

SAN ANDRES ITZAPA, GUATEMALA:
THE IMPACT OF A HIGH-AID HOUSING PROGRAM

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This study was conducted in October–November 1976 for INTERTECT as one part of a series of case studies, interviews and reports being prepared for the United Nations Disaster Relief Office (UNDRO) to help determine the role and effect of emergency shelter following disasters. San Andres Itzapa was selected for the study because of the intensive reconstruction aid which it received. The Canadian Government spent nearly two million dollars on the town, first aiding with machinery for rubble clearance, then providing materials and organizing for the construction of 1,600 semi-permanent houses and eight schools, all within a few months of the earthquakes of February 4, 1976.

The purpose of this study is to determine the attitudes of the local inhabitants towards intensive housing reconstruction aid and to assess the aid's impact on the community.

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Sociological Background

San Andres Itzapa is a municipio (municipality) in the Department of Chimaltenango approximately 55 kilometers from Guatemala's capital city. In its urban center, San Andres had a population (before the earthquake) of 5,916; another 2,531 lived in the eight aldeas, or villages, which dot the surrounding hillsides; thus making a total of 8,447. One hundred and fifty were killed in the earthquake of February, 1976.

The aldeas, many of which are accessible only by jeep or on foot, are inhabited almost exclusively by subsistence farmers called naturales, their own term for people of direct Mayan descent. The average income for such farmers in the Guatemalan highlands has been calculated at \$150 a year.¹

The large majority (2/3) of the inhabitants of the municipio are also naturales who work in agriculture at the subsistence level. A high percentage of the urban naturales (specific data unavailable) are reported to be landless peasants, earning their living by renting land from large landowners or working on the large farms as agricultural laborers. Both rural and urban naturales customarily migrate to coastal plantations (of coffee, cotton, sugar cane) for one to four months every year to earn a significant part of their yearly income.

The ethnic minority in San Andres is constituted of ladinos, i.e. those who distinguish themselves from the naturales by speaking only Spanish (the naturales still speak Cakchiquel as a first language). In general, the ladinos are more rich and powerful than the naturales; they own most of the land surrounding the town, own and operate most of the town's small businesses and, until 1976, occupied most of the town's political offices.

Prior to the earthquake, San Andres had no health facilities and only one school. The general condition of streets, roads, and municipal buildings was poor. The best conditions were found in the town's central district (where most of the ladinos live) which has electricity, running water and sewers, as well as the town's only paved (cobblestone) street.

Among the naturales of San Andres, there is a strong tradition of humility and acceptance of the status quo, reinforced by religion. However, there was a small movement prior to the earthquake oriented towards greater justice and social improvement. The evangelist groups, for example, whose membership is largely natural, have interpreted their religious mission as a struggle for education, economic improvement, and ethnic equality. At the same time, some of the town's Catholics have organized into "Basic Christian Communities" to propose similar goals. The communities (groups of 20-25 families) were organized some 2 1/2 years ago by the town's North American pastor. Their purpose is to evoke from their members a Christian commitment towards the solution of community problems. The communities send delegates once a month to meetings of the Parish Council. About 7 1/2 percent of the town's population is reportedly involved in these communities.

1. Figures from El Quetzal agricultural cooperative, Chimaltenango, Guatemala.

Another example of the social change movement was a community improvement committee called Ku Samaj Junan (Cakchiquel for "Let's Work Together"), which was formed in the mid-1960's after a group of 300 families received land in the canton (subdivision) of San Cristobal (see next section for details). By bringing its pressure on the national government, the group received financing for a \$12,700 bridge which united two parts of their canton, plus running water in three central locations. The group also aided the neighborhood in obtaining registered titles for their new land.

Finally, the social change movement was manifested in a political group called the MLN Youth.² Over the last two years, this group has put pressure on the ladino municipal government to be more responsive to community needs. In 1976, their candidate for mayor -- who won and began his term in August -- was a natural.

In summary, San Andres before the earthquake was a poor, ethnically-divided town making some initial steps towards organization and social change. The reconstruction aid which the town received -- and the disaster which prompted it -- must be analyzed in the context of this reality.

Previous Housing Patterns

A. Cultural Traditions

The traditional house design, once used by the naturales all over the Guatemalan highlands, used cana walls (stalks of sugar cane or corn), rough-kewn wood as cornerposts, and a straw roof supported by wood or bamboo. The house was usually one room, used for sleeping as well as a storageplace for corn and other agricultural products. In most cases, the open-fire kitchen was placed inside a smaller second hut apart from the first. Because of the light roofs and flexible walls, the traditional design was resistant to earthquakes.

Many of the people of the aldeas still used this design at the time of the earthquakes of February, 1976. However, most of the urban residents used a design introduced by the Spanish in the sixteenth century, with adobe walls and tile roofs.³ According to a local builder, people generally preferred this type of dwelling because it provided better insulation against the heat and cold; was not vulnerable to fire, rot, or destruction by animals (chickens and dogs eat the cana); and had a more permanent and respectable appearance.

Although historical data is incomplete, the rough outline derived from the study indicates that adobe-and-tile houses became available to the naturales only within the present century. This may be attributable to rising incomes

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2. Ironically, the MLN (National Liberation Movement) is Guatemala's predominately ladino ruling party.
 3. See question 3 in survey, Appendix 1.

connected with the nations's expanding export trade. Adobes and tiles were both locally produced in San Andres and sold at relatively low prices.

In the last decade, lamina corrugated metal sheets) had become available in San Andres, also at a low price, and had been used in the aldeas because of its ease in transport and installation. It had also been used in town, often as partial roofing for a kitchen or extra room.⁴

In the traditional pattern, new house construction was the responsibility of each individual family. New houses were built when a new family was formed. The bridegroom's father (or his mother or his in-laws, if they were wealthier) would grant the new couple a parcel of land on which to build their house. The house would be built with the aid of relatives and/or a paid assistant.

In town, 3-5 adobe houses were often placed next to each other around an inner court, making an extended family grouping. Adobe houses generally required the help of a paid albanil (literally a mason, but here refers to an experienced but unlicensed builder from the local community), who worked in conjunction with the owner and his relatives or friends.

In some cases, an old house would be rebuilt rather than building a new one. Two of the respondents in the October survey reported having built their houses a generation ago on top of an old foundation. The main cause for the decay of the previous houses was the rotting and weakening of the wood which held up the tile roof.

B. Economic Factors

The type of house built (i.e., cana-and-straw or adobe and tile) and the length of time between the family's formation and initial construction, although guided by cultural traditions, was largely a function of the family's financial resources. If a new couple did not have financial assistance from relatives, it would have had to save an estimated 2-3 years to afford a cana, wood-and-straw (or lamina) house, or 5-10 years for an adobe-and-tile house.⁵ Worse, if the new couple had not inherited land, they might have no place to build. There was no credit available either for the purchase of land or for house construction.

This problem was exhibited in the mid-1960's, when San Andres became overcrowded with families who had no land. The problem was alleviated with a land grant from the National Institute of Agrarian Transformation (INTA). Some 300 families were authorized by INTA to move onto plots provided in this grant⁶ which now make up the subdivision (canton) of San Cristobal.

With a population growth rate of 2.4% annually, the demand for new housing has increased. Overcrowding again became a problem by early 1976. The average number of inhabitants was 5.1 per dwelling, most of which were one-room only. An undetermined number of residents had migrated to the capital city, finding no place to live or work in San Andreas.

4. See question 3 in survey, Appendix 1.

5. Based on approximated material prices and average incomes.

6. No data on terms is available.

In general, the individual family's approach was to build the best house they could afford, if they could afford one at all and had land on which to build. Most of the naturales had houses of only one room, often with the kitchen inside the room; those who had more money would have a separate hut for the kitchen and possibly two or three rooms in the house, dividing up children, parents, grandparents, etc.

There was also a variation in the amount of "finishing" done to a house. Most of the naturales had mud floors, bare adobe walls, no ceilings, and no glass windows. The ladinos, on the other hand, often had tile floors, plastered adobe walls, light wood ceilings, and finished doors and windows. The richest ladinos had cement-block houses, equipped with electricity and gas stoves.

In summary, house design and construction before the earthquake of 1976 was an individual family affair, guided by cultural and economic factors. Given these guidelines, the most common structure in San Andres was adobe-and-tile.

The following sections will analyze the changes made in this pattern through the combined impacts of the disaster and reconstruction aid.

Impact of Earthquake and Early Community Response

A. New Factors in Housing Patterns

The first and strongest of a series of earthquakes occurred at 3:32 a.m. on February 4, 1976, destroying 90% of the structures in San Andres. One-hundred-and-fifty people were killed and 728 injured, mainly from falling adobes, tiles or wooden posts.

The disaster affected everyone in varying degrees, both ladinos and naturales alike. The least affected were the very rich and very poor, the former because they had houses of sturdy concrete blocks, the latter because they had houses of flexible cane walls and light roofs. The hardest hit - the majority - were those who lived in adobe-and-tile structures in the urban center. Many of these houses collapsed in the narrow streets, closing all possible escape routes.

Besides the loss of family members, the survivors suffered an economic setback. Many lost what little money they had in the rubble, as well as the corn which had been recently stored as the year's food supply. Precious time which would otherwise be spent earning money in agricultural work would now have to be spent on reconstruction.

The continuing tremors added to the blow. Over 1,200 small earthquakes were registered by the nation's Meteorological Observatory within 30 days of February 4, at least two of which were strong enough to cause more destruction and injuries.⁷ The most religious inhabitants were convinced (and remain so, according to the survey) that God was punishing them for their sins. There was an atmosphere of apocalypse as many religious groups united their members to pray for forgiveness.

7. Asturias Montenegro and Gatica Trejo, Terremoto '76, Ediciones Pop., Guatemala.

Nearly 100% of the respondents in the October survey reported being "stunned" for one or two months following the earthquake of February 4. No one was sure what was going to happen.

The earthquakes added the following new factors to the existing patterns of housing and community organization:

1. The most common design - adobe-and-tile - was no longer viable. A common new solution or reevaluation of the traditional mode was needed.
2. All the houses were destroyed at the same time, along with the destruction of public buildings and the interruption of daily life in the community. If the goal was to return to normal, a dimension of community effort would have to be added to the individual family approach.
3. The disaster affected both ladinos and naturales, meaning that they shared an increased need for resources related to housing (especially capital and materials), hence a common interest in fulfilling this need for the entire community.

B. Community Response

Despite the psychological shock to the residents and their lack of preparation for the disaster, they responded fairly quickly and responsibly. By the night of the first day, many had already put up some form of temporary shelter using sheets, nylon or canvas on top of or adjacent to their destroyed homes.⁸ The families did not leave their sites because everything they owned, including chairs, tools, corn chickens, pigs, etc., plus the site itself and the title thereto, lay within the rubble. They spent the first few days caring for the dead and injured, and salvaging what they could.

The traditional urban design of 3-4 houses grouped around an inner court proved to be valuable in setting up temporary shelter. Many families owned large canvases used for drying beans. These were placed over wooded posts in the inner courts to house the survivors of the extended family and, in some cases, a few orphan children from the neighborhood. Many suffered from the cold (nighttime temperatures in the highlands during February are generally in the range of 35-50 degrees Fahrenheit) and food was scarce, since much had been lost in the rubble and neither the shops nor the daily market were functioning.

Over the following weeks, the residents improved their temporary homes using whatever resources became available, especially lumber and lamina that was salvageable from the rubble. As the October survey revealed,⁹ several of the residents built temporary huts in the traditional rural style, with cana walls, wood cornerposts, and lamina roofs. However, there was still a great fear surrounding the use of adobe and tile, and many were afraid that anything they might put up would be shaken down again. In addition,

8. One interviewee pointed out that most of the naturales were experienced in temporary shelter because they were often required to provide their own housing while they were working on the plantations. (G. Porras - see list of interviews, Appendix 2.)

9. See questions 4, Appendix 1.

very few residents had the financial possibility to begin permanent reconstruction, even if they had known what to build. Judging from these realities, as presented by the respondents of the survey in October, individual families did not have at that time a solution to the problem of permanent reconstruction.

However, the community did show signs of a group response to common problems arising out of the earthquake. The mayor of San Andres (at that time a ladino) formed an emergency committee the first day with six other ladinos who were municipal officials or personal acquaintances. Each member was asked to help coordinate rescues, transportation of the injured to nearby hospitals (the closest was in the departmental capital, Chimaltenango, 5 kilometers away), burial of the dead, and removal of rubble from the streets. At least one committee member put his truck in service for transporting dead and injured.¹⁰

At the same time, one of the community development groups mentioned in the beginning section - the Catholic Basic Christian Communities - began working out a reconstruction plan through meetings of the Parish Council and contact with CARITAS, the National Catholic Relief Agency (receiving international donations). The Parish organized a gift of 2,000 laminas to widows in San Andres within a month of the earthquake and worked out a long-range plan including the sale of lamina on credit and a model-house plan by which residents could learn seismic construction techniques.¹¹

Many residents have since commented that San Andres was on its way to solving its own problems and might have done so without outside aid (see section on attitudes below). However, there is now no way of knowing.

Within three days of the earthquake, emergency supplies (mainly food and clothing; later blankets, tents, nylon, and medicines) began to arrive in San Andres by truck and helicopter. The emergency aid immediately became the focus of community attention.

In the first few days, a dispute arose over the composition of the emergency committee. Ku Samaj Junan, the Indianist pro-improvement committee mentioned in the first section, thought that they should be the ones to distribute goods in their canton rather than the ladinos on the mayor's committee. A representative of the group went to see the town's priest (a North American) and told him that he had witnessed a hoarding of emergency supplies on the part of the emergency committee. The priest brought the matter up with the mayor, who agreed to reorganize the committee so as to make it more representative.¹² Following a meeting of the Parish Council, four natural representatives were chosen for the new emergency committee, making them a majority on the mayor's 7-member team. At the same time, the deputy-mayors from each of the town's five cantons were asked to form emergency sub-committees. The sub-committees told the women in their neighborhoods that they should line up on the soccer field according to their respective cantons to

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10. He complains today that he has never been remunerated for the cost of running his truck for nearly two weeks at the service of the town, despite the mayor's indications that the National Government had made funds available for such circumstances.
 11. This plan was later cancelled when the Canadian Government decided to launch its reconstruction project.
 12. The priest said later he had the support of CARE, one of the largest donors of emergency supplies to San Andreas.

receive emergency supplies. The men were to begin clearing the rubble from the streets. At this point, the aldeas were not included in any emergency plan.

Over time, each of the four natural representatives on the Central Emergency Committee resigned their posts. One of them stated in October¹³ that the ladinos close to the mayor had maintained control of distribution and were still taking the best goods (the nicest clothes, the most useful foods, etc.) for themselves. Since the mayor was partisan to the ladinos, he said, nothing could be done.

In short, there was still no solution to the dilemma presented by the earthquake - how to reconstruct safe, permanent houses for the entire community. Although a beginning in reconstruction was made, community efforts were focused immediately on the distribution of emergency aid.

Canadian International Development Agency Reconstruction Project

A. Planning the Aid - Initial Determinations

The Canadian Government responded to the Guatemalan disaster through C.I.D.A., the Canadian International Development Agency. Its first action, begun two days after the earthquake, was a million-dollar shipment of blankets, powdered milk and medical equipment, destined for the entire affected area. (Nationwide, the earthquake killed 27,000 and injured 78,000.) While this project was being carried out, C.I.D.A.'s home office was designing "Phase Two".

According to the C.I.D.A. Field Representative in Guatemala,¹⁴ C.I.D.A. outlined its reconstruction program using the recommendations of Guatemala's National Emergency Committee, Canadian Embassy personnel in Guatemala, and C.I.D.A.'s own investigator (who had been flown to Guatemala in the first week following the earthquake). The guidelines of the program by mid-February were as follows:

1. The budget was to be approximately four-and-a-half million dollars.
2. C.I.D.A. would purchase lumber and other building materials in Canada and ship them to Guatemala.
3. The aid should be concentrated in one or two towns and would include rubble-clearing, reconstruction of houses and public buildings.
4. C.I.D.A. would try to finish the reconstruction of houses before the rainy season began in May (100 days after the earthquake).

The administration of the reconstruction program in Guatemala was the responsibility of the Embassy Charge d'Affairs. Reportedly, he himself visited several possible locations for the program considering them on the basis of

13. A member of Ku Samaj Junan - see list of interviews, Appendix 2.

14. See list of interviews, Appendix 2.

the following criteria:

1. Size should be right for the budget.
2. Area should be accessible to trucks.
3. Inhabitants should demonstrate a willingness to organize themselves.

The Charge d'Affairs apparently decided on San Andres after having seen rubble-clearing crews in operation and having talked with the president of the Emergency Committee.¹⁵ However, most of the townspeople surveyed in October said they never knew why their town was chosen.

The Charge d'Affairs had also reacted favorably to another, somewhat smaller town in the same Department (Chimaltenango), San José Poaquil. On February 24, he signed an "Act of Commitment" with the National Emergency Committee, promising to aid both towns with reconstruction.

B. Organization of the Community

While details of the housing reconstruction plan for both towns were still being worked out, the Embassy deployed some heavy machinery to San Andres (12 trucks, 6 front-end loaders, one bulldozer) to begin clearing the rubble from the streets. The machinery was put to work on the 29th of February, while daily tremors still shook the town.

At this point, no official announcement had yet been made to the town's population that the Canadians were planning to reconstruct the entire town. Respondents in the October survey reported that they had heard that the Canadians were financing the rubble-clearing, but they were unsure about the foreigners' motives; in the first few days, they had been afraid that the Canadians were going to move them out of town and steal their land. One hundred Red Cross tents had been put up in the soccer field, and many of the naturales had heard they were going to be sent to live there.

A group of Guatemalan university students played a significant role during this period in organizing and informing the townspeople about the Canadians' plan.¹⁶ Members of the group had been in contact with the Canadian Embassy in late February and had learned the latest details of C.I.D.A.'s aid.¹⁷ The students carried out the following activities:

First, they held a meeting in each of the five cantones, telling people that:

1. They would not be removed from their land.
2. Boundary lines would still be respected after the bulldozing.

15. According to Plenty, a group that has since worked closely with the C.I.D.A. program. See list of interviews, Appendix 2.

16. Two students from the Department of Architecture of the University of San Carlos (Guatemala City), plus five students from other departments, were helping with distribution of emergency supplies in February. In March, other students arrived including a group of 12 from the School of History, which were the principal ones involved in the activity mentioned here. See Bucaro's Informe . . . cited in bibliography, Appendix 5.

17. See list of interviews, Appendix 2.

3. The Canadians planned to import lumber to help the people with shelter.
4. They should organize themselves so that neither the ladino municipality nor the Canadians would be able to treat them unfairly.

After the meetings by canton, smaller meetings were held in each manzana (roughly, a square block). The people elected two representatives for each manzana, who in turn chose five amongst them to be the representatives in the canton subcommittee.

Once this organization was established, the rubble-clearing proceeded canton by canton in an order preestablished and agreed upon by the Central Emergency Committee and the subcommittees. The manzana representatives organized work crews for their block to work alongside the heavy machinery, salvaging wood and other valuables while the trucks carried off crumbled adobes and tiles.

The new community organization incorporated a large part of the population in the rubble-clearing operation, informed them about the schedule and purpose of the operation, and introduced them to C.I.D.A.'s reconstruction plans. As a method of communication, it was a significant improvement on the deputy-mayors' subcommittees, which were not democratically formed, had never met beyond their initial meetings, and were not well-known in the community.

However, despite the democratic fashion in which the organization was established, in reality it conformed more to the traditional pattern of ladino control and natural submission. As one of the members of the students' group later commented, the naturales were not accustomed to such a democratic process - when faced with a decision on who to elect, they often voted for a ladino, because it did not occur to them that a poor, uneducated natural could be a leader.

Nevertheless, many of the elected manzana representatives and the members of the canton subcommittees were naturales - but, as will be shown below, these positions were not significant posts in the administration of the project. The most important positions - the presidencies of the canton subcommittees - were occupied by ladinos in four out of five cases. The one natural president eventually resigned, giving his post to a well-known ladino in his canton, because he was, in his own words, "threatened" by his ladino neighbors.

C. Decision-Making in Project Planning

The University students had now set the stage for C.I.D.A.'s reconstruction project. The same group from the School of History provided the Canadian Embassy with a list of the heads-of-household for 1,117 families who had lived in the town before the earthquake and were to receive housing materials under the Embassy's Plan.

At the same time, students from the School of Architecture were working on a design for the house. The Embassy had informed them that the lumber to be imported (in fact, it was already on its way) was in the form of press-wood and plywood sheets. Lamina roofing was also being imported as well as nails and tools. On this basis, the architecture students came up with a

design which they said was drawn up in consideration of local culture and climate. Their design had two rooms, both considered as bedrooms, and a shed roof covering a corredor equal in size to the living space. The kitchen was to be placed apart in a separate structure to be built by the inhabitants themselves using salvaged materials.

The students presented their design in opposition to another one which had been submitted to the Embassy at their request by a Canadian former building contractor and crate-manufacturer. He had already built a model house in San Andres, assuming the houses would be built according to his design. The students criticized several aspects of the model, especially his plan for a flat roof. They pointed out that the Canadian had no experience with Guatemala's rainy season (May to November) and did not understand that a flat roof could not possibly stand up to the heavy precipitation in that season.

Eventually, the Embassy decided on a compromise plan weighted towards the students' design - the house would have a shed roof, with a slight slope. However, another argument was already in session over the method of distributing the materials. Whereas the Canadians wanted to set up a pre-fabrication assembly plant using voluntary labor from the town, the students were in favor of distributing materials directly to each site, whereupon each family would cut and assemble its own house, guided by the design of the model house. The students had already proposed their plan in a letter to the Embassy Charge d'Affairs in early March in which they commented on the disadvantages of "imposing" a design on the population of San Andres. Among their points:

1. Many families still had foundations or other usable parts of their houses still standing. Rather than tearing these down to make way for a total house, it would be better to give them the materials outright so that they could build on top of their old structures.
2. Many of the sites did not have the necessary dimensions for the model house under consideration. It would be better for these families to receive the materials so they could make the houses according to the size of their plot.

The matter was left unresolved by the Embassy for some time, until the Charge d'Affairs asked the president of the Reconstruction Committee (the Emergency Committee had changed its name) to cast the decisive vote. Acting unilaterally, he suggested the assembly plant be set up and run for a trial period of two weeks; if there was not enough enthusiasm for the plan on the part of the townspeople, the plan should be dropped. A town meeting was called through the manzana representatives and the people were informed of the decision. They were told that they would all have to participate in the project if they wanted to receive a house; that houses would be given to all families who had lived in San Andres at the time of the earthquake and were on the Embassy's list; and that the town would be reconstructed canton by canton in the same order as the rubble-clearing had gone. Residents would be called to work in the factory by the canton subcommittees, and they would also be asked to prepare their sites for the delivery of the house.

The structure of decision-making in the project-planning process illustrated the power of the donating agency relative to the townspeople in determining the style of reconstruction in San Andres. Finding relatively few obstacles in their path, the officials of the Canadian Government proceeded according to their own conception of what the needs and possibilities were

for the town's reconstruction. It assumed, for example, that:

1. The priority was housing.
2. The houses must be up before the rainy season began.
3. Pre-fabricated presswood houses were better than none.
4. A family would rather have a whole house than the materials with which to make one.
5. A family would rather work for the house than buy it, or have it given to them.
6. There were no better alternatives.

Although some or all of these assumptions may have been valid, they were never tested on the community at large before it was too late to alter them.

The University students played an important role as nationals, in criticizing and refining the details of the plan, and in establishing an organization through which the townspeople could theoretically have some input in the implementation of the project. However, they too were foreigners to the town, had no previous experience there, and had thought very little about what kind of reconstruction plan might be possible without the presence of Canadian aid.

On another level, the same was true of the ladino president of the Reconstruction Committee. Though he lived in town amid the rubble like his natural neighbors, he stated in an interview in October¹⁸ that he didn't know how well the poor people would receive the plan for preassembly and delivery. He said he felt pressured by time (the materials were already arriving) and the Canadian plan seemed reasonable enough to try. Alternatives beyond what the students had suggested were not considered.

D. Issues in Project's Operation

The construction system was designed by two officially-designated Canadian volunteers and administered by a Guatemalan student of architecture named coordinator by the Embassy at the suggestion of the University's Coordinating Committee. It was highly organized from start to finish.

Basic materials were stored at the football field as they arrived by truck from the port. As they were needed, they were transferred to the factory, which was mounted in the Municipal Theater, a large concrete building which was not destroyed by the earthquake. The presswood sheets and pine studs were pre-cut with electric saws, placed in pre-set molds, nailed together and loaded onto trucks. The walls and roof would then be delivered to the sites, at a projected rate of 35 houses per day.

The factory and delivery process required approximately 120 workers per day in three shifts. The manzana representative of the canton under construction were each to send a group of workers to the canton subcommittee president.

18. Carlos Cabrera - see list of interviews, Appendix 2.

who in turn would assign them to various tasks in the factory or on delivery. None of the workers were to perform skilled tasks because the high turnover would make training wasteful. Such tasks (running saws, supervising, etc.) were the responsibility of various Canadian volunteers (more on this below).

The residents were to have prepared their site before the delivery by clearing and levelling the land and digging holes for the cornerposts. In order to make sure this was done correctly, technicians from INTECAP¹⁹ would supervise the sites. The technicians were also in charge of supervising the erection of the houses.

The house did not include doors and windows - these were the responsibility of each owner. However, scrapwood was made available so that they might make their own. The project also gave three sacks of cement to each owner to be used on the cornerposts. At the end of the project, each family was to receive a legal document indicating its ownership of the materials donated by C.I.D.A.

The construction began April 10 and continued beyond its trial period without any formal evaluation of its progress. The factory worked non-stop for two months at one time setting a record production of 40 houses per day. In June, there was a celebration marking the completion of 1,200 houses in the first group.

The factory system had been a new cultural experience for the people of San Andres. Few, if any, of them had ever seen or worked in a mass production situation. Many have commented since that they were impressed with the ongoing activity (which continued after dark under bright electric lights run by the project's generators) and the rapid pace of production.

According to one of the supervising volunteers, the delivery process was the most popular among the workers, because they were able to ride in the truck and see parts of their own town which they had rarely visited. The workers reportedly also enjoyed contact with the various expatriate volunteers (mainly from Canada and the United States) who numbered about twenty at any given time during the first few weeks of the project. The factory was located near the central plaza where the buses arrive and depart; it was the source of constant attention from both townspeople and visitors from outside. All reports indicate that morale in general was high.

Generally speaking, the project did accomplish its goal of providing a house to every family, and having most of them up before the rainy season began. However, there were some shortcomings which must be taken into account in assessing the project's impact on the community. These are described in the following pages:

1. Elitism in decision-making. Although the President of the Reconstruction Committee made the final decision on the method of distribution, he and his

19. Institute for Technical Improvement and Productivity - working under a formal agreement with the Canadian Embassy.

Committee ceased to play a role in decision-making once the project began.²⁰ No other community groups, including the reformist groups mentioned earlier in this paper, were represented in or carried official roles with the reconstruction project. Even the municipality had no official role, except for providing occasional bureaucratic services and cooperating with the Embassy on a land grant to 12 landless families.²¹ This left the Canadian Government's own personnel in complete control of the reconstruction project.

In the first few weeks, the officially-designated Canadian volunteers were present to see that the factory process was working smoothly. Eventually they left the supervision of internal factory operations up to the "Apostles of Infinite Love", a group of priests from Quebec with experience in carpentry. These were known to the Embassy and worked for the project under a verbal contract.

The significant fact about these and other expatriate volunteers is that they were put in positions of power without the previous knowledge or consent of any members of the community.

The same was true of the project's coordinator. Although he may have been more culturally adapted to a leadership position in San Andres, he was still an outsider to the town, and a representative of the ladino ethnic group. By putting him in an administrative position without any checks or balances on the part of the community, C.I.D.A. was reinforcing its own elitism as master of the reconstruction process.

The community organization set up by the University students was theoretically a means of democratizing the reconstruction process. However, in actual practice, the elected officials of this organization acted more as labor contractors for the coordinator. The pattern as described by the "Apostles" was as follows: they (the Canadians) would indicate to the coordinator how many workers were needed and for which jobs; he, in turn, would call on the canton presidents to find the required number of workers. In most cases, the manzana representatives were ignored as an authority; they participated only in listmaking or other menial tasks assigned to them by the canton presidents.

In essence, C.I.D.A. had set up its own hierarchy of decision-making in San Andres, bypassing all other previously-established mechanisms.

2. Inequalities in Distribution of Aid

As mentioned above, the original plan announced to the public was to reconstruct the town canton by canton, using labor from each to accomplish the task. Exceptions were those who rented, or lived with another family, or for any other reason did not live in a house of their own which was des-

20. He has since explained that his duties as Director and teacher at the school took priority since classes reopened at approximately the same time the project began.

21. The 12 families had been renters previous to the earthquake. The municipality granted them each a small plot of land on the eastern edge of town so that they could receive houses from C.I.D.A.

troyed by the earthquake. These people were to receive their houses after all the rest were built.

The order was interrupted when North American volunteers in charge of distribution of houses decided to attend to the most remote areas of town first, because these areas had the poorest access roads and delivery would become difficult there after the rains began. As a result, some people received their houses before they had worked at all in the factory, while others had to wait a long time after they had worked for their houses to be delivered.

In view of the confused order, the project coordinator asked each canton president to provide workers from his canton at the same time, rather than waiting until their canton was being attended. This seemed to work well for the first phase, but caused problems from June to August when the second group of houses was being built. Many of the members of this group had already worked many days in the factory during the first phase and did not think it was fair they should have to work again to get their houses. As a consequence, the project coordinator could not find enough volunteers during this period to keep the factory going. He eventually resorted to procuring paid workers.

The issue of how much work one needed to do in order to receive a house was never clearly defined. The Embassy's resolutions made public to the town in the beginning of the project merely stated that "priority in the reconstruction of houses will be given to those who help in construction work". This idea was presented to the public by the canton subcommittee presidents in more concrete terms; they used a guideline of twenty days for every able-bodied male who belonged to a family receiving a house. However, in practice, there was a wide variation in the amount of time that people worked.

For the respondents in the survey, the time in the factory varied from a few days to several weeks. Many claimed they had worked on the Canadian project for rubble-clearing to the close of the factory - a total of six months. At the same time, many of the wealthy ladinos in town did no work at all; they paid others to work in the factory in their place. There were also some cases in which a family sent relatives to work in their place or received permission not to work in the factory because they were too busy with agricultural work.²² Work did not guarantee priority in receiving a house.

There was also a shift away from the stipulation that a family that had not lived in San Andres at the time of the earthquake was not eligible for a house. The project coordinator listed over 250 requests for houses or housing materials, many of which were from people not on the original list of eligible families prepared by the University students. Many extra houses and materials were given away on the basis of these requests. Whatever their validity, a popular viewpoint among the respondents in the survey was that houses and materials went to ineligible families. There was at least one case in which a wealthy ladino received more than one house and received extra materials which were then sold out of town.

These facts pointed out that, regardless of the Canadians' previously-stated ideology of equality, the ladinos were still getting more than their

22. See question 6 in survey, Appendix 1.

share of the aid. This served to reinforce the existing tension between naturales and ladinos.

3. Limited help for the aldeas. While the destruction in the aldeas was not as serious as in the town itself, a number of the inhabitants reportedly felt they too should be included in any plan for reconstruction promised to the whole of San Andres.²³ C.I.D.A. did send some of its rubble-clearing machinery to the aldeas and later organized a plan to rebuild (or build for the first time, in some cases) a school in each of the eight aldeas.²⁴ However, there was no plan to aid the aldeas with houses or housing materials.

In July, a social worker convinced the Embassy to provide a limited number of materials (enough for walls but no roofs) to the inhabitants of the aldeas, through local reconstruction committees which he had organized. However, the delivery was made all at once, and many missed out on the donation because they were away working on the plantations. The study revealed many houses still without roofs in November of 1976.

Two issues were brought out by C.I.D.A.'s light approach to the aldeas. For one thing, it reinforced the traditional neglect of these areas on the part of the municipality. The aldeas, as always, were seen as different, remote, less important than the town center - this helped restimulate the jealousies between residents of the aldeas and the town.

In addition, it demonstrated the degree of control still reserved by C.I.D.A. over its building materials. The people of San Andres understood from the beginning that much of the wood stored on their football field was destined for San José Poaquil, the other town receiving C.I.D.A. aid. However, throughout the course of the project, C.I.D.A. made several gifts to institutions and groups in other communities, none of which were included in C.I.D.A.'s "act of commitment" with the National Government. C.I.D.A.'s claim that there wasn't enough material to help the aldeas of San Andres was untrue; it was just a matter of priorities. Clearly, C.I.D.A. had its own view of what these priorities were.

4. Failure of the block project. Since presswood walls are especially vulnerable to rot when in contact with the humid earth, the original design envisioned a cement foundation for the posts and a one-meter high wall of terracement blocks surrounding the wood. The model house built by the Embassy representative used these blocks, and the Embassy's original intention had been to provide them for all the houses in the community.

C.I.D.A. provided 11 block machines with a supply of cement to San Andres in early March and a group of men from the community began making the blocks. The Embassy's idea was to organize a cooperative around the block-making activity. The cooperative would be allowed to charge each family a small fee for the blocks, thereby having funds with which to pay the workers and establish the cooperative. The blocks would be produced continually as the houses were going up.

23. According to social worker Gonzalez. See list of interviews, Appendix 2.

24. Construction was in the hands of volunteer carpenters from "Plenty", a communal farm organization from the United States.

A Guatemalan with experience in cooperativism volunteered her services as an advisor to the group, who, according to reports by the project coordinator, were enthusiastic about the project. However, as the production of houses began in mid-April, Embassy officials realized that the block project could not produce blocks fast enough to keep up with the distribution of houses, and furthermore, it was costing much more than they had hoped. The Embassy therefore stopped supplying cement for the production of blocks, although they left the machines for the cooperative. In the opinion of the project coordinator, the withdrawal of the cement supply caused the failure of the cooperative, thereby frustrating those who had been involved with it. In addition, it disappointed the hopes of those who had learned that the blocks would be supplied along with the house.

5. Technical problems with the house design. A report by a Chilean architect (see bibliography) which was presented to the Canadian Embassy pointed out some technical problems with the house design used in San Andres. Mainly, it emphasized the problem of humidity, which could attack the house for the following reasons:

- a. The slope of the roof was not steep enough for the amount of rain that falls during the wet season.
- b. Without cement or block foundations, the wood could too easily come into contact with wet soil.
- c. The galvanized roofing was placed directly on top of plywood, threatening to rot the wood through condensation.
- d. The wood was not treated nor painted with water-resistant chemicals.

Given the fact that most of the inhabitants do not have the economic means to solve these problems, the architect stated that "40-50% of the dwellings should be considered temporary", that is, unsafe for habitation after two years.

Another danger mentioned was fire, especially acute since the houses were placed so close together. Others have commented on this danger, adding that it is complicated further by the fact that traditional cooking is done on an open fire within the house, and that furthermore, there is no firefighting equipment in San Andres.

Some steps have already been taken by C.I.D.A. and local inhabitants to combat these problems. In one of the cantons, for instance, the inhabitants turned their wooden roof panels upside-down, leaving only the studs in contact with the metal roofing above. This became a popular innovation, since it had the added advantages of increased insulation and an attractive flat ceiling. As for the paint, C.I.D.A. (as of mid-November) decided to fund the supply of water-resistant plaster for all the houses in both San Andres and San Jose Poaquil. A fire truck has also been committed to San Andres.

However, most of the inhabitants are still uninformed about the strengths and weaknesses of the structures they now own. For example, half of the respondents in the October survey²⁵ thought that their houses would last between

25. See question 8 in survey, Appendix 1.

twenty and fifty years. In light of the findings presented above, it seems they are sadly mistaken.

In summary, the project in operation was not as democratic and just as it had set out to be; and there were serious limitations to the design of the house which were not communicated to the inhabitants.

Some of these shortcomings might have been resolved with more careful and experienced staff. In fact, reports from San José Poaquil (the other Guatemalan town which received aid from C.I.D.A.) show that some lessons were learned about design and distribution from the experience in San Andres. However, in that town as well as in San Andres, the original limitations were set by C.I.D.A. before the towns were chosen. To review, these limitations involved:

- a. Size of budget (4 and 1/2 million for two towns)
- b. Type of materials (wood)
- c. Style of project (intensive)
- d. Amount of time (as little as possible)

Without expanding one or more of these limitations, it is difficult to conceive how the project might have been much more democratic or more successful in providing safe, suitable, long-lasting dwellings for the inhabitants of San Andres. The size of the budget, for example, limited the block project to a mere beginning (unless priorities were changed instead). The decision to import presswood panels limited the design of the house. Decisions on the style of the project and the amount of time it should take both influenced the project's ability to be just and democratic.

C.I.D.A. had taken on a formidable task: the construction and delivery of a house to every family in San Andres before the rainy season began. With such a goal, there was not time and no real effort invested in establishing or supporting a secure, democratic system of decision-making. There were bound to be complications and deviations from the plan.

On balance, C.I.D.A. did a good job within the framework of its own preset limitations. At issue is the effect of imposing such limitations on the reconstruction of houses in San Andres.

Attitudes Towards the Project

A. Majority Attitudes

The survey and interviews conducted in San Andres during October-November, 1976, attempted to probe the attitudes of the community's inhabitants towards the reconstruction aid they had received. Due to the illiteracy of the majority of the population and their inexperience in articulating opinions in the form in which they were solicited, explicit statements of reflected thought were difficult to obtain. However, the study did provide some indicators which have made it possible to construct the following statements about the feelings of the inhabitants.

1. They didn't expect any help and were surprised to see it come. In the survey of randomly-selected inhabitants (see Appendix 1), 12 out of 17

answered that they did not trust the Canadians' promise of aid when they first heard about it. As others more knowledgeable about the community have pointed out, most of the naturales can recall a long history of promises made by their representatives in the National Government and others in positions of power, and very few of them have ever seen a promise come true. They fully intended to solve their problems on their own - as they have always done - and were shocked to see how much help they did actually receive.

2. They participated in the project because they thought it was necessary in order to receive a house. 13 out of the 17 respondents reported having worked personally in the factory or having sent a family representative. Three others sent paid workers in their places, and one claimed to have obtained permission from the canton president not to work. None of the respondents had any official role in the project, nor did they indicate having volunteered any extra time than they thought was necessary to qualify for the gift (although the necessary time was not clearly explained, as was shown above).

3. They felt satisfied with the house's design because they felt they had no other alternative. 11 of the 17 respondents were using the house with no alterations whatsoever at the time of the survey some 4-5 months after they received it. The same number were aware that the house needed paint and "general care" in order for it to last. They explained that they had no money with which to make improvements. In general, the respondents could not give an opinion about the quality of the house; they regarded it as a gift, and felt that the gift could not be criticized. All of the respondents felt that housing was their most urgent necessity following the February earthquake, and now at least they had a house - for that they were grateful. As indicated above, most of the respondents had a poor idea of the relative quality of the house they had been given - there was nothing to compare it to, no criteria by which to judge.

4. They thought highly of the Canadian donors. Although many of the respondents had been outraged by the injustices described in the above section, not a single person ascribed the responsibility for these injustices to the Canadian authorities. A majority (10 out of 17 - see question 7) responded that the project was totally faultless. Many spoke of the arrival of Canadian aid as a religious event - "God spoke in Canada's heart" was a popular interpretation.²⁶ Most seem to have been as surprised by the arrival of Canadian aid as they were by the earthquake. To them it had no rationale; no history; no cause -- it must have been preordained.

In more realistic terms, many of the respondents said they had seen the Embassy Charge d'Affairs himself on one of his visits to the town. He spoke in Spanish directly to the general population, and they were impressed that such a high official should make a personal appearance. In addition, many were impressed by the long hours of work put in by various expatriate volunteers who, rightly or wrongly, were identified as official representatives of the Canadian Government.

26. Signs saying "God Bless Canada" and the like were frequently seen on walls and street corners during the October survey. A small monument was built honoring Canada in August, and a larger one-using community funds - will be built in 1977.

5. They felt better off as a result of the project. As stated above, the respondents unanimously felt that housing was their most urgent need after the earthquake. They needed shelter for themselves, their corn and their possessions. Although a few clarified that they would eventually have solved this problem on their own by building some kind of permanent structure, most agreed that, had it not been for the C.I.D.A. aid, they would still have been living in makeshift shacks at the time of the survey. Only one family out of the 17 said they might have begun permanent reconstruction by that time.

B. Attitudes of Community Leaders

As indicated by answers to questions 10, 13, and 14, most of the respondents were natural farmer-families not associated in any of the groups mentioned at the beginning of this paper as being active in social change. Leaders from those groups and other have somewhat differing attitudes than the ones described above. These were revealed in the study through interviews with eleven community leaders (seven naturales and four ladinos). The following are some recurring themes in their viewpoints:

1. They were critical of the house design. The leaders generally agreed that if they were going to last, the houses needed painting (they were interviewed before C.I.D.A. had authorized paint for the houses of San Andres) and a better foundation (cement around the posts was not enough). Some of them had already made improvements on their own houses, such as cement flooring, cement blocks around the walls, and painting; however, most agreed that a majority of the population could not afford to make such improvements. In addition, one commented that the wood-and-lamina construction did not insulate as well as the adobe-and-tile combination they had known before the earthquake; worse, because of the danger of fire, the new homes could not be heated. Another (a builder) thought that the roof was too heavy for the frame and might slip and fall in another earthquake. In general, the leaders seemed pleased at having received the house, but they did not consider it a complete fulfillment of the need - it was, in the words of one respondent, an "emergency house".

2. They thought the town could have been reconstructed by the local inhabitants. Two of the seven leaders interviewed stated that the town would have been reconstructed in 10 - 15 years assuming no outside group was there to help. The indication was that individual families would have rebuilt according to their own devices - following the traditional pattern of construction - but that it would have taken a long time for them to save enough money to rebuild. The other respondents seemed to support this view by constantly focusing on one problem - poverty - as the basic obstacle to reconstruction. The Mayor, for example, said that a reconstruction loan program had been considered by the municipality but then discarded, because repayment of loans in itself was beyond the financial possibilities of the residents. Another interviewee stated his belief that the emergency committee - formed before the Canadians had arrived - might have found financial assistance for reconstruction without the help of outsiders.

3. They perceived injustices in the distribution of aid, but didn't blame the donors. Almost all of the natural leaders, and even two of the ladinos, remarked on the uneven distribution of aid. In general, their complaint was that, while they understood in the beginning that the houses would

be given equally to rich and poor on the basis of work, in fact they were distributed without regard for who worked or how much they worked. Wealthy people who hadn't worked at all sometimes got more than one house, whereas those who worked the hardest got no additional reward, and sometimes were even made to wait longer than others for their house. The only one who specifically denied this pattern was a man considered to be the wealthiest in town - the owner of a bus company.²⁷

However, several of the leaders stated their belief that these injustices were not known to the Canadian officials. The Embassy had left a ladino from Guatemala City as their official representative and as administrator for the project; three of the natural leaders thought that he had allowed the town's wealthy ladinos to take advantage of the Canadians' charity. One even suggested that a Canadian coordinator might have done a better job. In general, the leaders believed that the reconstruction aid they had received was genuine charity on the part of the Canadian nation, and that the country's representatives at the Embassy in Guatemala had done their best to donate the resources fairly. In their view, it was only in the actual process of distribution - when Guatemalan ladinos took control - that injustices occurred.

4. They felt the community was better organized and more aware of its possibilities than it was before the earthquake. Several of the leaders commented on the "good example" set by the Canadians and the positive effect of their having asked for an effort on the part of the community. One leader praised the university students for having "organized us" during the rubble-clearing process and having reinforced the idea that the community itself would have to work hard if it wanted to reconstruct.

Many of the leaders had held official positions in the project and they felt a personal sense of accomplishment when the project was completed.²⁸ They had worked hard to encourage and enlighten others about the project and they felt, on the whole, that they had succeeded.

For those involved in making long-term changes in the community, the spirit of cooperation and hard work seemed to have continued beyond the close of the project. For example, the new natural mayor is enthused about the activities of a Support Committee which he formed with representatives from each of the five cantons and eight aldeas. The Committee - with assistance from a group of students of social work from the University of San Carlos - is actively investigating solutions to such problems as poor electricity, water and sewage service, and inadequate roads. Other leaders involved in conscientization²⁹ (such as the local leader of the Catholic Reformist group) or education (such as the school teacher) feel that their work has been advanced by the discovery that the naturales can work together and accomplish impressive goals, such as rubble-clearing and reconstruction.

27. F. Arenales - see list of interviews, Appendix 2.

28. Especially as members of the canton subcommittees. See list of interviews, Appendix 2.

29. A term used by religious groups to imply increased awareness of social conditions and of possibilities for change.

In contrast to the majority, the leaders seem to have been more aware of the problems of the project and, at the same time, more enthusiastic about its consequences for social change.

In light of the majority attitudes presented above, the leaders' enthusiasm may be unfounded. Although the poorer naturales greatly appreciated the Canadians' gift, they viewed it as just that, a gift, and not much more. The project did not involve them very deeply, nor did it otherwise change their lives. In fact, they seem to have been baffled by the whole experience. This is analyzed in more detail below.

Impact of Reconstruction Aid

A. Change in Housing Patterns

To review, the previously existing housing pattern in San Andres was as follows:

1. House design and construction was an individual family affair, guided by cultural and economic factors.
2. The most common structure was one-room, adobe-and-tile.

The earthquake added new factors which might have changed the pattern in the long-run; but since reconstruction aid arrived so soon, all we can state about the response is as follows:

1. House design and construction was still primarily an individual family affair with potential to become a community affair, guided by cultural, economic, and now, geophysical factors.
2. The most common structure was no longer viable; a new solution had to be found.

With the arrival of C.I.D.A. aid, the original housing pattern was completely changed. Now,

1. House design and construction was a C.I.D.A. affair, guided by C.I.D.A.'s own preset determinations about money, type of materials, style of project, and time frame.
2. The most common structure was two-room, presswood-and-lamina.

What are the implications of this changed pattern? On one hand, it is clear that the inhabitants still do not know what kind of structure is best in light of the new reality - the potential for destruction by earthquake. C.I.D.A. made the decision for them, without involving them in the design process or even in a discussion of the relative strengths and weaknesses of the structure they were given. They believe, on the whole, that the house is earthquake-resistant - but they are not sure why. Many of the respondents in the survey commented that they thought the new structure was safe because it was made of wood, but this is only in contrast to materials which they know are not safe - adobe and tile. They do not know that wood houses are the best solution. On the positive side, each family in San Andres now had a house, even those who hadn't had one before.³⁰ Moreover, the houses were

30. Houses before the earthquake numbered 1,240 whereas 1,640 were built by C.I.D.A.

all up within a few months of the disaster, much quicker than anyone had expected.

In fact, if other characteristics are taken into account, it seems clear that the C.I.D.A. houses are not the best solution. They are not, for example, as permanent or as well-insulated or as fireproof as the previous design. Moreover, they are made with materials which are not unavailable to the inhabitants - they cannot be repaired or duplicated.

For those who have financial resources, the C.I.D.A. houses may last. A few are reinforcing and protecting their houses with paint, cement foundations and flooring, even brick or cement block walls around the sides. Some have covered the outside walls with adobe bricks. Others have walled in the outside corredor to expand the house.

However, in the opinion of the new mayor, some 50-60% of the town's population cannot afford to make improvements. Their plight is made more difficult by the higher cost of local building materials such as wood, lamina, and cement blocks. One local albañil said the prices of these materials in general have gone up 100% since the earthquake.³¹

There is some indication that the local residents, with time, might have found a better solution on their own. One of the local albañiles, for example, was building additional houses in San Andres in November using half-adobe, half-wood design; the adobe rises only a meter high - not high enough to fall and crush anyone inside. The structure also uses well-sunk wood cornerposts and a lamina roof. Another albañil, at the time of the study, had organized a group to receive classes on seismic construction techniques using local materials, given by the OXFAM/World Neighbors Programa Kuchuba³² in nearby Chimaltenango. There is also a good deal of new construction among the wealthier ladinos using cement blocks.

All of the materials being used by these builders are available locally. They are not as vulnerable to rot or fire as the C.I.D.A. materials, and they are likely to provide better insulation and greater permanence. But the biggest difference is that they are being designed and built by the local population rather than by an outside group.

The possible effects of a people working together for a common solution to reconstruction in San Andres can never be evaluated because the responsibility and the choice was taken out of their hands by the C.I.D.A. project. This will be discussed below in the context of the changing social reality of San Andres.

B. Social Change After Reconstruction Aid

As was brought out in the beginning section of this paper, San Andres before the earthquake was a poor, ethnically-divided town making some initial

31. Vicente Zamora, see list of interviews, Appendix 2.

32. A program supported by donations from the United States and England.

steps towards organization and social change. With the earthquake, the community experienced a social shock - it affected the entire population all at once, with similar effects. The community was now more than ever aware of its own poverty and confronted with the challenge of community organization and cooperation. The ladino municipality did, in fact, make a beginning in this direction, and at least one of the reformist groups mobilized itself for a community solution to the reconstruction dilemma. At the same time, there was a great deal of chaos and doubt. Where this process might have led is now impossible to say.

As was shown in the section on attitudes, most of the residents were greatly surprised by the arrival of C.I.D.A.'s reconstruction aid - indeed, "shocked" may be an appropriate word. To this day, most of them have no idea why they were chosen for such a gift. The aid, especially for the naturales, was totally unexpected.

Once they had verified that the aid was in fact a reality, they were even more surprised to hear that it was to be distributed equally among ladinos and naturales, on the basis of work rather than money or status. This had the effect of raising expectations among the naturales, giving them hope that for once they would be treated on a par with their wealthier neighbors.

The ideology of equality surprised the ladinos as well; it was not the pattern they expected. One ladino was caught stealing some of the project's lumber with the intention of selling it out of town. He was fined \$600 and thrown in the departmental jail. It was the first time, at least for many years, that a ladino from San Andres had been jailed.

Canadian Embassy officials, with the help of the University students, had set up an entirely new community organization for the delivery of aid. In this way, it bypassed both the ladino municipality and the natural reform groups - two types of community organizations which might otherwise have played a significant role in the reconstruction of San Andres. This pitted the two against each other in competition for control over the reconstruction project. As it happened, the ladinos - who were better organized and better prepared to deal with C.I.D.A.'s ladino coordinator - took more control of the project and reaped a disproportionate share of its benefits. This made the natural leaders angry and disappointed, increasing the existing tension between ladinos and naturales.

To a large degree, the community organization by manzana and canton set up by the University students³³ was responsible for the positive attitude later exhibited by some of the natural leaders - that they themselves had reconstructed the town through cooperation and hard work (and help from the Canadians). As was stated above, it gave them a role - however small - in community organizing and a concrete goal to achieve.

The factory system also helped stir an enthusiasm among the town's population, especially among natural leaders. It was a high-technology system, when compared to what was locally available. Through the use of trucks, electric saws, drills, lights, etc., the productive capacity of the community was greatly increased. They were awed by the speedy results of their

33. It should be remembered that the students took on this project on their own - it was not a C.I.D.A. idea.

own labor. This was facilitated, too, by the number of expatriate volunteers who were familiar with such technology and the mass-production system.

Once again, the project had raised expectations; if such rapid and comprehensive solutions were possible in the realm of housing, why not in other areas such as community electricity or water systems? The Canadians had shown an explicit desire to help the naturales as well as the ladinos; so had the volunteer groups who had worked with them;³⁴ it did not seem difficult to elicit even further help from them if needed. The only obstacle, as far as the natural leaders were concerned, was the ladino establishment.

With the election of a natural as mayor in August, this obstacle was removed, or at least set back a step. As was mentioned in the section on attitudes above, the mayor has ambitious plans for improvements in San Andres - water systems; electricity; better roads; even an improved relationship between the urban center and the aldeas is on the schedule. As he said in an interview in October, 1976: "There is more unity than ever".

Only time can tell if the mayor's optimism is well-founded. However, the study shows his (and other natural leaders') outlook. For example, in the section on attitudes above, it was shown how little the general population shared the enthusiasm of their leaders - most are still poor, illiterate, and uninvolved. The project did not improve their economic welfare, nor did it provide them with any means of improving it.

Also, while the naturales have gained power in the municipality, the tension between them and the ladinos has not necessarily ceased. A social worker in town has pointed out that the ladinos are still very much in control of the economic resources within the town. If this control is threatened in any way, they will certainly react.

Most important is the style of problem-solving used by the natural leaders. All of the projects proposed by the mayor's committee are to be accomplished through donating agencies - some national, some expatriate. C.I.D.A. itself is one of them; it has (as of this writing) promised to help San Andres with a water system. The reformist community is organized to this end: to attract a donor from outside the town and provide the labor organization necessary to accomplish a given project. As in the housing reconstruction project studied here, the local residents would not be involved in the planning stages.

Planning is a key issue, for we have seen in the case of C.I.D.A.'s housing reconstruction project that the initial planning of aid - carried out thousands of miles away from San Andres - set the limits for the entire reconstruction process in San Andres.

It is beyond the scope of this paper, but nonetheless essential, to consider the opportunity cost of such elitist planning: what other uses might have been accomplished with the same resources? Or, put another way, what kind of solutions might the people of San Andres have come to on their own?

34. Plenty and the Apostles of Infinite Love are groups which have stayed to live on land near San Andres. These groups may continue to have an impact on the community in the future.

One thing is certain: as long as aid recipients are left out of the planning process, as long as their decision-making power is kept reduced, there is no way of knowing what kind of solutions are best.

For the present time, San Andres is receiving a lot of aid from powerful, benevolent, outside groups. But what will happen when there is no aid agency to solve the community's problems? What might happen if the power of the aid agencies is used for less charitable ends? These questions must be asked now, because a dependency is being created, a dependency on outside groups for the solutions to local problems.

C. Conclusion

Like the earthquake which prompted it, the intensive housing reconstruction aid given to San Andres was a social shock. It affected everyone in the town in a similar way and it came so quickly that the recipients had no time to think about it. It was a reality less than three weeks after the disaster.

The aid's impact was contradictory: while it provided a house for every family in town, it destroyed the possibility for them to find their own solution - one which might have been better in the long run. And, while it helped promote the social reform movement in town, it restricted the movement by orienting it towards outside solutions.

Because it had shock value - it seemed to have no cause or origin - the aid was a deception. It deceived the recipients into thinking the houses they received were the best available, and that aid agencies have the only solutions. As the study has shown, there might have been other, better ways to approach the dilemma of permanent reconstruction - but, because C.I.D.A.'s aid was imposed as an answer, most people did not see alternatives.

In the final analysis, the people of San Andres are no better prepared than they were before to find their own solutions to the problems which face them. Whether they will continue to accept solutions from outside groups or instead develop their own capacities for doing so, may depend as much on the actions of outsiders with power as it does on their own efforts.

APPENDIX 1

Results of Survey of Inhabitants Selected Randomly (Sample size: 17)

- Question 1: Are you the owner of the land on which house sits?
 Yes: 14 Owned by relative: 2 Rented: 1
- Question 2: How many people occupy the house?
 Range: 2-7 Mean average: 5
- Question 3: House you lived in before the earthquake -
 a. Who built it? We did: 3 Albañil did: 11 Don't know: 3
 b. What materials? Adobe and tile: 9 Adobe and lamina: 3 Both: 3
 c. How old was it? Range: 3-50 years Mean average: 16 years
- Question 4: What did you live in after the earthquake?
 Makeshift shack with sheets, nylon, or canvas: 12
 Built "rancho" with cane, wood, lamina: 5
- Question 5: Did you trust the Canadians' promise to help?
 No: 12 Yes: 2 No opinion: 3
- Question 6: Did you (family) participate in the project?
 Yes, had official role: 0
 Yes, worked in rubble-clearing and in factory: 10
 Yes, sent relative to work: 3
 No, paid someone else to work: 3
 No, didn't have time: 1
- Question 7: What is your opinion of the project?
 Good, find no faults: 10
 Good, but there was injustice: 7
- Question 8: About the house you received -
 a. Have you made any alterations? No: 11 Yes: 6 (cement floor: 5, tile floor: 1, painted walls: 3, blocks or bricks on outside wall: 3, added electricity: 3)
 b. Anything wrong with house? It needs paint: 11 It needs reinforcements: 1 It needs general care: 12
 c. How long will the house last?
 10-20 years: 2
 20-40 years: 5
 up to 50: 4
 no idea: 6
- Question 9: If the Canadians hadn't helped, what would you have done?
 We'd be in the same situation (no permanent reconstruction): 16
 We might have begun some permanent reconstruction: 1
- Question 10: Do you belong to any political, religious, or other association?
 No: 14 Yes: 3
- Question 11: Did you receive any other emergency aid?
 Yes: 11 (food: 11 blankets: 4 clothing: 3)
 No: 6
- Question 12: Out of the following, what would you have listed as your first necessity after the quake? What second?
- | <u>First:</u> | | <u>Second:</u> | |
|-----------------------|--------------|----------------|---|
| Housing | 17 | | 0 |
| Water | 0 | | 4 |
| Sewage | 0 | | 1 |
| Electricity | 0 | | 3 |

First:

Second:

More land . . . 0 0
Jobs 0 1
Other 0 0

No response: 8

Question 13: What is your occupation (head of household)?

Agricultural: 11

Small business: 1

Other: 5

Question 14: Ethnic background?

Natural: 11

Ladino: 6

APPENDIX 2

List of Persons Interviewed
October - November 1976

Town Leaders

1. Manuel de Jesus Tala. Small businessman, evangelical leader. Natural.
2. Alfonso Can. Tailor/builder, evangelical leader, member of canton sub-committee. Natural.
3. Francisco Arenales. Owner of La Esperanza bus company. Ladino.
4. Hermelindo Azurdia. Cattle trader, president of first canton sub-committee. Ladino.
5. Jose Pedro Siquinajay. Mayor of San Andres (as of 7/76). Natural.
6. Simon Hernandez Vasquez. Catechist, leader of "basic christian community" (new Catholic group). Natural.
7. Felipe Herrera Chirix. Evangelical leader, president of second canton sub-committee until replaced by Vincente Zamora (see below). Natural.
8. Pablo Tagual Tala. Agricultural worker, short-term member of emergency committee, member of canton sub-committee. Natural.
9. Vincente Zamora Silva. President of second canton sub-committee, builder. Ladino.
10. Ku Samaj Junan (group interview). Canton Improvement Committee. Naturales.
11. Carlos Cabrera. School director and teacher. President of Central Emergency (and Reconstruction) Committee. Ladino.

Outsiders

1. Luis Humberto Gonzalez Soto. Social Worker in charge of distributing materials to aldeas (villages) of San Andres.
2. Apostles of Infinite Love (group interview). Group of Priests from Quebec who ran factory in San Andres.
3. Reverend Ron Burke. North American Pastor of San Andres.
4. Gustavo Porras. Professor from History Department, University of San Carlos, helped organize San Andres for reconstruction.
5. Dennis Martin. Leader of Plenty, group from Tennessee who built schools with Canadian materials.
6. Bruce Wilson. C.I.D.A. Field Representative and Canadian Vice-Counsel.
7. Sergio Bucaro. Project coordinator, San Andres.

APPENDIX 3
Statistical Data

Population (before earthquake)

Urban center: 5,916
Rural areas: 2,531
Total: 8,447

Ethnicity

Natural (of Mayan descent): 2/3
Ladino (non-Mayan): 1/3

Earthquake's damage (February 4, 1976)

150 killed, 728 injured
90% of structures destroyed

Number of Houses

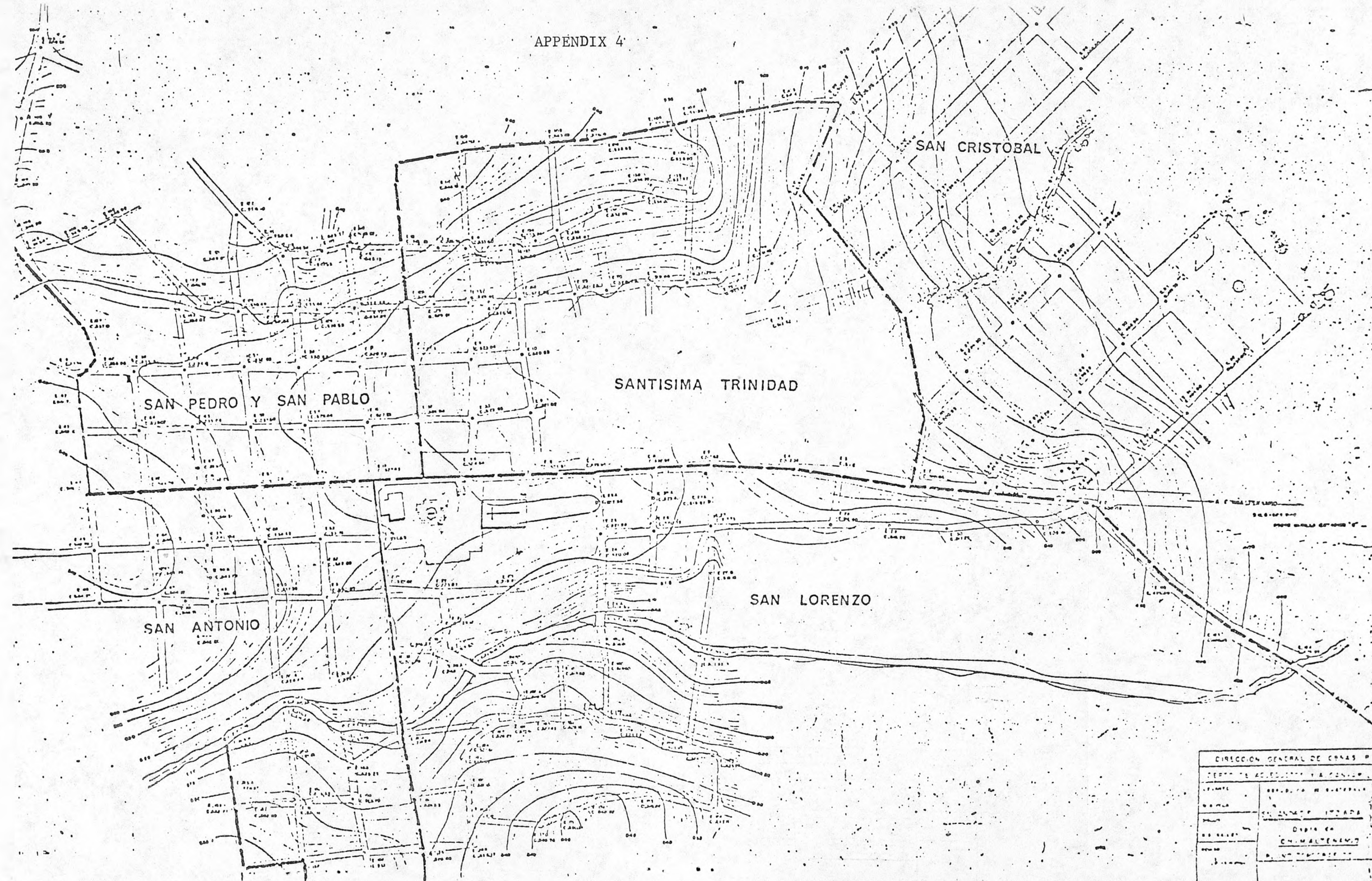
Before earthquake: 1,240
Reconstructed: 1,640

Estimated costs of Project

San Andres -	Rubble-clearing:	0.2 million
	Construction materials:	1.5 million
	Total:	1.7 million

Total Emergency and Reconstruction Aid: 4.2 million

APPENDIX 4



DIRECCION GENERAL DE OBRAS PUBLICAS	
DEPARTAMENTO DE ACQUISICION Y MANTENIMIENTO	
ESTADO	SECRETARIA DE GOBIERNO
CARRERA	SECRETARIA DE OBRAS PUBLICAS
PROYECTO	DEPARTAMENTO DE MANTENIMIENTO
NO. DE PROYECTO	DEPARTAMENTO DE MANTENIMIENTO
NO. DE PLAN	DEPARTAMENTO DE MANTENIMIENTO

APPENDIX 5

Methodological Note

Information for the study was collected through two types of interviews (see listing) and a survey of seventeen persons selected randomly. A Cakchiquel research assistant aided in translating and clarifying the survey questions and information received. The research was conducted over a three-week period in October and November of 1976.

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