

DISASTERS



PREPAREDNESS AND MITIGATION IN THE AMERICAS



Issue No. 74

News and Information for the International Disaster Community

October 1998

Editorial

Hospital Safety: A Collective Responsibility

Preventing disaster-related damages in hospitals and other infrastructure is not only the responsibility of technical health agencies such as PAHO/WHO. The dimensions of the problem are so great that they also require the focused attention and collaboration of international lending agencies.

This editorial was written as Hurricane Georges was working its way across the Caribbean, leaving in its wake more than 500 dead and injured and significant damages in all sectors, but particularly health, infrastructure and agriculture. Although international teams were pre-positioned in neighboring countries, it was the national authorities in the affected countries that were on-site, coping with the traditional problems: lost dwellings, roads strewn with rubble, downed electric and telephone poles and kilometers of twisted cable.

More to the point of this editorial, however, is

what happened to the J.N. France hospital in St. Kitts. The failure of the hospital's roof resulted in the loss of all 170 beds. This is at least the 10th time the hospital has been significantly damaged in its 35-year history. (The structure of the entire hospital is fundamentally vulnerable to hurricanes and earthquakes, not to mention that it is sited beneath the landing pattern of the St. Kitts airport!)



Photo: A. Waak, PAHO/WHO

These and other events would lead one to believe that little has changed in the aftermath of a disaster. But in reality, many things have changed in the last 20 years.

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A Closer Look at Hurricanes Georges and Mitch

PAHO/WHO is calling an interagency workshop to analyze the health sector response to the major 1998 hurricanes Georges and Mitch. The national and international response to these disasters was, as usual, generous. But there are lessons to be learned that can be applied to future disasters. How effective was the health sector preparedness? Could some of the losses have been prevented? Did national and international assessment and coordination mechanisms meet the challenge? Did SUMA contribute to interagency collaboration?

Who may attend this workshop?

- Health disaster coordinators from all affected countries and territories.

- International organizations and bilateral agencies.
- National or international NGOs.
- Any institution that was active or interested in the response to hurricanes Georges and Mitch.

The workshop is scheduled for 9-12 February in Santo Domingo, Dominican Republic. All information about this meeting, including the agenda and registration forms, is available on our Web site at: <http://www.paho.org/english/ped/pedhome.htm> (look under Important Meetings). If you prefer, text versions of this material can be sent to you by e-mail. There will be no formal letter of invitation nor pamphlet advertising this meeting. Information will be available through Internet only. Contact: disaster-meeting@paho.org □

News from PAHO/WHO



Please visit this Web site and send comments or suggestions about how we can best meet your needs to: disaster@paho.org

Updated Information Available on PAHO Web Site

PAHO's Emergency Preparedness and Disaster Relief Coordination Program has renovated its Web site. The URL is new as well, so if you had a bookmark to our previous site, take note of this new address:

www.paho.org/english/ped/pedhome.htm.

Among some of the features of the updated site are:

- an expanded section on the health effects of the El Niño phenomenon in the Americas, including the just-passed resolution by PAHO's Pan American Sanitary Conference
- a description of and links to the five WHO/PAHO Collaborating Centers on

disaster preparedness and mitigation in PAHO's Member Countries; our most recent publications from the Disaster Mitigation Series, which can now be downloaded in full text using Adobe Acrobat Reader (available on the site)

- a redesigned section on the SUMA project . . . and more!

More on Disaster Mitigation in Drinking Water and Sewerage Systems

If you're interested in disaster mitigation, PAHO has just published *Natural Disaster Mitigation in Drinking Water and Sewerage Systems: Guidelines for Vulnerability Analysis*. This is the second book in a series that PAHO has published this year on lessening the impact of disasters in drinking water and sewerage systems.

This publication focuses specifically on vulnerability analysis—an essential step in protecting these valuable systems—and on appropriate response procedures when a disaster occurs. Although presently only available in Spanish, the English translation should be ready by the end of the year.

In June, PAHO published (in Spanish only): *Manual para la mitigación de desastres naturales en sistemas rurales de agua potable*.

Full-text versions of both publications can be downloaded from our Web site: www.paho.org/english/ped/pedhome.htm.

Look under "Publications and Training Material" and then "Full-Text Documents," or request print copies from: disaster@paho.org □



Global Experts to Discuss Disaster Documentation Centers

Access to technical information that reflects differing realities worldwide is a constant need as countries pursue the goal of disaster reduction. The marriage of computers and telecommunications allows us to share and transfer information as never before. This is partly responsible for the sharp rise in the production of technical information, and users, particularly in developed countries, can quickly become saturated. However, in other countries, information is not available or arrives too late to those who need it. Therefore,

making the best use of existing disaster information and knowledge requires professionals and specialized centers that are capable of organizing and disseminating documentation effectively.



There are important disaster documentation centers worldwide, who are interested in fostering closer technical contacts and pursuing common solutions.

Databases, electronic formats and methodologies, communication over the Internet can all be improved and will be topics of discussion at the Global Meeting on Disaster Documentation Centers, organized by WHO in collaboration with PAHO, IDNDR and CRID, November 18-20 in San Jose, Costa Rica. The time is at hand to begin building a true network of technical information centers on disasters and emergencies. For more information, please contact Ricardo Perez by email at: perezric@paho.org or fax: (202) 775-4578. □

Other Organizations

IDNDR Conference on Early Warning Systems

The International IDNDR Conference on Early Warning Systems for the Reduction of Natural Disasters was held in Potsdam, Germany September 7th -11th. The Potsdam Conference identified major strengths and weaknesses in early warning capacities around the world. Participants emphasized that ultimately, early warning is effective only to the extent that policy makers at national levels of authority make a sustained commitment of resources that will establish protection.

Conclusions from the meeting include:

- that effective early warning depends upon multi-sectoral and interdisciplinary collaboration;
- that issues of early warning for natural disasters should be brought to the highest levels of deliberation within the UN system;
- that arrangements should be made to ensure continued integration and evolution of early warning at all levels of responsibility.

For the complete summary, email:

Terry.Jeggle@dha.unicc.org.

Draft Disaster Management Glossary

The UN Centre for Human Settlements (Habitat) in Kenya, and the Disaster and Emergency Reference Centre in the Netherlands, have developed a draft Disaster Management Glossary.

The terms are multi-disciplinary, and most entries are coded according to the specific sector of disaster management from which the term comes. These include general disaster management (DM), technological disasters (TD), human settlement (HS), natural disasters (ND), emergency response (ER) and wildfire (WF).

The publication can be obtained from the Disaster and Emergency Reference Centre (DERC), PO Box 338, 2600 AH, Delft, The Netherlands, fax (3115) 278 4408, email: disaster.derc@usa.net.

New Zealand's Earthquake Hazard Centre Newsletter Online

The Earthquake Hazard Centre is a non-profit seismic hazard reduction center for developing Commonwealth countries. The Centre aims to

encourage developing countries to adopt basic building seismic design and construction. The idea to form the Centre emerged during the Workshop on Seismic Hazard Mitigation of Non-engineered Structures (1996) where the gap between the developed and developing countries in terms of knowledge and practice of earthquake hazard reduction became obvious. The Earthquake Hazard Centre Newsletter is published quarterly both in the printed form and on the Internet at <http://www.ehc.arch.vuw.ac.nz>. For more information on the Centre please visit their website or email: quake@arch.vuw.ac.nz.

CEPREDENAC: Prevention and Sustainable Development

The Center for Disaster Prevention and Coordination in Central America, CEPREDENAC, hosted a symposium, "Mitigation of Disasters: A Contribution to Sustainable Development in Central America", October 6-8, to mark the 10th anniversary of its existence.

Conclusions from the meeting included: the need to sensitize local, regional and national structures to the extent that they include disaster prevention in their regular activities, to orient international investments toward prevention and to strengthen local institutions with international networks that provide access to scientific-technical information.

A full summary of this event may be obtained at the CEPREDENAC Web site: <http://www.sinfo.net/cepredenac/simposio/engrelat-fin.htm> or by contacting the organization at fax: (507) 232-7641.

FLACSO, LA RED Offer Graduate Studies in Disasters

The Faculty of Latin American and Social Sciences (FLACSO) and the network of Social Studies in Disaster Prevention in Latin America (LA RED) are offering a Masters of Social Science in Disasters and Risk Management (part time and full time). The deadline for applications is January 15th, 1999 for the program beginning in August 1999. Applications and detailed program information may be obtained online at <http://www.itdg.org.pe/maestria> or email: andrew@itdg.org.pe.

Internet News

Disaster Management Training List Online

The Federal Management Agency (FEMA) and the Natural Hazards Center maintain lists of institutions offering higher education courses in emergency and disaster management.

<http://www.fema.gov/EMI/edu/>

<http://www.colorado.edu/hazards/colleges/colleges.html>

New IDNDR Website

The International Decade for Natural Disaster Reduction has launched a new web site located at www.idnдр.org. This site contains IDNDR Highlights, activities, and technical information.



Member Countries

SUMA Serves Disaster Victims in the Caribbean and Mexico



SUMA, the humanitarian relief supply system, was mobilized in two emergencies in the Region to assist in classifying and sorting post-disaster aid and increase the efficiency with which supplies were received and distributed to the affected populations.

Chiapas, México

Heavy rainfall in the southern Mexican state of Chiapas caused extensive flooding along the coast and in the mountains. Government officials indicated that 33 towns were affected, more than 82,000 people displaced, 259 communities left without communications, 240 dead and 688 people missing. The distribution of supplies became the responsibility of the armed forces and the Red Cross in Mexico.

With support from the SUMA team, the Red Cross set up a Coordinating Center in Tuxtla Gutierrez, Chiapas for the entire area, and had already installed SUMA in its collection center in Mexico City to take donations. To implement SUMA, the Red Cross delegated human and material resources toward installing "warehouse" modules in the most important cities in the affected area. The use of SUMA in these locations greatly increased the speed of delivery of supplies to the most needy.

The Caribbean

In the Caribbean, national, regional and international solidarity following Hurricane Georges resulted in the mobilization of a large amount of post-disaster relief. In the Dominican Republic, one of the most affected countries:

- at the Joint (Civilian - Military) Operations Center, which had field data collection teams at two airports, the government gave the Red Cross the overall responsibility for the distribution of relief
- the Santo Domingo City Council, the government and some NGOs used SUMA's Warehouse module to maintain their own inventory and keep track of the distribution of their own supplies
- staff and additional equipment were sent to the Dominican Republic from the SUMA Project's headquarters at FUNDESUMA in Costa Rica, with the support of experts from Honduras.

These operations served as the final testing ground for the new release of the SUMA software, version 5.1. □

BVI Hosts Critical Incident Stress Management Workshop

(PAHO) in conjunction with the British Virgin Islands (BVI) Office of Disaster Preparedness conducted a workshop on Critical Incident Stress Management for Disasters in September. The training sought to identify the psychological profile of emergency workers; describe common signs, symptoms and behavioral changes associated with stress reaction and demonstrate debriefing skills that can be used to assist Emergency Service Personnel in coping with Critical Incident Stress after a major incident or disaster.

Particular emphasis was placed on those interventions that are most applicable to mass casualty incidents. Participants attending this workshop included psychiatrists, mental health workers and emergency service personnel from throughout the region. PAHO hopes to develop a cadre of Critical Incident Stress Managers, through this type of training, able to assist the first responders in any mass casualty incident that may occur.

For more information contact Dr. Dana Van Alphen: Tel. (246) 436 6448, fax (246) 436- 6447 or email: dvanalphen@pahocpc.org. □

Workshops Target University Staff

Panamá

The first university training workshop for the introduction of disaster studies into the curricula of medical, nursing and public health programs at the University of Panama took place in Panama City September 9th -12th . Disaster preparedness, prevention and mitigation will be incorporated as part of the programs in both undergraduate and postgraduate levels, following this meeting, in conjunction with the University of Antioquia's PAHO/WHO collaborative center in disaster preparedness. Full support for these

Hurricane Season '98: A Double Blow from Georges and Mitch

additions was received from the president of the university and the deans of the medical, nursing and public health schools. Changes in the curricula are expected to be implemented within the next few months. For further information please contact: Laura de Thomas, Facultad de Medicina, Universidad de Panama. Fax: (507) 262-8780 or email: lthomas@sinfo.net. □

Nicaragua:

The Nicaraguan University Natural Disaster Teaching Commission, in a joint venture with the Universidad Autonoma de Nicaragua, Managua branch and PAHO/WHO, prepared and carried out the first workshop for medical, nursing, public health, engineering and architecture university staff, in Managua, Nicaragua, October 15th-17th. It is the first university Commission made up of public and private teaching institutions that teach disaster studies and where changes in the curricula will be made in the near future to adjust to their particular needs. The teaching modules prepared by the Mesoamerican University Commission with the universities from El Salvador, were presented and will be tried out by the nicaraguan universities during the 1999 teaching period. For further information please contact: Lic. Candelaria Espino, Facultad De Medicina, Universidad de Nicaragua. Fax: (505) 278-6782
Email:fnuapmed@tmx.com.ni. □

Importance of Social Communication in Disaster Prevention

Prevention begins with information...however, communication requires a coordinated effort by professionals in various sectors and levels of disaster work. This was the theme of the event, "Workshop on Social Communication and Disaster Prevention", that took place September 29th – October 1st, in Quito, Ecuador. The meeting was organized through the joint collaboration of the Ministry of Civil Defense, the IDNDR, PAHO and CIESPAL.

This workshop emphasized the importance of access to information in facilitating the exchange of information during a crisis as well as being an integral part of the development process of the region. The IDNDR is preparing a publication on this theme that will be ready by the end of this year. For more information contact Helena Molin Valdes: hmolin@undpcos.nu.or.cr, fax: (506) 257-2139.

Hurricanes Georges and Mitch, occurred one after the other in Central America and the Caribbean, with devastating effects. The most recent, Hurricane Mitch (downgraded to Tropical Depression Mitch) is being called one of the six worst Atlantic storms on record. At the time of printing, the death toll from floods and mudslides caused by Tropical Depression Mitch had risen to 7000, with the majority of casualties and damages in Nicaragua and Honduras. Nearly a million were left homeless and fragile econo-

mies severely incapacitated by destruction to crops, bridges and buildings. Hurricane Georges, arrived in the northern Caribbean September 20th, and left a trail of destruction to many of the countries, in particular the Dominican Republic, which was left with approximately 600,000 homeless and 250 dead. More information on Mitch and Georges and on the PAHO/WHO Post Hurricane Evaluation Workshop, scheduled for January in the Dominican Republic, will be available in the next issue of *Disasters*.

First Call: Hemispheric IDNDR Meeting for the Americas

The IDNDR will end in December 1999. As a prelude to the closing, the *Hemispheric IDNDR Meeting for the Americas: Towards a Reduction in the Impact of Disasters in the 21st Century* is being planned. The meeting will be held in San José, Costa Rica, 1-5 June 1999 and will be hosted by the government of Costa Rica.

Throughout the 1990s Latin America and the Caribbean have engaged in many activities to promote risk reduction and disaster mitigation at national and regional levels. Achievements include: the development of vulnerability analysis methodologies, institutional strengthening in health, education and other sectors and the improvement of regional disaster management agencies. The end of the Decade will be an excellent opportunity to review the achievements of the last ten years and to set an agenda for the 21st century. A preliminary agenda will be available in the next issue of this newsletter.

For more information, please contact Helena Molin Valdes, email: hmolin@undpcos.nu.or.cr, fax: (506) 257-2139.

Central American disaster managers made good use of the Internet after Hurricane Mitch. Communication via the listserv *desastres-ca* intensified, and the PAHO/WHO office in Nicaragua and the National Emergency Commission of Costa Rica did an excellent job of updating their web sites. See:

<http://www.ops.org.ni/desastre/indexnew.htm>

<http://www.cne.go.cr>

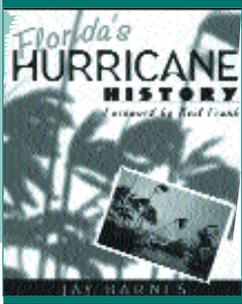


Review of Publications

Florida's Hurricane History

Jay Barnes, *The University of North Carolina Press, Chapel Hill, 330 pp., English.*

This publication chronicles more than one hundred hurricanes, features a comprehensive collection of Florida hurricane photographs as well as explains hurricane dynamics, forecasting and preparedness. Florida's Hurricane History is an important resource for meteorologists, law enforcement, rescue, disaster personnel and government officials. Ordering information may be obtained from the Publicity Department, University of North Carolina Press, Fax: 919 966-3829.



Final Report of the Hazard and Risk Assessment Project (HRAP)

Aedan Earle, *Government of the British Virgin Islands, Tortola, 1997, English.*

The Final Report of HRAP provides a comprehensive picture of the natural and man-made hazards to which the British Virgin Islands (BVI) is exposed. This book covers three broad aspects, hazard assessment, impact evaluation and the

development of loss reduction recommendations. Four main activities were involved in putting together this resource:

- Hazard mapping;
- production of an inventory of the elements at risk;
- Vulnerability analysis and loss estimation;
- Development of mitigation or loss reduction strategies.

For information on obtaining this book contact: Office of Disaster Preparedness, Tortola BVI, fax: (284) 494-2024, email: bviodp@caribsurf.com.

UCLA School of Public Health Newsletter

UCLA's Center for Public Health and Disaster Relief published its first newsletter this summer. This bulletin will be published three times a year and contains information on upcoming events, course offerings and research. For more information, contact the Center at fax: (310) 794-1805 or visit <http://www.ph.ucla.edu/cphdr/>; e-mail: locn@ucla.edu.

Upcoming Meetings

First International Congress Emergencies and Care of Critical Patients:

URGRAV '99

This meeting will take place April 14-17, 1999 in Havana, Cuba and is being hosted through the collaboration of WHO, PAHO, UNFPA, UNICEF, Ministry of Public Health and the Red Cross. The main topics to be covered are Emergency Medical Care, Emergency Systems, Education and Health Sector Reforms. For more information, contact: Alvaro Sosa Acosta, Fax: (537) 33-3918 or email: vmas@infomed.sld.cu.

12th World Conference on Earthquake Engineering

The 12th World Conference on Earthquake Engineering will take place January 30 – February 4, 2000 in Auckland, New Zealand. The aim of the conference is to enable dialogue among leading professionals and researchers from the broad range of disciplines committed to reducing the impact of earthquakes on developed and natural environments.

More information on this event may be obtained from the conference Web site at www.cmsl.co.nz/12wcee or from the 12WCEE Conference Secretariat, email: 12wcee@cmsl.co.nz, fax: 64-9-520 0718.

UCLA Conference on Public Health and Disasters

The UCLA Center for Public Health and Disaster Relief is hosting a national conference on Public Health and Disasters, April 11-14, 1999 in Los Angeles, California. The conference will coincide with the closing of the IDNDR and National Public Health Week. For more information visit:

<http://www.ph.ucla.edu/cphdr/> or email locn@ucla.edu.

Hospital Safety: A Collective Responsibility

(from pg. 1)

In the 1970s, few people in the Americas were trained in disaster preparedness. The few who were belonged primarily to non-governmental organizations operating in the countries. Today, almost all countries have official emergency agencies with well-trained personnel and a sustained leadership capacity. Two decades ago there was no clear coordination in disaster response. Duplication of efforts and a lack of focus on priority areas were commonplace. Today, coordination is much better, although in some sectors it is better than in others.

However, getting better prepared for a disaster is one thing; preventing or mitigating the loss of a facility as critical as the J.N. France hospital in St. Kitts is quite another.

Why disaster mitigation?

Mitigating the effects of natural disasters on health infrastructure is a complex task because it encompasses not only coordination by national and international actors, but also a host of development issues. To ignore this task—which is geared toward diminishing vulnerability to disasters—is to put a country's health infrastructure at an enormous risk.

For the health sector, disaster mitigation means reducing the vulnerability of health care facilities and water supply systems by developing risk studies, applying corrective measures in existing facilities and taking into account the results of vulnerability studies when planning or designing new works. This task has several purposes:

- political, for governments who must show that public works are efficient and effective.
- social, demonstrating that every consideration has been given to ensuring that hospitals will continue to function and provide critical services when they are most needed, and
- economic, because the Region's health infrastructure must be cost effective.

The challenge for international financing agencies

Disaster mitigation, both before and

after a disaster, requires decisive participation from international financing agencies such as the World Bank, the Inter-American Development Bank and the European Development Fund. As the Region's vulnerability continues to grow, natural and man-made hazards do not appear to be declining. In light of this, the time is right to set a collaborative agenda for disaster mitigation in health infrastructure. It is important that the major international banks and donors not only consider funding rehabilitation and reconstruction activities after the disaster, but also include disaster mitigation prior to a disaster. Risk analysis, both in the construction of new health facilities and in retrofitting or strengthening existing ones, must be viewed as a mandatory requirement for approval of loans. Assuming that appropriate building regulations and disaster-resistance codes exist (and/or are implemented) in a recipient country has proven to be an inadequate excuse for failure on the part of the international community.

Investment institutions must also firmly link the granting of a loan to improve structural or nonstructural safety with improvements in disaster preparedness and response in priority health care facilities.

To lessen the chance of repeating history, PAHO/WHO extends an invitation to international financing and lending agencies to collaborate in the field of disaster mitigation in health infrastructure in the Americas. The governments of the Latin America and the Caribbean region have already expressed their interest and commitment in this field. At a 1996 meeting in Mexico, they recommended that UN agencies and lending institutions to give preference to construction and renovation projects in health facilities that have included studies of hazard risk and vulnerability.

The time has passed when banks and other funding agencies could hide behind the excuse of a recipient country's nation-

al sovereignty and close their eyes to the safety—in the face of earthquakes or hurricanes—of the infrastructure they design and finance.

Financing agencies, and indeed the international community, share the moral and social responsibility and the financial burden when critical facilities such as

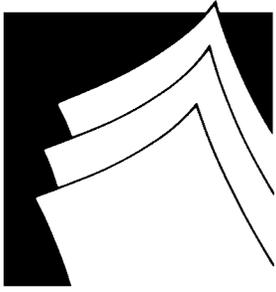
hospitals are rendered inoperative at a time when they are most needed (as was the case in the Caribbean). Even graver are those occasions when hospitals collapse, killing both patients and staff, as happened in the Juarez Hospital in the 1985 earthquake in Mexico. Disaster preparedness and training, the apparent success stories in this Region, can quickly become empty shells if basic medical infrastructure and services do not survive the impact of natural disasters.



Photo: A. Waak, PAHO/WHO

A Step in the Right Direction...

The World Bank has incorporated disaster prevention and mitigation aspects into their funding projects through the recently established Disaster Management Facility (DMF). The DMF's role is to assist the World Bank in providing a more strategic and rapid response to disaster emergencies and to mainstream prevention and mitigation initiatives into all World Bank activities. DMF activities include: Market Incentives for Mitigation Investment (MIMI), review of the World Bank's disaster assistance portfolio and policy on emergency assistance, training events in disaster prevention, mitigation and response. For further information contact Alcira Kreimer, fax: (202) 522-3224, email:



Selected Bibliography

The articles listed in this section may be of interest to health professionals and others responsible for disaster preparedness, mitigation and relief. They have been reproduced and recently added to the collection of articles available from the Editor of this Newsletter. A complete list of reprints is available upon request. Please quote the reference code listed to the left of the publication title when requesting articles.

- W.8** Baden, Daniel G., Lora E. Fleming and Judy A. Bean. "Marine Toxins," *Handbook of Clinical Neurology*, Vol. 21(65):141-175, 1995.
- W.9** De Ville de Goyet, C. et al. "SUMA (Supply Management Project), a management tool for post-disaster relief supplies," *World Health Statistics Quarterly*, 49, 1996.
- W.10** Porto, Marcelo Firpo de Souza and Carlos Machado de Freitas. "Major Chemical Accidents in Industrializing Countries: The Socio-Political Amplification of Risk," *Risk Analysis*, Vol. 16 (1): 19-29, 1996.
- X.1** Reed, Margaret K. "Disaster Preparedness Pays Off," *JONA*, Vol. 28(6): 25-31, 1998.
- X.2** "Repercusiones sanitarias del fenómeno El Niño," *Boletín Epidemiológico*, Vol. 19 (2):9-13, 1998.
- X.3** Cernea, Michael M. "The Risks and Reconstruction Model for Resettling Displaced Populations," *World Development*, Vol. 25 (10):1569-1587.

Disasters: Preparedness and Mitigation in the Americas is the Newsletter of the Emergency Preparedness and Disaster Relief Coordination Program of the Pan American Health Organization, Regional Office for the Americas of the World Health Organization. The reported events, activities and programs do not imply endorsement by PAHO/WHO, nor do the statements made necessarily represent the policy of the Organization. The publication of this *Newsletter* has been made possible through the financial support of the International Humanitarian Assistance Division of the Canadian International Development Agency (IHA/CIDA), the Office of Foreign Disaster Assistance of the U.S. Agency for International Development (OFDA/AID), and the Department for International Development of the U.K.

Correspondence and inquiries should be addressed to:
The Editor
Disasters: Preparedness and Mitigation
in the Americas
Pan American Health Organization
525 Twenty-third Street, N.W.
Washington, D.C. 20037, U.S.A.
Fax: 202-775-4578
E-mail: disaster@paho.org
<http://www.paho.org/english/ped/pedhome.htm>

CRID

Regional Disaster Information Center
Apdo. 3745-1000, San José, Costa Rica
Fax: (506) 231-5973
E-mail: crid@netsalud.sa.cr
<http://www.disaster.info.desastres.net/crid/eng/index.htm>

October, 1998

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