

A WORLD SAFE FROM NATURAL DISASTERS

**The Journey of Latin America
and the Caribbean**



Pan American Health Organization
Pan American Sanitary Bureau, Regional Office of the
World Health Organization



International Decade for Natural Disaster Reduction
Regional Office for Latin America and the Caribbean

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FOREWORD

The 1990s has been declared the International Decade for Natural Disaster Reduction (IDNDR). The mid-point in this International Decade and the World Conference on Natural Disaster Reduction provide a golden opportunity to showcase the progress of Latin America and the Caribbean in reducing the impact of disasters on life and property. It is also an appropriate time to suggest areas in need of additional attention at the national level during the second half of the Decade and beyond.

During the first half of the IDNDR, each country in Latin America and the Caribbean made significant progress in the field of disaster management, or as we call it today, disaster reduction. However, this journey toward a safer Region by no means began in 1990.

The principal purpose of this publication is to remind policy makers and the international community that a modest but sustained investment in disaster reduction in Latin America and the Caribbean has saved, and will continue to save, in a non-dramatic but effective way, a large number of lives and avoid tragedies which would otherwise drain resources for humanitarian assistance. A second purpose is to share the optimism and enthusiasm of disaster professionals at witnessing a slow but steady evolution in the Region from the fatalistic acceptance of disasters to the determination to take steps to avoid them whenever possible or minimize their effects through long-term disaster reduction planning.

Natural disasters will continue to impact critical facilities such as hospitals and schools, public infrastructure and housing. However, we can reduce the vulnerability of our communities to these natural hazards, that is, the potential losses can be dramatically diminished, by selecting safer locations and improving design and construction techniques and, most importantly, by ensuring that development decisions impact positively on vulnerability. The technical knowledge necessary to reduce risks from natural disasters has been available for some time.

The most lasting effect of the IDNDR could and should be to establish a disaster prevention culture in which safety from disasters is recognized as a basic requirement of individuals and of society in order to attain a complete state of physical and mental well-being or, in other words, health, as defined by the Alma-Ata Conference of 1978.



Carlyle Guerra de Macedo
Director
Pan American Sanitary Bureau

ACKNOWLEDGEMENTS

A myriad of people, initiatives and projects have fashioned the disaster management programs in this Region. No single agency or expert can possibly have an overall view of the multisectoral field of disaster prevention, mitigation, and preparedness. This publication attempts to outline broad trends and highlight the most significant events that have marked the long journey of the countries of Latin America and the Caribbean toward safety from disasters. Unfortunately, most of these significant events have been tragedies that caused loss of life and property—tragedies that were preventable.

This document is the result of a collaborative effort of the staff of the IDNDR Office for Latin America and the Caribbean and the Emergency Preparedness and Disaster Relief Coordination Program of PAHO/WHO. They have been assisted by literally hundreds of officials in the countries, experts, and representatives of agencies who dedicated their time and effort, provided data and documentation, met with consultants and laboriously reviewed the draft circulated at the Inter-American Conference in Cartagena, Colombia, in March, 1994. Every effort has been made to acknowledge specific sources of information. We apologize should any contributor or contribution not be properly recognized.

Again, without the support and cooperation of disaster experts and officials throughout Latin America and the Caribbean, the United Nations system, and bilateral and regional organizations, neither the progress achieved toward disaster reduction in Latin America and the Caribbean during the last 15 years nor, consequently, this book would have been possible.

Claude de Ville de Goyet
Editor-in-Chief

DEDICATION

This book is dedicated to the scientists who lost their lives in the eruption of the Galeras Volcano, one of the seven “Volcanoes of the Decade”, in Colombia in 1993, as well as to the nationals in Latin America and the Caribbean who have enthusiastically dedicated their professional lives to promoting disaster prevention and preparedness in their countries.

Disasters

*When I arrived in Curacaután
it was raining ash
because the volcanoes willed it.*

*I had to detour to Talca
where they had grown so wide,
those tranquil rivers of Maule,
that I fell asleep on a boat
and went to Valparaíso.*

*In Valparaíso the houses
were falling around me
and I ate breakfast in the wreckage
of my lost library
between a surviving Baudelaire
and a dismantled Cervantes.*

*. . . I made my bed next to a river
that carried more stones than water,
next to some serene oaks,
far from every city,
next to stones that were singing,
and finally I was able to sleep in peace
in certain terror of a star
that was watching me and winking
with a certain malignant insistence.*

*But the gentle morning
painted the black night blue
and the enemy stars were swallowed by light
while I sang peacefully
with no catastrophe and no guitar.*

PABLO NERUDA

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NO SHORTCUTS TO DISASTER REDUCTION

Both natural hazards and the disasters they can turn into, are an integral part of the history of the American region. From Mexico to Chile, earthquakes and tsunamis claim hundreds of thousands of victims and cost billions of dollars. In the Caribbean Basin, the hurricane season regulates the lives of millions, overshadowing other risks such as earthquakes and volcanic eruptions which, over the centuries, have also left their mark on these island nations.

Latin America and the Caribbean are regions with histories of frequent and devastating natural disasters, with a population and economic future at risk, and yet with the human resources and institutions necessary to cope and move forward. Universities with centuries-old traditions of academic excellence produce well-trained scientists and researchers, seismologists, meteorologists, engineers, architects, urban planners, economists, and public health physicians. Research and monitoring institutions have spent decades gathering and disseminating seismological and meteorological data. The countries have been and continue to be ideal laboratories in which to study the evolution of disaster management over the last decades and to develop solutions beneficial not only to the Americas but to all countries that share a tendency toward natural catastrophes.

In spite of the economic crisis of the

1980s which seriously affected socioeconomic progress in Latin America and the Caribbean, presently the Region is in a better position than many other regions of the world. However, its vulnerability to natural disasters is an issue that must be resolved. This vulnerability is particularly troubling, considering that rapidly industrializing countries such as Mexico and Brazil have made significant capital investments in infrastructure in highly vulnerable areas, or considering that the Caribbean tourism industry, one of the most developed and modern in the world, is at the mercy of hurricanes each year. This level of development achieved over the years, thanks to an increasingly stable social climate and democratic institutions in most countries, must be protected from natural disasters.

FROM AD HOC RESPONSE TO PREPAREDNESS

4 February 1976, the turning point for Latin America . . . An earthquake measuring 7.5 on the Richter scale strikes Guatemala. In more than one-third of the country, adobe houses with heavy tile roofs, a legacy of the Spanish conquest, collapse in seconds on the sleeping inhabitants. An estimated 23,000 persons are dead or missing. The picturesque allure of the countryside is transformed into a tragic scene that shocks the world. This comes six years

Photo facing page:

Few people will question the wisdom of protecting lives and economic investment from the impact of natural hazards. But the countries of Latin America and the Caribbean have learned that there are no shortcuts to disaster reduction—the road is long and winding, but it is worth the challenge.

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after an earthquake in Peru left more than 60,000 dead.

In September 1979, Hurricane David devastates the economy of Dominica, a small Caribbean island with 90,000 inhabitants. From a global perspective, this may be considered a disaster of modest proportions because of the low number of fatalities; however, the hurricane leaves 80% of the population homeless. Many consider this the turning point for the Caribbean.

In these two instances, the public and private sectors—governmental and international—generously and spontaneously mobilized to assist the victims. But certain shortcomings quickly became obvious: the lack of preparedness and training of key sectors, the weaknesses in existing legislation, and the inadequacy of the national response mechanisms traditionally based on the concept of a military chain-of-command rather than dialogue and coordination in the civilian sector. The days when governments could simply assign responsibility for disaster management to the military and then forget it had passed. The health sector, an early responder in large-scale disasters, was the first to realize that the way to improve its own performance was through civilian planning and training. The era of ad hoc response had been replaced by the era of preparedness.

As is often the case, national resolve materialized first in the form of an internationally crafted resolution. In 1977, the Ministers of Health of the Western Hemisphere instructed the Pan American Health Organization, Regional Office of the World Health Organization (PAHO/WHO), to establish a regional disaster preparedness program to benefit the health sector. Soon, with the financial

support of Canada, the United States, and select European countries, this program enabled the countries to improve their readiness. In rapid succession, the program went from a period in which PAHO/WHO masterminded and carried out disaster preparedness activities in the health sector, to a transition phase during which the Organization was associated to some degree with significant events, to the present, in which the countries themselves manage the activities. Today, no single agency can even inventory, much less monitor, the many preparedness initiatives and achievements of the health sector in the Region.

FROM PREPAREDNESS TO PREVENTION

Mexico, 19 September 1985: One of the largest metropolitan areas in the world is hit by a severe earthquake, putting the recently created metropolitan emergency plan to an exacting but successful test. There are conflicting reports, but it is estimated that 10,000 lives are lost in Mexico City. Despite this, the response of the health services is remarkable, thanks to adequately trained personnel, the smooth evacuation of unsafe facilities, and the redistribution of casualty cases across the metropolitan system. However, preparedness alone is not always sufficient, and one striking event sheds light on both its potential and its limitations: the collapse of a modern wing of the Juárez Hospital caused the death of patients as well as doctors and nurses who, ironically, were among the nation's best prepared to respond to mass casualties. Preparedness can alleviate the effects of natural disasters; it can't stop them.

Colombia, 13 November 1985: The Nevado del Ruiz volcano, active for several months, erupts violently. Within an hour, a mudslide triggered by melting snow, gathers rocks and other debris as it makes its way down the slopes of the mountain, burying an estimated 23,000 people. Compounding the national tragedy, a bitter controversy divides scientists and politicians about whether the human losses could have been prevented. The fact that maps of the at-risk areas were available but people were not moved from them illustrates the growing gap between the academic knowledge of natural hazards and how this knowledge is translated into potentially life-saving, but costly, preventive measures.

A NEW FOCUS

These tragedies demonstrated clearly that vertically organized response operations to emergencies had limitations. Soon, both Mexico and Colombia established highly professional public institutions responsible for disaster prevention, mitigation, preparedness, and response. Other countries took similar steps. Costa Rica, a small nation with a constitution that forbids an army, strengthened its emergency commission, adding professionals experienced in urban planning, sociologists, engineers, and architects.

Regionally, PAHO/WHO redirected its disaster program to address the safety of health facilities and to promote comprehensive mitigation policies so that losses, such as those experienced at the site of the Juárez Hospital in Mexico, would not occur again. Similarly, the Department of Regional Development and Environment of the Organization of

American States (OAS) included a dynamic component on incorporating risk factors into the socioeconomic development of its member countries. The era of disaster prevention and mitigation had begun in Latin America.

In the Caribbean, despite different risks, a different culture, and a distinct disaster history, the countries nonetheless came to similar conclusions. In the aftermath of Hurricane David (1979), UNDRO, the Office of the UN Disaster Relief Coordinator (now the UN Department of Humanitarian Affairs – DHA), together with the Secretariat of the Caribbean Community (CARICOM), the International Federation of Red Cross and Red Crescent Societies, and PAHO/WHO, with support from bilateral agencies, established the Pan-Caribbean Disaster Preparedness and Prevention Project (PCDPPP). For nine years, this internationally funded project served all the countries of this subregion. A major achievement of PCDPPP was the development of a strategic group of professionals and decision makers who were sensitized to the need for a genuine local commitment to disaster management. Hurricane Gilbert in Jamaica (1988) and Hurricane Hugo in the eastern Caribbean (1989) acted as catalysts for the creation of a bona fide subregional response agency: the Caribbean Disaster Emergency Response Agency (CDERA).

Disaster Mitigation and Prevention and the IDNDR

In decades past, disaster management—or “disaster reduction” as it is now called—was never recognized as a professional activity or a scientific field in its own right. Often, those working in the field were labeled as well-intentioned amateurs. The advent of the



Photo: Gaggero, PAHO/WHO

The natural hazards that threaten the Region are many and varied. Often, the most vulnerable are those with the least economic resources. Hurricane Hugo damaged or destroyed an estimated 80% of the housing on the island of Montserrat in 1989, posing severe financial hardships on much of the population.

International Decade for Natural Disaster Reduction (IDNDR) changed that, providing practitioners at the national level with the international credentials they lacked. Gradually, the Decade has weeded out those practitioners—amateurs and professionals—who have failed to master new methods and techniques, or who cling to the old ways of equating disaster prevention and mitigation with stockpiling equipment, blankets, and old clothing. The IDNDR's emphasis on engineering and planning sends a strong message that traditional systems geared for relief operations must be replaced with a more development-oriented structure.

This Region's vast experience in dealing with natural hazards has taught it that there are no shortcuts to disaster reduction. Rather, countries must journey along a winding path of sustainable development, a path where progress is made as countries recognize that disaster management is more than a simple logistic exercise. It is a development and planning responsibility, a responsibility calling for multidisciplinary collaboration. In Latin America and the Caribbean, the path from ad hoc response to preparedness and later to prevention and mitigation has been the result of a long maturation process. There are no easy shortcuts on the road from a careless society to a responsible adult nation.

Disaster reduction is too serious a matter to leave to the experts, be they scientists or disaster managers. The most important contribution of the IDNDR in Latin America and the Caribbean has been to accelerate the transition into the new era of integrated disaster reduction and development, where the entire society cooperates in reaching a common objective: building a safer world for all. ♦