mission together with the local WFP representative. Requests for material assistance from the welfare and missionary agencies in the tribal areas, and from Fulack Associations in the URA, begin to arrive at Government offices, UNHCR and Voluntary Agency Headquarters in Bakwaspur, New York and Geneva. Meanwhile, a cable from Geneva announces an initial allocation from the Emergency Fund of \$200,000 for basic supplies pending a fuller assessment of needs. The BO Representative replies asking for more staff to help him handle the crisis.

May 8

The assessment team returns, confirming that about 10,000 refugees have now arrived. Local supplies have run out and food, medicines, blankets and adequate shelter are desperately needed. The UNHCR representative calls an urgent meeting with the government and voluntary agency representatives the same afternoon. It is decided that UNHCR will provide funds for initial supplies which will have to be airlifted, together with local donations and distributed by the agencies. The URA Ambassador agrees to pay for the air transport but states his government would have preferred to spend the money on direct relief goods. The UNHCR representative sends a full situation report to Headquarters again, requesting more staff as well as tents, blankets, food, medicines and a medical team. A cable from HQ announces the imminent despatch of a team including PMS and TSS officers to examine the situation.

May 9

The airlifts start. Two planes provided by the government fly in food, blankets and medicines. Unfortunately, owing to heavy rains and poor visibility, one plane cannot land in Lost Spot and leaves the goods at the nearby settlement of Swampu which is 5 km down river. The pilot radios to the mission in Lost Spot which agrees to send 3 boats to pick up the cargo. The former PI officer at Bakwaspur, who has been sent to serve as the Field Officer in Lost Spot, also gets off at Swampu, leaves the goods at the airfield and rents a jeep to take him to his new duty-station. Meanwhile, in response to an appeal from the local Red Cross, a team of local volunteer doctors and nurses leave Bakwaspur for the North.

May 10

Headlines in the local press have continued to be critical of the lack of attention UNHCR is paying to the emergency. BO staff who are already overburdened by the crisis in the West are now working 16 hours a day and little time has been available to answer queries from the media. The representative therefore decides to call a press conference for that afternoon with the government and HELP present. The diplomatic community has also been requesting more information and in order to answer inquiries from their respective countries, several Ambassadors express the wish to visit the zone. One Ambassador announces his country will fly in 200,000 tins of spaghetti (the Fulacks are a rice-eating people).

At the press conference the representative and agency staff report on action taken. Some journalists could not be contacted within the short deadline and miss the conference. It is announced that HELP already have a man at Lost Spot working with the tribals; he has been asked to coordinate help to the refugees, who are sheltering at a number of mission settlements. The arrival of the UNHCR officer in Lost Spot is also announced.

May 11

In response to the international appeals by church organizations and Fulack support groups, and the sympathetic coverage of the refugees' plight in the media, donations from many countries are beginning to pour in to Bekaristan, which the Government asks the agency HELF to handle. Many of the items are old clothes, including jackets and stockings, assortments of medicines, high heeled shoes, woollen garments, etc. (Bekaristan is a tropical country of largely traditional people). Most of the packages are poorly labelled and HELF decides to make a radio appeal for volunteers to assist in sorting out those items which can be used.

The UNHCR Public Information Spokesman in Geneva briefs the international press on the situation, describes it as a major rapidly escalating emergency and speaks of the quick and effective response - the airlifts, despatch of the Field Officer, forthcoming HQ mission, etc.

A Swedish team of doctors and nurses arrive together with a three-month supply of medicines for 10,000 persons and request logistical support to get to Lost Spot. Representatives of several other international agencies arrive to offer assistance. Meanwhile the local volunteer medical team has arrived in Lost Spot by boat and radios for fresh medical supplies.

May 12

The daily papers carry front page photos and headlines concerning donated relief goods which have been abandoned and destroyed by rain. The UNHCR representative calls the local newspaper and is informed that the photos are from Swampu. The plane carrying the press and diplomatic representatives had passed over Swampu before landing at Lost Spot. The relief goods unloaded at Swampu on May 9 by the plane had been left uncovered and had to be collected; winds and heavy rains had clearly made much of the goods unusable. The Representative says he cannot comment but will check the story. He discovers that since his Field Officer had arrived, the local mission assumed that UNHCR would take care of its own supplies: the promised boats had therefore not been sent.

The UNHCR Field Officer has meanwhile spent almost all his time escorting the visiting diplomats, journalists and others who have been coming to examine the situation.

May 13 In Geneva, UNHCR accepts a pledge of \$50,000 from Ozland earmarked for the purchase of a large number of tents in Ozland, a country 12,000 km away from Bekaristan. Meanwhile, the daily airlifts are continuing and radio reports from the Field Officer in Lost Spot indicate that the influx seems to have stabilized at 10,000, as far as he has been able to establish with the limited time and resources at his disposal. Food is being distributed and, helped by the local population, many of the refugees have organized themselves and managed to build adequate shelters. The local medical team who arrived on the 9th report that the health situation is not as bad as first imagined and can be described as "under control." There are no reports of epidemics, malnutrition or deaths. Meanwhile, influential Fulack parliamentarians in the URA are demanding that their government withhold funds from UNHCR and channel them to HELP or the Bekaristan Red Cross. The Geneva press angrily accuses the spokesman of misleading them.

(cont'd.)

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May 14

Officials at UNHCR HQs who have become increasingly concerned by international press reports and complaints from the URA Permanent Mission in Geneva (that UNHCR is not responding to the emergency, that relief goods are being flown in at enormous cost and then being left to rot in the rain, etc.) telex the BO in Bakwaspur announcing that a million dollar emergency budget has been approved; tents and other relief items are being sent, a medical team from Paris is on its way and that instead of the TSS-PMS mission, a five-man emergency mission from Headquarters will arrive at the weekend to take over coordination of the operation.

May 15

A URA-backed counter-coup in Fulero restores the previous government to power. The guerrilla leaders are shot and the refugees in Lost Spot start streaming back to their homes. Meanwhile, unrelated troubles in Lonanda drive 500 refugees into the West. The UNHCR Representative receives the news while waiting at the airport for the HQ team. As they land, they see him tearing out his hair.