directing council

PAN AMERICAN HEALTH ORGANIZATION

regional committee

WORLD HEALTH ORGANIZATION

XXXI Meeting

XXXVII Meeting

Washington, D.C.
September-October 1985

Provisional Agenda Item 30

CD31/18 (Eng.)
31 July 1985
ORIGINAL: ENGLISH

EMERGENCY PREPAREDNESS AND DISASTER RELIEF COORDINATION

After discussion and consideration of the topic "Health in Cases of Disaster and Emergencies," the 95th Meeting of the Executive Committee adopted Resolution XXII on the subject. The Executive Committee reviewed Document CE95/14, Rev. 1, which, in line with the Committee's discussions, has been revised (see Annex).

Resolution XXII of the 95th Meeting of the Executive Committee is presented below for the consideration of the Directing Council:

THE 95th MEETING OF THE EXECUTIVE COMMITTEE,

Having seen the document presented by the Director on the progress of regional and national emergency preparedness programs (Document CE95/14),

RESOLVES:

To recommend to the XXXI Meeting of the Directing Council the adoption of a resolution along the following lines:

THE XXXI MEETING OF THE DIRECTING COUNCIL,

Having seen the document presented by the Director on the progress of regional and national emergency preparedness programs (Document CD31/18);

Considering Resolutions X, XXXVI and XL of the XXIII, XXVI and XXVII Directing Council meetings, respectively, on the Emergency Preparedness and Disaster Relief Coordination Program;

Being aware of the increasing vulnerability of the Region of the Americas to negative health consequences of all types of disasters, and in particular those resulting from industrialization and urbanization processes;

Concerned about the need to maintain the technical cooperation provided by the Organization independently from the support received by PAHO from funding agencies;

Stressing that it is the national responsibility of each Member Government and especially of the Minister of Health as head of the sector to establish, as recommended by the Directing Council in its XXVI Meeting, a continuous emergency preparedness "program to update emergency plans, train health personnel, and promote research" on health aspects of all types of emergency situations caused by natural, technological or man-made disasters; and

Noting the importance of maintaining close cooperation between the Organization and other regional or global programs of WHO, UNDRO, UNHCR and nongovernmental organizations,

RESOLVES:

1. To urge Member Governments who have not done so to establish within the Ministry of Health an emergency preparedness and disaster relief coordination program responsible for continuously updating emergency plans, training health personnel, developing national guidelines and coordinating within and outside the sector.

2. To recommend to Member Governments that they cooperate with the Director in reinforcing the technical resources available to them for cooperation with other countries in preparing for disaster cases.

3. To request the Director to consider measures to maintain and increase the Organization's regular support to national programs.

4. To request the Director to strengthen, if possible, the Organization's technical cooperation and coordination in preparing the health sector to respond effectively to health problems caused by technological disasters, such as explosions and chemical accidents, as well as by displacements of large population groups caused by natural or man-made disasters.

5. To request the Director to explore the availability of additional funds from extrabudgetary sources and to continue the Organization's efforts to ensure that disaster prevention and preparedness be an integral part of the activities of the technical programs and professional staff of the Organization.

6. To encourage the Director to pursue his policy of joint activities and close cooperation with other regional offices of the World Health Organization, UNDRO, UNHCR, bilateral organizations and nongovernmental organizations, whenever appropriate.

7. To ask the Director to report on progress made towards compliance with this resolution at the Directing Council meeting in 1987.

Annex

executive committee of the directing council

PAN AMERICAN HEALTH ORGANIZATION

working party of the regional committee

WORLD HEALTH ORGANIZATION

95th Meeting
Washington, D.C.
June 1985

Agenda Item 25

CE95/14, Rev. 1 (Eng.)
31 July 1985
ORIGINAL: ENGLISH

HEALTH IN CASES OF DISASTER AND EMERGENCIES

In 1976 and 1980 the Governing Bodies of the Pan American Health Organization requested the Secretariat to provide the Member Governments with a program intended to prepare the health sector for the impact of natural and technological disasters.

In response to the request of the Government of Peru at the XXX Meeting of the Directing Council (1984), the Organization is reporting on the present status of the Disaster Preparedness and Relief Coordination Program carried out by the Secretariat and the Member Countries.

Although significant progress has been achieved in the Region, the health sectors of Member Countries have the responsibility to establish or strengthen their national emergency preparedness programs with appropriate mandates and resources.

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HEALTH IN CASES OF DISASTER AND EMERGENCIES

1. Definition of Terms

1.1 Emergencies and disasters often have different meanings for different persons or institutions. A common working definition will assist in clarifying the content of this document.

The manual of the World Health Organization defines an emergency as "any situation implying unforeseen, severe and immediate threats to public health."

Within the scope of this document, a disaster will be defined by our Organization as: "an overwhelming ecological disruption which exceeds the capacity of a community to adjust, and, consequently, requires assistance from the outside."

Characteristics of the community affected by an event must enter into our understanding of disaster. Failure to do so would disregard the fact that, for instance, the effects of a natural event may pass nearly unnoticed in a large nation, while a smaller event may be a major catastrophe for a small island in the Caribbean.

1.2 Disasters are divided into three categories based on their etiology:

Natural disasters: earthquakes, hurricanes, tornados, floods, droughts, etc. Although triggered by natural hazards, they are aggravated by socioeconomic factors.

Technological disasters: chemical accidents, fires, explosions, air crashes, etc. They are the unwanted but direct result of human activities such as, for instance, industrial development.

Man-made disasters: they are the direct price of armed conflict and social disturbances to the society.

1.3 Prevention measures are defined as measures aimed at impeding the occurrence of the natural event, for instance, construction of dams or levees for flood control. Hurricanes and earthquakes cannot be prevented with the technology presently available.

Mitigation measures are aimed at reducing the impact of the natural event. Building codes, for instance, will reduce losses in the event of earthquakes or hurricanes.

Preparedness measures are directed to enable individuals and institutions to respond rapidly and effectively to emergency situations created by any type of disaster. Such measures include formulating plans, training personnel, maintaining inventories of resources, etc.

2. The Region of the Americas and its Vulnerability to Disasters

2.1 Vulnerability to natural disasters

Most Latin American countries are vulnerable to natural disasters (earthquakes, hurricanes, floods, etc.). The consequences are immediate in terms of loss of lives and suffering and can create long-term setbacks in national development plans toward Health for All by the Year 2000. Although local material and human resources may be significantly greater in Latin America than in other Regions of WHO or the Caribbean, the magnitude of past disasters is considerable: Nicaragua 1972, 10,000 deaths; Honduras, 1974, 8,000 deaths; Guatemala, 1976, 23,000 deaths. The 1970 earthquake in Peru alone caused 67,000 deaths and approximately 150,000 casualties. This year, in Chile, the earthquake caused 150 deaths, 2,000 injuries and directly affected over 170,000 people.

The Caribbean area is exposed to hazards such as hurricanes (e.g. Barbados, 1955, Haiti, 1964, Dominica and Dominican Republic in 1979, Saint Lucia, Haiti and Jamaica in 1980), earthquakes (Trinidad and Tobago, Jamaica, Antigua), volcanic eruptions (St. Vincent and Guadeloupe), floods and landslides (most of the islands). The disruption caused by the natural event is magnified by the physical isolation of each country and the scarcity of local resources that can be potentially mobilized by the authorities.

Annex I illustrates the regional occurrence of earthquakes, hurricanes, floods and volcanic eruptions in the last 15 years.

2.2 Vulnerability to technological disasters

Vulnerability to technological disasters, such as chemical accidents, fire explosions, etc. is closely associated with industrial development and population density. Although it does not follow the clearly defined geographical pattern of natural disasters, before the year 2000 it is likely to become an increasingly critical public health concern in many of the Member Countries. T is is illustrated by the gas explosions in Mexico and Brazil and the air crashes in Ecuador and Bolivia, for example. The Region of the Americas is not immune to tragic events such as the chemical accident in Bhopal, India.

2.3 Refugees and displaced persons

The armed struggles and social conflicts troubling several Central American countries have caused the greatest dislocation and suffering

among traditionally disadvantaged groups, especially the rural poor. Social violence has forced hundreds of thousands of people to become refugees in foreign countries, searching for security and protection for their families. Hundreds of thousands more have fled their homes and now live as displaced persons in makeshift communities or temporary settlements within their own nation. Delivery of primary health care to these vulnerable groups is further complicated by the mosaic of international agencies, local or foreign voluntary organizations and pressure groups that in many instances contribute to a lack of accepted technical or administrative standards and coordination.

2.4 Disasters, disaster relief and development

Although the short-term effects of disasters are those that tend to impress public opinion and move the international community into action, their long-term impact on economic development and progress toward health for all by the year 2000 may be far more important and may still be felt a decade after the impact. Often, disaster relief and assistance efforts have lost sight of developmental issues. In some instances, they have actually contributed to the detrimental impact of the disasters on long-term progress.

3. Mandate of the Organization

3.1 In October 1976 the Directing Council of PAHO requested that the Director set up "a disaster unit with instructions to define the policy of the Organization, to formulate a plan of action for the various types of disasters, to make an inventory of the human and other resources available, to train the necessary personnel, to prepare and disseminate the appropriate guidelines and manuals, and to promote operational studies to meet the needs of the countries in disaster situations, and to ensure that this unit establish effective coordination with the United Nations Disaster Relief Coordinator, the International Red Cross, and other national and international bodies providing disaster assistance" (Resolution CD24.R10) (Annex II).

3.2 In 1979 and 1980, the Directing Council reviewed the preliminary progress of the Program established in 1977 and instructed the Director to strengthen its technical cooperation in the aftermath of a disaster and concentrate efforts on the training of national health officials in charge of Emergency Preparedness (Resolutions CD26.R36 and CD27.R40) (Annex II).

3.3 The Emergency Preparedness and Disaster Relief Coordination Program concentrates its efforts on preparedness (as defined in 1.3) for natural, technological and man-made disasters (as defined in 1.2). That is, PAHO focuses on preparing the health sector of Member Countries, as well as the Organization itself to play an effective role during and after emergency situations. To a lesser extent, support and cooperation

are also provided for the development of mitigation measures (for instance, improved design of health facilities, etc.). Prevention activities are generally outside the domain of health.

It should be noted that other organizational units are responsible for preparedness and response to emergency situations created by outbreaks of human disease or of zoonoses.

4. Objectives of the Program

The objectives of the Program are:

a) To promote and support the establishment of a technical unit, office or program in the health sector responsible for ongoing predisaster planning and training and, when applicable, management of the health aspects of emergency situations;

b) To promote the development of human resources in the health sector for a multidisciplinary approach to disaster management;

c) To stimulate cooperation between the Ministry of Health, other health institutions, the non-governmental organizations (NGOs) and the civil defense or similar institutions responsible for overall disaster coordination.

d) To improve the management of health problems following disasters by promoting a technically sound and rational response to objectively assessed emergency needs, in accordance with long-term development goals.

5. PAHO's Approach to Emergency Preparedness

5.1 Emergency preparedness activities should be regarded as an extension, during extraordinary times and circumstances, of PAHO's developmental effort in primary health care. Emergency preparedness activities are and should be complementary and supportive of the normal technical cooperation activities of the Organization. Emergency situations also have provided repeated opportunities for changes and innovations at country level, such as the establishment of communicable disease surveillance systems. An emergency preparedness program at regional and national level is, therefore, an essential component of the development process in the health sector and accordingly have received due attention in the organizational structure, staffing and budgeting process.

5.2 Disaster relief and, consequently, disaster preparedness are genuinely intersectoral activities. The regional and national programs should foster participation of other sectors and serve as a non-controversial bridge between all parties involved (private and public

sector, Ministry of Health and Social Security, governmental and non-governmental organizations, civilian and military, national and international communities). The placement of the program in the respective organizational flow charts at national level should facilitate contacts and cooperation within and outside the health sector. In addition to obvious benefits for disaster relief, such intersectoral coordination offers definite advantages for further cooperation in development activities. In the Organization, the Emergency Preparedness and Disaster Relief Coordination Program is under the direct supervision of the Assistant Director's Office to permit greater access to all programs, including those under Health Systems Infrastructure and Health Programs Development, as well as direct contact with higher levels of the Administration in case of emergencies.

5.3 Emergency preparedness is not the exclusive responsibility of disaster experts. It is an approach or state of mind that should involve all technical cooperation programs of the Organization. Regional and national programs should stimulate, coordinate and support the inclusion of emergency preparedness in the activities of other technical units, rather than implement activities on a vertical basis.

5.4 Emphasis is placed on dissemination of basic managerial concepts aimed at rational decision making in times of crisis, based on a more detailed assessment of emergency needs rather than on reliance on technology, stockpiles and sophisticated, voluminous and untested contingency plans. At regional level, the development of a "critical mass" of health professionals familiar with the general principles of emergency management has precedence over the formulation of high technology solutions to scientifically challenging problems.

6. Program Components

The Emergency Preparedness Program is divided into components, as follows:

a) Technical cooperation to national programs
b) Development of training/educational material
c) Training in environmental health
d) Hospital disaster preparedness
e) Assessment of health needs following sudden impact disasters
f) Technological disasters
g) Overall program management and supervision.

7. Progress Report on the Regional Program

7.1 Technical cooperation to national programs

Since the inception of the program, PAHO has dedicated most of its resources to the establishment and strengthening of national disaster preparedness programs in the health sector of disaster-prone countries.

It is encouraging to note the increasing role national counterparts have played in setting priorities and allocating the resources of the regional program. In the late seventies, most health preparedness activities taking place in the Region were initiated by the Organization.

The responsibility for planning and providing technical cooperation to national programs lies with three subregional advisors, one stationed in Costa Rica for Central America and Panama, one in Peru for South America, and one in Antigua, W.I., for the Caribbean. Other countries are served directly from Headquarters.

a) Mexico, Central America, and Panama

Technical cooperation in emergency preparedness to Central America and Panama, originally provided from the Washington Office, is the responsibility of an advisor stationed in Costa Rica since April 1985. Responsibility for Mexico remains with the Washington Office. Disaster preparedness units or offices are now operating in the health sector of four countries. In 1984, support was provided for ten national or subregional meetings held in Mexico, Costa Rica, Honduras, El Salvador and Guatemala. In line with the philosophy of Technical Cooperation among Developing Countries (TCDC), PAHO relied heavily on the exchange of experience and cross-fertilization among countries. The direct cost of technical cooperation provided to Central America amounted in 1984 to US$166,774 and in the first semester of 1985 to US$104,423.

A topic of special relevance to this subregion is health care for refugees and displaced persons. Jointly with UNHCR, Red Cross and UNICEF, PAHO held a high-level meeting of health officials in February 1984 in Mérida, Mexico, to discuss this problem. It concluded that the Ministers of Health, with the support of PAHO at regional level, could play a more direct role in ensuring that these vulnerable groups receive primary health care of the same quality and level as the surrounding populations. The need for technical support and training of non-governmental organizations was also identified to ensure that the health care provided conforms to the norms and standards used in the country. The meeting resulted in a progressive increase of the technical cooperation that the Organization is lending in support of the activities being undertaken by national health sectors and the United Nations High Commissioner for Refugees (UNHCR). As part of the overall "Health as a Bridge for Peace" initiative submitted by PAHO to potential donors in relation to Central American health issues, a pilot project was designed to supply health care for displaced persons in Costa Rica.

b) South America

The South American subregion is attended by a Subregional Advisor stationed in Lima, Peru. Technical cooperation was directed largely to the Andean countries most vulnerable to major earthquakes--especially Colombia, Ecuador and Peru, countries that have established disaster preparedness programs in the health sector (Ministry of Health or Social Security).

Of particular interest is the successful follow-up of the Meeting of Deans of the Schools of Public Health held in Washington in December 1983 with the purpose of including disaster preparedness in the teaching curriculum. This objective is well on its way to being met. An evaluation meeting with the Deans and curriculum coordinators is scheduled for late 1985 in cooperation with the Latin American Association of Public Health Schools (ALAESP).

Direct costs of technical cooperation to South America amounted in 1984 to US$247,637 and in the first semester of 1985 to US$172,209, including support to 22 meetings and workshops in Argentina, Brazil, Colombia, Ecuador, and Peru.

c) Caribbean

This Subregion includes all English, French or Spanish-speaking islands as well as Suriname and Guyana. PAHO activities are integrated in the multi-agency Pan Caribbean Disaster Preparedness and Prevention Project headquartered in Antigua, West Indies. This multisectoral initiative of several UN agencies: UNDRO, WHO/PAHO and secondarily WMO, ITU, etc., is funded by a pool of donor agencies (AID, CIDA, EEC and, recently, through PAHO, the Government of the Netherlands).

Activities have taken place in most countries of the subregion, although at a pace somewhat slower in 1984 than in 1983, due to the sharing of the PAHO Health Advisor between health activities and his responsibility as overall Project Manager on behalf of CARICOM. Among activities of particular significance are a series of environmental health training courses, vulnerability analysis of some hospital facilities to hurricanes, participation of the health sector in a meeting of all Caribbean national disaster coordinators, and initiation of the establishment of a radio emergency network through the satellite ATS-3 of NASA.

The direct cost of technical cooperation to the Caribbean countries is estimated at $180,470 for the 1984 fiscal year and $171,353 for the first semester of 1985.

7.2 Development of training/education material

This regional component has undertaken considerable expansion over the eight years of existence of the Program. At its inception in 1977, there was a considerable lack of technical guidelines, manuals or audiovisual material on health emergency preparedness. In the Spanish language the shortage was almost total.

7.2.1 As a first phase, PAHO issued a series of six Scientific Publications in English and Spanish (and by late 1985 in French) on the general management of various health aspects of emergency situations. Widely promoted, these manuals are among the most requested publications of the Organization, leading to the printing of a second issue (average 8,000 copies each in both languages). Numerous requests are received from countries or organizations outside the Americas. To complement the manuals, eight sets of slides were developed in both languages. This material is directed to managers, decision makers and middle level health professionals. Intended to promote management principles, they do not enter into technical details. New materials are currently being developed to address those needs.

7.2.2 An eight-page quarterly newsletter, "Disaster Preparedness in the Americas," was first issued in 1979. Directed to a broad audience of health professionals, scientists, civil defense officials and voluntary agencies personnel, it serves as a powerful and cost-effective instrument to disseminate new managerial approaches to disaster relief, stimulate discussion and debates of key issues, as well as raise questions on some deeply rooted practices or beliefs regarding disasters. From an initial press run of 500, 4,000 copies are now printed in each language. The high level of interest in North America and in other regions explains the number of copies in English.

The publication of this newsletter proved to be a very cost-effective activity to link country programs and promote greater participation of the health sector in predisaster planning. The level of contribution of health officials from Member Countries to the newsletter remains to be improved through articles, opinions or reports.

7.2.3 To complement the manuals and slides series, technical articles covering a broad scope of disaster and health issues are screened and reproduced for free distribution upon request. A fully computerized bibliography, Disaster Update, provides access to approximately 3,000 documents in the Program reference center. Most of these documents are available from PAHO on microfiche, and are not normally accessible through commercial or official retrieval systems (Medlars, etc.).

Operational research on disasters affecting the Americas is promoted and supported. The results deemed to have scientifically sound management value are published as Disaster Reports.

Critical abstracts of books and films are prepared with an eye toward providing professionals in Member Countries with an overview of the availability and appropriateness of such materials. Those considered pertinent are purchased for reference and lending purposes.

Slides, photographs, video and films on actual disaster situations are actively produced and collected on a worldwide basis, inventoried and indexed for further use in training or publication.

7.2.4 As a substitute for first-hand experience, classroom desk-top simulation exercises were developed to simulate the flow (or the lack) of information, that reaches decision makers immediately following a disaster. These exercises proved to be a most valuable educational method adapted to the specific requirement of the program. They have been used in most countries of the Region for audiences of various levels of authority and backgrounds.

7.2.5 One area the program had not addressed in the earlier phase was the role of public opinion in disaster situations. In 1984, PAHO reached an agreement with the British Broadcasting Corporation to coproduce a film focusing on preparedness and emergency management of natural disasters. This television documentary should serve to heighten public awareness of the real health problems that emerge as a result of natural disasters, dispell commonly held myths, and point to the steps that need to be taken to ensure that rapid recovery is possible. It is hoped that the film will be helpful in educating the public and thereby make relief efforts more efficient. The release is expected for mid-1985.

7.3 Training in environmental health

7.3.1 Sanitary engineers and other environmental health professionals play a key role in the event of disaster. Indeed, disasters by definition consist of sudden environmental changes that are detrimental to the public health. Furthermore, there is hardly any emergency situation in which adequate water supply or sanitation are not a major concern.

7.3.2 Progress made in this component is to be credited to the continuous support and active involvement of the Environmental Health Program and the Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS).

Comprehensive training modules on water supply systems following earthquakes and floods have been developed, circulated, tested and revised by CEPIS. Mitigation, preparedness and relief management aspects

relevant to water supply systems have been extensively treated through case studies. Short guidelines illustrated with sets of slides have been completed in English and Spanish, on vector control and bacteriological analysis of water supply sources following disasters.

The CEPIS training modules now available in Spanish only are being adapted to the Caribbean environment and will be available in English, together with nine sets of slides, in late 1985.

7.4 Hospital disaster preparedness

7.4.1 Efficient response to sudden impact disasters requires that hospitals be prepared to provide minimum health care to a large number of casualties. The explosion of gas holding tanks in Mexico City and the recent earthquake in Chile illustrate the magnitude of the problem health services may be facing under emergency conditions. Although the most effective form of preparing care institutions to face disasters may be to improve their capacity to handle daily emergencies, this program addresses only indirectly the establishment or strengthening of emergency medical services. Rather, it aims to optimize the use of existing resources, services and facilities in case of disaster.

7.4.2 In Latin America over 15 workshops on mass casualty management were sponsored by PAHO, and 7 hospitals were selected to take part in a pilot project aiming to develop procedures and train hospital personnel in predisaster planning. Among the problems encountered is the relative scarcity of Spanish-speaking experts familiar with the formulation of disaster plans and drills for areas in which organized emergency medical services, radio networks and centralized ambulance systems are lacking.

7.4.3 In the Caribbean, PAHO, in coordination with CARICOM and the Pan Caribbean Disaster Preparedness and Prevention Project, initiated a feasibility study for a formal mechanism to address mass casualty incidents on a Caribbean-wide rather than national basis. A hospital survey in the English-speaking Caribbean countries and preliminary contacts with governments, airlines and other agencies have been made to ascertain the potential response capability in the event of disaster.

According to the results of this feasibility study on the regional mechanism in the Caribbean, formal consultation with participating countries and funding agencies will take place for its gradual implementation.

7.4.4 It is expected that upon the completion of the five-year activities in this component (March 1988), a reservoir of expertise and pilot hospitals will be available within the most vulnerable countries of Latin America. However, unless Member Countries dedicate significant efforts at national level, the limited resources available at regional level ($607,000 over a period of five years) are likely to have only an ephemeral and modest impact.

7.5 Training in field assessment of health needs following sudden impact disasters

7.5.1 Rapid and accurate information on health needs following sudden impact disasters is essential for good management of the relief assistance. There is currently no field-tested method for quick assessment of health needs in the immediate aftermath of natural disasters. The development of technically sound and standardized methods of data collection and interpretation may contribute significantly to the improvement of relief activities. In addition to permitting rational and effective decision-making by relief officials from the affected country and donor agencies, data collected during assessment will also ensure a better understanding of disaster-related health problems in future emergency situations. In the health sector, PAHO is best equipped to assume, at regional level, the technical responsibility and leadership in developing and disseminating this know-how. Technical cooperation in assessing needs is regarded by the Governing Bodies as a main role of PAHO in case of disasters (CD26.R36, CD27.R40).

7.5.2 Planned activities are as follows:

- identification of essential information required by health relief officials and donor agencies for prompt decision-making immediately following a disaster;
- identification of techniques to collect and interpret this information in a timely manner;
- development of training material and organization of workshops or courses.

7.5.3 So far, reasonable progress has been achieved in the identification of the information required. In coordination with UNDRO and ECLA, 25 regional experts from various sectors met for four days in Mexico in May 1984 and developed an extensive list of indicators to estimate emerging needs in agriculture, nutrition, health care, sanitation, transportation, and communication. Considerable work, however, remains necessary to distill the extensive list of data regarded as ideal by experts to a workable checklist of operational relevance in the first days or weeks following a catastrophe. This further step was completed in a joint meeting of experts from the WHO Regional Office for Europe and from PAHO, held in Ottawa, Canada, in March 1985.

7.5.4 A team of PAHO staff members stationed throughout the Caribbean is on stand-by for the hurricane season to assist the countries in assessing needs and coordinating the relief effort if disaster strikes. An operations manual has been developed and revised over the last three years to standardize the procedures and methods to be used by this disaster-response team in the early assessment of health needs in a

stricken island. Field exercises and drills are scheduled to take place before the 1985 hurricane season in order to familiarize the team members with the communications equipment and test the procedures under difficult conditions.

7.5.5 In order to facilitate the rapid entry of a multidisciplinary team of PAHO experts after a disaster (see Resolution CD27.R40) PAHO entered into formal agreement with Antigua, Dominica, St. Christopher and Nevis, Saint Lucia and Suriname. A copy of the standard formal agreement is attached to this report (Annex III).

It is suggested that countries with limited human resources consider the convenience of this mechanism to facilitate immediate technical cooperation from PAHO in the event that international communications are disrupted by a major disaster. Running the risk of unnecessarily mobilizing PAHO experts familiar with the country would appear preferable to waiting until normal channels of communication with the authorities are open, only to find that help was needed earlier.

7.6 Preparedness for technological disasters

7.6.1 This area provides an excellent opportunity for inter-program cooperation within the Organization and the health sector. While the International Program of Chemical Safety is focusing its attention mainly on the study and prevention of all health effects of slow or sudden chemical releases, the Emergency Preparedness and Disaster Coordination Program limits its action to the formulation of contingency plans and intersectoral coordination of the health sector response in case of massive sudden chemical accidents. For both programs, the Pan American Center for Human Ecology and Health (ECO) is acting as the main channel for technical cooperation to Member Countries.

7.6.2 In 1984, PAHO initiated a regional analysis of vulnerability to technological disasters and promoted a series of workshops at regional and national level on chemical accidents. These activities, implemented by ECO, provide an illustration of the excellent cooperation to be achieved between programs. The workshops, to be continued in 1985, constitute, in many instances, the first opportunity for all sectors (health, industry, fire, police, etc.) to meet and discuss a joint approach to an increasingly serious threat in Member Countries.

7.6.3 Activities remain at a relatively modest level due to the low level of funding of this component ($100,000 from extrabudgetary sources for the biennium 1984-1985). Negotiations are currently underway with the U.S. Environmental Protection Agency for joint ventures in the area of health preparedness for chemical accidents.

7.6.4 With the projected pace of development of the regional programs of Chemical Safety (IPCS) and the Emergency Preparedness Program in this

field, close cooperation will be maintained in order to define areas of responsibility more clearly and maximize the use of the scarce resources of the Organization.

8. Regional Activities in Disaster Relief Coordination

8.1 The management of the response to a disaster and the provision of health assistance to the victims are the exclusive responsibility of the affected country. Similarly, the establishment of priorities and the coordination of international assistance is primarily a national prerogative.

8.2 The Governing Bodies (Resolution CD27.R40) requested the Director to gradually increase the Organization's cooperation "in the assessment of emergency needs," and related areas. In addition, the Organization also responds to requests for any specific emergency technical cooperation in its field of expertise.

8.3 U.N. Agencies (for instance, UNDRO, UNICEF, WFP), other member countries, organizations--governmental (e.g. EEC, CARICOM, etc.) or non-governmental (e.g. Red Cross)--also expect WHO to issue authoritative and independent opinions regarding what it considers to be genuine priority health needs. As a matter of principle PAHO, as Regional Office of the World Health Organization, has consistently offered the least subjective, the most detached assessment of the health needs based on its broad experience in disaster situations, the regional health priorities determined by its Governing Bodies, and the available information on the situation in the affected country.

8.4 In 1984, requests or need for disaster relief and coordination by PAHO have been minimal. Regional support was channeled to Ecuador (malaria control following the 1983 floods); Colombia (technical cooperation and supplies following the 1984 floods, thanks to the donation of US$23,000 from CIDA); El Salvador (supplies for Hospital Rosales with the support of the Canadian Embassy); and Peru (follow-up of the 1983 floods in Piura and Tumbes). Technical cooperation was offered to Ecuador and Mexico following the mass casualty incidents caused by the technological disasters in their capital cities. Supplies procured in 1984 amounted to US$52,305, approximately 12% of the amount administered in 1983. In 1985, PAHO donated the amount of US$50,000 from its Natural Disaster Relief Voluntary Fund to assist the health services of Chile following the devastating earthquake in the central region of the country. PAHO also assisted in obtaining a grant of US$30,000 from CIDA (medical supplies to be procured by PAHO) and US$50,000 from AID/OFDA (direct bilateral procurement) on behalf of Chile.

9. Status of Health Sector National Disaster Preparedness Programs in Member Countries

9.1 Health disaster preparedness activities, especially training events, are taking place in 1985 in almost every country of the Region. Nonetheless, workshops, courses and other periodic activities do not necessarily imply the existence of a genuine program of continuous planning, training and coordination in the health sector. Nor does the level of PAHO commitment and expenditure in a given country necessarily reflect the level of commitment and development of the national program. In some countries the comparatively high level of activities is likely to decline sharply if PAHO funding and technical support is reduced.

9.2 Not all countries may need a full-fledged disaster preparedness program in the health sector. The risk of earthquakes, hurricanes, and floods is not evenly shared among nations. Nor can every country afford the cost of additional manpower and material resources required to reach and maintain an optimal level of preparedness in the health sector. Certainly, none can afford to be fully prepared for every type and magnitude of disaster. Ironically, small countries such as the Caribbean Islands which are the most vulnerable to the long-term impact of disasters, are the least able to afford the investment in human resources required for disaster preparedness.

9.3 A few indicators have been selected to evaluate the level of development of national programs.

9.3.1 According to the information available, only 13 countries of the Region have taken the formal step to establish a program within the Ministry of Health. However, three of these programs have no full-time professional staff available nor an identified budget, limiting their effectiveness considerably. Twelve countries are allocating a modest amount of the PAHO country resources to disaster preparedness to match or complement support from the regional program. This statistic, however, does not take into account that in all countries where disaster preparedness activities are taking place, PAHO country staff usually provide extensive technical support and guidance in their planning and implementation.

9.3.2 Most countries report to have established task forces or committees within the Ministry of Health or the Health Sector. However, regional experience suggests that committees and task forces are not always an effective mechanism in the absence of a technical program with human and material resources earmarked for that purpose.

9.3.3 Only three countries out of the 21 formally replying to the survey questionnaire acknowledged the lack of national disaster plans for the health sector. Approximately half of the countries that reported having such a plan recognized that health personnel have not been briefed or

familiarized with the plan. In general, only a limited number of copies of the plan are published, making the broad dissemination required for its effective implementation difficult.

In the experience of the Organization, few of the national health plans meet the requirements for effectiveness (simple, practical, widely disseminated and tested).

Improvement with regard to general emergency plans at the provincial and local levels in the health sector and specific contingency plans for hospitals are also necessary.

9.3.4 In summary, the preliminary results of the survey undertaken by the Organization confirm that although most disaster-prone countries have established coordination mechanisms (committees, task forces) at central level of the Ministry of Health, a limited number have allocated the personnel and operating budget necessary to effectively increase the preparedness of the health sector by updating and testing plans and training health professionals.

10. Funding of the Program

10.1 The table in Annex IV indicates the budget available for disaster preparedness in the biennium 1984-1985. It is worth mentioning the considerable proportion of the activities funded from extrabudgetary sources. Main agencies supporting the Program over the last five years include CIDA, AID/OFDA, EEC, SIDA and the Government of the Netherlands.

10.2 The predominantly extrabudgetary origin of the funding presents both advantages and inconveniences. On one hand, it permits the Organization to promote and offer technical cooperation in an extent and with a flexibility normally not possible with existing limited resources. On the other hand, it requires considerable managerial investment in liaison with agencies and monitoring and reporting of expenditures in a specific format for each agency. The uncertainty of the timing and duration of the funding is also hampering medium-term planning.

10.3 Funds allocated for disaster preparedness cannot be used for providing relief assistance (grants, supplies, etc.) in case of disasters. For this purpose, the Governing Bodies established the Natural Disaster Relief Voluntary Fund (PD fund) to which governments and donors would contribute prior to a disaster. However, despite the Organization's repeated encouragement and requests, no advance contribution has been obtained to date. This reflects the reluctance or administrative difficulty of agencies to commit funds for relief assistance before the nature of needs and place are known. Currently funded at the level of US$250,000, the PD fund provides PAHO with the mechanism for immediate mobilization of resources upon preliminary oral

pledge from a donor agency and for modest direct contributions from the Organization (for example, $50,000 to Chile following the earthquake). The Organization also contributes an additional 10-15% of the amount contributed through this fund by donors at the time of a disaster.

11. Cooperation with Other Agencies

The very nature of disaster preparedness and relief encompasses close coordination and cooperation with other institutions, both at national or international levels. The Organization makes a considerable effort to stimulate joint undertakings with other agencies.

11.1 Cooperation within WHO

In cooperation with Emergency Relief Operations, WHO/HQs, the Organization, jointly with the Regional Office for Europe (EURO), is developing indicators for rapid assessment of health needs following sudden impact disasters. A consultative inter-regional meeting took place in Cornwall, Canada, from 18 to 21 March 1985. A 10-day meeting on disaster preparedness in small nations is being organized jointly by the Regional Office for the Western Pacific (WPRO) and our Region. This meeting, scheduled for November 1985 in Hawaii, will promote the exchange of information between the Caribbean and the Pacific islands and territories.

Similarly, preliminary contacts have been made to assist in the public health management of the emergencies caused by the drought in Africa. This proposed cooperation is also regarded as being in the interest of this Region, since it provides first hand experience in the management of large scale severe emergencies that so far are fortunately uncommon in this Region.

11.2 Cooperation within the U.N. system

11.2.1 The United Nations Disaster Relief Coordinator Office (UNDRO) is the responsible U.N. agency for the overall coordination of international relief assistance and promotion of disaster preparedness and prevention. Numerous joint activities or consultations are taking place between UNDRO and PAHO. In addition to the joint project in the Caribbean (see 7.1.c) technical collaboration is being considered in Latin America to offer the countries a multisectoral cooperation at international level. Worthwhile mentioning is UNDRO's offer to support the printing of the French language edition the PAHO Scientific Publications on disaster management.

11.2.2 The United Nations High Commissioner for Refugees (UNHCR) is the U.N. agency responsible for the protection and welfare of populations seeking refuge from disasters or conflicts in another country. This organization has recently established a post of medical advisor in Geneva, offering an opportunity for closer technical coordination at

Headquarters level. At country level, the UNHCR presence and involvement in the public health field is practically limited to Central America and Mexico. A more active role of the Organization as advisor to the UNHCR on public health matters might be of mutual interest. At the present time, UNHCR often delegates public health matters to non-governmental organizations (NGOs) that are somewhat unfamiliar with the policies and primary health care approaches adopted by the WHO Governing Bodies and the technical norms and standards applicable in the host country.

11.2.3 A meeting of 25 experts on assessment of needs following disasters was organized jointly with the United Nations Economic Commission for Latin America (ECLA) and UNDRO in May 1983 at ECLA's offices in Mexico. Exchange of information, consultation and other cooperation is maintained with other agencies, such as UNICEF, as dictated by the circumstances.

11.3 Cooperation with other agencies and NGOs

11.3.1 To the extent possible, the Organization coordinates its preparedness activities with the National Red Cross Societies, the League of Red Cross Societies and, when applicable, with the International Committee of the Red Cross. Periodically, contacts are also maintained with the main NGOs active in the field of disaster relief or preparedness, such as Catholic Relief Services (CRS), OXFAM, Save the Children, etc.

11.3.2 A few countries offer bilateral cooperation to Latin America in general disaster preparedness. Special effort is made to avoid duplication and offer them technical advice or support on health related issues, whenever in the interest of Member Countries.

12. General Observations on Future Orientations of the Program

12.1 The current reliance of the Program on temporary extrabudgetary funding should lead the Organization and its Governing Bodies to consider various issues of importance:

a) Are the current strategies and priorities for the use of this transitional outside funding the most appropriate ones to ensure a permanent impact and benefit for the existing national disaster preparedness programs of the health sector?

b) How would it be possible to stimulate action from governments of disaster-prone Member Countries who have not established a disaster prepared- ness program in the health sector yet?

c) What level of technical cooperation should be maintained and funded by the Organization itself to ensure the continuity of a minimum support to national programs?

12.2 In some cases, donor agencies tend to favor specific technical areas of cooperation, e.g. hospital disaster preparedness or well-defined short-term projects, e.g. preparation of manuals or training material. The Organization encountered more difficulties in securing medium-term extrabudgetary funding for general technical support and cooperation to national programs. Yet these non-specialized activities probably constitute the most critical support now required by the emerging national disaster preparedness programs. Such cooperation might be assumed by increasing the contribution of the regular budget or by use of the mechanism of technical cooperation between developing countries (TCDC).

12.3. As are all technical cooperation programs, disaster preparedness is "labor intensive." A significant amount of the budget is dedicated to advisory/consultancy services. Exploration of alternative complementary sources, such as the recruitment of U.N., volunteers is critical. Surprisingly few potentially eligible U.N. volunteers have been identified so far from disaster-prone countries of the Region, in spite of a presumably large reservoir of young qualified health professionals in search of challenging employment in several countries of the Region. It may be beneficial for the countries and the Organization to more actively seek out these promising young professionals.

A complementary mechanism to be considered is the temporary detail (for instance, one year) by the Member Governments to the Organization of national staff from the country disaster preparedness programs.

12.4. The ultimate justification of a regional program is to stimulate or strengthen the programs on emergency preparedness at country level. In addition to allocating their own resources to fulfill this health responsibility, Member Governments should consider the convenience of including specific projects into the priorities submitted to bilateral or multilateral agencies offering direct cooperation to the country.

12.5. At global level, two centers have been designated by WHO as "Collaborating Centers" on emergency preparedness: Center of Epidemiology of Disasters, Public Health School, University of Louvain, Belgium (natural disasters) and the London School of Tropical Medicine and Hygiene (refugees and displaced persons). Although it is a priority to identify regional centers, preferably in disaster-prone countries of Latin America or the Caribbean, to provide scientific support and reference to the regional program, no significant progress has been made yet.

12.6. Fortunately, large disasters are not a common occurrence in any single country. As a result, it is critical that additional effort be made to draw lessons and experience from severe emergency situations experienced by other countries on a worldwide basis. Within the Region, disaster-prone countries should develop mechanisms to offer standing

advance invitations to selected counterparts from other Member Countries exposed to the same risk so that they may observe and cooperate, if appropriate, during the actual management of the acute emergency. Simulation exercises and postfacto meetings are no substitute for direct involvement.

It should also be noted that the relatively advanced status of disaster preparedness programs at regional and national level in the Americas, compared to other regions of WHO, places the Organization in a position to share its experience with them. Far from diverting attention from the unmet needs at the regional level, this inter-regional cooperation is likely to prove of benefit to our Region by broadening the experience and expertise available to Member Countries.

Annexes

MAJOR EARTHQUAKES

1970-1985

YEAR	COUNTRY	KILLED	INJURED	AFFECTED
1970	Peru (May 31)	66,794	143,331	3,072,909
1970	Ecuador (December 9)	29	N/A	60,000
1971	Chile (July 9)	85	451	2,348,522
1972	Nicaragua (December 23)	10,000	20,000	400,000
1973	Costa Rica (March 14)	21	98	3,563
1974	Peru (October 3)	78	2,414	41,260
1976	Guatemala (February 4)	23,000	77,000	3,750,000
1979	Colombia (December 12)	276	N/A	10,000
1982	El Salvador (June 19)	8	96	5,000
1983	Colombia (March 31)	102	228	150,000
1985	Argentina (January 26)	6	200	38,000
1985	Chile (March 3)	150	2,000	170,000
	TOTAL	100,549	245,818	10,049,254

Sources: UNDRO, OFDA/AID, PAHO

MAJOR HURRICANES

1970-1985

YEAR	COUNTRIES	KILLED	INJURED	AFFECTED
1974	Honduras (Fifi) September 18	800	N/A	600,000
1976	Mexico (Liza) October 1	600	14,000	200,000
1979	Dominica (David) August 29	40	2,500	70,000
1979	Dominican Republic (David and Frederick) August - September	1,400	N/A	1,200,000
1980	St. Vincent (Allen) August 4	-	-	20,000
1980	Saint Lucia (Allen) August 4	17	1,000	70,000
1980	Jamaica (Allen) August 6	9	N/A	10,000
1980	Haiti (Allen) August 8	220	N/A	835,000
1982	Cuba (Albert) June 18-19	40	N/A	105,000
1983	Mexico (Tico) October 20	135	N/A	10,000
	TOTAL	3,261	17,500	3,120,000

Sources: UNDRO, OFDA/AID, PAHO

MAJOR FLOODS

1970-1985

YEAR	COUNTRY	KILLED	AFFECTED
1970	Brazil, Recife (June)	172	104,371
1970	Colombia, Cauca (October)	307	5,000,000
1971	Peru, North Coast (February)	250	330,000
1972	Mexico, Mexico City (May)	37	100,000
1973	Chile, Central and South (June)	32	40,000
1975	Haiti, Les Cayes (May)	78	40,000
1975	Brazil (July)	118	748,000
1978	Bolivia, Beni, Santa Cruz, (December)	40	100,000
1979	Colombia, North Eastern (November)	62	100,000
1979	Jamaica, entire country	40	160,000
1980	Argentina, Buenos Aires Province	31	36,000
1982	Guatemala, Pacific Coast, Trop. Dep. Paul (September)	620	20,000
1982	El Salvador, Montebello (September)	600	25,000
1982	Honduras (September)	200	20,000
1982	Nicaragua (June)	71	52,000
1983	Ecuador (February-June)	300	950,000
1983	Peru (February-June)	280	830,000
1983	Bolivia (February-June)	40	700,000
1984	Colombia	152	192,000
1985	Brazil	N/A	35,000
	TOTAL	3,430	9,285,371

Sources: UNDRO, PAHO, UN/ECLA

VOLCANIC ERUPTIONS

1970-1985

YEAR	COUNTRY	KILLED	AFFECTED
1976	Costa Rica (Arenal), October 21	-	70,000
1976	Guadeloupe, August 30	-	75,000
1979	St. Vincent (La Soufriere) March 13	2	20,000
1982	Mexico (El Chichonal), March 29	100	60,000
	TOTAL	102	225,000

Sources: UNDRO, OFDA/AID

Resolution X

Emergency Assistance to Countries of the Americas

The Directing Council,

Bearing in mind the assistance given by the Pan American Sanitary Bureau on the occasion of the earthquake that occurred in Guatemala on 4 February 1976, the provisions of Resolution XXX approved by the XVIII Pan American Sanitary Conference in connection with the earthquake in Peru in 1970, and the recommendations concerning natural disasters contained in the Ten-Year Health Plan for the Americas;

Being convinced that similar emergency situations are bound to occur in the disaster-prone parts of the Region and are likely to affect countries that do not as yet possess comprehensive emergency relief plans or that need technical assistance in order to update and apply them;

Considering that most of the assistance agencies are not properly equipped to provide help in the health field in carrying out their reconstruction, rehabilitation and planning tasks; and

Being anxious that the international assistance given to countries affected by natural disasters should be better coordinated, rational and more effective,

Resolves:

1. To thank the Director and the Secretariat, and particularly the personnel assigned to Guatemala, for the assistance given to that country in connection with the earthquake of 4 February 1976.

2. To request the Member Governments to develop plans and, where necessary, enact legislation, set standards, and take preventive or palliative measures against natural disasters and disseminate such measures throughout the sectors concerned, coordinating their action with that taken by the corresponding services of PASB.

3. To request the Director to set up within the Pan American Sanitary Bureau, after first compiling and analyzing the appropriate data and information, a disaster unit with instructions to define the policy of the Organization, to formulate a plan of action for the various types of disasters, to make an inventory of the human and other resources available, to train the necessary personnel, to prepare and disseminate appropriate guidelines and manuals, to promote operations research to meet the needs of the countries in disaster situations, and to ensure that this unit establish effective coordination with the United Nations Disaster Relief Coordinator, the International Red Cross, and other national and international bodies providing disaster assistance.

4. To request the Director to set up a natural disaster relief voluntary fund which can be used promptly and readily by the disaster unit.

(Approved at the tenth plenary session, 1 October 1976)

Resolution XXXVI

Emergency Preparedness and Disaster Relief Coordination Program in the Americas

The Directing Council,

Bearing in mind Resolution X of the XXIV Meeting of the Directing Council on emergency assistance to countries of the Americas, and Resolution XXII of the 82nd Meeting of the Executive Committee on emergency preparedness and disaster relief coordination program in the Americas;

Having examined the document presented by the Director on the disaster preparedness program in the Americas (Document CD26/11);

Considering that emergency situations caused by natural or man-made disasters are bound to affect the health status of the countries of the Region, and that the ministries of health should play a leading role, within the civil defense system, in emergency preparedness and relief activities related to health; and

Convinced that the most valuable contribution of the Organization in the wake of a disaster may be the speedy provision of technical cooperation,

Resolves:

1. To thank and commend the Director for the development of the Emergency Preparedness and Disaster Relief Coordination Program and for the technical cooperation and assistance provided to Member Countries during emergency situations since its inception.

2. To urge Member Governments to establish a high-level multisectoral group to coordinate all relief measures and an ongoing program to update emergency plans, train health personnel, and promote research and case studies to improve disaster management.

3. To urge Member Governments and funding agencies to contribute to the Natural Disaster Relief Voluntary Fund (PD) and to facilitate the Organization's technical cooperation immediately following a disaster on the basis of agreements signed prior to the emergency.

4. To request the Director to maintain direct contact with all funding agencies and institutions in order to channel relief assistance towards areas of need in the health sector.

5. To invite the Director to increase the cooperation of the Organization in assessing emergency needs, preparation of damage estimates, and rehabilitation projects following a disaster.

6. To request the Director to center the efforts of the Organization on the training of health officials in charge of emergency preparedness and the coordination of relief efforts in Member Countries, including in actual emergencies whenever possible.

(Approved at the sixteenth plenary session, 4 October 1979)

Resolution XL

Emergency Preparedness Program

The Directing Council,

Bearing in mind Resolutions X and XXXVI of the XXIV and XXVI Meetings of the Directing Council, respectively, on the establishment of the Emergency Preparedness and Disaster Relief Coordination Program and the Natural Disaster Relief Voluntary Fund;

Having examined Document CD27/25 presented by the Director on the proposed medium-term program and strategy for the Emergency Preparedness Program and the role of the Organization in the immediate aftermath of disasters;

Believing that the Organization should extend its technical cooperation in all disaster or emergency situations presenting any serious threat to public health;

Being aware that emergency technical cooperation must be provided with the utmost promptness and a minimum of administrative or other delays; and

Being convinced that PAHO has the necessary technical and administrative capacity to coordinate international disaster health assistance in the Region and to offer technical advice to potential donors on appropriate assistance required,

Resolves:

1. To approve the medium-term program and strategy proposed in Document CD27/25, and to request the Director to gradually increase technical cooperation within the Emergency Preparedness Program to assist the health sectors of Member Countries in the development of disaster preparedness programs also in case of natural or technological disasters of public health importance.

2. To request the Director to seek extrabudgetary funding for strengthening PAHO's technical cooperation at regional and area levels in emergency preparedness and disaster relief.

3. To request the Director to take the necessary steps to make a multidisciplinary team of PAHO experts available, on request, for providing emergency technical cooperation in case of a major disaster and to assist in the assessment of needs and in the coordination of the international health assistance.

4. To urge Member Governments of countries which are especially vulnerable to disasters and which so desire it to facilitate the entry of the multidisciplinary team of PAHO experts in the country after a disaster has occurred and, when deemed convenient, adopt the necessary measures prior to a disaster.

5. To request the Director-General of the World Health Organization to study the desirability of decentralizing to the Regional Office for the Americas the responsibility for the management and coordination of international disaster health assistance in the Region.

6. To request Member Governments, international organizations, bilateral agencies, and private donors to make contributions to the Natural Disaster Relief Voluntary Fund, which operated by PAHO.

(Adopted at the sixteenth plenary session, 2 October 1980)

Sample Agreement

EMERGENCY TECHNICAL COOPERATION AGREEMENT BETWEEN THE PAN AMERICAN HEALTH ORGANIZATION AND THE GOVERNMENT OF (COUNTRY) IN CASE OF A MAJOR NATURAL DISASTER

The Government of (country), represented by the Ministry of Health and Housing, hereinafter referred to as "the Government"; and

The Pan American Health Organization, hereinafter referred to as "PAHO", represented by the Pan American Sanitary Bureau, Regional Office of the World Health Organization;

Hereby establish the bases for the provision of emergency technical cooperation in case of a major natural disaster in (country).

ARTICLE I

Definitions

1. The Pan American Sanitary Bureau (PASB) is the administrative organ of PAHO. By Agreement signed between PAHO and the World Health Organization (WHO) on 24 May 1949, PASB serves also as the Regional Office of WHO for the Western Hemisphere.

2. "International personnel" means in this Agreement, all PAHO staff and all consultants appointed by PAHO to work in the emergency, as well as the staff of any other bilateral or multilateral international agency who cooperates in the emergency.

3. "Natural disaster" means any natural event causing damages and ecological disruption on a scale sufficient to warrant an emergency response from outside the affected community.

4. "A major natural disaster" is a natural event which causes great damages and calls for resources exceeding by large the capacity of the country. For instance, the earthquakes in Peru (1970), Nicaragua (1972), and Guatemala (1976); the hurricanes Fifi in Honduras (1974) and David in the Dominican Republic and Dominica (1979).

5. "Emergency technical cooperation" means in this Agreement all technical advisory services and other means of cooperation, provided by PAHO and by any other bilateral or multilateral international agency during the emergency period following a disaster. Normally, it will be extended for no more than four weeks following the impact.

ARTICLE II

Frame of Reference

The following documents will serve as frame of reference for the provision of the emergency technical cooperation:

1. The Basic Agreement signed between the Government and PAHO on _____.

2. Resolution XL, "Emergency Preparedness Program", approved on 2 October 1980 at the sixteenth plenary session of the XXVII Meeting of the Directing Council of PAHO.

ARTICLE III

Objectives

The objectives of the emergency technical cooperation include:

- assessment of health needs and determination of priorities;
- formulation of emergency projects and coordination with prospective sources of assistance;
- surveillance of communicable diseases and outbreak prevention;
- inventory and distribution of relief supplies;
- survey of water supply systems and other sanitary services;
- survey of damages to existing health facilities.

ARTICLE IV

Provision of Emergency Technical Cooperation

1. Emergency technical cooperation will be provided by a small multidisciplinary team of international personnel. The team will be constituted by PAHO immediately after the notice that a major natural disaster has stricken (country).

2. Actual composition of the team will depend on the:

- Estimated magnitude of the disaster compared to the human and material resources of (country);
- Importance, qualifications and disaster experience of the PAHO staff in duty in the country at the time of the disaster;
- Availability of the appropriate experts (staff members or consultants from countries exposed to similar risks) for temporary assignment to the disaster area.

3. The team will normally be mobilized in a given situation with the authorization of the Government, except in case of disruption of telecommunications between (country) and PAHO. In such an eventuality, PAHO has the authority to temporarily transfer staff on duty station in other countries, or appoint consultants to travel without delay to (country). International personnel sent by PAHO to (country) under these circumstances will report upon arrival to the designated national authority.

ARTICLE V

Administrative Provisions

1. Emergency relief activities will be executed under the responsibility of the Government, with the advice and emergency technical cooperation of PAHO in health related matters.

2. PAHO's Caribbean Program Coordinator in Barbados will be the official channel of communications between PAHO and the Government at country level.

3. PAHO's office for Emergency Preparedness and Disaster Relief Coordination will be responsible for the mobilization and coordination of the emergency technical cooperation covered by this Agreement.

4. The international personnel appointed by PAHO will be under its supervision and will be responsible only to this Organization. When deemed appropriate by PAHO, this international personnel may be placed under the operational direction of the Coordinator of the United Nations Disaster Relief Office (UNDRO).

ARTICLE VI

Financing

1. The extent of emergency technical cooperation will be contingent on availability of PAHO resources at the time of a particular natural disaster.

2. PAHO may seek and accept extrabudgetary resources, funds, or services such as transportation or telecommunication facilities from other agencies or Member Countries, in order to provide the necessary emergency technical cooperation.

ARTICLE VII

Commitments of PAHO

PAHO, subject to its administrative and financial regulations, agrees to the following:

1. Personnel

The staff of PAHO and, when appropriate and possible, consultants appointed for the emergency, will provide technical advice and guidance, in accordance with Article IV, paragraph 4.

2. Supplies and Equipment

2.1 Equipment, supplies and printed material may be provided by PAHO to facilitate operations of the emergency technical cooperation team.

2.2 Title to any nonexpendable supplies and equipment which may be furnished by PAHO for the duration of the emergency technical cooperation will be retained by PAHO.

2.3 Donation of medical supplies, equipment, etc. for general relief purposes is not covered by this agreement.

ARTICLE VIII

Commitments of the Government

The Government agrees to the following:

1. Personnel

The Government will designate, upon signature of this Agreement, a counterpart official responsible for coordinating with PAHO all health-related emergency relief activities in (country).

2. Supplies and Equipment

The Government will grant exemption from customs duties for any health supplies and equipment which might be provided by PAHO or other international agencies, and will provide, subject to availability, all necessary facilities for the receipt, warehousing, and transportation within the country of such supplies and equipment.

3. Facilities for International Personnel

Subject to availability, the Government will provide for the international personnel assigned to the emergency, the necessary facilities for the fulfillment of their mission, including office accomodation, secretarial assistance, transportation within (country), access to telecommunication facilities, granting of temporary visa at the port of entry to prevent travel delays, identification documents to circulate in the emergency zone and other facilities, as required and compatible with the emergency situation existing in (country).

4. Information

The Government will keep PAHO informed on matters which may affect the provision of emergency technical cooperation.

5. Third Party Liability

5.1 The Government will be responsible for dealing with any claims which may be brought by third parties against PAHO, its advisers, agents and employees, and will hold harmless PAHO its advisers, agents and employees, in case of any claims or liabilities resulting from operations under this Agreement, except where it is agreed by the parties that such claims or liabilities arise from the gross negligence or willful misconduct of such advisers, agents or employees.

5.2 Without prejudice to the generality of the foregoing, the Government will insure or indemnify PAHO for any liability under the laws of the country, in respect of vehicles provided on loan for the emergency.

ARTICLE IX

Evaluation

1. The Government and PAHO jointly assume responsibility for the evaluation of the emergency technical cooperation.

2. Evaluation facilities will be made available by the Goverment to PAHO, including access to statistical and other records, assistance from statistical and other governmental services, and use of their premises for this purpose.

3. The Government will encourage national or regional scientific institutions to cooperate in the evaluation of emergency operations in general, and PAHO emergency technical cooperation in particular.

4. The Government and PAHO will consult each other regarding the publication, both national and international, of findings and reports compiled in connection with the emergency.

ARTICLE X

Final Provisions

1. This Agreement will come into effect upon signature by both parties.

2. This Agreement may be modified or extended by mutual consent of the parties.

3. This Agreement may be terminated unilaterally by either party, by written notice to the other party. Termination will take effect 30 (thirty) days after receipt of such notice.

4. PAHO will not be held responsible if prevented from fulfilling its commitments, in whole or in part, due to war, civil disturbances, and any other cause beyond the control of PAHO.

IN WITNESS WHEREOF, the officials designated below, being duly authorized to that effect, sign this Agreement in duplicate.

ON BEHALF OF THE GOVERNMENT OF
(COUNTRY)

Place: _____

_____ Date: _____

ON BEHALF OF THE
PAN AMERICAN HEALTH ORGANIZATION

Place: _____

_____ Date: _____

Director
Pan American Sanitary Bureau

BUDGET OF THE EMERGENCY PREPAREDNESS PROGRAM IN US$

	1982-1983	%	1984-1985
Regular budget	267,100	9.1	365,900
Emergency fund (PD)	319,395	10.8	380,997
Extrabudgetary	2,364,451	80.1	3,109,235
TOTAL	2,950,946	100.0	3,856,132

FOLLOW-UP TO AND COMPLIANCE WITH DIRECTING COUNCIL RESOLUTIONS IN CONNECTION WITH THE DISASTER PREPAREDNESS PROGRAM

Directing Council Mandate	Countries	PAHO/WHO
Resolution X, October 1976		
Paragraph 2		
- To draw up national emergency plans and take preventive and palliative measures against natural disasters		N/A
Paragraph 3		
- To set up a disaster unit in PAHO		- In 1977 PAHO set up a disaster preparedness unit
- To define the Organization's policy and formulate a plan of action for the various types of disasters	N/A	- Compliance in progress, Documents CD26/11 (1979) and CD27/25 (1980)
- To make an inventory of resources, train personnel, prepare guidelines and manuals, and promote operations research	N/A	- This regional activity has been widely implemented
- To establish effective coordination with the UNDRO, the International Red Cross, and other agencies	N/A	- Coordination is satisfactory
Paragraph 4		
- To request the Director to set up a voluntary fund for natural disaster relief (this mandate was buttressed by Resolutions CD26.R36 and CD27.R40)	- There was no response from countries or agencies	- In 1977 PAHO established the fund with an initial capital of US$100,000, and made a further contribution of US$200,000 in 1983

FOLLOW-UP TO AND COMPLIANCE WITH DIRECTING COUNCIL RESOLUTIONS
IN CONNECTION WITH THE DISASTER PREPAREDNESS PROGRAM

Directing Council Mandate	Countries	PAHO/WHO
Resolution XXXVI, October 1979		
Paragraph 2		
To urge Member Governments:		
- To establish high-level multisectoral groups to coordinate relief measures	- They exist in almost all countries	N/A
- To establish an ongoing program to update emergency plans, train health personnel, and promote disaster research	- This basic recommendation has been implemented in a minority of the countries	N/A
Paragraph 3		
To urge the Governments to facilitate the Organization's technical cooperation in disasters on the basis of agreements signed prior to the emergencies	- Four Caribbean countries have signed agreements	N/A
Paragraph 4		
- To request the Director to maintain direct contact with all funding agencies and institutions in order to channel relief assistance towards areas of need in the health sector	N/A	- Contact is properly maintained (a directory has been compiled of agencies that provide assistance in the wake of disasters)
Paragraph 5		
- To invite the Director to increase the Organization's cooperation in assessing emergency needs, preparing damage estimates, and rehabilitation projects	N/A	- In compliance: a manual for the "evaluation of health needs in the wake of natural disasters" is in the design stage

FOLLOW-UP TO AND COMPLIANCE WITH DIRECTING COUNCIL RESOLUTIONS
IN CONNECTION WITH THE DISASTER PREPAREDNESS PROGRAM

Directing Council Mandate	Countries	PAHO/WHO
Paragraph 6		
To request the Director:		
- To center the Organization's efforts in the training of health officials in charge of emergency preparedness	N/A	- The training of local officials is a very important part of the Organization's technical cooperation. Training on site of disasters has not been possible
Resolution XL, October 1980		
Paragraph 1		
- To gradually increase technical cooperation in emergency preparedness for technological disasters of public health importance		- A component on technological (chemical) disasters has been included in the regional program, but it could not be developed properly for lack of a budget. - Technical cooperation is also being increased for health aspects of social violence (refugees and displaced persons)
Paragraph 2		
To request the Director:		
- To seek extrabudgetary funding to strengthen PAHO's technical cooperation		- The Organization has been fairly successful in obtaining extrabudgetary funds for the regional and country programs

FOLLOW-UP TO AND COMPLIANCE WITH DIRECTING COUNCIL RESOLUTIONS
IN CONNECTION WITH THE DISASTER PREPAREDNESS PROGRAM

Directing Council Mandate	Countries	PAHO/WHO
Paragraph 3		
- To request the Director to take the necessary steps to make a multidisciplinary team of PAHO experts available for cooperation in the assessments of needs and the coordination of international health assistance		- In compliance: a multidisciplinary "Disaster Response Team" has been set up for the Caribbean countries. - Training seminars for PAHO proffesional staff are in the planning stage
Paragraph 4		
- To urge Member Governments to facilitate the entry of the multidisciplinary team of PAHO experts in the country after a disaster has occurred	- Very little headway has been made; technical assistance is delayed and made less effective by the requirement of routine formalities and the obtaining of authorizations	
Paragraph 5		
- To request the Director-General of WHO to study the desirability of decentralizing to the Regional Office for the Americas the responsibility for the management and coordination of international disaster health assistance in the Region	N/A	- The request has been forwarded but further action is still pending

EMERGENCY RELIEF ASSISTANCE
(All funding sources)

	1983	1984	1985 (1st. Semester
Antigua	--	160.00	--
Argentina	1,000.00	--	--
Bolivia	42,775.19	104.00	1,184.00
Chile	--	--	82,619.00
Colombia	2,279.48	6,065.49	25,704.00
Ecuador	203,032.21	22,597.14	--
El Salvador	999.15	22,249.90	--
Honduras	411.71	--	--
Paraguay	110,987.27	--	--
Peru	42,261.88	1,129.11	4,160.86
TOTAL	403,741.85	52,305.64	113,675.86

EMERGENCY PREPAREDNESS AND DISASTER RELIEF COORDINATION PROGRAM
EARMARKED FUNDS BY SOURCES OF FUNDING(*)

FISCAL YEAR 1983

Component \ Source of funding	PAHO Regular	PAHO** Emergency Fund	CIDA	AID	SIDA	EEC	Netherlands Government	Italian Government	Total
Overall Program Management	21,264.69	96.42	22,208.10	21,370.92	4,366.45	18,189.37	—	—	87,495.95
Educational-Training Material	25,776.91	—	55,055.81	9,766.50	24,162.00	15,662.66	—	—	130,423.88
Hospital Disaster Preparedness	1,737.18	—	12,008.49	4,754.50	3,075.48	25,869.76	—	—	47,445.41
Environmental Health Training	—	—	7,959.20	521.89	—	—	—	—	8,481.09
Man-Made Disasters	13,937.00	—	—	—	—	—	—	—	13,937.00
Assessment of Health Needs	—	—	11,173.88	6,205.54	—	—	—	—	17,379.42
Technical Cooperation to Latin America	6,954.71	—	—	20,072.35	11,441.14	173,594.63	—	—	212,062.83
Technical Cooperation Caribbean	10,350.86	—	—	191,575.68	19,186.94	—	1,620.00	—	222,733.48
Disaster Relief	4,408.71	132,089.20	—	—	—	95,310.06	—	169,752.00	401,559.97
TOTAL	84,430.06	132,185.62	108,405.48	254,267.38	62,232.01	328,626.48	1,620.00	169,752.00	1'141,519.03

* Excluding Program Support Cost
** Including contributions from CIDA

EMERGENCY PREPAREDNESS AND DISASTER RELIEF COORDINATION PROGRAM
EARMARKED FUNDS BY SOURCES OF FUNDING(*)

FISCAL YEAR 1984

Source of funding / Component	PAHO Regular	PAHO** Emergency Fund	CIDA	AID	EEC	Total
Overall Program Management	137,385.87	145.44	57,097.47	13,897.64	261.89	208,788.31
Educational-Training Material	36.00	—	141,287.99	59,306.00	8,473.56	209,103.55
Hospital Disaster Preparedness	10,800.00	—	83,333.74	10,969.50	504.78	105,608.02
Environmental Health Training	—	—	44,735.45	9,025.34	1,851.51	55,612.30
Man-Made Disasters	34,288.68	—	—	34,616.92	—	68,905.60
Assessment of Health Needs	2,911.57	—	57,790.77	276.40	—	60,978.74
Technical Cooperation to Latin America	1,706.00	—	—	10,113.46	124,765.11	136,584.57
Technical Cooperation Caribbean	2,339.59	—	8,679.56	97,627.53	21.00	108,667.68
Disaster Relief	974.49	44,847.04	—	160.00	1,629.11	47,610.64
Total	190,442.20	44,992.48	392,924.98	235,992.79	137,506.96	1'001,859.41

* Excluding Program Support Cost
** Including contributions from CIDA

EMERGENCY PREPAREDNESS AND DISASTER RELIEF COORDINATION PROGRAM
EARMARKED FUNDS BY SOURCES OF FUNDING(*)

FISCAL YEAR 1985
(First Semester)

Source of funding / Component	PAHO Regular	PAHO** Emergency Fund	CIDA	AID	EEC	Total
Overall Program Management	89,093.42	—	44,209.18	1,162.00	1,038.00	135,502.60
Educational-Training Material	15,380.00	—	178,450.57	7,967.41	1,134.39	202,932.37
Hospital Disaster Preparedness	1,296.00	—	80,910.56	—	—	82,206.56
Environmental Health Training	—	—	46,079.60	—	—	46,079.60
Man Made Disasters	1,746.00	—	—	27,122.00	2,700.00	31,568.00
Assessment of Health Needs	5,060.00	—	102,390.45	—	—	107,450.45
Technical Cooperation to Latin America	4,980.00	—	—	55,463.00	81,895.76	142,338.76
Technical Cooperation Caribbean	1,028.00	—	104,169.50	33,443.40	—	138,640.90
Disaster Relief	—	110,463.86	—	—	1,024.00	111,487.86
Total	118,583.42	110,463.86	556.209.86	125.157.81	87,792.15	998,207.10

* Excluding Program Support Cost
** Including contributions from CIDA

EMERGENCY PREPAREDNESS EXPENDITURES/OBLIGATIONS
BY GEOGRAPHICAL AREA

	1984	1985 First Semester
Central America, Panama and Mexico	$ 144,523.99	$ 104,423.87
Intercountry	75,623.35	50,221.00
Costa Rica	12,642.02	12,731.91
El Salvador	10,624.62	3,398.96
Guatemala	14,495.22	18,927.00
Honduras	6,385.22	5,640.00
Mexico	8,906.90	9,905.00
Nicaragua	3,666.00	—
Panama	12,180.66	1,800.00
South America	$ 210,281.69	$ 172,209.18
Intercountry	115,724.39	70,682.00
Argentina	5,055.52	9,140.00
Bolivia	1,673.00	—
Brazil	22,137.09	6,034.39
Chile	702.90	4,400.00
Colombia	29,009.32	38,060.28
Ecuador	13,368.85	7,926.00
Paraguay	2,356.00	4,996.00
Peru	18,316.12	20,366.10
Uruguay	1,042.50	—
Venezuela	896.00	10,604.41

	1984	1985 First Semester
Pan Caribbean Area	$ 180,470.65	$ 171,353.24
Intercountry	150,609.78	115,624.85
Antigua	7,968.30	—
Bahamas	—	2,800.00
Cuba	1,371.90	1,028.00
Dominican Republic	2,301.60	8,759.64
Dominica	—	2,510.00
Haiti	691.00	633.75
Jamaica	9,403.54	1,300.00
Netherlands Antilles	616.53	—
Puerto Rico	3,674.00	396.00
Saint Lucia	564.00	5,400.00
Suriname	1,449.00	—
Trinidad	796.00	25,542.00
UK Territories	1,024.50	7,359.00
Regional Activities	$ 413,777.44	$ 441,388.09
TOTAL	948,011.27	887,574.38

EMERGENCY PREPAREDNESS AND DISASTER RELIEF COORDINATION PROGRAM
DISTRIBUTION OF EXPENSES BY SUBREGION AND BUDGET ELEMENT
(including relief assistance)

FISCAL YEAR 1984

	SALARIES	TEMPORARY STAFF	CONSULTANTS	DUTY TRAVEL	CONTRACTUAL SERVICES	SUPPLIES/ MATERIAL	SEMINARS/ COURSES	GRANTS	TOTAL
REGIONAL	198,234.58 (47.8%)	3,737.15 (0.9%)	12,402.84 (3.0%)	19,397.18 (4.7%)	62,409.06 (15.1%)	26,574.27 (6.4%)	34,042.36 (8.2%)	57,480.00 (13.9%)	414,277.44 (100%)
CENTRAL AMERICA/PANAMA/MEXICO	41,704.07 (25%)	18,296.00 (11%)	12,984.93 (7.8%)	11,154.14 (6.7%)	1,533.56 (0.9%)	22,343.83 (13.4%)	58,757.36 (35.2%)	— —	166,773.89 (100%)
SOUTH AMERICA[1]	82,508.21 (34.3%)	— —	24,427.68 (10.2%)	23,197.33 (9.7%)	15,187.53 (6.3%)	40,889.73 (17.0%)	53,966.95 (22.5%)	— —	240,177.43 (100%)
PAN CARIBBEAN[2]	63,457.13 (35.1%)	— —	25,818.51 (14.3%)	20,395.60 (11.3%)	21,198.42 (11.7%)	22,830.71 (12.7%)	26,930.28 (14.9%)	— —	180,030.65 (100%)
TOTAL	385,903.99 (38.5%)	22,033.15 (2.2%)	75,633.96 (7.6%)	74,144.25 (7.4%)	100,328.57 (10%)	112,638.54 (11.2%)	173,696.95 (17.3%)	57,480.00 (5.7%)	1'001,859.41 (100%)

[1] Excluding Guyana and Suriname

[2] CARICOM member countries, Cuba, Haiti, Dominican Republic, Suriname

FOOTNOTES (Annexes VIII and IX)

- These provisional figures provide an indication of the level of activity and financial commitment of the Regional Program of Emergency Preparedness and Disaster Relief Coordination in the Member Countries and subregions.

- All direct expenses made for the benefit or on the request from a country is entered inside the country name: for example, national workshops, duty travel to the country, participation of nationals in meetings outside the country, etc.

- Direct costs, such as salaries of staff members, cost of preparation of documents or audiovisual material of interest to several countries, are entered under subregional or regional headings (intercountry).

- The level of expenditures is usually determined by the level of interest and commitment of the health activities. Active national programs in the health sector do request and receive more support.