

Preliminary Proposal for the Activities Program in the Social Disasters Area

I. Introduction and Justification

Natural disasters, both large, medium and small, constitute a permanent and growing phase in the daily life of thousands of Central Americans. Their incidence and impact clearly cannot be reduced to a problem of a natural world or to an adverse physical context, but to the very structure of society, to its social and economic condition, its political and administrative structures, its attitudes, perceptions and ideologies, besides other multiple factors of social order. The disasters are social and they derive in most cases from the degree of underdevelopment in society, contributing to maintain this very condition.

The social consideration towards natural disasters has scarcely been researched in Central America and what the government and its organizations carry out in the prevention, mitigation or attention to disasters is generally performed without the adequate knowledge or back up, leading to inadequate responses to the problem.

Dealing with research, it has been dominated by physicalistic points of view, belonging to the natural or exact sciences (geophysics, geology, geomorphology, meteorology, etc.) directed to the prediction of events as a production factor for disaster prevention. The efforts that have been carried out in these fields by national institutions have been reinforced during the last two years with the creation of the Prevention Center for Natural Disasters in Central America (Centro de Prevención para los Desastres Naturales en Centroamérica) (CEPREDENAC), financed by the Swedish government, and recently by the Norwegian and Danish governments.

Due to the absence of socially supported actions, the basic science experts become the bearers of reason; the location of the epicenter, its depth, if there will be replicas and when, become the center and the solution to the problem. The people turn to these experts to find out the truth and when they're wrong or declare themselves incapable to predict, the people are reduced once more to an unprotected and irrational organism.

The absence of social research and that of prevention and mitigation actions adequately backed up in the Central American countries, was the starting point for the creation and execution of a regional research project, financed by CSUCA's Central American Research Program (Programa

Centroamericano de Investigación del CSUCA), and carried out by multidisciplinary groups adscribed to the Confederation's Universities with the financial aid from the International Research Center for Development (Centro Internacional de Investigación para el Desarrollo) (CIID) in Canada.

This project, Natural disasters and danger zones: prevention and mitigation options in Central America. (Desastres naturales y zonas de riesgo: Opciones de prevención y mitigación en Centroamérica), will be completed in January 1991. As its objectives it pretended to offer a global analysis of the diverse social aspects of the disasters' problematic, particularly: the zoning of areas under risk in the perspective of their social vulnerability; the plans, programs, instruments and organization existing in the prevention field, mitigation and tending of emergencies; and the attitudes and perceptions of the population in recurrent danger zones selected in all six countries of the isthmus.

As it had actually been anticipated with the project, due to its globalizing and synthesizing nature, the results showed as many questions as well as answers in terms of the necessary scientific knowledge needed to face the task of designing the adequate strategies for prevention and mitigation in Central America. On the other hand, the theoretical point of view, the methodology, the orientation and the study's results have caused considerable interest among State and private organisms towards aiding the national work groups in the debate, research and training of the thematic. Besides, the project has been able to form a network of more than fifty researchers of the social and ecological sciences who have formed on its side in the multidisciplinary research on natural disasters, and who constitute the only existing network in this sense.

Due to the last regional meeting that national work groups held in Panama, at the end of November 1990, and keeping in mind the research results that have been found, discussions with organisms that deal with the prevention and mitigation of disasters, as well as with collateral information, it has been possible to identify a series of studies and actions that are considered indispensable to implement in the search to establish a more solid basis for the preparation of a real national action plan or strategy in this field.

In this document, these work areas are synthesized, so that a regional research program is formulated, for the diffusion and training for the disasters in Central America.

11. The Program's General Objectives

1. To strengthen a network for research-training in the social area of natural disasters in Central America directly linked with CSUCA's Universities and having direct communication to the national and private decision-making organisms with attributions in this area.

2. To organize and stimulate applied investigation in diverse priority areas of knowledge of importance to establish a more rational and organic action of the State and private organisms in the prevention area, mitigation and tending of disasters.

3. To help start training and global education courses in the prevention, mitigation areas and in the tending of emergencies, with priority to local and popular sectors, to school population and private organizations.

4. To establish a documentation system and of social information diffusion at a Central American level, accesible to the research and action sectors (State and private) and to the general public.

11.1. The Program's Global Integration Structure

The program of activities that are outlined in the following sections and that hopes to fulfill the general objectives stated above, projects in three fields: research, extension and documentation.

This division in definite fields of action, is concreted in one single program integrated through organic links that are established between the three fundamental components, and in the concatenate manner in which the advances will be promoted in steps contemplated in the program.

Documentation-----Social research

Area 1

Area 2

Area 3

-----Training

Physical-natural research

IV. The Program's Components and Activities

1. Social research

In the global area of social research, this promotion of activities are proposed in the following generic priority themes:

- * Social communication (means of mass communication and techniques);
- * Cost-benefit of the means of prevention and mitigation;
- * Environment and the physical conditionings of disasters;
- * Environmental education at school level;
- * Social organization of popular sectors and the community;
- * Organization and logistics of emergency planning (national, regional and local level);
- * Legislation for prevention and mitigation.

1.1 Brief description of the themes

1.1.1 Social communication

Within this global problematic there exist two sub-themes of problems of priority interest.

a) Social means of communication: In the context of education for disasters and the communication about eminent risks or real disaster contexts, the means of mass communication (written press, radio and television) must play a key role in the orientation and preparation of the population. Daily evidence suggests, nevertheless, that the means in Central America play a limited role in general, desorienting, superficial and sensationalist with unknown effects on the population and on its ways of acting and preparing.

b) Technical information, social communication and the preparation of the population. The scientific organisms and the governmental action related to disasters deal with systems and instruments for measuring and control related with the temporary and spatial incidence of physical risk. This is the

case, for example, of the acelographs and sismographs which measure the earthquakes' intensity, location, etc.; and comprised within the obligations of University and State institutions in each country; or maps of physical risk that must constitute an important component in the system of disaster prevention and mitigation.

Nevertheless, the transformation of the scientific and technical information which these measures incorporate into valid knowledge at action or social organization levels has been scarcely studied or explored. As an example of this one can ask, as an indicative manner, for example:

- The information that is generated and published about the frequency and intensity of earthquakes, about locus and epicenters and their depths, how is it processed and understood by the population and how does it influence their behavior?

- The overemphatization on the technical and natural aspects of the phenomena within official reports, belonging to specialized organisms and the press, how does it influence the ideas, behavior and hopes of the population and their perception of disasters and their fundamental causes? Which are the processes through which the technical instruments of prevention (for example, maps of risk areas or of the use of the soil), are transformed into instruments of social action relevant at a local level?

1.2 Studies of cost-benefit of prevention and mitigation measures

State attention given to the problem of disasters has concentrated predominantly on the aspects related to the tending of emergencies and to the reconstruction of damaged areas. Prevention and mitigation have been relegated and in the best of cases reduced to technical studies on earth and atmospheric dynamics with the pretension of advancing in the possibilities of a temporary and spatial prediction of events.

In general, there exists an «acceptance» that the measures of prevention and mitigation are technical (dams, contention walls, dikes, etc.), or social (social organization and education, legal controls over location, etc.), constituting a non-productive social expense in economic terms. This situation in conditions in which the States suffer severe fiscal deficits, a high foreign debt, and a tendency to reduce social expenses, does away with the incentives to implement actions in the fields of prevention and mitigation of disasters.

It is considered necessary to have access to economic and social studies that would offer a convincing reference mark as far as the compatibility of the prevention measures go with the achievement of global and specific objectives for development. Becoming aware of consciousness at a political level is a must in this context. In order to achieve these objectives, studies are proposed that:

- a) Will allow the implementation and design of a methodology that will permit, at a local and national level, to obtain valid information regarding the economic cost of the losses suffered by the impact of the disasters (production, infrastructure, jobs, etc.).
- b) Studies on the efficiency-cost of research and action in the technical-scientific field (natural sciences) of prevention and mitigation.
- c) Studies of cost-benefit of alternative means of prevention and mitigation (social measures, infrastructural and environmental) in contrast to emergency or reconstruction measures.

1.1.3 Environment and the physical-natural conditionings of disasters

There exists the fundamented conviction that the processes of local degradation, regional or national of the natural environment (destruction of river beds, deforestation, inadequate use of the soil, etc.), contribute to heightening the physical risk of the population, particularly in reference to floodings, landslidings, flood tides and droughts. Nevertheless, very few studies exist which attempt to specify scientifically, on one hand, plausible control proposals on the use of the environment and that contribute to a self-sustained development and to augmenting the security conditions of the population.

There are three research areas which we consider that must be given priority:

- a) Studies on deforestation at river bed levels and their impact on the pluvial regimes, the erosion and sedimentation at a local level with regard to: changes in rivers and to the stability in their slopes;
- b) Studies on the relation between the patterns of agriculture production and the problems of drought or the adequate supply of water;

c) Studies on the destruction of mangroves and the urban-portuary development and its impact on the coastal stability and the changes in the pattern of the waves;

1.1.4 Environmental education at school level

An important component in man's capacity to adjust to the permanent conditions of physical risk or to intervene with will power on the casualty of these phenomena, resides in his own understanding of the natural environment that surrounds him, which influences his conscience and the ways in which he acts.

This knowledge is clearly relevant to all strata of the population and to all ages and it points toward the need of an environmental education which permeates curricular and extracurricular education.

Without denying the importance of reforms at an educational post- high school level(formal or informal) priority has been given to these reforms for the infant and high school population due to the process of their formation for the future, and the role that these sectors demonstrate at the educational level of the adults in the family

Research should find out about knowledge, attitudes and perceptions that the students have with regard to the problem of disasters and the environment in general and about their immediate environment. The style of research should point towards knowledge that will allow the posterior design of education models about these problems adjusted to the spatial or territorial reality where the students live.

1.1.5 Organization of popular sectors and the community

Regarding human action related with the prevention, mitigation and attention of disasters, there exists an ample acceptance of the role that the community should perform and, in consequence, the popular sectors in these processes. Besides, the majority of propositions that arise from the national authorities in charge of this problematic shows the need for organization and local participation.

Nevertheless, in practice little has been advanced in this sense and numerous questions remain regarding the necessary knowledge to substantiate and give impulse to an adequate action in this direction and in the training and education of the population at a local level.

Among the fundamental questions that should be clarified are: the degree and levels of consciousness existing within local populations regarding disasters, their causes and the possible action to confront them; the importance given to disasters compared with other problems of daily living in the existence of the population (health, housing, jobs, etc.); the existence and social composition of local organizations; the natural leaders in the community; the available resources (human and economic) to give impulse to the social organization and training of the local groups.

1.1.6 Organization and logistics of emergency planification

Regarding the emphasis that is considered necessary to place in the phases of prevention and mitigation of disasters, it is clear that the attention during the emergency phase and that of reconstruction due to an emergency, will continue to dominate during some time the close up to the problematic. In view of the above there exist several areas of priority research that could offer important information for the improvement of the organization and logistics of the actions during emergencies and during the periods that follow, such as:

- a) In depth studies of the global structure of the system of attention to emergencies: hierarchical structure, organisms, logistics, lines of command, existing human resources, levels of centralization and decentralization, available technical instruments (including operative plans, communications, etc.).
- b) Particular life line studies including medical attention; food and medicine purveyance; alternative assignation of running water; electric energy.

Methodologically, three approximations to these research areas are proposed.

- i) Through studies that pretend to reconstruct the organization carried out during an event or events of certain magnitude that have recently occurred (for example, the seismic emergency in Costa Rica in december of 1990, Juana in Nicaragua 1988), with the pretension of identifying the do's and don'ts in the activities that were carried out;
- ii) Through a fund that would allow social and technical researchers to go to the disaster areas when the emergency occurs to evaluate in situ

the type of organization and its deficiencies. This technique allows the recuperation of information that is lost with the passing of time;

iii) Through systematic studies of the existing system of organization; that is, the normativity of the system that would be instrumentalized during a future emergency.

1.1.7 Legislation for disasters

Concerning the research on the judicial instruments that exist on Natural Disasters, contrary to what happens with environmental legislation, we realize that it is scarce and that it has serious practical problems.

In this field it is a priority to work a bit more regarding:

a) A constitutional reform that will establish the procedure of emergency declarations: who will declare them, how, for what, etc.

b) An Emergency Law that will clearly establish three fields:

Administrative Organization: an administrative system that will respond to three phases: before, during and after.

Planification: how to incorporate the problematic of natural disasters within the schemes of national planification. Different fields that must be regulated in this type of problems such as: customs systems in case of emergency; telecommunications, restrictions of private property; etc.

These two areas are necessary and urgent in all the countries of the Central American area and it would be of great benefit if a guide or methodology could be drawn on the steps to take to elaborate adequate judicial instruments for each national reality. It seems pertinent to have certain basic questions that should be answered, in each country, depending on its different particularities, in an operative, efficient and practical manner.

To go about it requires an ample consultation operation, permanent with those organisms that already have experience in these type of situations, with the objective of obtaining their testimonies and recommendations to this effect.

2. Training and education in the area of disasters

The knowledge produced during the process of social and technical research should constitute, along with the experience and information available through other sources, a fundamental element in the training or education of public officials, academic-research personnel, low-risk population and other sectors related with the problematic of disasters.

Those demanding training and education are numerous, but there are certain sectors which are considered a priority within the scheme of a short-term program of activities, and that relate to the afore mentioned research areas in Section I of this document. The training efforts impulsed by the program should be coordinated with those national or international instances that are already involved in the problematic (OPS, OEA, OFDA, National Emergency Committees, CEPREDENAC, etc.).

- a) The mass media communication professionals (press, T.V. and radio).
- b) Basic and secondary teaching personnel.
- c) Technicians and scientists of the natural and basic sciences in the area of social diffusion of technical information.
- d) Personnel involved in the formation of or in activities of the local emergency committees (at municipal, district levels, etc.).

Regarding the research-academic personnel there is a need for a continuous effort in terms of training in social and environmental research due to a relatively weak research basis now existing.

Both for the training of professionals on disasters, as well as that of the research-academic personnel the need to count with the support of international assistants would be foreseen, in addition to the local staff available

3. Documentation area and diffusion of information

Through the research project on Natural Disasters and Danger Zones in Central America (Desastres Naturales y Zonas de Riesgo en Centroamérica (CSUCA-IDCR) the almost total absence of material in literature and documentation about social aspects on the problematic of disasters was appreciated, neither seen from the Central American perspective nor from

that of the rest of the world.

This situation difficults both the academic-research reflection and training on the issue-, as well as the access of public sector professionals to relevant information for the improvement of the national systems of prevention, mitigation and tending of disasters.

This context justifies an effort to implement the region with a documentation and information processing center with accesible information for professionals, students or the general public from the different countries of the isthmus.

The basic characteristics of the Integrated Center of Documentation, would be the following:

a) A central receptor and processing unit of social documentation on disasters at a Central American level and selectively at world level, emphasizing, first of all, the documentation related with the research pivots and of training that are impulsed.

This central unit could either be created in a stable university institution of the region, or could form on the basis of a specialized center already in existance (for example that of the Pan American Health Organization in Costa Rica; or join as a member of an existing component of a Center of Documentation existing in the Social Sciences (for example, the Center in formation as an agreement between CSUCA, FLACSO and the Institute of Social Research of the University of Costa Rica).

b) A communication network by electronic mail with a university institution and the National Emergency Commission in the other countries of the region, through which the desired information would be transmitted and information for the central base would be received.

c) A link with an information center from outside of the region, specialized in disasters and with capacity for processing and for systematization of documentation (for example, the Natural Disasters Information Centre at the University of Colorado, Boulder).

Regarding the need for a documentation center, the attention and publication of two books about methodological aspects of social research about disasters and in the planification area for prevention, mitigation and tending of emergencies is also foreseen.

It is anticipated that these books would cover, to a great extent, works that have already been written by experts at a worldwide level which, if necessary, would be translated into Spanish for their publication.