Chapter 3

The Disaster and the Guatemalan Government's Response

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Introduction

In order to understand the organization of the Guatemalan government with respect to environmental and man-made hazards it is necessary to look at the problems it faced at the time of the earthquake from two perspectives. One, the geographic perspective locates Guatemala in an area where natural phenomena release vast and sudden amounts of energy. Geomorphic processes such as earthquakes, volcanic eruptions, erosion and mass earth movements, as well as meteorological events such as hurricanes, storms and floods, are some of the products of these releases of energy. All are part of the natural order generated by continuous and dynamic energy transformations and flows of earth.

Guatemala is situated among three tectonic plates, the North American, the Caribbean and Cocos. The boundary between the North American plate and the Caribbean one is delineated by the Motagua and Polochic fault systems that divide the country in an East-West direction (Dengo 1968:9). The boundary between the Cocos and Caribbean plates forms a subduction zone where the Cocos plate is submerging under the Caribbean (Harlow 1976:12). These geological characteristics cause seismic activity along the boundaries of these plates and produce earthquakes of large magnitude and intensity,

such as the 8.3 Richter scale magnitude earthquakes of 1902 and 1942 (Vassaux 1969:87). Destruction due to such intense seismic activity (Vassaux 1969:86) occurred in 1541, causing the destruction of Cuidad Vieja by a mud avalanche, and in 1773 the destruction of Antigua Guatemala in the Panchoy Valley. In 1859 the southeastern towns of Taxisco, Escuintla, Sta. Lucia Cotzumalgaupa and Amatitlan were severely affected and tidal waves were produced along the Pacific Coast. In 1902 Quezaltenango and Salcaja were destroyed and San Cristobal Totonicapan, San Marcos and other towns were heavily damaged. During 1917-1918 Guatemala City and other towns in the Valley of the Virgen were destroyed.

Finally, there was the earthquake of 1976, which is being examined in this study, that partially destroyed Guatemala City (39%), the departmental capitals of El Progreso (100%), Chimaltenango (100%), Salama (75%), Solola (50%), Antigua Guatemala (25%), Totonicapan ($\pm$ 50%), Quiche (46%), Puerto Barrios (15%), Zacapa (50%), Chiquimula (10%), Jalapa (50%), and Jutiapa (10%). In this earthquake forty-two major municipal towns with populations of from 3500 to 15,000 were destroyed (100%) or severely damaged (50%), and 52 other major municipal towns with similar populations were partially destroyed (10% to 49%) as well as hundreds of rural villages, hamlets and other small communities.

The official damage reported by the Guatemalan government for the 1976 earthquake made through the National Reconstruction Committee - NRC - in May, 1978 (Balcarcel 1978:4), stated that the earthquake of 1976 was of magnitude 7.5 on the Richter Scale and of intensities from VI to XI on the Modified Mercalli scale. According to this report, approximately 25,000 people were killed and 78,000 severely injured. The

earthquake destroyed approximately 258,000 houses, 5,215 classrooms, 82 hospitals, health centers and posts amounting to 80% of the health infrastructure and services in the earthquake areas. In addition, one hundred and thirty-three public buildings were destroyed or heavily damaged and approximately 220 kilometers of paved roads and 180 kilometers of gravel roads were destroyed. Furthermore, several bridges, including three of the largest and most important ones in the country, collapsed. In addition, most of the cultural patrimony of the country, including precolonial and colonial monuments and buildings were either destroyed or severely damaged and the landscape legacy of the past was heavily affected. The economic loss from the earthquake was initially estimated to be 1.021 billion quetzales (1 quetzal = 1 USA dollar) and later 2.0 billion dollars (Barcarcel 1978:4). In addition, damage to the environment and to natural resources was estimated to be approximately another 1.9 billion dollars (Ferraté 1978:10).

Such periodic geomorphic processes as earthquakes and hurricanes become hazards and disasters when the communities and societies exposed to them have not developed adequate and rational mechanisms to cope with such environmental phenomena. The cultural order, as an expression of these mechanisms, expresses not only a relationship between man and nature, but also a degree of awareness in the form of value codes and attitudes which furnish a level of understanding of the consequences of these natural phenomena and the releases of energy associated with them. These consequences can be, and most of the time are, disastrous when any given culture, through the practices it promotes, transforms a potental hazard into a disaster.

On the other hand, any release of energy and its products can also be perceived and processed by a society as a natural asset with potential benefits to the communities that experience it. The energy released by nature as part of a natural phenomenon such as an earthquake or hurricane sooner or later becomes either natural resources, raw materials, and goods and services through the input of appropriate technology or it may become the source of mechanisms for change which promote innovation and the adoption of new concepts, ideas and patterns for survival and development of the culture.

A natural phenomenon can either be seen as a potential hazard with disastrous consequences or as an input of energy that can create mechanisms for adjustment, survival and development. This possibility was perceived by a group of Guatemalan scientists with field experiences in development activities at the moment of the catastrophe. Some of them were called to participate in defining the role of the National Reconstruction Committee - NRC - and initiating its activities. As a consequence, these ideas were incorporated into the philosophy, objectives and purposes of the reconstruction process at a very early stage.

In addition to the ecological or geographic perspective taken above, a second or historical perspective must be taken. Guatemala is like a germplasm or a cultural pool, with a variety of social organizations derived from the diversity of indigenous and exotic cultures that have merged in that area, mostly on a linguistic and regional basis. Gradually, since colonial times, much of this cultural diversity and its variety of response patterns to natural or man-made hazards has been lost.

Western values, technologies and beliefs have gradually been substituted for indigenous ones by a process of cultural diffusion which has produced a "landscape homogenization" that has not only simplified natural ecosystems, but has disrupted many of the cultural patterns furnishing adaptive responses to environmental phenomena. This process of "landscape or cultural homogenization" has increased the fragility of human settlements to geomorphic and meteorological processes and has considerably increased the potential of natural hazards to produce disasters. The introduction of exotic goods and services sometimes produces benefits and promotes development in developing countries, but at other times such innovations have not been introduced along with sufficient cultural acceptance, technological knowledge, economic support and environmental adaptation to be an adequate and convenient replacement for indigenous goods and services already adapted to geomorphic and meteorological phenomena. Since colonial days in Guatemala, such innovations have sometimes been promoted by the church, and by the national and local governments and other institutions.

This process of severe cultural disruption has been magnified in recent times by the introduction of other "civilized" technological patterns such as the use of long-term biodegradable pesticides, detergents and other agro-chemicals. It has also been produced by the monoculture of coffee, cotton and bananas on lands that are more suitable for producing basic grains, causing spatial disorganization and the intensification of plantation-type agriculture that substitutes shifting westernization cultivation techniques for indigeneous ones and often uses

several calories of energy to produce just one in food. All of these trends have resulted in the systematic destruction of tropical forests in order to produce export products which are sold mainly to industrialized societies such as the United States.

With respect to the "development" of human settlements, diffusion from industrialized societies has introduced the use of energy expensive services and materials that make urbanites dependent upon large corporations. Products such as corrugaged tin and asbestos roofs; prefabricated wall panels, the use of concrete or wood, or brick as building materials, and the introduction of electronic equipment such as sophisticated T.V.s and radios, electric brushes and vacuums and the consumption of canned and dehydrated foods have been introduced into the rural agricultural communities of Guatemala and have enhanced consumerism. Finally, the concept of industrialized production using bureaucratic management has been transferred.

Such technological transfers have increased local industrial capabilities at a higher energy cost but most of the time the products produced are not accessible to the poor in either rural or urban communities. Such people have become cheap labor for use in the production process. Meanwhile they have become dependent on urban industrial employment and no longer produce their own subsistence.

Guatemalan culture has not been able to absorb all of these innovations flooding in from the developed world without being partially disrupted. These man-made change processes have introduced more risks and hazards to human life in the form of anti-goods and anti-services, such as agro-chemical and pesticide pollution in the Pacific Coastal

plain, pumice grabens in the volcanic highlands and river flood plains, and massive erosion processes in the highlands due to overpopulation and lack of available agricultural land. Some of these factors are producing irreversible terminal landscapes in parts of the country increasing and magnifying the potential of floods in the lowlands as well as decreasing the capacity of the land to produce biomass.

The Guatemalan government, with its small scientific and technological resources, realized after the earthquake that the relief, rehabilitation and reconstruction processes should take into account these problems and try to avoid patterns of "development" in the reconstruction process that might mean dependence in the long term. The National Reconstruction Committee was aware that increased dependence could not only result in future disaster-caused injuries and loss of lives, and in disrupted infrastructure, but could also produce economic hazards and risks as well as social turmoil, political problems and even political violence (Rivera 1976).

Some members of the National Reconstruction Committee believed that the process of "landscape homogenization" through westernization, industrialization and urbanization, which the Guatemalan government had supported for a century, had increased the potential for hazards and disasters, since both should be seen not only as the product of natural phenomena, but also as a result of man's maladaptation to them.

This degree of environmental awareness, however, was shared by very few, and the Guatemalan government, through its Plans of Development had indirectly magnified this potentiality by conceiving of the environment

as only another sector of the economy and not as one dimension of a complex sociocultural system. A few Guatemalans with a more ecologically and community oriented view of development felt that the development plan promoted the adoption of exotic innovations without sufficient knowledge of their consequences and diminished the cultural carrying capacity of Guatemalan society by reducing its level of adaptation to its environment. Some believed that this plan would reduce the capacity of the society to respond and adjust to sudden releases of energy such as earthquakes, volcanic eruptions, hurricanes, floods, storms, pollution and erosion, as well as to the accelerating urbanization process and to the rapidly increasing consumerism which was accompanying it. This was the panorama of Guatemala before 1976.

For several years, the Guatemalan government had been attempting to cope institutionally with these magnified environmental hazards and risks by creating a series of institutions designed to respond to specific emergencies. As a consequence, the Ministry of Health and Public Assistance had been put in charge of epidemiological and pollution hazards; the Ministry of Agriculture was assigned biologically related risks such as pest infestations and sanitary animal and plant control; the Ministry of the Interior, through the Advisory Commission for the President of the Interministerial Council for the Improvement of the Human Environment, was made responsible for the normative aspects of environmental hazards, risks and disasters; and the Ministry of Defense, through the National Emergency Committee - NEC - was assigned responsibility for the effects of geomorphological and meteorological hazards and

disasters as well as some man-made accidents.

On the one hand, Guatemala in 1976 was a country where natural phenomena periodically released vast amounts of energy and where communities were becoming more vulnerable to natural hazards and risks resulting from environmental degradation and cultural disruption. On the other hand, the Guatemalan government had created a national level institutional structure to cope with some of these risks - the National Emergency Committee. But in 1976 when the earthquake struck it had not as yet increased its capacity to respond to natural and man-made phenomena at the local level.

National Emergency Committee - NEC - its Composition, Organization and Functions

Before the creation of NEC in 1969, the Guatemalan government's response to hazards and disasters was carried out mainly through the army and through municipal and voluntary firemen's organizations, The Red Cross, The Boy Scouts, cooperatives and other private organizations. Most of the relief and rehabilitation processes were coordinated by the army and The Red Cross. In spite of their humanitarian orientations, considerable functional and geographical overlapping occurred and improvised solutions to problems often took place. There was no formal organization in charge of emergency, evacuation and relief programs.

The National Emergency Committee was created to cope with environmental hazards and disasters on September 8, 1969, when the Pacific Coastal Plain experienced one of the worse floods on record. Between 1969 and 1970, the NEC attempted to become the coordinating entity for

all relief and rehabilitation actions. It did not, however, have full legal credentials to perform this duty. Finally, on September 28, 1971 its status was legalized as a part of the Presidency of Guatemala working through the Ministry of National Defense (CRN 1977).

The NEC is a permanent entity and is activated wherever an emergency is declared by the President and ratified by the Guatemalan congress. The Minister of National Defense is the President or Chairman of the NEC and therefore the army has primary control over it. There is a Board of Directors that is formed by the Ministries of the Interior, Public Finances, Agriculture, Communications and Public Works, and Public Health and Social Assistance, as well as by representatives of the Chambers of Commerce and Industry, the Associations of Banks, Agriculturalists, newspapers and reporters, and The Red Cross. This Board of Directors is the highest authority of NEC and is presided over by the Minister of Defense who is second in authority to the President.

The most important executive on the NEC is the General Coordinator who is the third ranking authority below the President and Minister of Defense. The Coordinator executes, coordinates and directs the actions of the NEC during an emergency or relief operation. This General Coordinator is named by the Minister of Defense and approved by the Board of Directors and is by law an experienced senior army officer. This army officer is assisted by four other persons, the Secretary, Treasurer and the Public Relations officer as well as a sub-coordinator who is also an army officer.

At the operations level, the NEC coordinates its actions through

an Operational Emergency Command that integrates the actions of the Ministry of Public Health, The Red Cross, the firemen and the army. Every one of these organizations has regional and local representatives in different areas of Guatemala and they form the main structure of the local NECs. Most of the field staff is formed by army officers trained in relief and emergency operations. During disasters the whole operational structure functions as an army unit, with the same channels of command, and with its main headquarters in Guatemalan Air Force buildings in the Aurora airport, Guatemala City. During emergencies the committee also has temporary regional offices associated with army regional headquarters.

The NEC performs two principal functions: (1) its coordinates all governmental and private institutions engaged in relief operations and (2) it organizes the provision of food, clothing, shelter, medical and sanitary services to people or refugees affected by natural phenomena or manmade events such as accidents or neighboring wars. The NEC has the authority to require any type of services, manpower, machinery and other logistic support from any government institution to cope with the consequences of a disaster and to rehabilitate basic services. In spite of this, its purpose is mainly to respond to the immediate impact of a disaster by offering emergency relief.

For the most part, the NEC uses the logistical structure of the Ministry of National Defense to perform its activities and relies very heavily on the firemen, police, cooperatives, The Boy Scouts, The Red Cross, and other private voluntary organizations to carry out its work.

Since it was founded, its work has been efficient and effective, especially during the 1976 earthquake.

The most important activities carried out by the NEC were those related to floods in the Pacific Lowlands in 1969, 1972 and 1974 and in connection with volcanic eruptions of 1971-1972, 1973 and 1975. It helped in Managua after the Nicaraguan earthquake of 1972 and in Honduras during search and rescue operations following Hurricane Fifí in 1974. Due to increasing manmade risks in Guatemala resulting from the degradation of ecosystems caused by innovations which disrupt traditional cultural responses to hazards and disasters, the National Emergency Committee is an institution in constant demand.

The Immediate Response of the Guatemalan Government and NEC to the Earthquake of 1976

The NEC and other Guatemalan relief organizations have a limited capacity to respond to large natural or manmade disasters. As a consequence, the Guatemalan government could not respond efficiently and immediately to a disaster of the magnitude, extension and impact of the 1976 earthquake.

Initial awareness of the size, importance and extensiveness of damages of the earthquake came from individual members of the NEC and scientists located in Guatemala City. Within four hours, when the army communication systems became operational and information was collected from persons looking for relatives in Guatemala City, the situation was at least partly known for the metropolitan area and its surrounding towns.

Guatemalan geologists from the National Institute of Geography (NIG) and geomorphologists from the National Institute of Forestry (NIF), however, knew that an earthquake of this type and magnitude had to produce regional damages and that a national state of emergency should be declared. When the NEC was informed about these conclusions a reconnaissance survey was speedily organized.

By dawn the first army and private helicopters took off from the Aurora airport, Guatemala, to make the first general inventory of the human toll and infrastructure damages caused by the earthquake. By about 12:00 P.M., a relatively complete picture of the magnitude and extension of the damages was put together and a conception of the main needs was formed on the basis of this reconnaissance. The Guatemalan government called officially for international cooperation and aid. Since early in the morning of February 4, neighboring countries had been helping. Most services were out of order but telephones continued to operate in well-off neighborhoods. Consequently large parts of the city had telephone service during the first and second days following impact. Electricity was restored during the first week after the quake.

The only reliable broadcasting system in operation during the morning of February 4, 1976 was the small broadcasting station operated by the Seventh Day Adventist Church and through it, other regions of Guatemala and the people of neighboring countries learned about the tragedy. Soon the flow of national and international emergency relief supplies began to arrive in a massive way.

The NEC established its operational services in its headquarters in

the old terminal building of the Aurora airport and during the first three days its main concern was with coordination of search and rescue activities; the establishment of refugee camps; the temporary restoration of basic services such as water, sewage systems, communications, transportation, and the opening of public markets, the burial of the dead and the supplying of medical services for the injured. In addition, a more specific inventory of the damages, deaths and impacts on the social, economic and ecological structures of the area affected by the earthquake was taken.

The NEC had a disaster contingency plan, but it was not designed for a disaster of this magnitude and dimension. Therefore, the NEC had to adjust its plans to real present conditions (Echeverria Vielman 1977). At the same time, the NEC was trying to coordinate the activities of national and international institutions that were offering assistance. Unfortunately everybody had different ideas about what to do and different orientations as to their own potential roles. As a result, disorder and confusion was created and the effectiveness of the NEC was decreased. To avoid this potential for chaos, the NEC took a very strong position and decided to send relief organizations who wanted to cooperate to rural areas and population centers outside of Guatemala City to start their activities. They wanted less talking and more work.

By February 12th, the NEC was in control of most emergency relief operations and most of the municipios had reported the number of deaths and injuries, the extent of housing destruction, and other infrastructure losses. This information was reliable for urban places but due to their

inaccessibility, very little information came in from rural hamlets and sparsely settled areas. Meanwhile, the NEC divided its operational activities into three sectors, the western highlands, the eastern highlands (Motagua low plains) and the metropolitan area of Guatemala City. Two coordinators were appointed to the rural sectors outside the metropolitan area and the mayor of Guatemala City took responsibility for the latter one.

The NEC also formed about 65 field teams, made up of an army officer and a civilian (most of the time an engineer) and gave them responsibility for the coordination of search and rescue, burial and demolition activities. They were also responsible for the rehabilitation of basic services, the establishment of refugee camps, the establishment of sanitary and health operations and any other activities needed to avoid problems derived from the emergency created by the earthquake.

After February 12th, when most of the dead and injured had been taken care of, the NEC focused its attention on four activities. The first was the clearing and opening of transportation and communication systems. About 1026 major landslides that represented about 310 million cubic meters of debris (Ferratê 1976:3) had fallen over highways, roads and river basins. Some streams had been blocked, producing reservoirs that had to be drained to avoid damages downstream. The second major activity concentrated on was the provision of basic services - food, medical, shelter, clothing and others - as well as on the organization of emergency distribution systems utilizing mainly army personnel, university students, and Non-government Organizations (NGOs). The

third activity concentrated on the demolition of structures that were severely damaged by the earthquake and too dangerous to leave standing. This activity was accomplished by salvaging construction materials and the disposal of the rubble. Finally, the NEC focused on the coordination of efforts between the government and private agencies.

Some agencies, both public and private, were using approaches defined by the committee as being paternalistic. Such approaches were considered undesirable since they were creating social tensions by giving aid away indiscriminantly to disaster victims. In order to cope with this situation, the NEC formulated plans which later became its basic program with the names of: (1) Operation "Techo" or shelter, (2) Operation "100 Days," (3) Demolition and Rubble Removal, and (4) the formal Coordination Program of Non-government Organizations (NGOs).

In addition, the NEC very effectively supported some actions taken by private or autonomous organizations. Among the most important ones were:

- It sent out an international call made by Guatemalan scientists for cooperation in order to study the earthquake, its origin, impact, and damages. The international scientific community answered this appeal in such a positive way that the Guatemalan earthquake has been intensely and continuously studied since 1976, and is one of the most well known natural phenomena in the world.
- It took the advice given by Guatemalan scientists to send the supplies that were landing at the Aurora airport to the

most heavily stricken areas as soon as possible in order to avoid a situation similar to the one created in Managua when uneven distribution of emergency goods and services created social unrest, speculation and political problems during the earthquake of 1972. The NEC policy was "to help at the maximum level and to help those in need."

- It supported the initiative of the University of San Carlos to send about 250 teams of students to provide medical and engineering services to the most damaged rural communities. Every team was composed of two students, one medical and one engineering or architectural student. This program was one of the most effective because the students (through a program known as Professional Supervised Field Exercises - EPS) not only provided urgently needed services but also channeled supplies into appropriate local organizations and organized communities and assisted in demolition and rubble disposal, the salvage of construction materials, the setting up of refugee camps and the organization of local groups for the future development and reconstruction programs.
- It supported the coordination efforts of the municipality of Guatemala City with other institutions to rehabilitate the basic services of the metropolitan area, such as potable water, waste disposal, sewage systems, transportation and communications, as well as to compile a detailed inventory of the damages to the infrastructure and the industrial capacity of Guatemala City.

-It also helped to organize a general broadcasting and communications center to alert the population about potential hazards and prevent injury, and to inform the public about the development of the relief and emergency operations. This broadcast network was also used to allow the people to communicate with relatives and friends, to report any water losses or disruption of services, to control potential looting (fortunately there was no looting), to inform the people about the location of food, clothing, shelter, lost and found, medical, transportation centers and other services and finally, to keep everybody busy in productive activities.The area initially covered by this coordination was the metropolitan area with about 1.7 million people.

- The NEC tried to expand these activities to other urban centers and was very successful in doing so. By approximately February 20, in spite of all the problems, most of the urban centers (metropolitan area of Guatemala City, departmental capitals, large towns and villages) had rehabilitated most local services and an emergency broadcasting system and land transportation network was operating.

During the first few days and weeks after the earthquake the NEC reacted very efficiently and most of its operations such as search and rescue, rehabilitation of public services, and the promotion of community cohesiveness were effective. During this time period, three distinct institutional groups cooperated with the NEC. Each had a different approach and different goals for the rehabilitation and reconstruction process. One group was formed by an association of representatives from autonomous

private and government organizations joined together by the Guatemalan Chamber of Construction. This group consisted of some members of the National Economic Planning Council, the National Housing Bank (BANVI), the Municipality of Guatemala City and the Institute of Insured Mortgages (FHA). It was concerned about the impact of the earthquake on the National Development Plan 1975-1979, because the disaster could affect the policies, strategies and goals of the plan. As a consequence, this group felt a "transitional policy and strategy" was needed to link the goals of the reconstruction process with the development goals set for the period 1975-1979 (Rivera 1976). This idea was considered valid by the government and the first plan formulated by this group was called "The National Plan for Emergency Urban Reconstruction" - later called the "100 Days Plan."

The immediate objectives of this plan were: (a) the demolition of severely damaged houses and other structures (about 15,000 in Guatemala City and another 107,036 in the other affected areas) (Rivera 1976) and the disposal of rubble and debris (about 11.0 million cubic meters) before the beginning of the rainy season, approximately 100 days from February 14, 1976, the day that this plan was presented to the President of Guatemala;(b) the "Shelter Operation" that consisted of providing seven corrugated tin sheets as roofing material plus wooden poles and beams to build a temporary shelter for affected families. The original goal was to reach at least 40,000 families in Guatemala City and about 107,000 families in the rest of the affected area. The total cost of demolition, rubble and debris disposal and the shelter operation was estimated at 11.9 million U.S. dollars. Eventually only part of the

demolition, rubble and debris disposal program was executed at a cost of about 2.9 million U. S. dollars (Rivera 1976). About 655,000 U.S. dollars were invested in refugee camps in Guatemala City, but there are not reliable data accessible for other parts of the affected area.

The NEC worked very closely with this group as they developed a coordinating scheme to carry out plans (a) and (b). The committee recommended the municipality of Guatemala City as the entity in charge of operations in the metropolitan area and the National Housing Bank (BANVI) as the institution for the acquisition, management and legal responsibility for funds in other urban areas and the National Bank for Agricultural Development (BANDESA) with similar responsibilities in the rural areas. The Guatemalan army was to become the body to provide the logistical support and the control of the operations. This group became known as the "100 Days Plan Group."

The second group of institutions was formed by the General Secretariat of the National Council for Economic Planning (GSNCEP) and the Bank of Guatemala. These two institutions were concerned mainly with economic and financial matters and with how the earthquake might affect the economy and the National Plan for Development 1975-1979. Their role during the emergency period was based upon a Presidential Mandate dated February 10, 1976, which stated that the GSNCEP (SGCNPE 1976) should make an evaluation of the magnitude and consequences of the disaster on the economy, coordinating its activities with the army as well as helping in the negotiation and legalization of foreign loans.

Such negotiations are ordinarily a responsibility of the Ministry of Public Finances but in this case were carried on in coordination

with the GSNCEP and the Bank of Guatemala. The Mandate also mentioned that the GSNCEP had to coordinate international technical cooperation that had been offered by international organizations and friendly countries for the rehabilitation and reconstruction process, and finally, that the GSNCEP would make the necessary adjustments and modifications in the National Plan for Development 1975-1979 with the purpose of reallocating and optimizing the resources that were needed for the rehabilitation and reconstruction programs. These two government institutions (the GSNCEP and the Bank of Guatemala) did the inventory of damages, estimated the economic losses in 1976 prices and included depreciation of the physical infrastructure that was destroyed. These institutions tried also to forecast the future general consequences for the economic development of Guatemala. Unfortunately they did not take into account inflation trends and therefore the reconstruction costs were underestimated. The data obtained under the circumstances were preliminary and partially reflected the magnitude and geographic estension of the disaster and the immediate needs of the people affected by the earthquake on a priority basis.

The GSNCEP also coordinated international technical cooperation, but the results of most of this massive foreign cooperation were theoretical, inappropriate, late, with little concern for Guatemalan indigenous cultures and sometimes also reflecting the lack of knowledge of some of the United Nations "experts" concerning rehabilitation and reconstruction programs. It seems that international technical cooperation through the GSNCEP was more a conceptual exercise preparatory