

# LOOKING TOWARD THE FUTURE

**I**n the 1970s, advances in telecommunications permitted the mass media to relay images and information about natural disasters directly to a world audience with unprecedented speed. People saw what happened to their neighbors as the result of disasters. This new knowledge helped erase boundaries between societies and has given rise, in the 1990s, to a focus on sustainable development. This new way of looking at disasters has integrated the concepts of prevention, mitigation, and preparedness to reduce the social and economic impacts of natural disasters.

## TOWARD NATURAL DISASTER REDUCTION—THE ACTORS

No country nor agency could have reached its present level of maturity with regard to disaster reduction had it remained isolated from others. The slow process of transforming from vulnerable to more secure implies the participation of numerous protagonists both at the national and international levels. The protagonists in this enterprise of disaster reduction are listed below in order of visibility, not in order of importance:

- International agencies
- Scientific associations, universities, and nongovernmental organizations
- Governments
- Communities

## International Agencies

Much of this report has emphasized the achievements of the principal protagonists, that is, the countries. It is also important to address the contribution of the international—multilateral and bilateral—agencies, which have served as catalysts in promoting disaster reduction in the Region of the Americas.

Among the international actors involved in disaster reduction is the United Nations system. Initially, disaster reduction activities were the mandate of UNDRO, the Office of the UN Disaster Relief Coordinator, until the creation of the Department of Humanitarian Affairs in 1991. Other U.N. agencies that have played important roles are the World Meteorological Organization, leader in coordinating early warning systems for hydrometeorological hazards; UNESCO, promoting research in the fields of volcanology and seismology; and, more recently, the United Nations Development Program (UNDP), which provides training for the entire UN system through the Disaster Management Training Program. In short, all agencies in the system contribute to reducing natural disasters in the Americas.

At the regional level, the Economic Commission for Latin America and the Caribbean (ECLAC) has evaluated the economic repercussions of major disasters in the last decades and created a database of great value in preventing and

Photo facing page:  
Gaggero, PAHO/WHO



mitigating the effects of disasters.

Since the early 1980s, the Organization of American States (OAS) has helped its member countries to reduce the impact of natural hazards by: evaluating them as part of the study of natural resources; identifying and formulating mitigation measures; making information on hazards more accessible; and training planners in evaluation of natural hazards and disaster mitigation techniques.

The Pan American Health Organization, Regional Office for the Americas of the World Health Organization (PAHO/WHO), is convinced that socioeconomic development goes hand in hand with protecting the people of the Region from natural or manmade hazards. PAHO's Emergency Preparedness and Disaster Relief Coordination Program places people's health as the force driving disaster reduction in the Americas. Thus, they support some 200 courses and workshops annually and produce and disseminate publications, video and slide programs, and other materials of key importance. Disaster professionals in the Region benefit from PAHO/WHO's Disaster Documentation Center whose primary purpose is to offer quick access to disaster management information.

At the subregional level, the creation of the Caribbean Disaster Emergency Response Agency (CDERA) by the Caribbean Community (CARICOM) deserves mention. It was the first intergovernmental organization in the Americas established exclusively for the management of natural and manmade disasters and funded by its Member Countries.

Bilateral agencies have supported disaster reduction activities in Latin America and the Caribbean either directly or through the U.N. and nongovernmental

organizations. International cooperation agencies such as the Canadian International Development Agency (CIDA), the U.S. Office of Foreign Disaster Assistance of the U.S. Agency for International Development (OFDA/USAID), the Japan International Cooperation Agency (JICA), the Swedish International Development Authority (SIDA) and agencies of other Nordic countries, the Overseas Development Administration (ODA) of the United Kingdom, the Government of the Netherlands, and the French and Italian Cooperations provide financial support and technical assistance to a variety of projects.

In 1987, OFDA/USAID, through its regional program located in Costa Rica, began an interactive course for the training of trainers in disaster management, damage evaluation, and needs assessment. They also developed courses on planning and school safety, creating a fertile field for the complementary initiative, UNDP's Disaster Management Training Program. OFDA/USAID, through the U.S. Geological Survey, also collaborates with governments and scientific institutions in the Region on volcano surveillance and monitoring. The reorientation of their priorities—from preparedness to prevention and mitigation—is exemplified by agreements made with PAHO/WHO on disaster mitigation for hospitals and health installations, and with the OAS for a Caribbean mitigation project.

In addition to its support for specific projects such as flood prevention, JICA emphasizes scientific cooperation in engineering and seismology. CISMID in Peru, and CENAPRED in Mexico, are centers of scientific and investigative

excellence in the Region (see chapter 6) that owe their existence to the material and technical support of Japan.

The Nordic countries in turn, led by Sweden, developed CEPREDENAC. Conceived with a scientific scope for disaster prevention, CEPREDENAC now focuses on the social and political dimensions of disaster reduction. Currently, CEPREDENAC is recognized as an intercountry agency, and following the example of CDERA in the Caribbean, must secure funding from the countries of Central America themselves for its core activities.

Other countries, such as Canada and the United Kingdom, have given up a high level of visibility derived from direct involvement and have opted to act through existing agencies (UN, Red Cross, NGOs). These countries have exerted considerable influence on disaster reduction efforts in Latin America and the Caribbean.

With so many protagonists, coordination has, at times, been an issue, but one that is being satisfactorily resolved. At the end of the 1970s the number of protagonists at the regional level was limited (UNDRO, OFDA/USAID, the League of Red Cross and Red Crescent Societies, today the International Federation, the OAS and PAHO/WHO, among others). As the numbers grew, more dialogue was needed among the protagonists. One way to build and maintain this dialogue was to hold meetings at the regional and subregional level. Two notable examples are the meetings of national IDNDR Committees: in Guatemala in 1991 for Latin America and the Spanish-speaking Caribbean, and in Jamaica for the English, French, and Dutch-speaking Caribbean. The U.N. World Conference in Yokohama provided

another opportunity for dialogue. The 1994 Inter-American Conference on Natural Disaster Reduction in Cartagena, Colombia, represented the last stage of preparation for the World Conference by the countries of Latin America and the Caribbean (see the Conference Resolutions in Box 7.1).

### **Scientific Associations, Universities, and NGOs**

Natural disaster reduction must be multidisciplinary and multisectoral; it cannot be the exclusive territory of any one group. Scientists, professional associations, and universities have developed risk mapping, early warning systems, and other preventive measures. Nevertheless, despite successful results and model projects, the percentage of scientists in the Region that actually participate in and contribute to this field is not high, and the field continues to be dominated by a few experts in each country.

In the last 15 years, many countries have successfully included disaster management and preparedness in the formal curriculum of universities. The goal is to familiarize all graduates with disaster reduction as it relates to their specific discipline.

The revitalization of intergovernmental associations such as CERESIS (Peru), the SRU (Trinidad) and others that enjoy international and national support, can be credited to the IDNDR. The objectives of the Decade also have strengthened other scientific and management initiatives: the establishment of a scientific IDNDR Committee, as in the case of Chile; the creation of networks focused on technical or social aspects of disasters such as La RED or the Latin American Partnership of CUSEC; and the formation

# THE INTER-AMERICAN CONFERENCE

*Cartagena, Colombia, March 1994*

## THE FINAL STEP IN THE REGIONAL PREPARATION FOR THE WORLD CONFERENCE

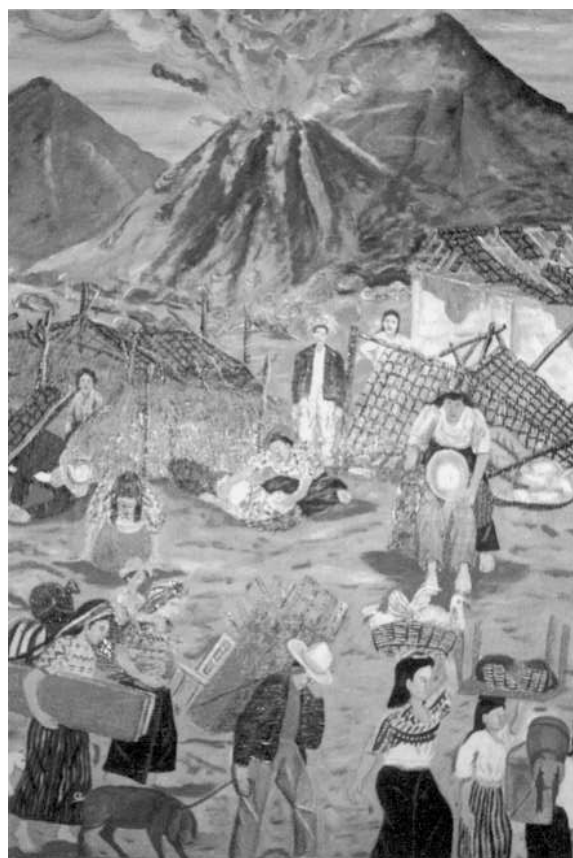
More than 1,000 representatives of governments, international organizations, regional agencies, and scientific and academic institutions responded to the call from the Government of Colombia to review the progress achieved during the first half of the IDNDR, and to identify regional priorities for the remainder of the Decade.

Following are highlights from observations and recommendations made by Conference participants:

### A REVIEW OF THE FIRST HALF OF THE DECADE

The International Decade has stimulated the interest and attention of most countries and of international and regional organizations in disaster reduction. As a result, many institutions have initiated effective disaster reduction programs in a variety of sectors: institutional building, health, education, infrastructure, and distribution of information and documentation.

However, due to development policies and practices and a lack of political commitment, the Region's vulnerability to natural disasters continues



Painting by Rafael González, photo courtesy of Count de la Barre d'Erquillines

to grow. Areas of concern or needing improvement are:

- i Many IDNDR initiatives have focused on scientific studies and technological solutions, with insufficient regard to their social, cultural, or economic feasibility.
- i National agencies responsible for disaster reduction frequently have a centralized structure that

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excludes the participation of local communities and other sectors. These agencies are directed toward post-disaster response rather than prevention and mitigation measures.

- The link between disaster prevention and management of the environment has not been implemented because disaster reduction, as an essential strategy for sustainable development, has not been explicitly promoted.

## LOOKING TOWARD THE FUTURE

Within their areas of expertise, the participants at the Inter-American Conference committed themselves to promote and implement the following actions:

- Adopt disaster reduction as both an objective and an indicator for reaching sustainable development;
  - Develop regional and national techniques to assess and monitor vulnerability to natural disasters;
  - Ensure the active participation of individuals and communities at risk;
  - Translate technological results into effective policies for disaster response by reviewing and compiling regional experiences and studies that integrate the social and scientific sectors;
  - Give priority to educating the general population and the main protagonists to establish a disaster prevention “culture” adapted to the reality of the Region;
- Provide practitioners and scientists with rapid access to information by expanding regional and national disaster documentation centers with a multisectoral and multiagency approach;
  - Strengthen the trend toward decentralization of institutions and promote greater participation of the entire society in the effort to reduce vulnerability to disasters;
  - Promote the establishment of national and regional parliamentary commissions on disaster reduction to review and strengthen existing legislation;
  - Recognize and support the role of the Ministries of Foreign Affairs in promoting effective international cooperation, as well as between developing countries of the Region;
  - Request that the international community support not only relief and preparedness activities, but also horizontal cooperation and networking between countries to achieve the goals of the IDNDR;
  - Encourage financial institutions at global and regional levels to support disaster reduction activities by including vulnerability reduction aspects in national development projects.

*This is a summary of the conclusions elaborated at the Inter-American Conference on Natural Disaster Reduction, Cartagena, Colombia, March 1994. They have been translated into English and abridged by PAHO/WHO.*

of specialized centers to promote the teaching of integrated disaster management, such as the WHO Collaborating Center in Medellín, Colombia.

### **Governments**

During the 1980s, civil defense and emergency response agencies made major advances in coordinating and supporting disaster response. Today, other sectors are beginning the more complex process of reducing the vulnerability of infrastructures as well as communities and their property to disasters. The best results have been obtained in those countries where development authorities take a leadership role and obtain the technical backing of disaster experts.

All countries in Latin America have established IDNDR Committees; the broader the participation of the public sector, the private sector, the Red Cross, NGOs, churches and community groups in these Committees is, the more dynamic they are. In those countries where ministries of finance, public works, education or health play a dominant role, a sustainable development approach has taken place. But where a traditional operational response command has simply been relabeled "The IDNDR Committee," little progress toward disaster reduction has been made.

New challenges face governments in the second half of the International Decade. For example, finance and planning sectors, on being invited to regional disaster reduction meetings, may still ask "What does our department or ministry have to do with disasters?" This reaction is identical to that of the health sector when, 15 years ago, it was encouraged to establish preparedness

programs. The IDNDR, and in particular the U.N. World Conference, make a powerful argument for why they should be involved.

### **The Community**

The other protagonists in disaster reduction are community groups and the general public. The illusion that the government can solve all problems while communities passively wait is fading. Individuals need to participate in the plans that shelter them from the effects of natural disasters. Community projects and experiences demonstrate that disaster reduction issues cannot be isolated from those of sustainable development. Community members contribute great energy and creativity to the solutions for their own progress; their participation must be developed and nurtured. The annual celebration of International Natural Disaster Reduction Day has opened the door to greater community involvement, and this will continue to be a priority for the second part of the Decade.

## **THE FACTORS**

Progress toward reducing vulnerability to natural disasters varies from country to country in this Region and a number of factors determine the degree of progress made.

### **Acceptable Level of Risk**

Each authority, each community, and each individual has a different notion of what constitutes an "acceptable" level of risk. Some countries do not invest in mitigation measures, but follow a "pay-the-price-later" philosophy, and choose to wait for the consequences of disasters. The more developed countries may have

a greater collective conscience of the importance of disaster management, thereby investing more in mitigation and prevention. These countries also have more resources available to enforce legislation and finance prevention, factors that influence what constitutes their acceptable level of risk.

The “triggering” role that serious natural disasters have played in awakening a collective awareness cannot be underestimated; a disaster occurring in one’s own country does much more to motivate change than simply hearing of a disaster in a neighboring country. But motivating communities, institutions, or governments to invest in works meant to reduce damages caused by *potential* disasters is a challenge. A well-known anecdote tells of a Latin American engineer who was evaluating post-earthquake damages. Looking for lessons that the community learned that might be applicable to future situations, he asked a victim of the disaster what might be done to prevent another such occurrence. The response was: “I am much more worried about how I will get a chicken for my soup today than about how to protect myself from some other disaster.” This anecdote illustrates the need to seek solutions to the problems of disasters within a broader national and local agenda aimed at eradicating poverty and meeting urgent needs.

What today is considered a clear two-way relationship between disasters and socioeconomic progress, was ignored until recently. Disasters were seen as unavoidable events to be dealt with when they happen, not events to consider during the design and preparation of development projects. Today, the sophisticated and costly infrastructure and burgeoning economy in many

countries in the Region has significantly lowered the threshold of what is considered an acceptable risk.

### **Political and Administrative Stability**

Disaster reduction has few immediately visible benefits, and until a major catastrophe occurs, the results are hidden. Disaster reduction requires political maturity and administrative stability. Preventing and mitigating the effects of natural disasters had little support during the social conflicts in Central America during the 1980s or in the midst of the political crisis of Haiti in the 1990s. Stable government and continuity at high decision-making levels are decisive factors in the countries that have achieved advances in the field. Harmony and a history of joint working relations between civil and security sectors also are important.

### **Availability of Resources**

Poverty indisputably increases a population’s vulnerability. Yet the countries with the highest per capita incomes are not necessarily those that succeed best in protecting their investments. Vulnerability can be reduced with even a modest economic investment if it is coupled with the appropriate political commitment. However, a lack of financial or human resources is the factor most often cited as limiting the implementation of mitigation and prevention measures.

Future solutions to the problem of vulnerability to disasters will require that “natural hazards” be included in analyses for new investment proposals, and that projects for reducing the effects of natural disasters be given priority in requests made for technical cooperation or loans from the international community.

In Latin America and the Caribbean, as in other regions of the world, political decisions are often the result of demands by populations exposed to risks. Two main objectives of the IDNDR are to create a level of awareness in the general public and to develop a “critical mass” of scientists, experts, and journalists, along with academic, social, and religious leaders who can serve as advocates of disaster prevention.

### **THE SECOND HALF OF THE DECADE . . . AND BEYOND**

The trends in natural disaster reduction observed at the regional level and the extensive consultation process carried out in regional meetings (e.g., Guatemala 1991, Jamaica 1992, Colombia 1993 and 1994) could be summarized as follows:

***Expand the “culture” of disaster prevention:*** The traditional tendency to equate disaster management with post-disaster response is being replaced by an approach to disaster reduction based on the realization that the effects of disasters may be, in part or in whole, prevented. Increasing public awareness of the benefits of disaster reduction is essential; this will be achieved through:

- Educational campaigns, using celebrations such as International Natural Disaster Reduction Day and other public events;
- Participation of the mass media at joint meetings, briefing workshops, and above all, through open and joint dialogue;

- Emphasis on including disaster prevention and preparedness in school curricula . . . a slow but powerful process.

***Increase political support and commitment:*** The IDNDR should not only stimulate more scientific and technical activities, but raise the level of political commitment for prevention and mitigation measures despite the lack of immediate or obvious returns.

To consolidate the progress achieved at the World Conference on Natural Disaster Reduction in Yokohama, the following actions can be taken:

- Brief elected officials and, in particular, the legislative bodies at national, subregional, and regional levels; stressing the link between socio-economic development and disaster reduction.
- Discuss natural disaster reduction policies and priorities periodically with subregional and regional political bodies;
- Organize regional conferences to maintain a high level of political visibility of the topic. In particular, PAHO/WHO, with other interested regional and global organizations, will convene a regional meeting on mitigating damage to hospitals and other critical health facilities.

***Disseminate technical knowledge:***

Much scientific knowledge and know-how is not sufficiently shared with those responsible for formulating and implementing disaster reduction policies and strategies. Although Latin America and the Caribbean are placing more emphasis on the development of human resources, regional preparatory meetings should:

- Compile and disseminate successful pilot projects and other achievements at local or national levels;
- Expand the existing regional or national disaster documentation centers using a multisectoral and multi-agency approach, to facilitate free access to existing documentation;
- Strengthen existing networks of scientists by increasing the participation of practitioners;
- Include disaster reduction in the curricula of academic institutions, schools of engineering and architecture, faculties of medicine, etc.;
- Reduce duplication, and fill existing gaps of training activities undertaken by bilateral, regional, or global agencies.

***Emphasize the social dimension through local participation:***

Political commitment and scientific knowledge do not guarantee the reduction of community vulnerability to natural disasters. Those attending the Cartagena Inter-American Conference were committed to the social dimension of disaster reduction by:

- Involving local communities in practices that reduce their vulnerability;
- Promoting scientific findings that translate into effective policies;
- Improving understanding of natural hazards, and the relationship between behavior, development, and disaster reduction.

***Strengthen institutions through multisectoral participation:*** The trend from centralized relief-oriented institutions toward multisectoral natural disaster reduction efforts will be encouraged and will require:

- Promoting the participation of government development institutions;
- Decentralizing governmental agencies to involve communities and their leaders in decision making;
- Providing a legal framework for disaster prevention, mitigation, and preparedness;
- Creating disaster committees in national parliaments and discussing disaster mitigation in subregional or regional parliamentary consultative bodies.

***Recognize interdependence***

***between countries:*** Solidarity and cooperation traditionally are strong in Latin America and the Caribbean in times of catastrophe. Now a common purpose is emerging: to prevent the occurrence of a disaster. To achieve this, countries will need the following during the remainder of the IDNDR:



**MAP OF LATIN AMERICA AND THE CARIBBEAN**



- i Frequent contacts between officials of neighboring countries at periodic meetings; informal technical consultation and exchange of information on a routine basis; and use of modern communications, such as electronic mail;
- i Support from the Ministries of Foreign Affairs to incorporate disaster reduction into existing or upcoming inter-country agreements;
- i Increased collaborative efforts in border areas exposed to natural disasters such as volcanic eruptions or earthquakes;
- i Support and leadership from regional or subregional institutions.

***Emphasize the link between urbanization, development of human settlements, and increased vulnerability:*** Regional urban regulatory plans and land-use laws do not always require the analysis of natural disaster risk when creating development plans. To correct this, countries should:

- i Include risk analysis and natural hazard data in land regulation plans supported by UNHCS (HABITAT), the OAS, and others;
- i Include the topic at national and inter-governmental meetings, commissions on housing and human settlements, and place it on the agenda of the World Conference, *Habitat 2*, in 1996.

***Pay greater attention to the causes and effects of flooding and landslides***, which place a heavy burden on the countries and have not received a proportionate share of attention, by:

- i Making systematic studies of the causes and effects of floods and landslides on agriculture and human settlements at the national and regional levels;
- i Creating integrated flood control programs, including Ministries of Agriculture, hydrometeorological institutes, municipalities, the housing sector, and others.

In the same way that current achievements of Latin America and the Caribbean have been the result of a process started long before the proclamation of the IDNDR, the drive toward reducing the effects of natural disasters as an explicit objective and requirement of the development process will not end with the Decade.

In Latin America and the Caribbean, the notion that the factors involved in natural disaster reduction are the same as those that influence socioeconomic development is gaining widespread acceptance. This is to the credit of the IDNDR. And, it is not surprising that the two go hand in hand, since it is impossible for one to advance without the other. To achieve disaster prevention and mitigation without socioeconomic development and political maturity in a society is not possible. Nor can sustainable development be achieved without reducing the vulnerability of people and nations to disaster. ♦