
BOMBERO
ARAGON
REACCION

THE WAKE-UP CALL: FROM IMPROVISATION TO RESPONSE PLANNING

Photo Gaggero PAHO/WHO

During the past five centuries, dating back to the earliest recorded accounts, nature has struck the Americas with fury in one of many forms—an earthquake, a volcano, a hurricane—and has left in its wake destruction, which rapidly subsides and is subsequently forgotten, even by those who suffer its consequences. It was common to believe that natural disasters were simply that—acts of nature—and as such, were unpredictable and uncontrollable, merely events to be endured. To plan for disasters that may never happen was thought to be folly. Inevitably though, nature's wrath did return, bringing with it devastation. The visits seemed random but were actually routine—regular enough to warrant preparing for them. To convince people that planning could counteract many of the effects of nature was to win half the battle.

Photo Vizcarra PAHO/WHO

The reality of the Americas until the early 1970s was this: When disaster did strike, relief was provided with a great deal of generosity and solidarity, but in an improvised and uncoordinated way. Sectors providing relief competed rather than cooperated with each other. The lack of coordination led to an international response that was neither technically appropriate nor culturally sensitive.

With each passing year, as the size of the at-risk population grew and its dependency on essential services such as water, electricity, communications, roads, and airports increased, disaster response, which included immediate relief, rehabilitation, and reconstruction operations, became more commonplace and more complex.

During the last 25 years, the large-scale disasters experienced by the countries of Latin America and the Caribbean forced them to recognize the need to better organize their response and to deal with the usual problems that accompanied disasters: rescuing the survivors; treating the injured; putting out fires, controlling leaks of hazardous materials; providing shelter, water, and food to the affected population; evacuating people to safer places; reestablishing communications; maintaining security and public order, and identifying and disposing of bodies.

Several of these disasters brought to light what was wrong with a response that was organized in an ad hoc fashion. For example, when the exclusive authority for disaster response was assigned to agencies responsible for internal and external security, without the full participation of the rest of the nation, a period of chaos often ensued. Overemphasis on "law and order" was often the antithesis of coordinated action and effective management. At the same time, the survivors were over-

Photo facing page.

The force of the 1985 earthquake in Mexico ruptured gas lines, the ensuing fires were an additional cause of damage to buildings.

whelmed by the sometimes counterproductive rush of local, national, and international agencies whose goodwill often exceeded their mandate to provide assistance.

The response phase to disaster is complex, because in addition to the number of organizations that are involved, the greatest problems lie in making decisions under uncertain circumstances. Matters become even more complicated when agencies, unsure of their roles even in normal times, undertake operations that interrupt rather than coordinate the efforts of all the groups involved.

THE EVOLUTION OF NATIONAL RESPONSE ORGANIZATIONS

During the 1980s, civil defense organizations began to include disaster preparedness for the public in their activities.

The official response to disaster in Latin America and the Caribbean has steadily improved. Early on, emergency response was dominated by a country's armed forces, national Red Cross or in the case of English-speaking territories in the Caribbean, by the governor. Today's response involves civil defense or disaster response agencies, usually functioning under the Ministries of Defense or Interior. These agencies organize and coordinate the country's disaster response as well as maintain public order and national security.

Despite improvement in emergency situations, between 1970 and 1985 many civil defense systems had a tendency—understandable under military regimes—to confuse "coordination" with "command." This confusion provoked conflicts regarding their role and led to an ineffective use of health sector and other public sector resources. Governmental and nongovernmental institutions vied to play a leading role and thus gain national and international recognition.

One of the success stories in terms of a government response took place in the Huaylas Canyon disaster in Peru in 1970, during which the civil defense demonstrated their effectiveness, delegating "first responder" responsibilities to the Armed Forces in this remote and inaccessible area of the country. Medical personnel, paramedics, and drugs were on the ground four days after the earthquake, when a Hercules plane belonging to the Peruvian Air Force circled the area and dropped by parachute 50 soldiers, 4 doctors, and 7 nurses on the area—the only health personnel trained in parachuting in the country.

During the 1980s, civil defense organizations began to include disaster preparedness for the public in their activities. As they engaged in preparing plans and programs to manage disasters, they became more capable and equipped to train personnel in many sectors and expand their organization from the local to the regional levels.

Toward the mid-1980s, national-level agencies and organizations with a role in responding to disasters joined together, and with the technical support of international organizations (including PAHO/WHO, UNDRO, the Office of U.S. Foreign Disaster Assistance [OFDA/USAID], UNESCO, and others), identified priority areas in order to avoid duplication of activities. In most cases, the civil defense institutions recognized the need for the public to participate more actively and become better prepared to face disasters.

Box 4.1

HUAYLAS CANYON: THE WAKE-UP CALL

The 1970s began for the Region with a devastating earthquake in the Huaylas Canyon in Peru. The quake, which occurred on 31 May 1970 and measured 7.5 on the Richter scale, had its epicenter on the coast near the towns of Chimbote and Huarmey. The cities of Huaraz, Caraz, and Aija in Huaylas Canyon were destroyed, and other important coastal cities such as Trujillo and Chimbote also suffered significant damage.

The ruin did not stop there. The huge quake dislodged the northern wall of the snow-capped Huascarán mountain, triggering a mudslide that dragged along with it 80 million tons of snow, rocks, and mud as it descended upon the town of Yungay.

Survivors from the affected area worked to rescue the injured and bury the dead in the very first hours after the quake, as roads in this remote area were destroyed and assistance could not arrive from Lima and other coastal cities.

Less than two hours after the quake, the Huaraz Regional Hospital, with a normal capacity of 150 patients, had already received 600 seriously injured patients with multiple trauma injuries and serious fractures. The lack of adequate prior planning challenged the imagination and creativity of the local health authorities in dealing with a problem of this magnitude, given the scarcity of medical personnel. They elected to perform triage, a new concept for these medical professionals.

Because the city remained without electricity and the hospital's electric plant was not operating, all surgical and emergency interventions were performed by candlelight, the candles donated by nearby convents and churches. Local authorities also solved the problem of an interrupted supply of drinking water by deciding that individuals who arrived at the hospital asking about family members would only be provided information if they brought with them a bucket of water from the river, a spring, or some filtered source, to be deposited in large cylinders set up for this purpose throughout the hospital. When the hospital's stock of medicines ran out, local police appropriated all medicines found in the rubble of the destroyed pharmacies in Huaraz.

The disaster in the Huaylas Canyon of Peru was the wake-up call for the Region. Although it gave the international community a great deal to think about, it did not lead to any decisive action.

Deaths: 67,000 ◆ Injuries: 150,000 ◆ Affected: more than 3 million

Rescue of survivors and recovery of bodies	Local personnel	Lack of personnel and equipment for removing debris
Treating the injured	Triage	Lack of medical personnel and paramedics
Lack of electricity	Candles	Insufficient candles
Interrupted drinking water supply	Water provided by family members	Water not potable
Lack of medicines	Appropriated from local pharmacies	Stocks were quickly exhausted
Housing for survivors	Return to the rubble and set up temporary housing	Tents not apropriate for the climate
Distribution of food	Community organization by sector and camp	Dissatisfaction in donor community because they could not deliver food aid directly
International relief missions were not self-sufficient	Depended on items meant for victims or depended on victims themselves	Depleted the donated goods and became a burden for the survivors
Relief missions were unfamiliar with language	Interpreters	Difficulty in communicating with survivors placed limitations on providing opportune and appropriate aid

Source: CRYRZA 1971

Box 4.2

GUATEMALA EARTHQUAKE: THE MAGNITUDE OF THE AFFECTED AREA PRESENTS A CHALLENGE

GUATEMALA

In the early pre-dawn hours of 4 February 1976, Guatemala was rocked by an earthquake measuring 7.5 on the Richter scale. Once again, needs during the first critical days following the disaster were spontaneously met by the very survivors and by the national authorities, with their own resources. Because in this situation it was easy for people from neighboring countries in Central America and Mexico to reach Guatemala during the search and rescue phase, the country received support in first aid.

The damages caused by the earthquake awakened a spontaneous national reaction worthy of commendation, and the large amount of international relief undoubtedly served the country in its short-term recovery efforts.

The National Emergency Committee (CONE), created in 1969, worked with dedication, although the lack of preparedness on the part of many sectors and the absence of experience in intersectoral planning caused the response to be more improvised than coordinated. CONE's contingency plans did not allow for meaningful participation of the civilian sector and were not designed for an emergency of this magnitude.

This disaster served as a second warning for the international community, but in this case, the health sector at the regional level did respond adequately.

Deaths: 23,000 ◆ Injuries: 77,000 ◆ Affected: 3.7 million

Destruction of health infrastructure	Care provided in improvised hospitals	Insufficient human resources and equipment
Problems of organization in the governmental response to the disaster	Direct command by the President and the Armed Forces	Dissatisfaction among population
Excessive amounts of unsolicited international aid	Multiple points of distribution	Perishable food spoiled and clothing inappropriate for the climate was wasted
Inappropriate temporary housing ("igloos")	Survivors stayed in the ruins of their homes or used tents	Igloos were not used and thus wasted

Source: PAHO/WHO

THE EVOLUTION OF INTERNATIONAL ASSISTANCE

Thanks to the rapid growth of communications technology, today news of major disasters today spreads worldwide in a matter of minutes. One cannot underestimate the effect—for good and for bad—this speed has had on international response. Quick communication about disasters permits organizations to act immediately to offer relief. But this same quick communication is often incomplete and can encourage inappropriate actions based on erroneous information.

The earthquakes of Peru (1970) and Guatemala (1976) in Latin America, and Hurricane David (1979) in Dominica were the turning points in transforming the response of the countries of the Region—from improvised to better prepared—just as the 1970 cyclone in Bangladesh (in which 250,000 people died) and the earthquake in Nicaragua (1972) served to trigger similar changes at the international level (see boxes 4.1-4.4).

Box 4.3

HURRICANE DAVID, DOMINICA: DIFFERENT PROBLEMS IN SMALLER COUNTRIES

Photo de Ville de Soyet PAHO/WHO

On 29 August 1979 Hurricane David, considered one of the worst storms of this century with winds that surpassed 250 km per hour, lashed the island of Dominica in the Caribbean. As a result, 38 people died and more than 3,000 were injured, even though the regional media had alerted the population. Dominica was practically destroyed: the roads, all means of communications, the island's energy, and drinking water supply were interrupted, most dwellings were left without roofs; and agriculture and livestock were seriously affected.

Because the government's normal administrative services were critically affected, a Relief Committee was formed. The local response, although improvised, was excellent. Hurricane David sounded the first alarm bell for the countries of the Caribbean, which prior to this, had not paid a great deal of attention to the consequences of the earthquakes in neighboring Latin America. Smaller countries, and especially islands, learned from Hurricane David that they should resort first to neighboring countries for assistance. They also recognized that an inter-Caribbean mechanism for responding to disasters was necessary. The very positive result of this disaster was the creation of the Pan-Caribbean Disaster Preparedness and Prevention Project (PCDPPP).

Deaths: 38 ◆ Injuries: 3,000 ◆ Affected: 81,000

Transportation routes interrupted	Assistance from neighboring islands	Economic losses
Communications and electric energy interrupted	Emergency power plants	Food spoiled and vaccines ruined
Failures in distribution of drinking water	Population instructed to boil water	Increase in gastrointestinal illnesses
Roofs blown off houses	Temporary housing and tents	Increase in respiratory illnesses
Difficulties in providing medical care	National and international health brigades	Increase in overall rate of morbidity

Source: U. Reid, 1980

Any large-scale disaster will show what still happens, in spite of a country's readiness, when international aid does not respond to specific needs.

The Earthquake in Nicaragua

Two years after the tragedy in Peru's Huaylas Canyon, shortly before Christmas of 1972, an earthquake shattered Nicaragua. The international community reacted with great solidarity and assistance came quickly and spontaneously, especially from neighboring countries.

However, the response was difficult for Nicaragua; the civil agencies, suffering serious losses, were late in getting organized. When they did, the response was uncoordinated. As more information on the effects of the earthquake became known, other countries began to send all types of assistance, most of which had not been requested. This inundation of supplies created serious problems in terms of classification, storage, transportation, and distribution. Most of the well-known anecdotes on inappropriate international assistance come from the experience of this earthquake: winter clothing sent to a tropical country, perishable foods unfamiliar to the local population, transport of the injured outside the country without documenting the cases, the construction of insulated "igloos" in a warm climate, to name a few.

At the same time, the emergency situation itself helped to break down barriers, and many positive examples of international solidarity occurred. An example of humanitarian concerns prevailing over political differences was the mobile hospital erected in Managua by the government of Cuba, even though the two governments did not maintain diplomatic relations.

The earthquake in Nicaragua showed the international community the problems of an inappropriate natural disaster response, but knowing the problems didn't automatically produce solutions. In 1976, when another major earthquake struck Guatemala, patterns of international assistance had changed little, and many of the same errors made in Nicaragua were repeated. Improvisation and an absence of planning for the response resulted in wasted external aid.

Regional organizations, PAHO/WHO in particular, saw that they faced a double challenge: (1) to offer technical cooperation in disaster preparedness for the countries of this Region and (2) to coordinate health assistance (within the framework established by UNDRO, mandated by a resolution adopted by the U.N. General Assembly after the cyclone in Bangladesh). As a result of the 1976 Guatemala earthquake, the Ministers of Health of PAHO's Member Countries requested that the Director create the Emergency Preparedness and Disaster Relief Coordination Program (Resolution X, Directing Council XXIV). The health sector in Latin America and the Caribbean thereby set the example of integrating public services with the civil sector in disaster preparedness at the regional level.

However, creating regional mechanisms for coordinating international response and establishing national preparedness programs alone do not guarantee reform in international assistance; international organizations have their own dynamics which are not always relevant to the needs of victims of disasters. Any large-scale disaster will show what still happens, in spite of a country's readiness, when international aid does not respond to specific needs.

The Earthquake in Mexico

In September 1985 Mexico suffered a catastrophic earthquake measuring 8.1 on the Richter scale. Hardest hit was the capital, Mexico City. There, in spite of having effective national plans in place

Box 4.4

NICARAGUA

EARTHQUAKE, NICARAGUA, DECEMBER 1972

Dead: 10,000 ◆ Injuries: 20,000 ◆ Affected: 400,000

Destruction of health infrastructure	Care provided in improvised hospitals	Insufficient human resources and equipment
Problems of organization in the governmental response to the disaster	Direct command by the President and the Armed Forces	Dissatisfaction among the population
Deficiencies in classifying injuries	Evacuation to neighboring countries	Repatriation of the injured and flaws in record keeping
Excessive amounts of unsolicited international aid	Multiple points of distribution	Perishable food spoiled and clothing inappropriate for the climate was wasted
Reconstruction with insulated materials ("igloos")	Survivors stayed in the ruins of their homes or used tents	This inappropriate type of housing was not used and thus wasted
Incineration of unidentified bodies		Good forensic records were not kept

MEXICO

EARTHQUAKE, MEXICO, SEPTEMBER 1985

Dead: 10,000 ◆ Injuries: 30,000 ◆ Affected: 60,000

Destruction of health infrastructure	Transfer to other hospitals	Families had difficulty locating patients
Problems of organization in the governmental response to the disaster	Direct command by the President and the Armed Forces	Dissatisfaction among the population
Excessive amounts of unsolicited international aid	Multiple points of distribution	Duplication of donations and difficulties in delivering to needy population
Distribution of drinking water deficient	Distribution by water tank trucks and repair to broken mains	Increase in gastrointestinal illnesses
Final disposition of bodies	Maintaining cadavers in dry ice until identified	Decomposition of bodies and dissatisfaction among family members
Collapse of housing structures	Use of own resources and international aid	Insufficient human resources and machinery to remove debris

Source PAHO/WHO

and trained people to carry them out, international aid was disruptive and hampered rather than helped the national response.

Almost 12 years after the earthquake in Managua, and 9 years after the one in Guatemala, the Mexican government was prepared and provided an organized approach to the disaster. Immediately, hundreds of rescue and relief brigades mobilized, both official and spontaneous, and fanned out to the various points of destruction. At the institutional level, triage and emergency care teams were organized to cope with the situation. Although Mexico had a National Emergency Plan under the direction of the Armed Forces, the President of the Republic established two emergency commissions at the national and city levels.

International assistance was offered only hours after the disaster struck. Nevertheless, despite official requests for specific needs—specialized search and rescue teams for trapped victims; equipment and supplies for second and third level hospitals, particularly for operating rooms, recovery rooms, and intensive care units, refrigeration devices—more than two-thirds of the donated shipments consisted of unsolicited drugs, food, used clothing, blankets, and other low priority items. The international community realized that a strategic plan was needed to avoid these costly mistakes.

NEW IDEAS FOR ANSWERING AN OLD CALL

As a result of experiences in Latin America and the Caribbean in responding to disasters as well as in managing the associated flood of international assistance, a high-level meeting was held in 1986 in San José, Costa Rica, to set guidelines for the donor community on what constitutes effective international health relief assistance and how to provide it (see chapter 5).

The approach to requesting international assistance was improved notably beginning in 1988, when personnel from

Box 4.5

VENEZUELA: INTEGRATED EMERGENCY RESPONSE

Venezuela's Integrated Emergency Response System, an initiative of the country's Ministry of Health and Social Assistance, brings together a number of the country's important public services through a single emergency telephone communication system. The system is activated by dialing 171. The objective of the system is to coordinate and improve the response to emergencies of these agencies: the national telephone company, the Ministry of Health, the Fire Department of Caracas and Sucre, the metropolitan police, the municipal governments of Caracas and Sucre, and the Venezuelan Institute of Social Security.

The system was originally designed to respond to medical emergencies caused by fires, explosions, landslides, hazardous materials incidents, traffic accidents or collapsed structures in five of the nation's municipalities. Following an evaluation of the performance of the institutions involved during the first phase, a decision will be taken to expand the system to meet growing needs by including the participation of other institutions such as the Ground Transportation Authority, the National Guard and the Electric Company of Caracas.

Source: Ministry of Health, Venezuela

Photo: Vizcarra, PAHO/WHO

Due to the widespread devastation caused by the eruption of the Nevado del Ruiz volcano in Colombia, the injured had to be airlifted to hospitals in neighboring cities.

the Ministries of Foreign Affairs began participating in regional preparedness activities. They focused on the role of diplomatic and consular missions in both donor and recipient countries during the response phase of disasters. The improvement was seen following the 1991 earthquake in Peru. The coordinated response of Chile and Peru provided a successful example of disaster planning. Chile waited to receive an official list of needs, and when it arrived, provided assistance within 72 hours of the disaster. This operation was directed by the chanceries of both countries, using their military transport and their respective civil defense agencies (ONEMI in Chile, and the Peruvian Civil Defense). Both Ministries of Health coordinated the technical operations.

CONCLUSIONS

The response to disasters, both by the nations affected and from the international community, has gradually improved in Latin America and the Caribbean in the last 30 years (see Box 4.5). The relief phase is no longer spontaneous, disorganized, or uncoordinated; response is now based on advance plans that have been tested and validated. The active participation of governmental organizations and international agencies means that international assistance is no longer as necessary in the immediate response phase but can be better utilized in the rehabilitation and reconstruction stages. This transition, accomplished in a relatively short period of time, is a result of the institutionalization of disaster preparedness programs, initially in the Ministries of Health, and later in other governmental offices. Today, disaster preparedness programs are being carried out in the entire Region. ◆

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