CHAPTER 6. DISASTER RELIEF TO GUATEMALA: Its Compensatory and Development Inducing Components

1. Introduction

In this chapter we take a closer look at the composition of disaster relief for the purpose of discovering the extent to which it may be considered as compensatory only and the extent to which it may involve something more than pure reconstruction or compensation. In principle, compensatory relief may include either a supply of consumer goods or the replacement of damages to physical capital. The first type of compensation, although commonly believed to be what disaster relief is about, turns out to represent a negligible share of the total relief provided and its value is most often not recorded in the statistics. Hence, we shall disregard this kind of relief, as we did in the preceding chapter. The second type of compensation, replacement of capital, would of course contribute to restoring the capacity of production in the economy and thus affect growth as do investments in general, the perspective used for calculating the GDP^{ndr} path in the preceding chapter. Thus, what we have in mind when talking about development-inducing effects as distinguished from compensatory effects is something more than the capacity effects. Again, this is in line with the perspective used in the preceding chapters.

By identifying relief activities as "purely compensatory" or "development inducing" in the disaggregate analysis of this chapter, we shall be able to see whether activities of the latter type, which may have considerable effects on economic development, have been implemented. In order to do so, we first present a classification of relief media and disaster relief activities. Next, we estimate in turn the assistance given and the amounts

invested in the different activities by each of the relief media considered. Finally we aggregate the total amount invested by all relief media in the different relief activities.

Even if this approach does not contribute conclusively to explaining the factors behind the higher levels of real output for the 1976-80 period, it could shed additional light on the causal relationships involved. In addition, our classification of disaster relief activities below seems to have practical advantages not only as a method of estimating (ex post) the share of development inducing activities in a given disaster relief volume, but also as an analytical tool for managers of disaster relief operations to consider (ex ante) the long-run effects of the activities actually being implemented.

2. A Classification of Administrative Relief Media

In this chapter we consider three distinct media through which assistance has been channelled. Distinguished according to the type of implementing agency, these media are:

i) disaster relief provided via non-governmental organizations (NGOs). This includes foreign donations given by private persons or institutions and governmental agencies via organizations as CARITAS, Save the Children Alliance, The Norwegian Church Aid, OXFAM, etc.

ii) disaster relief provided via foreign governmental or international organizations (FGOs). This includes donations provided by foreign governments via their own organizations, such as CIDA (Canadian International Development Assistance) and AID (United States Agency of International Development), or by private and governmental

sources via international organizations, such as UNICEF and UNDP (United Nations Development Program).

iii) disaster relief provided via the Guatemalan Government (GnG). This includes donations and loans for reconstruction provided to the GnG directly by foreign governments or indirectly via international organizations such as IDB (Interamerican Development Bank) and IBRD (World Bank).

This classification has been chosen because of its practical advantages. To begin with, it facilitates compilation of information. In the archives of the National Reconstruction Committee (CRN) in Guatemala City, the data on relief operations are already classified according to the type of implementing agency. The CRN is the local governmental institution for coordination of the reconstruction in general and the supervision of the disaster relief operations of the NGOs in particular.

Secondly, this classification is motivated by certain systematic differences among the relief media which appear to have influenced the implementation and results of the relief programs. These differences, which we explain below, include the extent to which the recipients of the relief (the afflicted people) have been involved in designing and executing the programs, the extent to which the assistance was tied and the extent to which the implementation of development inducing activities has been delayed. So, for instance, disaster relief seems to have been more efficiently implemented and, therefore, to have had a more significant influence on the preconditions for economic development when recipients as well as donors were involved in designing and implementing the relief activities. This influence covers the creation of facilities in transmitting know-how and im-

provements to the existing organizational and administrative structure, etc., which can be expected to change attitudes and create incentives that favor development. This is often alleged to be the case with the operations of the NGOs. On the other hand, when relief plans have been designed by donors alone, as in the case of the FGOs, and executed with the help of local officials or entrepreneurs, the plans have rarely been carried out as projected.*)

In the case of relief through governmental channels, with planning and execution under the auspices of the Guatemalan Government, the targets set up have not often been fully attained. Such differences among the media are of course central to our investigation of the actual and potential extent of development-inducing effects of disaster relief.

3. Classifying Relief Activities

As we have pointed out earlier, disaster relief involves more than the provision of tents, blankets, medicines and similar first-aid items. It includes reconstruction of damaged housing and working places, as well as the replacement of machinery and other equipment or social overhead capital destroyed by the natural hazard. As we shall see in this section, projects within the disaster relief budgets of the organizations just mentioned may include other things as well.

In choosing a relevant classification of individual relief activities the central question has been how to identify activities that may have had an impact on economic development. First, we must recall the disaster relief

*) This seems to have been the case with CIDA. The assistance of this agency was tied, including training local people to use Canadian products, used local entrepreneurship and the local bureaucracy (Cohen, Guatemala City). For these reasons (CRN, Archives, Guatemala City) serious problems impeding successful implementation of relief work did arise.

expenditures are not aimed exclusively at compensation for the physical damage through reconstruction or replacement activities. In addition, there are expenditures aimed at facilitating the implementation of the compensating activities (see Chapter 1, section 3).

This latter type of expenditures would often improve conditions for other activities in the economy as well. For example, the creation of a brick factory to supply material for reconstruction activities would later on leave additional capacity for construction activities. Similarly, the opening up of a supply route by improving an existing road would benefit future economic operations in the area. And so on.

But the activities complementary to the relief work proper involve much more than tangible investments in brick factories, road improvements and the like. And the process of economic development encompasses much more than increased volumes of physical inputs of factors of production. As has been stressed by empirical studies of the sources of growth, a large part of the increase in total output can be attributed to some "unexplained residual factor" in the economy's aggregate production function (Meier, G. 1976, chapter I) including things such as better management, organization, work procedures (Jorgenson , D.W., 1966 pp. 1-12), a higher "degree of competitive pressure and motivational efficiency" (Leibenstein, H., 1966 pp. 392-415), and "learning by doing" processes in economic life (Arrow, 1962, pp. 155-173). The transmission of know-how, managerial and other knowledge to the damaged region to make possible certain relief operations may to some extent induce lasting changes in the general development conditions as illustrated by these catch words.

It has frequently been pointed out that, to achieve an effective stimulation of the development possibilities

of LDCs, there is a need for an "appropriate" transfer of technology from the rich donor countries (see, e.g., Meier, G., op.cit.). According to a commonly used definition, the technology is appropriate when "factor proportions.... are roughly in line with the overall factor availabilities in the economy" (While, L. J., 1977 p. 117). In this perspective, we may suspect that quite a few of the relief operations from the rich donor countries may use a technology that is more appropriate for the factor proportions in the donor countries. However, it should be observed that the notion of an "appropriate technology transfer" along the lines of the definition given has been criticized on account of its static nature. "The question of whether or not an 'efficient' alternative technology exists is closely tied up with the whole strategy of (a country's) development, and can only be assessed within the context of a particular strategy." (Stewart, F., 1977, p. 109). Or, as S.M. Rosenblatt puts it: "In a very narrow and technical sense, it would appear possible for the developing countries to choose more appropriate technologies and techniques from among the given set of available techniques, and perhaps even broaden the range from which choices are made. This would have the effect of increasing the demand for labor, raising the real wage level, and increasing the volume and scope of producer and consumer goods available to satisfy the mass market. However, before a significant breakthrough and restructuring of a country's technological base could occur, decisions and actions of a non-technology nature would have to be made and taken that would redirect the energies and resources of a developing country toward a series of economic development goals and objectives that were conducive to the widespread adoption of such technologies and techniques." (Rosenblatt, S.M., 1979, p. 9).

In other words, whenever it happens that technology relevant for the industrial donor countries is used in

disaster relief operations and complementary activities it may well be the only realistic alternative in this respect. This is likely especially since time is very short in disaster situations. In addition, there is the "dynamic" aspect that the use of "modern" technology may often stimulate adoption of more advanced technology which after some time adjusts efficiently to local conditions.*) This said, it should be kept in mind that the use of local labor and local facilities may still have forced the operator to adjust directly to the appropriate technological conditions of the target area.

In fact, the transmission of know-how, managerial knowledge, etc. entering disaster relief programs may play a very special but important role. The know-how transmitted may, as we just indicated, incite "local ingenuity" to look for the "appropriate technology". This may occur in the sectors closely connected with the disaster relief activities, but it may also happen in other sectors. Improved organizational, managerial or administrative procedures (now reaching, say, traditionally poor areas) may also help to reduce some of the barriers to development. If so, the disaster relief operations may induce fundamental changes in the conditions for production and consumption activities in the areas assisted and thus induce changes in their possibilities for economic development.

Against this background we take as our primary task to try to distinguish the "purely compensatory" activities from those operations which aim at supporting the imple-

*) Nowadays, there seems to be a general agreement that it is possible to adapt modern technologies to the local conditions of many LDCs. "They may require minor modifications and the application of local ingenuity as well as certain management techniques, but they do exist", (Ranis, G, and Pack, H., chapters 2 and 3, respectively, in Rosenblatt, ibid.). A factor pointed out in the literature, as impeding a correct choice of technology, has to do with the dualistic character of LDCs' economies (see Stewart, F., ibid. and Rosenblatt, p. 12, ibid.).

mentation of the "purely compensatory" activities. But these two categories can hardly be expected to exhaust what the disaster relief activities incorporate. In a great many instances it appears to be wasteful or even impossible or meaningless to reconstruct what has been destroyed. Instead, the donor or the relief medium decides to give assistance to the afflicted region in some alternative form. In the reconstruction phase that we are talking about here, such assistance would often lead to a contribution to the economic development of the region.

In the light of these possibilities, we have grouped disaster relief activities as follows:

1) "purely compensatory". This includes all expenditures on the provision of the physical units to compensate for physical destruction, such as expenditures on the reconstruction of houses and infrastructure, the replacement of damaged machinery and equipment

2) "complementary to compensation". This includes expenditures on the transmission of the know-how, material and equipment required to implement disaster relief tasks. These activities are often explained by the fact that providers of disaster relief came to realize that local supplies or the training of local labor needed to be improved in order to carry out an assistance program specified in advance and involve medical, sanitational, organizational and other know-how transmitted in the emergency phase, material and equipment used for compensatory operations, and managerial, building, administrative and related techniques transmitted during the reconstruction phase.

3) "unrelated to compensation". This includes expenditures on additional physical units or technical facilities of any kind provided to improve productive capacities and the socioeconomic conditions of the areas assisted. Here, we refer to the construction (unrelated to activities of the type 1) of new or enlarged capacities of brick fac-

tories, roads, bridges, communication and service infrastructures (telegraphs, hospitals, sanitational centers, water and electrical distribution systems, etc., literacy courses and "integral development" programs. It should be pointed out that the development assistance we refer to here is in fact disaster relief and not ordinary aid to LDCs, as it concerns assistance that is unlikely to have been provided in the absence of the disaster in question.

This classification would seem to permit an approximate assessment of the importance of activities capable of inducing economic development. An estimate of the total expenditures on such activities will be given by the sum of the "complementary to compensation" and "unrelated to compensation" components, here called the "development inducing" component of disaster relief. As will be explained in the concluding section of this chapter, the "complementary to compensation" share of this component will be taken as the lowest estimate of the share of the disaster relief with development inducing properties.

Obviously, the estimates obtained from this classification will only be a rough approximation of the actual situation. Firstly, this is because there are problems of the accuracy and breakdown of the available statistics. For instance, data on the "purely compensatory" activities have not always been reported separately from the complementary expenditures needed for their implementation. In many cases, the money costs for labor training and similar services are not even reported. Similarly, improvements in the productive capacity of physical units relative to that they had before the earthquake, e.g., when reconstructing bridges, roads, etc., do not seem to have been indicated in all cases. In other words, expenditures on activities identified as "purely compensatory" may include the costs of improvements that are "complementary to compensation", "unrelated to compensation" or both. Furthermore, data on

expenditures on material and equipment which are clearly not "purely compensatory" seldom reveal whether they are "complementary" or "unrelated to compensation".

Secondly, there are conceptual problems in the sense that activities of the "purely compensatory" type may have development inducing properties as well. For instance, physical units of any kind when replaced or built using modern techniques may have spillover effects on the general economic development in the area. On the other hand, the facilities created for implementing reconstruction, etc. and the know-how transmitted will not in all cases have development inducing properties. For instance, there will be facilities or know-how, specific for a certain type of disaster relief activities, that will not be used in the future for any other purposes. In particular, there may be commodities or know-how that will remain incompatible with local conditions or even confuse and retard the reestablishment of conditions that traditionally have been favorable to development.*) Therefore, the classification presented above will be used under the assumption that it provides a degree of approximation sufficient for the analytical purposes of this study.

4. The Assistance Through NGOs

The estimates of the assistance via NGOs have been made on the basis of the expenditures reported by the NGOs to the Guatemalan Government at the conclusion of relief operations. The activity classification used in table 1 below is the same as the one used by the CRN from which the information has been taken. We start by using this classification (which differs from the one mentioned above) because it will help us to present more clearly the type of expenditures made by the NGOs.

*) It should be noted, though, that if all investments in R & D in, say, an industrialized country are regarded as contributing to development, this is correct only in an average sense or as an approximation (which is what we are aiming at in our particular context). Such investments include, of course, the development of "know-how" that turns out to be useless or even temporary obstacles to development.

Of the six different types of activities specified in table 1, housing and training are of special interest to us. Housing refers to expenditures on elements of a purely "physical" character, e.g., on house construction (land, raw material and labor costs) whereas training refers to expenditures on know-how, production techniques and other technical facilities provided to people in order to implement a given relief program (see Martínez, J., 1979, p. 233). In current prices, expenditures on training during the whole period amounted to US $ 2 million approximately or nearly 7 percent of the US $ 29 million invested in housing. Since this training activity was specifically aimed at improving the productivity of the local labor force involved in relief programs, the figure obtained here could be taken to be a lower bound to the expenditures that may have influenced economic development. However, a closer inspection of the information shows that the other activities recorded also have components that may have had such an influence. In order to take this into account we make use of the classification presented in the preceding section.

Tables 2 and 3 below have been constructed on the basis of the new classification. The data in table 2 have been obtained by regrouping the data underlying each activity in table 1. From table 1 we took expenditures on reconstruction, replacement of physical units destroyed and other activities aimed at repairing the existing damages and aggregated these expenditures to obtain the "purely compensatory" component. Expenditures on the transmission of the know-how necessary to implement compensatory activities were included in the "complementary to compensation" component. Regarding the provision of additional physical units (material and equipment) the information available does not indicate whether such units have been of the "complementary to compensation" or "unrelated to compensation" type. Therefore, given that we are going

Table 1

Annual Investment by Activity, in US Dollars, as Reported by the NGOs after the Completion of Relief Operations. (Covers the period of February 1976 to August 1979)*

Year / Activity**	1976	1977	1978	1979	Total by Activity
Housing	1 165,716	9 545,935	8 328,672	9 689,999	28 730,323
Education	1 587,510	375,711.	3,500	32,496	1 999,217
Health	1 078,297	6,174	356,098	6,747	1 447,316
Infrastructure	627,232	908,023	900,415	738,698	3 174,369
Equipment	356,936	394,436	363,684	384,566	1 499,623
Training***)	359,340	521,301	489.036	511,762	1 881,439
Annual totals	5 175,035	11 751,580	10 441,405	11 364,270	38 732,290

*) Source: CRN's archives, "Disaster Relief Agreements with the NGOs"; and Martinez, J. 1979, "Informes Periódicos de las Actividades del CRN". Guatemala City, August.

**)
Activity Contents

Housing: house reconstruction alone

Education: physical reconstruction of schools, enlarging of capacities, construction of kindergartens

Health: reconstruction and construction of hospitals, nutritional and sanitational centers, latrines, provision of laboratory and related equipment and educational programs in connection with all these activities.

Infrastructure: reconstruction and construction of new roads, bridges, electrical generating systems, water supply systems, urbanization and the provision of related know-how

Equipment: restoration of market places, handicraft centers, brick factories libraries, museums, sport centers, gymnasiums, etc, first aid assistance equipment and related know-how and public facilities in general.

Training: educational programs in agriculture, general training of the labor force, nutritional knowledge, literacy improvements, "integral development" etc.

***) The weights used to obtain these estimates are: 0.1306, 0.27 and 0.2945 for 1976, 1977, 1978 and 1979 respectively. See our explanation in subsection 4.1.

Table 2

ACTIVITY*) \ YEAR		ANNUAL DISTRIBUTION OF THE NGOs' DISASTER RELIEF INVESTMENT IN GUATEMALA. PERIOD 1976-1979. IN US DOLLARS				TOTALS FOR THE WHOLE PERIOD
		1976	1977	1978	1979	1976-1979
1) Purely Compensatory		3 230,421	10 505,761	9 347,549	10 474,779	33 558,512
Development Inducing	2a) Complementary to Compensation	566,604	522,063	489,033	511,762	2 089,462
	2b) Unrelated to Compensation	1 378,008	723,755	604,821	377,728	3 084,314
2) Total Development Inducing = 2a)+2b)		1 944,611	1 245,818	1 093,856	889,491	5 173,776
Annual totals = 1)+2)		5 175,035	11 751,580	10 441,405	11 364,270	38 732,290

-*) The "Purely Compensatory" component includes: reconstruction of houses, schools, churches, roads, bridges, water distribution and electrical generating systems, the service infrastructure in general and, replacement of destroyed equipment, machinery etc.

- The "Development Inducing" component includes: a) "Complementary to Compensation" activities such as: providing of know-how in connection with all types of reconstruction, medical assistance, health, social and similar services, epidemic and disease prevention programs and administrative and organizational courses in connection with reconstruction. b) "Unrelated to Compensation" such as: construction of new or enlarged brick factories, roads, bridges, communications infrastructure in general, hospitals, medical centers, sanitational and other social services, first aid care centers, water and electrical distribution systems, literacy programs, appropriate technology courses and, "integral development" programs.

Note: Regarding the physical construction activities, the data have been distributed as follows. All units reported as "reconstrucción", "reparación" or "reemplazo" have been included in the "purely compensatory" activities; those reported as "nueva(o)" or "ampliación" are included in "unrelated to compensation". In the case of know-how, differentiation has not been a major problem since, in most cases, its nature has been explicitly indicated.

to take the estimate of the "complementary to compensation" component as the lower bound of the share of the disaster relief with development inducing properties (see p. 11, above) we chose to include all expenditures on extra physical units in the "unrelated to compensation" component. This means that the "complementary to compensation" component includes only expenditures on the transmission of know-how. It should be observed that the value of this component in table 2 is higher than the corresponding figure (training) in table 1. This is due to the fact that the expenditures on the transmission of know-how, which in table 1 are included in the value of the different activities, have now been separated and aggregated into the "complementary to compensation" component of table 2. So, for instance, health and equipment in table 1 included the costs of the provision of physical units as well as: a) the costs of the provision of know-how for the reconstruction of hospitals, health centers, equipment installation, etc. and b) the knowledge needed to provide the services that the physical units in question were intended to provide. Similarly, activities aimed at enlarging, creating or improving production units in connection with reconstruction programs, e.g., literacy, agricultural, horticultural, "integral development" programs, etc., have (when the statistics permitted) been aggregated into the "unrelated to compensation" component. Finally, to get the total "development inducing" component of the disaster relief, the "complementary" and "unrelated" components have been aggregated.

Table 3 contains the same information as table 2 but adjusted for changes in the general price level.*) These

*) A better picture of the real values are obtained by this transformation, but it does not necessarily mean that correct real values have been reached. This is because expenditures are distributed in different proportions in different years, whereas the price index used always referes to the end of the year.

Table 3

ACTIVITY \ YEAR		ANNUAL DISTRIBUTION OF THE NGOs' DISASTER RELIEF INVESTMENT IN GUATEMALA. PERIOD 1976-1979. IN 1970 US DOLLARS.*)				TOTALS FOR THE WHOLE PERIOD
		1976	1977	1978	1979	1976-1979
1) Purely Compensatory		2 359,824	7 675,827	6 083,055	6 076,828	22 195,536
Development Inducing	2a) Complementary to Compensation	413,918	381,435	318,246	296,893	1 410,492
	2b) Unrelated to Compensation	1 006,635	528,797	393.596	219,135	2 148,164
2) = 2a) + 2b) Total Development Inducing		1 420,553	910,232	711,842	516,028	3 558,656
Annual Totals = 1) + 2)		3 780,377	8 586,059	6 794,897	6 592,857	25 754,191

*) For the transformation from current to 1970 prices we have used the following expression and values of the GDP. $v_t^{70} = \frac{GDP_t^{70}}{GDP_t^t} \cdot v_t^t$. This means that investment value for a given year t in current prices (v_t^t) is transformed to the 1970 prices (v_t^{70}) by multiplying it with the rate between the value of total output expressed in 1970 prices (GDP_t^{70}) and the value of total output expressed in current prices (GDP_t^t) of the year t.

Current and Constant GDP Values

GDP \ Year	1976	1977	1978	1979
Current	3,678.3	3,985.6	4,720.6	5,507.3
Constant, 1970 prices	2,687	2,912.0	3,072	3,195

(See Table 1, Chapter 5, and Bank of Guatemala, Estudio Económico y Memoria de Labores.

figures are expressed in constant 1970 prices which are the prices used throughout this study. The value of the "development inducing" component indicated above now amounts to US $ 3.6 million. This corresponds to 16 per cent of the US $ 22 million invested in "purely compensatory" activities or to nearly 14 per cent of the total disaster relief provided by the NGOs. Here, the value of the "complementary to compensation" component is US $ 1.4 million or 40 per cent of the "development inducing" component. The changing role of "complementary to compensation" activities becomes apparent if one looks at the year-to-year composition of the total expenditures. In 1976, when most activities were directed mainly to the provision of pure disaster relief, the NGOs invested US $ 0.4 million in the transmission of know-how. This corresponds to nearly 29 per cent of the "development inducing" investments made that year or to 17 per cent of the US $ 2.4 million invested in "purely compensatory" activities.

During the years following 1976, despite its constant absolute value, the "complementary to compensation" activities increased in relation to the "development inducing" component but decreased in relation to activities of the "purely compensatory" type. This reflects the fact that, while the need for labor training in connection with compensatory activities decreased, the NGOs increased their efforts to improve the general conditions for economic development in the assisted areas. It is important to note here that in Guatemala some of the organizations with an initial purpose of providing disaster relief for emergency conditions only gradually became involved in economic development programs. By reviewing the agreements established between the NGOs and the Guatemalan Government (contracts for the period up to 1987!) we find that more than 90 per cent or US $ 23 million were planned to be used for activities of the "unrelated to compensation"

type.*) In other words, the disaster relief to the areas afflicted appears to continue but with increased emphasis on activities directed to improve economic development.

4.1 Reliability of the Data

Before proceeding we shall comment on the reliability of the data just presented.

First of all, the data are for the expenditures as reported by the NGOs. We must make a general reservation for the quality and relevance of the calculations behind these figures. Secondly, for the activities referred to as "infrastructure" and "training" (see table 1) we have not been able to find data for the annual expenditures. The data in possession of the CRN refer only to the total investment made during the whole period. In such cases, estimates of annual expenditures were arrived at by using the following assumptions. For "infrastructure" investments (which amounts to only 0.01 per cent of the total relief provided by the NGOs) were assumed an equal distribution per year. For investments in "training" we assumed expenditures to be distributed proportionally to all other investment made in the same year. We used this assumption because (with very few exceptions) expenditures on training are investments that were implemented to facilitate other relief efforts.

Another weak point in the information is the complete lack of statistics for some activities such as the provision of schoool equipment, equipment for city halls, youth centers, gymnasiums, libraries, public laundries, water distribu-

*) These estimates have been calculated on the basis of the information in "Listado de Convenios Vigentes Hasta el 30 de Septiembre de 1980". Palomo, A.M., 1980 CRN's archives. Guatemala City.

tion system and various training programs.*) This in itself would provide a tendency for the presented figures to give an underestimate of the "development inducing" component.

Finally, concerning disaster relief in kind, the monetary costs reported are based on market prices in the donor country. Thus, the monetary costs may in one way or another fail to reflect conditions of the local markets during the state of catastrophe. Consequently, these costs may not accurately reflect the value of the relief to Guatemala. For example, there may be cases in which the items sent from abroad turn out to be unnecessary or even use up local resources (at least, the human resources expended in taking care of the items). In such cases, the items will have a negative value for the recipient country rather than the positive one indicated by the donors.**) But it may be the case as well that disaster relief in kind has a higher value for the recipients than reported by the donors. In view of these considerations our estimates have to be taken with caution. Given that the problem just mentioned is valid irrespective of the relief medium this is also relevant to the estimates to be presented further on in this chapter.

5. The Assistance Through FGOs

The second disaster relief medium considered in this analysis is that of the foreign governmental organizations (FGOs). In general, this relief medium differs from that of the NGOs in that relief programs tend to follow specific procedures traditional for each organization and formed by the general policies of assistance to LDCs of

---

*) Most of these activities are financed by UNICEF. See pp. 28-29.

**) An example of this problem is provided by some of the drugs, clothes and food flown in to Guatemala after the earthquake. See Gwynne, P., Collings, A. and Begley, S., 1978, "When Help is Harmful".

the donor country involved. Thus, the relief programs are less influenced by the nature of the actual situation and by the views of the recipients. Moreover, the role of the government of the recipient country is less marked. In the Guatemalan case, this has meant, for example, that the CRN supervisor of relief operations has not been directly involved in the planning of the disaster relief through the FGOs.

Because the planning procedures aswell as the forms of the disaster relief provided have tended to differ significantly among the FGOs, we start by making a separate presentation of the assistance of each of the major FGOs involved in Guatemala 1976-79.

5.1 The Assistance Through AID

The disaster relief of the US Government via the Agency for International Development (AID) has taken two forms, loans and donations. Loans will be considered in the next section when analyzing the relief through the Guatemalan Government. In this section we shall refer to donations only.

At the occurrence of the earthquake of February 4, 1976, the Congress of the United States authorized a US $ 25 million grant for relief activities. On the basis of preliminary information about the needs in the areas to be assisted, AID administrators proposed a plan of operation which involved different relief organizations. Some of these organizations were among the NGOs already considered here.*) The rest were Guatemalan governmental institutions

---

*) These organizations were: Catholic Relief Services (CARITAS), Save the Children Alliance, CARE, Church World Service, YMCA, CEMEL and the CRN.

or ministries.*) In order to obtain the estimates we seek and to avoid double counting, we shall begin by substracting from the US $ 25 million grant the US $ 3.4 million channelled through NGOs (Source: Composition of US $ 25 million Earthquake Disaster Relief Grant AID archives, Guatemala City). Thus, we consider here only the US $ 21.6 million handled by the AID itself.

Looking at the nature of activities implemented we have aggregated expenditures according to the classification used earlier. The estimates obtained are presented in tables 4 and 5 below. Table 4 contains data expressed in current prices while in table 5 the data have been transformed to constant 1970 prices. As was done in some cases concerning the relief through NGOs when the information did not indicate the amount expended per year, we have used the assumption of an equal distribution. This has been the case concerning a) US $ 5 million expended on the purchasing, transportation and distribution of "lámina" sheets and related construction materials b) US $ 1 million on reconstruction and repair of the municipal infrastructure and c) US $ 3 million on the purchase, transportation and installation of prefabricated "Butler" buildings**) and some other minor expenditures.

Table 5 indicates that only 1 per cent of AID disaster relief grants has gone to other things than "purely compensatory" expenditures and hence possibly to "development inducing" activities. Nearly 0.6 per cent has been used in "complementary to compensation" activities. The "development inducing" property of the activities referred to here

*) For instance: BANDESA (Banco Nacional de Desarrollo Agrícola) BANVI (Banco Nacional de la Vivienda), FHA (Instituto de Fomento de Hipotecas Aseguradas).

**) A "Butler" building is a provisional building used for shelter, schools, etc.

Table 4

ACTIVITY*) \ YEAR		COMPOSITION OF THE UNITED STATES $ 25 MILLION EARTHQUAKE DISASTER RELIEF GRANT. IN CURRENT PRICES.				TOTALS BY ACTIVITY
		1976	1977	1978	1979	
1) Purely Compensatory		11 297,522	7 572,851	2 164,751	36,656	21 071,781
Development Inducing	2a) Complementary to Compensation	86,134	15,927	12,427	-	114,488
	2b) Unrelated to Compensation	34,303	34,303	53,821	-	122,428
2) Total Development Inducing = 2a) + 2b)		120,437	50,230	66,248	-	236,915
Annual Totals		11 417,960	7 623,082	2 230,999	36,656	Grand Total 21 308,698 **)

*) - Purely Compensatory: refers to expenditures on the purchase, transportation and distribution of lámina and related construction materials; reconstruction and repair of municipal infrastructure, water systems, schools, highway and provision of school desks and other equipment.

- Development Inducing:
  2a) Complementary to Compensation refers to topographic and socio-economic studies, study of water conditions, of damages and evaluation in general.
  2b) Unrelated to Compensation refers to: studies of development conditions, appropriate technology and International Symposium on the Guatemalan earthquake.

**) The remaining US $ 3.4 million have been channelled via NGOs.

Table 5

ACTIVITY \ YEAR		COMPOSITION OF THE UNITED STATES $ 25 MILLION*) EARTHQUAKE DISASTER RELIEF GRANT. IN 1970 US DOLLARS				TOTALS BY ACTIVITY
		1976	1977	1978	1979	
1) Purely Compensatory		8 252,845	5 532,954	1 408,743	21,265	15 215,810
Development Inducing	2a) Complementary to Compensation	62,920	11.636	8,087	-	82,644
	2b) Unrelated to Compensation	25,058	25.063	35,024	-	85,146
2) Total Development Inducing		87,979	36,699	43,111	-	167,791
Annual Totals		8 340,825	5 569,654	1 451,855	21,265	15 383,602

*) The US $ 3.4 million (1976 prices) channelled through the NGOs are not included in this composition.

(see table 4, footnote) lies in the possibilities they have of improving local capacities. For instance, topographic and socioeconomic studies required for the planning of village location (before the starting of reconstruction) will increase disaster preparedness in the area and provide technical data of relevance for many other studies, and this may eventually increase productivity in the area. Furthermore, the elaboration of the studies itself is a transmission of new techniques which, to the extent they involve local people, will improve local levels of knowledge (see Taylor, A., AID, June 1977, p. 57).

There are several reasons underlying the low values of expenditures on "development inducing" activities obtained here. But the main reason is probably to be found in the nature of the activities selected by the organization itself. A great share of expenditures of the AID went to the provision of construction materials such as sheets of láminas, components of prefabricated buildings, etc., for relief activities implemented by other organizations. Indirectly, however, AID financed part of the training programs implemented by the NGOs and the Guatemalan Government via the transfer of US $ 3.4 million as we mentioned earlier.*)

5.2 The Assistance of CIDA

Since the 1976 earthquake the Canadian International Development Assistance (CIDA) has increased its assistance to Guatemala markedly.**) CIDA started its assistance

*) In the next chapter, when analyzing individual projects in more detail we will also have a closer look at the AID's program. In particular, its role for the long-term economic development of the areas assisted will be taken up for discussion.

**) All data in connection with the CIDA's assistance have been obtained from Cohen, S. archives of CIDA, the Canadian Embassy, Guatemala City.

to Guatemala in 1973 with an agro-industry project in the amount of Canadian $ 500,000 in loans and Can. $ 320,000 in donations. During the post earthquake period 1976-79 CIDA provided assistance for a total of Can. $ 7.7 million. This amount, all of which was for disaster relief, was distributed as follows. Can. $ 4 million were invested in the reconstruction of houses, Can. $ 1 million in training activities, Can. $ 1.5 million for reestablishment of infrastructure and reconstruction in general in San Andrés Itzapa and San José Poaquil and an amount of Can. $ 1.2 million was channelled through the NGOs for the reconstruction of 16 schools, health centers and other infrastructural services.

Excluding the amount transferred to the NGOs and hence already reported, we find that Can. $ 5.5 million were spent on "purely compensatory" activities and Can. $ 1 million on operations "complementary to compensation". This means that some 15 per cent of the Can. $ 6.5 million expended by the CIDA itself went to "development inducing" activities. Here, "training" concerned activities aimed at improving or creating the organizational and administrative capacity needed to implement housing reconstruction programs in the communities. This was made by the formation of cooperatives, organized in FENACOVI (Federación National de Cooperativas de Vivienda) involving 200,000 families or nearly 1 million people. But, to some extent, training also had to do with learning how to utilize the Canadian products.

The data available here are nominal values of current expenditures made throughout the whole period. Consequently, no corrections for changes in the general price level nor discussions of annual changes in the composition of the relief can be made for this agency. However, for the purpose of presenting a rough idea of the annual inflow