

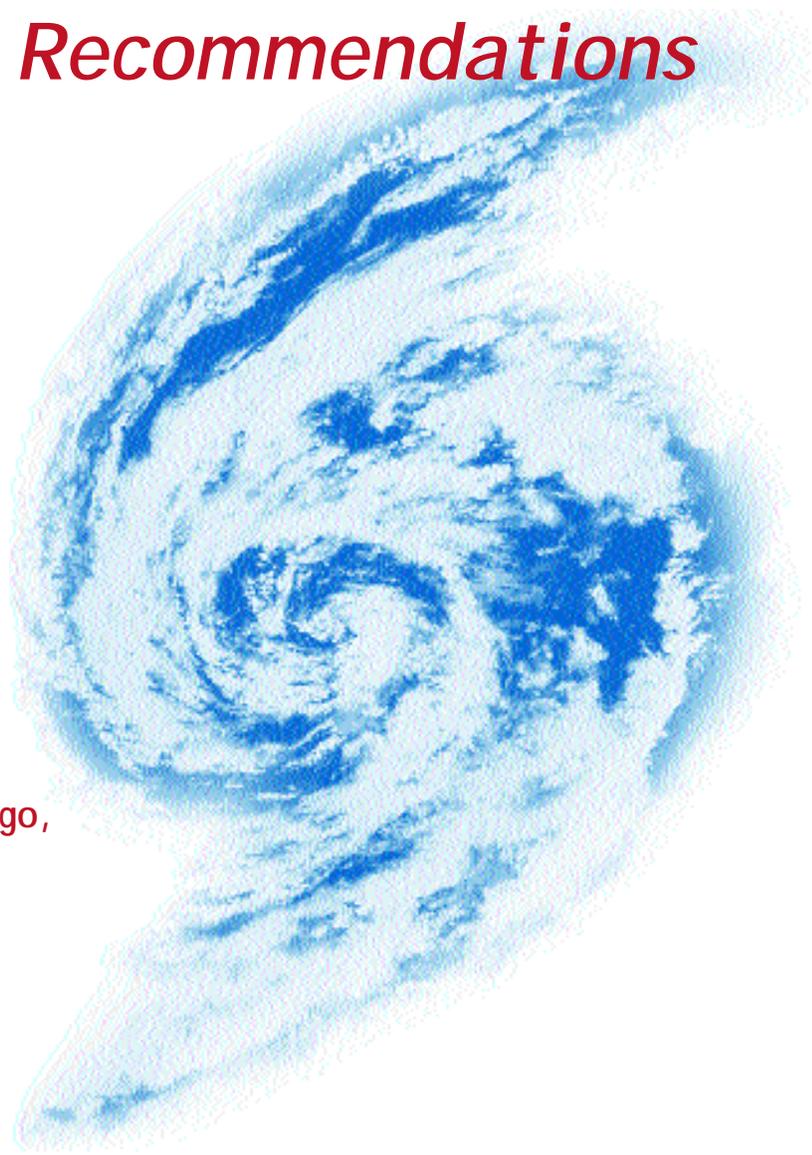


PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION

Conclusions and Recommendations

Meeting on Evaluation of
Preparedness and Response to
Hurricanes Georges and Mitch

16-19 February 1999, Santo Domingo,
Dominican Republic



In collaboration with:



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Preparedness and Response to
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A N o t e f r o m t h e E d i t o r

More than 400 professionals from 48 countries met at this meeting to identify lessons learned with regard to the preparedness for and response to two of the most devastating hurricanes of the last decades: Georges and Mitch.

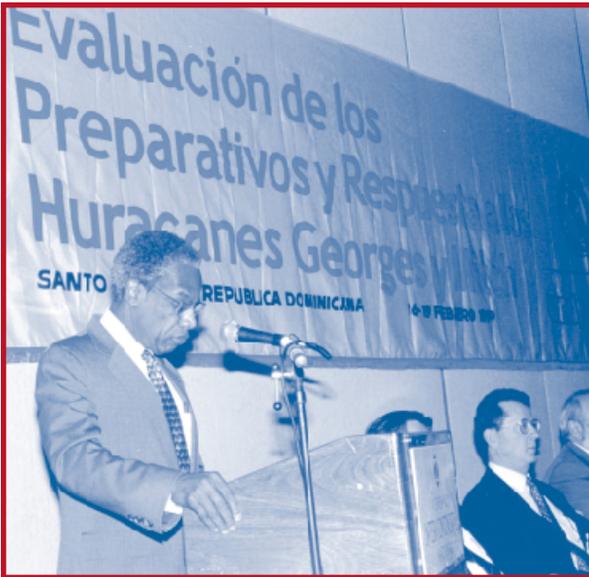
The recommendations that follow in these pages were drafted in 20 working group sessions that were coordinated by one or several of the co-sponsoring international organizations: the Pan American Health Organization, UNICEF, the United Nations Development Program, the Office of Coordination for Humanitarian Affairs and the Secretariat of the International Decade for Natural Disaster Reduction.

In presenting these recommendations, we have maintained the original format of the meeting so that readers can easily identify specific areas of interest. At the end of the document you will find a summary of the evaluation of the meeting made by the participants.

This document is available online at our website <http://www.paho.org/english/ped/pedhome.htm>. Click on the section "Important Meetings." You may download, copy and redistribute this document in its entirety from the Internet, but we ask that you cite the original source of the information.

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W e l c o m e M e s s a g e



Mr. Chairman, Ladies and Gentlemen, first let me thank you for coming to this meeting that has been organized by us in close collaboration with UNDP, OCHA, UNICEF and IDNDR with generous support from the Canadian, UK and USA development agencies. It is always a pleasure to recognize our partners.

We have with us here today representatives of a large number of agencies, institutions, NGOs and private individuals. This cross section

of interests is a manifestation of a growing and irreversible trend. The really important issues of our time cannot be dealt with solely by nations, agencies or individuals, even the most powerful ones. The phenomenon of globalization is no longer restricted to economic or financial matters, it is now evoking the wide participation of ranges and numbers of actors that would have been unthinkable a few decades ago. In almost all aspects of our work we are looking to find the partners and interests that can bring value to the management of the issue or the search for solutions, if definitive solutions can ever be found to the really important human challenges.

Natural disasters have, for me, always represented a classic example of the imperative need to involve multiple actors, or that multiple actors will, by the nature of the phenomenon, become involved. All of us are moved by Good Samaritanism to respond to misfortune, and the outpouring of material response to disasters is normal and natural. Various agencies have it within their mandate to respond to disasters and many perhaps moved by institutional Good Samaritanism also find that they must do something to help. It is in this light that I see the movement by various agencies to attempt to establish oversight coordinating roles in the Americas. This is perfectly understandable and laudable. And of course the national governments must, of necessity, regard it as their constitutional responsibility to address the material needs of their populations.

This meeting represents a forum for all of us to learn together how to prepare ourselves better to help countries to be better prepared to deal with the next disaster. We all need to be better prepared to understand that the natural hazards are beyond our control. We have still to accept how puny we are in the face or presence of the awful power of nature. But it is not arrogance to affirm that we can limit the

extent to which these natural hazards lead to disasters as well as the impact of the disaster itself. We can be better prepared to respond to the disaster.

Sometimes I am asked why a public health agency like the Pan American Health Organization should be programmatically involved in dealing with disasters. We have a long history of work in this area, as it was after the major earthquake in Guatemala in 1976 that the countries of the Americas instructed us to establish a technical cooperation program in the field. The experience of at least the last twenty years has strengthened my conviction of the critical role of the health sector in relation to disasters. There is the immediate concern for the health of victims and indeed after disasters this is usually the main focus of activity. We are concerned also with the damage to health services and their capacity to prevent diseases that might arise.

But more and more as health is seen as a key development sector, we are paying attention to the need to ensure that ill health does not impede the recovery process in its various dimensions. We therefore see our role as being concerned not only with disaster relief but with the whole spectrum, ranging from mitigation through preparation and prevention, to response, to development. In 1987, our Governing Bodies established the policy basis for our program that covers all these aspects and determined the responsibilities of the various levels of the Organization. The fact that this program is functionally attached to the office of the Assistant Director is an indication of the importance I assign to our work in this field.

The recent disasters such as Georges, Mitch, El Niño and the devastating earthquake in Colombia have really tested the preparedness of both the countries and the relevant agencies. That having been said, I do believe that the level of preparedness and general awareness has increased significantly in the Americas as a whole and definitely in the Caribbean and Central America. It is difficult to have quantitative proof, but the information from some countries shows how preparedness and the functioning of the preset mechanisms prevented greater loss of life after disasters. This has clearly been due to the activities of the countries, but here I would like to give some credit to the regional efforts that have been so generously supported by the governments of Canada, USA, UK, France and the European Community.

It is perhaps because of those advances that we should feel comfortable in participating in a careful examination of whether disaster preparedness received the required attention from health and other sectors. Could some of the consequences have been prevented? Was there optimum action and coordination by and among the various agencies that were involved, and can the mechanisms for the coordination be strengthened? I include the subregional agencies such as CDERA and CEPREDENAC in this category.

I am sure you will give attention to how the international goodwill can be channeled more effectively. You will reflect on how it can fulfill some definitive purpose instead of contributing to confusion because it was not solicited and did not respond to real needs. You will no doubt have the opportunity to examine the usefulness of

the supply management system, SUMA, and the extent to which it provided a mechanism for bringing some order to the great quantity of supplies when they arrived. But beyond the immediate benefit, it provided national governments with the kind of information that could ensure transparency in the management of the donations. It was also useful to donors, in that they could see exactly how their material contributions were directed. Unfortunately, I will not be able to stay for the whole seminar, so I will share with you some of the lessons I learned as a result of the recent disasters. Many of them were not new and perhaps I should say that my beliefs were strengthened, rather than that I learned anything new. I was impressed with the multiple tangible manifestations of regional solidarity. This was a clear manifestation of the Panamericanism to which I, as an individual, and my Organization are firmly wedded. Countries contributed according to their possibilities. Some such as Cuba and Mexico provided health personnel, some supplied money, and many provided equipment and critical supplies.

It was brought home to me very clearly that information played a key role in the response. The Internet is now a major medium that has to be recognized in disaster management. It is for this reason that PAHO was quick to establish a website that was a source of credible information during the immediate post disaster phase. I am sure you will discuss the problem of misinformation and what if anything one can do to limit it.

This is not a specific point to be discussed in your meeting, but it was a concern that kept recurring to me during my very brief visit to the countries most affected by hurricane Mitch. Those persons who lost the most had the least to lose. Those houses that were destroyed were often those that belonged to the poorest, and the death toll was highest among the poor. Indeed, the ill consequences of the disasters are often in direct relation to the degree of social inequity. We are concerned with inequity in health outcomes, but inequity in other areas shows its face to us at every turn and must surely be a constant cause of concern to those of us who are concerned with human development in its broad sense.

We look forward to the results of this meeting, the frank and open discussions that have as their sole purpose the improvement of our capacity to help our countries improve their capacity to prepare themselves to confront the inevitable natural hazards. This meeting will not address directly the phase of reconstruction, but all of us will surely be hoping that the countries that have been devastated by the hurricanes will not be forgotten once the faces of their people have passed from the world's television screens. The reconstruction must take account of the need to reduce the vulnerability of our people and their places to disaster.

I look forward to the report you will prepare and I wish to assure you of the commitment of the Pan American Health Organization to continue to work with you in the implementation of the recommendations you will make.

George A.O. Alleyne
Director, Pan American Health Organization

Early Warning Systems

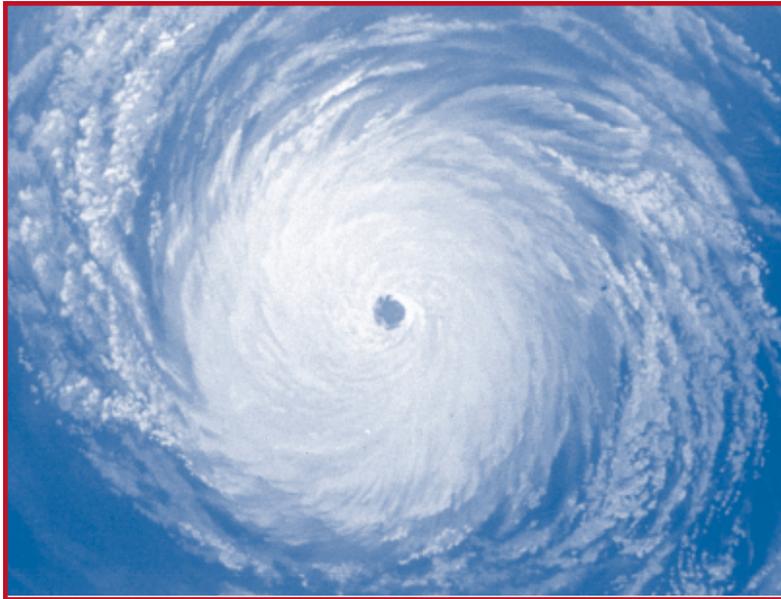


Photo:

The prediction and monitoring of hazards requires access to infrastructure and expertise that is not universally shared or accessible to all communities that may be vulnerable.

The Participants,

in reviewing the function of early warning systems during Hurricanes Mitch and Georges, recognized that:

- ◆ Early warning is a process, not a single activity, and participants in the process must include a broad, cross-section of society. Although the diversity of this participation should be considered positive, frequently national and local coordination of the early warning process is not always adequate.
- ◆ The prediction and monitoring of hazards require access to infrastructure and expertise that is not universally shared or accessible to all communities that may be vulnerable.
- ◆ A national government has the sovereign right and responsibility to issue timely warnings when it is determined, through scientific and other expert means, that segments of its population are at risk. When no authoritative source of information exists, persons may act on incorrect or misleading information that can lead to confusion and loss of life and livelihood.
- ◆ Pre-disaster planning, including the development and testing of warning systems, only can be effective if vulnerable populations are able to incorporate such systems into a routine process of their daily lives.



The Recommendations

- ◆ Planning for implementation of early warning is critical at the local, national, and international levels and must include all of the potential participants in the warning process. UN agencies and other regional institutions should provide technical assistance in the development and testing of such plans through the development of sample plans and models.
- ◆ A single national agency should be responsible for providing integration and cooperation among all parties with interests in early warning. These parties should include individuals and groups in vulnerable communities.
- ◆ National governments are responsible for issuing timely public warnings when reliable, accurate information of an impending event becomes available. Governments must identify a single source for issuing such information and warnings. This information should be distributed using all available media including radio, television, newspapers, and the Internet.
- ◆ Local communities must be made familiar with the hazards to which they are exposed and assist in building the local capacity for interpreting early warning and taking appropriate action to increase the safety of persons and ensuring the availability of essential resources.

Photo: PAHO/WHO

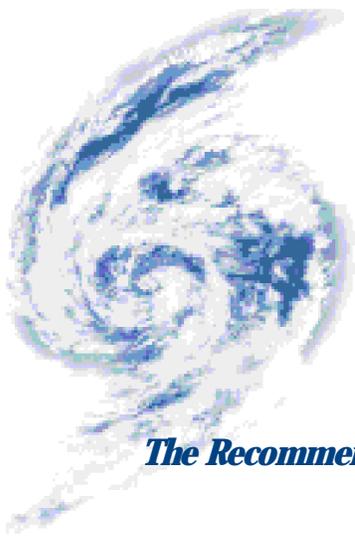


At-risk communities are the first to respond in a crisis, and these populations should be the focus on efforts to create a disaster management capacity. However, little has been done to increase the ability of communities to protect their own lives and property.

The Participants,

in reviewing disaster preparedness and response to Hurricanes Georges and Mitch, recognized that:

- ◆ In order to minimize the effects of natural disasters, it is imperative that at-risk countries have the permanent, professional institutional capacity for disaster preparedness as part of a disaster management program.
- ◆ At-risk communities are the first to respond in a crisis, and these populations should be the focus on efforts to create a disaster management capacity. However, little has been done to increase the ability of communities to protect their own lives and property.
- ◆ Communication media play an essential instructive role in disaster preparedness and response.
- ◆ In countries vulnerable to natural hazards, disaster preparedness, mitigation, and prevention should be a way of life.



The Recommendations

1. Creation and strengthening of capacity

There should be comprehensive training programs directed at all levels (communities, local and central governments, the private sector, NGOs and grass-roots organizations) in the following areas:

- ◆ All aspects of disaster preparedness as an approach to reducing the impact of disasters.
- ◆ Information management.
- ◆ Coordination.
- ◆ A number of simple disaster preparedness measures can be implemented with the support of central and local governments. Such measures should receive special attention in development and training.

2. Community awareness: organization and training

All organizations and institutions should:

- ◆ Promote better community organization as the basis for improving disaster response at the local level.
- ◆ Help organizations at the local level to improve capacity, conduct immediate needs assessment after a disaster, and identify, using simple methods, local hazards and vulnerability.
- ◆ Assist local authorities to develop their disaster preparedness plans with community involvement, followed by simulation exercises.

3. Information management

Communication media should be aware of their influence and role in public awareness, and should assist in improving the population's ability to prepare for and prevent disasters. For example:

- ◆ In broadcasting warnings, the media should not only report on the events taking place, but should provide information on what actions the population should take.
- ◆ The media should ensure that the language used in messages are understood by the majority of the population.
- ◆ Policy- and decision-makers should also be made aware of the need to produce reliable technical information.

4. Creating a “culture” of disaster preparedness and mitigation

There should be a multisectoral and inter-institutional focus on disaster preparedness, mitigation, and prevention, with special emphasis on the education and health sectors. Both the formal and informal education systems can change attitudes about the environment as it relates to hazards and risk.

Photo: PAHO/WHO



The objective of needs assessment is to mobilize funds, collect the necessary materials and supplies to assist disaster-affected populations, ensure rapid rehabilitation of basic services, and plan future action.

The Participants,

recognized that:

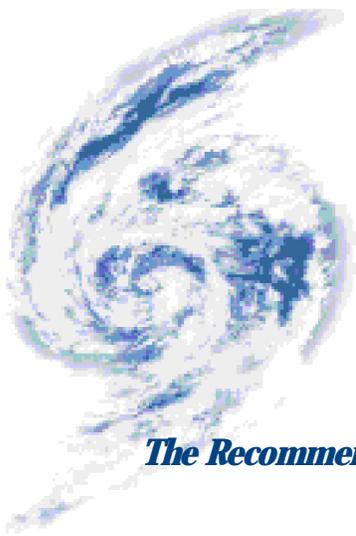
- ◆ The objective of needs assessment is to mobilize funds, collect the necessary materials and supplies to assist disaster-affected populations, ensure rapid rehabilitation of basic services, and plan future action. Governments and local structures must be involved at all times for the needs assessment process to be useful and relevant.
- ◆ There is a need to standardize an easy-to-use, sectoral format for immediate emergency needs assessment, thereby avoiding duplications in output. This format should be made available to all concerned, and presented in a way that is easily understood by all parties.
- ◆ On-site coordination of needs assessment is essential for the process to be reliable.

In reviewing the experiences of Hurricanes Georges and Mitch, the participants also recognized the following problems:

- ◆ There was no single focal point for data coordination. Several organizations were assigned this task, but there was no universally accepted mandate or authority, generally because of difficulty in accessing

adequate resources.

- ◆ Collected information on needs was not always fed back to affected populations.
- ◆ Although some tools are available for needs assessment, they either have not been tested or have not been universally accepted. There is a significant need for scientific methods and evaluation of this topic.
- ◆ Needs assessments made by the media often are not accurate reflections of the situation, and confuse the international donor community.
- ◆ Needs assessment exercises sometimes can be manipulated to serve personal or political interests.
- ◆ Local governments and community organizations involved in disaster response expressed frustration with the lack of coordination and the multiple external actors undertaking needs assessment. Local organizations were often overwhelmed by the situation and unable to undertake the task themselves.
- ◆ There is confusion between the objectives of immediate needs assessments and those of damage assessment relating to mid- or long-term recovery activities.



The Recommendations

- ◆ The governments and local authorities must ensure that the international donor community's response is based on reliable and verified needs assessments.
- ◆ Whenever possible, needs assessment should take place at the local level, as part of a structured official emergency management system. Governments should be supported in strengthening or creating such systems, and be responsible for providing suitable training, information and tools to community organizations.
- ◆ Governments should develop and test, with the technical support of international agencies, standardized methods and procedures to ensure that needs assessments are timely, accurate, and objectively applied. The rapid response needs assessment concept employed by the UNDAC or USAID/OFDA Disaster Response Teams (DARTs) might be adopted by governments.
- ◆ U.N. agencies and donor governments should apply a "lead agency" concept to needs assessment. The results of rapid needs assessments undertaken by external actors must be transferred to governments and sectoral institutions, which should assume full responsibility for mid- and long-term responses.
- ◆ The official local organization for disaster response, as designated in national emergency plans, should provide coordination at the local level between the international and national search and rescue and needs assessment teams. If this mechanism is not available, the OCHA On-Site Operations Coordination Centre (OSOCC) or UNDAC teams could be used for this purpose.
- ◆ Radio communications should be used extensively to supply and collect information from affected communities.

Photo: PAHO/WHO



Governments should be aware that they have the sovereign responsibility for sectoral damage assessments and for decisions on projects and financing sources for reconstruction strategies.

The Participants,

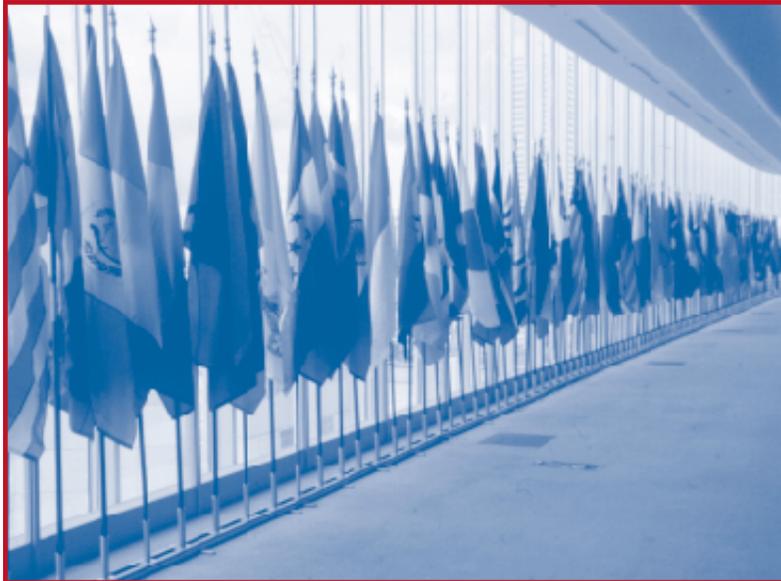
in reviewing damage assessment conducted in the aftermath of Hurricanes Georges and Mitch, recognized that:

- ◆ Governments are eager to receive damage assessments conducted by the U.N. Economic Commission for Latin America and the Caribbean (ECLAC) and other organizations rapidly, in order to use these data to procure resources for rehabilitation and reconstruction. However, international assessment missions (particularly in the case of ECLAC) must wait for the appropriate time to move into affected countries, which may imply a delay of four or more weeks. Assessing damage caused by hurricanes cannot be initiated until the emergency phase ends.
- ◆ Often the local communities do not understand that reconstruction activities do not depend upon ECLAC assessments, but instead depend upon the resources obtained through loans from bilateral and international organizations.
- ◆ The social and environmental sectors have difficulty obtaining funds due to their low visibility and because of problems associated with the methodologies used to calculate the indirect costs in these sectors. Confusion exists in the countries regarding the difference between objectives of immediate needs assessment and damage assessment.



The Recommendations

- ◆ Governments should be aware that they have the sovereign responsibility for sectoral damage assessments and for decisions on projects and financing sources for reconstruction strategies.
- ◆ Governments and civil society should, with the support of international organizations and of ECLAC in particular, work in the revision and adoption of unified damage assessment methodologies for estimating indirect costs to social, environmental, and other informal sectors.
- ◆ Governments and communities should document experiences obtained in disaster management in the aftermath of Hurricanes Georges and Mitch in order to provide feedback to ECLAC and other organizations conducting damage assessment, thereby favoring the predictability of the next event and reducing vulnerability.
- ◆ Communities must be aware that the damage assessment conducted by ECLAC and others are instruments used to consolidate information for the Government, and to assist decision-makers in prioritizing reconstruction activities.



Often, communities and the civil society are not involved in pre-planning. This impairs coordination of activities between the national coordinating institution and local communities during a disaster.

The Participants,

in reviewing the coordination of response to Hurricanes Mitch and Georges, recognized:

- ◆ Often, agencies work in an independent, uncoordinated manner, resulting in delays in the provision of effective assistance. In such operations, efficiency for the overall operation may be lost and costs may increase.
- ◆ Lack of information or inaccurate information impairs coordination or renders it ineffective, inefficient, and more costly. Information is the key to coordination. It must be accurate, credible, and reliable. It also provides the basis for funding.
- ◆ Often, communities and the civil society are not involved in pre-planning. This impairs coordination of activities between the national coordinating institution and local communities during a disaster.
- ◆ Coordination by a single, national institution should strengthen the Government's capacity to reach outside the disaster area and is essential for establishing links with on-site actors.



The Recommendations

- ◆ All disaster planning and response activities should be coordinated through a single, national institution. Evaluation research should be conducted to identify the effects of uncoordinated activities.
- ◆ Information systems must be developed and implemented at the national level that link the communities with the national coordinating institution. Assistance should be provided by the international community and donor organizations. Such systems must generate information that is appropriate for use in coordination of activities and fund raising, and therefore, should be model driven. Such tools should be developed by the appropriate UN or other agencies and tested and refined at the national level.
- ◆ Coordination is a continuous process involving all actors at all levels on a daily basis.
- ◆ Governments should utilize already existing regional and sub-regional organizations for technical and logistics support.
- ◆ The management of information as well as the coordination of the UN system's response to disasters at country level is led by the United Nations Resident Coordinator who in this capacity reports to the United Nations Emergency Relief Coordinator. The U.N. Office for the Coordination of Humanitarian Affairs (OCHA) must improve the quality of the situation reports sent to donors, since the donor organizations rely on them to make funding decisions. They should be based on accurate data provided by the national coordinating institution.

Military and Civilian Coordination



Both the military and civilian humanitarian communities must educate themselves about each other's culture, mission, and methods of operation.

The Participants,

regarding military and civilian coordination of response activities, recognized that:

- ◆ At times, the military seems of two minds: 1) not sure whether humanitarian initiatives are good for training, morale, and public relations; or 2) whether the humanitarian initiatives distract from its primary mission.
- ◆ Lack of knowledge about the mission and the institutional/organizational culture of military and humanitarian agencies frequently hampers good communications, which are necessary for effective preparedness planning and operational coordination during times of disaster.
- ◆ There are three groups of players: 1) national military and defense forces; 2) international military; and 3) local, national, and international civilian humanitarian organizations. It often is the case that there is little coordination between these groups during humanitarian response initiatives. This often results in ineffective or discordant relations during the stressful periods of disaster response.
- ◆ Protocols for military humanitarian initiatives may be established by civilian and political authorities and, when this is the case, the military only can engage so far as their terms of engagement provide. Another complication may be that in some countries, armed forces' involvement in humanitarian initiatives traditionally has not involved the civilian society.



The Recommendations

- ◆ Rules of humanitarian engagement should be defined as clearly as are the rules of military engagement. The guidelines on the Use of Military and Civil Defence Assets in Disaster Relief (reviewed and developed at the international Conference in Oslo in 1994) are in this regard the appropriate reference.
- ◆ Both the military and civilian humanitarian communities must educate themselves about each other's culture, mission, and methods of operation. Such educational efforts should not be reserved for on-the-job training. The learning process requires constant communication and exchange, not just during disaster response, but through collaborative preparedness and joint training efforts involving all levels of both communities in order to ensure success in times of great need.
- ◆ Regular mechanisms must be developed and institutionalized to provide for coordination in pre-disaster planning and cooperation within each group and between groups. Each of the actors planning to take part in humanitarian interventions must be willing to coordinate with their counterparts in other sectors.
- ◆ Politicians and legislators must be brought into the process of determining the extent to which military forces can become involved. These legislators must be educated so that they are conversant with the issues. As laws and the resulting protocols of engagement are better defined and understood, there should be better opportunities for cooperation with civilian operations, including preparedness and training.

Management of Information: Use of the Internet

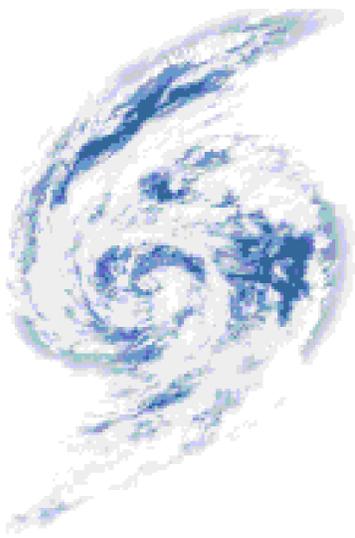


Decision making in many aspects and in all phases of disaster management has been enhanced by using the Internet as a coordination tool.

The Participants,

in reviewing the successes and obstacles related to Internet use following Hurricanes Georges and Mitch, concluded:

- ◆ The Internet, and particularly the use of electronic mail and the World Wide Web (including databases, text and graphics files), has become an important part of most day-to-day business applications, and disaster management is no exception. It has also contributed to reshaping the traditional relationships among humanitarian actors in terms of the collection and management of data and the production and use of information.
- ◆ There was a substantial increase in the use of Internet for early warning purposes to track the progress of Hurricanes Georges and Mitch.
- ◆ The Internet made it easier and much quicker to gather and publish information on disasters and to consult and receive answers to technical questions from peer groups (practitioners).
- ◆ Decision making in many aspects and in all phases of disaster management has been enhanced by using the Internet as a coordination tool.
- ◆ In some instances, the unrestricted nature of the Internet led to the distortion of information on traditional scientific concepts. For example, there was a proliferation of rumors and misinformation on epidemiological issues.
- ◆ There can be problems with confidentiality impartiality and the way information is used, which may make sources of information reluctant to share it.
- ◆ Information management is labor-intensive. The Internet doesn't solve this, and may contribute to it!



- ◆ Time lapses can occur in updating and posting disaster information electronically (sometimes because of required clearance process). However, the inverse can also cause problems. Sometimes the speed with which information is produced contributes to inaccuracies.
- ◆ Information overload, duplication of information, gaps, and format incompatibilities occur.
- ◆ It was difficult to determine the credibility of much of the information produced in the immediate aftermath of the disasters.
- ◆ Technological constraints, the high costs of telecommunications services, and language are still barriers to the equitable access to Internet.
- ◆ While Internet changed the way information was traditionally used, it also highlighted the need to preserve and archive valuable information related to the disaster. How do we preserve a long-term memory of what has occurred?

The Recommendations

- ◆ As a preparedness measure, the success of building trusted networks or “communities” (inter- and intra-country) of agencies lies in the establishment of these links prior to disasters. These networks should be created and improved.
- ◆ To improve the quality of information and to avoid redundancy, selective Internet discussion lists should be developed. Information posted, either through “listservs” or on the Web, should have an added value, i.e., the information should be previously analyzed and presented in a user-friendly way.
- ◆ The preoccupation with the rapid posting of information should be balanced with necessary attention to detail and credibility of the information.
- ◆ To ensure the continuous access to Internet during and after a disaster, contingency plans need to include telecommunications, power backup, etc.
- ◆ Users and producers of information must be responsible for using new technologies that allow them to meet their customized needs.
- ◆ Preserving long-term institutional memory is not a matter of technology. This already exists. It is a matter of human and financial resources and political will.
- ◆ The link between on-line information and the decision-making process should be fully evaluated. So should the policies of national authorities regarding access to and use of Internet by all sectors of the disaster community.
- ◆ Providers of information should be trained to obtain the best results of the new technology.

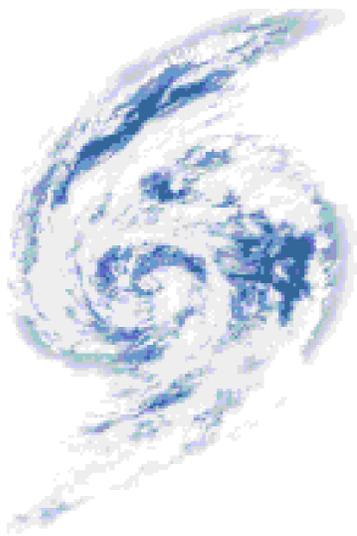


A series of specific, short-term measures should be taken to improve the working relationships between the government and the media, and to enhance the effectiveness of the media both in the early warning stage and in the dissemination of information during disasters.

The Participants,

in discussing the role of local and international public information offices and the mass media during emergencies and disasters, and more specifically, the dissemination of information on disasters, the role of governments in providing information to reporters, and how collaboration can benefit affected populations, noted the following:

- ◆ Citing their experiences during Mitch, described the massive confusion and hardships faced by local reporters in getting the story of what was happening. They indicated that it was very difficult getting information from government sources.
- ◆ Pointed out the perceived failure of early warning by national authorities, and the need to constantly keep in contact with meteorological services.
- ◆ The importance of media coverage in the affected countries was debated, as a way to increase 'sympathy' and heighten the possibilities of receiving international assistance.
- ◆ Noted that the media, at the international level, also disseminated rumors and incorrect information on immediate needs after the disaster, and on health aspects such as epidemics.
- ◆ Differences were pointed out between national and international media in terms of their methods in covering disaster stories, and the effect they had on the affected countries and on the potential 'donor' countries.
- ◆ Pointed out that it would be desirable to train national and international reporters in disaster-related issues.
- ◆ A series of specific, short-term measures



should be taken to improve the working relationships between the government and the media, and to enhance the effectiveness of the media both in the early warning stage and in the dissemination of information during disasters.

- ◆ Underscored the difficulties of the local levels in accessing some of the more modern communications systems, and the problems this generates in crucial times such as when a warning is declared, and in information gathering on damages and immediate needs.

The Recommendations

- ◆ Training journalists on issues related to disasters through short and well-designed courses on critical aspects, given by universities and national organizations responsible for disaster situations.
- ◆ With the support of international organizations and NGOs, train government officials, community leaders and disaster management experts specifically on the appropriate relations with the media before, during and after a disaster.
- ◆ Include the mechanisms for generating and disseminating official information to the media in emergency plans at the local and national levels.
- ◆ The local levels should have the most appropriate resources and information channels available, such as access to Internet and the traditional radio. International organizations and NGOs should support local governments and sectoral institutions in the acquisition and handling of radio communication networks.
- ◆ For international journalists covering disasters, who are not easily identifiable in advance given the unpredictability of international coverage, best practices for the emergency preparedness sectors involve having easily accessible information available at the national and international levels. This implies training as noted above, and perhaps a more prominent role for PAHO and for national disaster coordinators in the dissemination of information in disaster situations. The possibility of additional funding for this could be explored.

Photo: FAHO/WHO

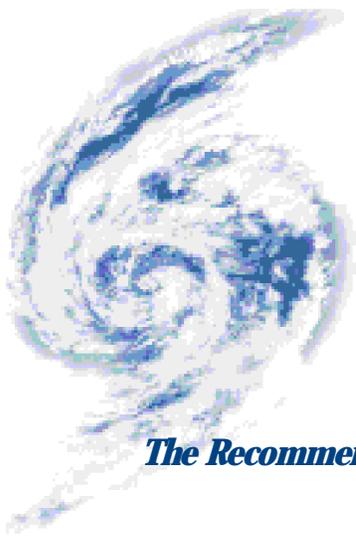


Coordination mechanisms for an integral development of the activities involved in supply management must be incorporated into sectoral and national emergency plans.

The Participants,

identified the following problems:

- ◆ The countries exhibited the political will to manage the resources with transparency and to provide efficient accountability for those affected. However, timely support for supply management operations was not always provided, e.g., in areas of institutional coordination, customs support, transportation, human resources, and logistics. Some public and private institutions such as ministries and nongovernmental organizations did not share information on the status of their supplies.
- ◆ Requests for international support in supply management were made too late in some cases, and were not made at all in others.
- ◆ In some cases, the donations did not have the intended value either for the recipient or the donor.
- ◆ As time passed, many difficulties were encountered in many places in disseminating the information gathered about humanitarian supplies, resulting in duplications and inconsistencies in requests made to the donor community and in updating data in the lists of needs.
- ◆ Personnel with prior training in supply management, who form the foundation for the proper functioning of the system, often were not available to assist at the time of the emergency.



The Recommendations

- ◆ Coordination mechanisms for an integral development of the activities involved in supply management must be incorporated into sectoral and national emergency plans, with active participation of national academic centers and other public and private institutions.
- ◆ The national disaster organizations responsible for coordination of the use and distribution of supplies should promote the use of SUMA or other supply management systems as evidenced by the need to ensure transparency and accountability. These organizations should also strengthen the inter-country operational teams as a first-response resource in major disaster situations.
- ◆ All United Nations agencies and other international organizations should train their personnel in the integral management of supplies, both before and after the occurrence of a disaster.
- ◆ PAHO/WHO should promote the availability of frequently updated and transparent information systems about humanitarian supplies on the Internet.
- ◆ The UN system should provide clear and precise information to donors and the media about the needs of the affected population.
- ◆ Countries should adopt the recommendations of the World Health Organization regarding donations of medical supplies and equipment, and the list of emergency medicines as a regional standard.

Photo: PAHO/WHO



The frequency and intensity of disasters are linked to environmental degradation. Among the factors most responsible are lack of land use planning, deforestation, current production systems, and patterns of consumption.

The Participants,

in assessing the environmental impact of Hurricanes Georges and Mitch, acknowledged that:

- ◆ The frequency and intensity of disasters are linked to environmental degradation. Among the factors most responsible are lack of land use planning, deforestation, current production systems, and patterns of consumption.
- ◆ Development cannot be disassociated from the reduction of vulnerability, disaster prevention, and mitigation of environmental degradation.
- ◆ Environmental quality and safety are universal, inalienable rights, and it is the obligation of authorities and society to guarantee these rights. Civil society should be made aware of and take responsibility for their rights and obligations.
- ◆ Local government has an important role in the management of natural resources, the prevention of disasters, and appropriation of financial, technological, and human resources.
- ◆ Suitable water resource management provides cohesion of organization at the community level and should be used for sustainable management of natural resources, thereby reducing vulnerability in the Region.
- ◆ Important institutional advances have been achieved, but improvement is needed in transparency, efficiency, and professionalism in government agencies.



The Recommendations

- ◆ A directive regarding the environmental impacts of natural disasters that is accessible and binding must be developed for policy makers.
- ◆ Disaster prevention and environmental issues should be included in the development agenda of the countries, with the aim of converting them to State policy. The agenda should be holistic, encompassing economic and social themes, and have a strong scientific foundation. Solutions should focus on cultural realities.
- ◆ Effective mechanisms for disaster preparedness, mitigation, and prevention should be developed among different strata of civil society, within the Government, and include the indigenous community.
- ◆ There should be improved and more rapid implementation of environmental legislation (norms, regulations, and codes) and measures for financing.
- ◆ Programs should be promoted for national, formal, and informal environmental education as part of the process of developing a culture of disaster prevention and environmental protection.
- ◆ Promotion and training of community organizations in the management of local resources should be encouraged.
- ◆ Alternative forms of renewable energy (hydro, solar, wind, etc.) should be supported.
- ◆ The availability of appropriate technology should be considered and incorporated into national fire-control programs and programs aimed at rehabilitating production systems of rural populations.
- ◆ In the process of rehabilitation and reconstruction, international financing agencies should ensure that there is a clear demonstration of natural resource protection (water, soil, air, and energy) and vulnerability reduction.

Photo: PAHO/WHO



National health and education authorities should strengthen basic training on search and rescue, first aid, and integral disaster management at the community level and the primary, secondary, and university levels of education.

The Participants,

in reviewing aspects of emergency medical care following Hurricanes Georges and Mitch, recognized the following:

- ◆ Emergency medical care was frequently very difficult to accomplish following the impact of the hurricanes, especially in those communities that were difficult to reach. In these communities, the population mobilized itself to conduct search and rescue and first aid for the injured until medical personnel arrived.
- ◆ While efforts have been made in the planning, training, and organization of institutional medical care in cases of disasters, these activities are still being implemented without the participation of or coordination among various local, regional, and national institutions, and with inadequate use of the limited available resources.
- ◆ It was observed that the emergency medical care required during the immediate post-impact phase was provided at the local level, through the mobilization of medical teams at the regional and central levels from the affected countries themselves, and from foreign medical brigades. Frequently, these brigades require logistic and technical support from the affected countries, which places another burden on the health institutions during the most critical phase of response. However, in the medium-term, the cooperation of foreign health personnel who respond to needs that have been clearly defined by the affected government often turns out to be very useful.
- ◆ It was observed that field hospitals, which, in addition to their high installation costs and the fact that they rarely respond to local needs, take too long to begin functioning. This results in under-utilization of the existing health services and the creation of false expectations in the affected communities.



The Recommendations

- ◆ National health and education authorities should strengthen basic training on search and rescue, first aid, and integral disaster management at the community level and the primary, secondary, and university levels of education. Exchanges should be facilitated among the community, technical, and political sectors.
- ◆ Health authorities, together with other institutions of the sector, and with the cooperation of PAHO/WHO, should strengthen the development, dissemination, and implementation of contingency plans that define the precise participation of each of the actors, linking primary health care with emergency hospital care.
- ◆ Countries and organizations should send medical brigades or health personnel only at the request of the affected country. The assistance provided must include sufficient logistic and technical components for these personnel to carry out activities under the coordination of health authorities, taking advantage of PAHO/WHO experiences.
- ◆ Field hospitals, if requested by the health authorities, should be installed in appropriate locations and be coordinated and managed by local health authorities, regardless of whether the facility's origin is local or foreign.

Photo: PAHO/WHO



Vaccines that are not included in basic immunization schemes should not be sent without pre-approval by the national coordinating institution. The basic immunization scheme of the country should not be broken.

The Participants,

in reviewing communicable disease surveillance and control, recognized the following:

- ◆ Instruments for detection of events, shelter identification and number of people in them, number of deaths, and health service conditions were designed during the emergency. Information obtained from medical records and notifications often did not agree. This was true especially for shelters. In addition, difficulties were encountered in obtaining epidemiological surveillance information from medical files. Epidemiology teams also collected information pertaining to damages and needs.
- ◆ Bulletins were the most frequently used mechanism for the dissemination of information. They were distributed at different times, and attempted to systematize the information received. The information needs varied among countries.
- ◆ Initial efforts often were very broad. The greatest problems were encountered in the shelters during the first few days following the events.
- ◆ Because surveillance information was inadequate prior to the events, there was difficulty separating disease frequency between the pre- and post-event periods. The actual changes associated with the event could not be accurately calculated.
- ◆ Some medical brigades from other countries were not coordinated by the national coordinating institution, were not given orientation, and hence, applied case definitions used in their countries of origin rather than those used in the region.
- ◆ Pressure was exerted to use vaccines not included in the basic immunization schemes. Adequate supplies of tetanus toxoid and anti-meningococcus vaccines often were not available at the local levels.



The Recommendations

- ◆ Instruments for data collection during a disaster should be prepared and standardized by PAHO/WHO prior to the disaster. During a disaster, medical records must be available for epidemiological surveillance. During the first days of the disaster, surveillance efforts should focus on shelters and leave routine notification for a second opportunity. Assessments should include modified risks, e.g., shelters, ecosystems, and the epidemiological context.
- ◆ Coordination among different sectors in the exchange of information is essential. Methodologies and information should be coordinated between existing laboratories in other sectors, such as agriculture, and at the national level in transferring laboratory techniques and reagents.
- ◆ Epidemiological standards should be developed for shelters.
- ◆ The mass media should be utilized to keep people informed about the status of communicable disease occurrence and control.
- ◆ The system must allow for classifications of deaths caused directly by the disaster.
- ◆ Other establishments, e.g., industries, occupational health, and the private sector, must be integrated into the information network for surveillance.
- ◆ The goal of surveillance is to assist decision-making at the local level. Community participation should be strengthened within the surveillance systems. Routine surveillance systems should not be substituted, but instead be adapted in disaster situations. When syndrome notification is used for surveillance input, a laboratory diagnostic confirmation is recommended. Surveillance systems and laboratory diagnosis capacities should be enhanced. Epidemic surveillance systems should be adjusted according to the existing health profile; thus, an accurate and current pre-event health profile must be available.
- ◆ The country receiving foreign medical brigades must define potential risk for diseases that can be introduced by personnel from other countries (e.g., non-existence of dengue-3 in the Dominican Republic). Medical brigades from NGOs and other agencies that support areas not covered by an official service must provide information on morbidity and mortality and surveillance actions taken in the country. Each country must orient incoming medical teams or brigades to the country's established surveillance systems and existing vaccination schemes. Informational bulletins could serve this purpose.
- ◆ The regional resource center for communicable diseases (PAHO/WHO) should establish uniform case definitions for surveillance activities and mechanisms for laboratory confirmation of cases for the entire Region. It should maintain strategic reserves of appropriate vaccines. All countries should adopt these case definitions.
- ◆ Vaccines that are not included in the basic immunization schemes should not be sent without pre-approval by the national coordinating institution. The basic immunization scheme of the country should not be broken. To reduce pressure on certain vaccines it is recommended that health education be strengthened, particularly regarding a country's basic immunization scheme. Adequate supplies of tetanus toxoid should be available for administration to persons working during the phase of debris removal and reconstruction.

Food and Water-Borne Illnesses



Photo: PAHO/WHO

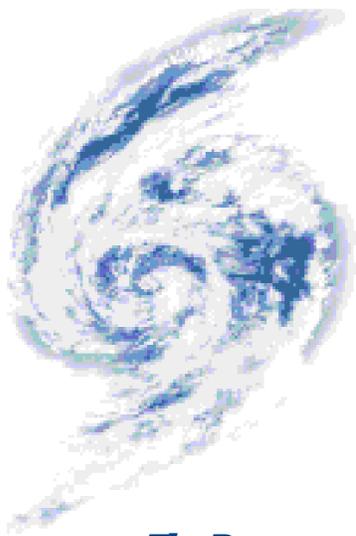
Oral cholera vaccines recommended by WHO are not yet ready to be used in the countries of the Region.

Vaccine cost limits access in the countries, its efficacy is not known in endemic areas, and it is not recommended for use in disaster situations.

The Participants,

recognized the following issues:

- ◆ Cholera is endemic to Central America.
- ◆ The presence of enteric illnesses and particularly cholera is a manifestation of social deterioration.
- ◆ The region has established clinical definition of cholera.
- ◆ During and after Hurricane Mitch, cholera was observed in relation to cross-border migrations.
- ◆ Damage to sewage networks by the hurricane resulted in contamination due to the mixture of waste and drinking water.
- ◆ In the most remote areas where communities do not have access to health services, there was a shortage of information on prevention of diarrheal diseases.
- ◆ There are cultural problems in accepting the taste of chlorine in water supply.
- ◆ There is little confidence in information provided by public services. There is a perception that inaccurate information is provided for economic and political reasons.
- ◆ Public policy and social spending in the countries have not been directed to the population at greatest risk;
- ◆ Many donated and stored foods were either rejected or disposed of because of their expiration dates or due to deficiencies in transportation and storage.
- ◆ Epidemiologically, cholera should be viewed in the context of enteric diseases and not independently.



- ◆ Oral cholera vaccines recommended by WHO are not yet ready to be used in the countries of the Region. Vaccine cost limits access in the countries, its efficacy is not known in endemic areas, and it is not recommended for use in disaster

situations. Measures taken to improve basic sanitation services and community education have proven their effectiveness in the prevention of food and water-borne illnesses.

The Recommendations

- ◆ Considering that food and water-borne illnesses, in particular cholera, result from deficiencies in human development, the working group calls on governments to focus their public policy and public spending on poverty issues, in particular on providing basic sanitation and drinking water services to the least advantaged populations.
- ◆ Governments should strengthen their National Emergency and Disaster Commissions with multidisciplinary health teams that maintain ongoing programs and evaluations for implementing emergency plans.
- ◆ Governments, with the participation of international agencies, NGOs, and civil society should cooperate in establishing a permanent *strategic plan* (comprising pre-disaster activities) using the support services offered by different agencies.
- ◆ Strengthened surveillance systems should be optimized for the control of food and water in the countries of the Region.
- ◆ Diagnostic laboratories should be strengthened; efforts should be made to ensure that surveillance includes monitoring resistance to antibiotics.
- ◆ Areas with the most vulnerable populations and those at greatest risk to disasters should be given priority.
- ◆ Infrastructure for adequate shelters with basic services should be established to avoid problems resulting from improvisation in disaster situations.
- ◆ Neighboring countries should establish an ongoing exchange of information systems on diarrheal diseases (before, during, and after disasters).
- ◆ There should be promotion for integrating health services into border activities for control measures.
- ◆ Owing to the impact of the exchange of information about cholera cases in border areas, it is recommended that notification be given regarding diarrheal diseases in general.
- ◆ Community education on prevention of diarrheal diseases should be implemented with the support of NGOs.



Photo: PAHO/WHO

To reduce the impact of vector-borne disease it is essential to activate the epidemiological surveillance system prior to the onset of a natural disaster:

The Participants,

based on the experiences of Hurricanes Georges and Mitch, concluded that:

- ◆ To reduce the impact of vector-borne disease it is essential to activate the epidemiological surveillance system prior to the onset of a natural disaster.
- ◆ The analysis of the level of preparedness in countries regarding the decentralization process of malaria programs revealed that greater social participation is needed. This is best

carried out in phases, giving communities the opportunity to take responsibility in solving problems.

- ◆ At the time of the Conference, there had not been an increase in vector-borne diseases in the countries affected by the hurricanes. This can be explained by the behavior of the phenomena as well as by the immediate action taken to control vector breeding sites.



The Recommendations

- ◆ Each country, depending on its epidemiological situation, should take pertinent disease prevention measures before and after an event.
- ◆ Technical manuals that orient field operations teams on the control of vector-transmitted diseases should be developed and/or made available. Existing training materials should be consulted, updated and improved.
- ◆ Training on different pathologies endemic in countries should be conducted in the public and private health sectors for technical personnel, professionals in clinics, and public health workers.
- ◆ Epidemiological criteria should be employed in the use of insecticides to avoid unnecessary use in certain areas, or to avoid wasting the product.
- ◆ PAHO should carry out investigations or delegate groups of experts to analyze the use of biological pest control for the benefit of the environment and public health.
- ◆ Entomological surveillance should be expanded to establish the different vectors of communicable disease in different regions of a country, thereby allowing timely operations to prevent outbreaks. It is also important to conduct entomological surveillance both inside and outside of refugee camps or temporary settlements.
- ◆ All countries exposed to hurricanes or floods should maintain epidemiological surveillance for leptospirosis and strengthen diagnostic laboratories.
- ◆ The collection and disposal of solid waste from temporary shelters should be controlled to avoid the creation of vector breeding sites and reservoirs.



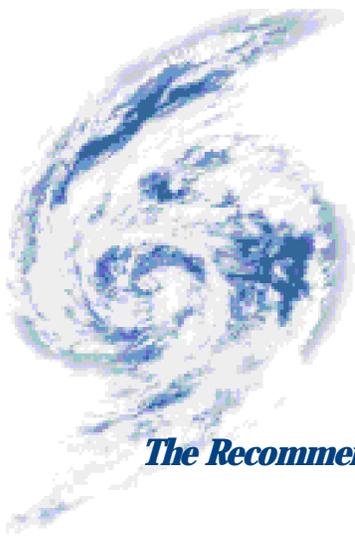
Photo: Diario El Sol (Peru)

Institutions in the water supply and sanitation sector must initiate or finalize vulnerability studies of their installations, and include this component in the development of reconstruction projects.

The Participants,

in assessing the impact of Hurricanes Georges and Mitch on water and basic sanitation systems, concluded the following:

- ◆ Aqueducts, water supply and sanitation systems and infrastructure were severely damaged by the hurricanes. Vulnerability studies and information on previously installed capacity were not available.
- ◆ Rapid assessment of damage to infrastructure in the area was poorly conducted and based on unorthodox methodologies.
- ◆ In some cases, local authorities had no pre-established mechanisms for coordinating and managing information concerning damage assessment, or for identification of water supply and sanitation needs.
- ◆ The humanitarian aid received consisted primarily of materials and equipment for water treatment and supply. These comprised a vast range of technologies, many of which were unknown to the communities. Disinfection equipment was insufficient, although in some cases there were means to acquire it.
- ◆ While community participation was proven to be essential for response activities in the sector, this participation should have been coordinated by water commissions and/or neighborhood or municipal groups in order to be more effective.



The Recommendations

- ◆ Institutions in the water supply and sanitation sector must initiate or finalize vulnerability studies of their installations, and include this component in the development of reconstruction projects.
- ◆ The results from sectoral and institutional vulnerability studies should be used for the implementation of short-term mitigation activities. The development of pilot projects to measure cost-effectiveness of mitigation measures in the sector is strongly suggested.
- ◆ Water and sanitation authorities should, with the support of international organizations, improve coordination and communication mechanisms through the formulation, testing and implementation of an emergency sectoral plan that includes formal channels of communication with government and local authorities, during and after an emergency.
- ◆ Sectoral institutions must develop and perfect formal training programs for both national authorities and international cooperation on emergency management in the area, taking advantage of universities and regional institutions. New technologies should be tested by research carried out under non-emergency conditions.
- ◆ Sectoral institutions should support the government, both at the central and local levels, in the development of information systems with data on human resources, materials, equipment, and existing capacity for managing water supply and basic sanitation.
- ◆ Sectoral institutions should document their experiences in emergency management following Hurricanes Georges and Mitch, including a comparative analysis of replacement costs vs. the costs of having taken preventive mitigation and preparation measures.
- ◆ Sectoral institutions must lead community hygiene training, in coordination with the education sector, local NGOs and international organizations, using participatory methods and appropriate materials. In addition, they should make sure that national authorities include a strong education component on sanitation in every water supply and sanitation project.
- ◆ Financial and technical cooperation institutions should demand that all new water supply and sanitation projects include vulnerability reduction components.
- ◆ Governments should reinforce the process of sectoral decentralization in order to strengthen the response capacity at local levels, and to guarantee transparency and reliability in requests for humanitarian aid and for the proper channeling of international cooperation.

Photo: PAHO/WHO



National food and nutritional policies and contingency plans for emergency situations should be developed and implemented.

The Participants,

recognizing the following problems in food and nutritional aspects, noted:

- ◆ At the national and operational levels, there exists a lack or inappropriate application of clear guidelines on procedures for food and nutritional aspects in emergency situations.
- ◆ Food supplies were often inaccessible in the most affected areas due to limited logistic resources and failures of the infrastructure.
- ◆ Inter-institutional coordination for food distribution was not adequate for some of the affected populations.
- ◆ The majority of the food reserves for immediate response depends upon donated supplies. Some of the food donations were not adequate for standard feeding patterns or were difficult to prepare in the disaster setting.
- ◆ It often was not possible to give priority attention to vulnerable groups due to limited information on their location and to the unavailability of special types of food.



The Recommendations

- ◆ National food and nutritional policies and contingency plans for emergency situations should be developed and implemented in association with PAHO/WHO.
- ◆ National governments and communities should allocate funds for the provision of food during emergencies.
- ◆ The national capacity for the provision of food should be strengthened through:
 - The creation of a committee for inter-institutional coordination;
 - Training of human resources, including at the local level; and
 - Development of distribution and transportation networks at regional and local levels.
- ◆ The National disaster organization responsible for the coordination and distribution of food should promote the use of SUMA or other systems for the integral management of food based on the need for transparency and accountability.
- ◆ The national government should assist the local communities with implementation of a food and nutritional security strategy.
- ◆ The WFP should provide easily accessible lists of essential food and complementary items for emergency circumstances, should assist the national coordinating agency in limiting the period of free food assistance, and should promote the implementation of productive and/or reconstruction activities.
- ◆ PAHO/WHO, UNICEF, and the WFP must establish/strengthen an ongoing system of food-nutritional surveillance with each country.

Psycho-Social Aspects of Disaster Situations

Photo: PAHO/WHO



It is essential to include the psycho-social aspects of health in national disaster plans and in the provision of care during disasters.

The Participants,

in reviewing the psycho-social aspects of the impact of Hurricanes Georges and Mitch, recognized that:

- ◆ Few, if any, plans or single, permanent, inter-institutional organizations exist at the national level that address the psycho-social aspects of disasters.
- ◆ Little is known about the psycho-social aspects of the impact of Hurricanes Georges and Mitch, since the instruments to make appropriate assessments and the personnel to use them are lacking. Scientific and technical information is not available to assess the results of known interventions.
- ◆ Generally, it is held that mental health care requires the intervention of specialists.
- ◆ Mental health guidelines and educational materials differ between countries and often cannot be shared.
- ◆ Access to mental health care is not always differentiated from other aspects of health care.
- ◆ In general, the media do not participate in orientation about the psycho-social aspects of disasters.



The Recommendations

- ◆ It is essential to include the psycho-social aspects of health in national disaster plans and in the provision of care during disasters.
- ◆ All nations should create an inter-institutional organization with a permanent staff that is responsible for the psycho-social aspects of disasters.
- ◆ International organizations should act as facilitators in the assessment of psycho-social care situations, support the integration of new programs, disseminate technical information and existing tools for the assessment of mental health needs, and support the process of documenting and evaluating experiences arising from their application.
- ◆ Mental health care, particularly at the primary level, does not necessarily require the interventions of specialists, but can be delivered by personnel in the communities who have been trained through self-experience and by teams from the national level.
- ◆ National health authorities, with the assistance of PAHO/WHO, UNICEF, and other organizations, should evaluate existing models and, as deemed necessary, develop new models for use by all nations.
- ◆ Countries should make provisions for mental health care for groups that are especially vulnerable (children, handicapped and older persons, community leaders, rescue personnel and people handling cadavers, among others), since the impact of the access to service and the emotional impact must be differentiated.
- ◆ Nations should conduct, with the support of international organizations, meetings to provide information and technical orientation on disasters to journalists and social communicators, thereby contributing to promotion and protection of health of the community.
- ◆ Plans for disaster response should include components aimed at decreasing peoples' vulnerability with respect to psycho-social risks associated with disasters.
- ◆ Personal training programs in the communities should integrate education for handling the mental health aspects associated with disaster situations.

Transition from the Emergency to Reconstruction

Photo: PAHO/WHO



External cooperation packages should incorporate strategies and concrete actions for preparedness, prevention, and mitigation of disasters.

The Participants,

in reviewing aspects of the transition from the emergency phase following Hurricanes Georges and Mitch to reconstruction, concluded:

- ◆ Disaster response is closely linked to social and ecological vulnerability, the feasibility of decentralized response, and the strength and transparency of central and local institutions.
- ◆ Communities and persons affected should determine the priorities in recovery and reconstruction. Psycho-social recovery is a decisive aspect of rehabilitation.
- ◆ Land ownership and land use are priority elements in recovery and reconstruction. Populations should be resettled using criteria based on safety and sustainability.
- ◆ For external cooperation to be effectively and efficiently assimilated, the following should be taken into account:
 - Accurate damage assessment must be conducted, and
 - Rehabilitation must be carried out simultaneously with training and strengthening of institutions.
- ◆ Hurricane Mitch provided a unique opportunity to politically and socially strengthen the process of Central American integration.



The Recommendations

Regarding aspects of social vulnerability, participants recommended:

- ◆ Basic social systems (principally health and education) need urgent rehabilitation using strategies such as the assignment of funds at the local level.
- ◆ Community employment and sustainable living conditions must be created to avoid migration and the return of populations to unsafe locations.
- ◆ Recovery and reconstruction must include components of gender equality.

To lessen environmental vulnerability, participants recommended:

- ◆ Reforestation, and management and protection of critical areas must be implemented.
- ◆ Watersheds must be protected and their management should be reevaluated.
- ◆ It is critical to reestablish agro-ecological and productive systems (e.g., the use of work-for-food programs).

Regarding reconstruction and external cooperation, participants recommended:

- ◆ Strategies must be sought to streamline administrative procedures and ensure transparency in the use of external assistance.
- ◆ Micro-projects aimed at the most vulnerable populations should receive special attention, and assistance should be provided to identify, formulate, and administer projects at the local level;
- ◆ Paternalism and the creation of false expectations should be avoided.
- ◆ External cooperation packages should incorporate strategies and concrete

actions for preparedness, prevention, and mitigation of disasters.

- ◆ Resources diverted from other programs and projects for disaster response should be restored to allow the sustainability of reforms and activities already in progress (e.g., the peace process in Guatemala).

To strengthen the Central American integration process, participants recommended:

- ◆ Existing institutions and processes for Central American integration must be taken into account in the reconstruction process (e.g., the Central American Integration System (SICA), Center for Coordination of the Prevention of Natural Disasters in Central America (CEPREDENAC), Alliance for Sustainable Development in Central America (ALIDES), and Consultative Civil Society Councils, etc.).
- ◆ It is necessary to establish integrated regional management of watersheds and other natural resources (e.g., river basins) and major infrastructure.
- ◆ Border initiatives should be taken to address shared problems.
- ◆ The participants recommend that the meeting of the Consultative Group of Stockholm (May 1999) focus on subregional needs in Central America.
- ◆ The governments, organizations, and other participants should agree to take into account the recommendations and achievements of the International Decade for Natural Disaster Reduction and transmit to their governments or authorities the conclusions of this session.

Evaluation of the Meeting



Participants had an opportunity to evaluate the organization and development of the meeting through a specially prepared questionnaire that was handed out at the end of the meeting. Although only 20% handed in the information, the following are the most relevant conclusions drawn from the questionnaire:

- ◆ Regarding the means used to disseminate information on the meeting, 45% of the total number of participants indicated that they used electronic means (e-mail and/or Internet websites). But only 17% of the participants from government institutions used the Internet, while 50% of NGOs and the Red Cross relied on this means.

Therefore, it is clear that governments need to strengthen the use of Internet and their electronic information management systems, make it more accessible at all levels, and probably improve internal distribution of information.

- ◆ The following five working groups were classified as the most useful related to the work of the participants:
 - Vector-transmitted diseases
 - Epidemiological surveillance
 - Medical attention
 - Supply management
 - Water- and food-borne diseases
- ◆ Regarding the overall assessment of the meeting, 82% of participants rated it as very beneficial and on-time; 16% rated it as useful, even though not all of their expectations had been met; and 2% considered that their expectations had not been met.

A c r o n y m s

ALIDES	Alliance for Sustainable Development in Central America
CDERA	Caribbean Disaster Emergency Response Agency
CEPREDENAC	Center for Coordination of the Prevention of Natural Disasters in Central America
CIDA	Canadian International Development Agency
DAR	Disaster Response Teams
DFID	Department for International Development of the U. K.
ECHO	European Commission Humanitarian Office
ECLAC	Economic Commission for Latin American and the Caribbean
FWP	World Food Program
IDNDR	International Decade for Natural Disaster Reduction
NGO	Non-Governmental Organization
OAS	Organization of American States
OCHA	U. N. Office for the Coordination of Humanitarian Affairs
OFDA/USAID	Office of U. S. Foreign Disaster Assistance/U.S. Agency for International Development
OSOCC	On-Site Operations Coordination Center
PAHO	Pan American Health Organization
PED	Emergency Preparedness and Disaster Relief Coordination Program
SICA	Central American Integration System
SUMA	Humanitarian Supply Management System
UNDAC	UN Disaster, Assessment and Coordination Team
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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