Severe food shortages and famines have been reported in Somalia for over a century. Many of these periods have been linked to droughts but there are also other causes. Some observers have noted times when famine-like conditions have been reported in small isolated areas or among small populations, usually nomads.

Despite the constant recurrence of famines, little is actually known about famine triggering mechanisms in the country and little research appears to be available describing possible famine regimes (the sequence of events that trigger famines and the resulting chain of events). Examining the available literature however, four likely regimes can be identified:

1. Drought-triggered famines affecting livestock: These occur as a result of prolonged dry periods and failure of seasonal rains. Surface water dries up, shallow wells are overtaxed and diminish, livestock die as a result of dehydration, herders lose their purchasing power, and malnutrition rates soar.

2. Drought-triggered famines affecting cultivators: These result from a failure of seasonal rains and can develop rapidly, especially if food prices are already high. As crops wither, food prices rise. Subsistence cultivators, without harvests to barter, must convert assets to cash; if the drought continues for a second year, the cultivators must migrate in search of alternative work to gain the cash needed to purchase food. Migration usually signals the onset of famine conditions -- high mortality and morbidity.

3. Famines triggered by livestock diseases: If unanticipated diseases strike livestock in areas where it is difficult to control or detect the diseases, livestock loses of the most vulnerable populations (nomads and sedentary subsistence herdsmen of goats and sheep) can be extremely high. As the animals begin to die, the owners try to "dump" the good stock undercutters prices. As knowledge about the disease spreads, demand for livestock drops, further lowering prices. As prices plummet, the owners' ability to purchase grain dwindles and soon malnutrition rates begin to climb.

4. Famines resulting from insect infestations: A variety of insects threaten subsistence cultivators, those least able to take preventative measures on their own. Locusts, grasshoppers, cutworms, corn borers, and other pests can quickly descend on an area and substantially deplete standing crops. If the losses occur over a wide geographic area, local shortfalls will occur, prices will rise, and the subsistence cultivators who lost their crops will not be able to afford food. Subsequently, malnutrition rates will increase.

In addition to these four regimes, two other possibilities should be recognized: conflict-
induced famines and famine conditions that occur as a result of catastrophic loss of purchasing power among the rural, and possibly urban, poor. These can be caused by a collapse of the economy, collapse of transport networks (due to fuel shortages), and hyperinflation.

Many observers have remarked on the prevalence of "pocket famines," isolated areas where severe malnutrition is reported in a large percentage of the population. While these are not famines in the general sense -- famines by definition are an areawide phenomenon -- nonetheless, they are of concern as they may precipitate a wider crisis and, unattended, can lead to high mortality.

Countering famine in Somalia will require two essential elements:

-- good intelligence that pinpoints the location, the boundaries, and the regime of the crisis, and

-- a quick response predicated on preplanned actions in a number of sectors.

1. Famine Intelligence:

A famine Intelligence system that can identify the development of food shortages, pinpoint the location of the problem, proscribe its bounds, and direct interventions requires five key elements:

-- Food availability monitoring;

-- Livestock monitoring;

-- Nutritional surveillance;

-- Epidemiological surveillance; 

-- Water monitoring.

2. Famine Response:

Famine response is more complex and requires a degree of sophistication and understanding of the underlying causes. For example, many people equate droughts with famine but they are two entirely different, though often interrelated, situations. Most people equate famine with a total lack of food; yet repeated studies of famines have shown that even in the most severe famines, food is usually available -- what is occurring is that the poorest families lose their ability to purchase food (what Amartya Sen has called their "entitlement"). Post famine studies of the even the most recent 1984-85 Ethiopian Famine have shown that there were substantial food reserves in the most affected areas: in many cases merchants were

\[1\]

Monitoring for cholera is especially important since northern Somalia appears to be the "reservoir" for the disease in the Horn.
exporting food at the same time that the relief agencies were spending millions of dollars to import food — supplies that arrived too late for most of the victims. Thus, if we are to combat famine in Somalia effectively in each of the regimes identified earlier, we will need to develop a mix of responses to quickly counter and contain developing famine conditions. This requires innovative responses which are only effective if they are planned in advance and innovative uses of resources, especially food aid. Indiscriminate food aid can have a variety of negative consequences, not the least of which are undermining of local grain markets and creation of dependencies among otherwise self-sufficient peoples.

In determining the response required for famines, it is important to understand the general scenario of how famines develop and how they kill.

Famines are an areawide, catastrophic decline in purchasing power of certain segments of the poor. In Somalia the two most vulnerable groups are nomadic herdsmen and subsistence cultivators. Famines occur when a "triggering event" such as a drought, insect infestation, etc., creates either a relative rise in food prices or a precipitous decline in purchasing power. This can be as a result of a shortfall in food supplies (though rarely a total absence of food), disease or dehydration among cattle, a closing of access to cattle or grain markets, hoarding by merchants, etc. A typical scenario might be as follows:

Seasonal rains are less than normal and harvests fail. Cultivators searching for alternative work flood the job markets and depress the wage scales. Merchants, seeing a draw-down on their reserves raise prices and large numbers of people who no longer have the resources to purchase food began to go hungry.

Another scenario could be:

Drought conditions dry up the available surface water used by nomads for their herds. As cattle begin to die, they are forced to sell the surviving animals but because of their poor condition, the prices are minimal. The selling off of so many cattle further depresses the prices and with the declining buying power, the nomads begin to starve.

Perhaps the most worrisome scenario is the possibility of a famine suddenly arriving at Somalia's doorstep. If massive losses of herds occur in Ethiopia (from drought or disease), large numbers of nomads needing emergency assistance could arrive in Somalia with little warning (and in some cases could conceivably be the trigger for setting off a famine regime here). Famine detection in the more remote sections of this country will be difficult enough, monitoring conditions across the border will be near impossible at present. Thus the famine response system will need to be able to move into action extremely quickly and many of the traditional responses, especially those that rely on importation of food, will not be effective in reducing high mortality. The primary task in containing famine is to restore people's purchasing power, either by providing alternative sources of income or by intervention in the markets.

If containment measures are not effective, famine conditions can quickly develop. The principal outcome of famine is high mortality. There are three factors that affect death rates: malnutrition, disease, and dehydration. (See Figure 1) In order to fight famine, we must address
all three must be addressed. The sets of interventions that will be required in Somalia are shown in Figure 2. To make these interventions possible, a strong logistics system is needed to deliver food, water, and medicines to the affected populations.

In summary, famine response will require two sets of actions: containment measures and emergency responses.

Containment actions are those that are designed to arrest deteriorating conditions and keep them from developing into a full-blown famine. For the foreseeable future in Somalia, the only famine regimes we will be likely to detect and take successful countermeasures are those related to drought. Therefore, the first preparedness objectives should be to establish a set of interventions:

-- To keep a drought from developing into a famine, i.e., containment, by:

a. providing income support to affected herdsmen and cultivators;
b. providing additional food in the peripheral areas;
c. developing programs to help the herdsmen and cultivators protect their assets.

-- To provide immediate, short term relief as necessary to affected people.

-- To take measures to prevent the spread of disease.

-- To ensure that the vulnerable groups do not deteriorate into a state of advanced malnutrition.
Figure 1

THREAT STRUCTURE
OF FAMINE

MALNUTRITION

(High Mortality, Increased
Susceptibility to Disease,
Deterioration of Mental Acuity)

/ \
/ \ 
/ \ 
/ \ 
/ \ 
/ \ 
/ \\

DISEASE DEHYDRATION
(High Mortality from (High Mortality,
Measles, Cholera, Lethargy)
Diarrheas)
Figure 2

STRUCTURE OF FAMINE INTERVENTIONS

FOOD & NUTRITION

Interventions:

/   Livestock Price Supports   \
/   Price Supports for Grain   \
/   Food Market Interventions   \
/   Food Aid Interventions   \
/     --Food Assistance   \
/     --Supplementary Feeding   \
/     --Cash for Work   \
/     --Food for Work   \
/       --PiK   \

HEALTH-        ----------------------------------- WATER & SANITATION

Interventions:

Measles Immunization
Cold Chain
Epidemiological Surveillance
Vitamin A & C Supplements
Disease Response

Interventions:

Emergency Water Supply
Sanitation in Settlements
Water System Maintenance
Water Transport
To accomplish these objectives, the following interventions are needed:

1. **Actions to save livestock**
   - assuring access to water;
   - assuring access to range;
   - assuring access to fodder;
   - assuring access to markets; and
   - immunizing livestock against diseases that correlate to cattle malnutrition.

2. **Actions to ensure that the rural poor have access to food**, including:
   - providing alternative access to cash via:
     - cash for work projects,
     - income support projects, and
     - payment in kind projects (PiK);
   - providing support to market system;
   - initiating food for work programs in adjacent areas to the drought zones;
   - providing access to alternative markets as needed; and
   - providing seeds for alternative crops as practical.

3. **Actions to maintain health and nutrition levels** among the most vulnerable groups, including:
   - provision of food supplements as necessary;
   - immunization of vulnerable groups against measles; and
   - increasing surveillance for other diseases of concern.

If these measures fail and the situation continues to deteriorate, more intensive actions will be required and general famine relief programs will be necessary. When this happens, the primary objectives become: to reduce mortality and morbidity and to contain the geographic spread of famine conditions.

The interventions required include:

- **Actions to restore and maintain health and nutrition levels** among all groups but especially
the most vulnerable, including:

-- provision of food rations to villages and migrant populations;
-- provision of food supplements to vulnerable groups as necessary;
-- immunization of vulnerable groups against measles, TB, polio;
-- increasing surveillance for other diseases of concern.

2. **Providing alternative access to cash** via:

-- cash for work projects,
-- income support projects, and
-- payment in kind projects (PiK);

3. **Taking actions to control prices of food in markets**, including:

-- releasing food surpluses into the market,
-- purchasing food on local markets for resale at lower prices;
-- providing food to small entrepreneurs to sell at normal prices,
-- food swaps (wheat for sorghum, etc.)

4. **Taking actions to increase food security in the peripheral areas** including:

-- initiating food for work programs in adjacent areas to the famine zones;

5. **Increasing support to local farmers to reduce their net losses**, including:

-- providing access to alternative markets
-- initiating crop salvage strategies where practical;
-- providing seeds for alternative crops as practical.

6. **Taking actions to support herdsmen**, including

-- emergency interventions in livestock markets, i.e., purchases.
-- grain for livestock swaps;
— livestock culling;
— assuring access to markets or developing holding markets; and
— immunizing livestock against diseases that correlate to cattle malnutrition.

7. Taking actions to save and rehabilitate livestock, including:
— livestock rehabilitation programs (feedlots);
— increased veterinary services.