

# DISASTERS



## PREPAREDNESS AND MITIGATION IN THE AMERICAS



Pan American Health Organization  
Regional Office of the  
World Health Organization

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### Editorial

## Do we evacuate our hospitals prematurely?

*Currently, when health facilities are evacuated after a disaster, often the reason is not solely the physical damage that occurs after an earthquake, hurricane, or any other natural catastrophe.*

When health facilities are evacuated after a disaster, often the reason is not solely the physical damage that occurs after an earthquake, hurricane, or any other natural catastrophe. During recent disasters in Latin America and the Caribbean, many health care facilities were completely evacuated when the actual damage did not merit such drastic action. Often the physical damage justified only a partial evacuation of the areas most affected by the disaster, and in some other cases, no evacuation was necessary at all.

This phenomenon is, in many ways, due to an assumption on the part of the health sector that they must be as prepared as possible in the face of a disaster. This assumption has led to the promotion of the idea that hospital emergency and disaster plans must include evacuation plans. The problem resides in the fact that the criteria for judging a successful evacuation plan after a simulation focused on deeming those hospitals which carried out the evacuation most quickly as the best quali-



Photo C. Osorio, PAHO/WHO

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## Gender and Disasters

*The collection and dissemination of information on this important topic is one way to increase awareness.*

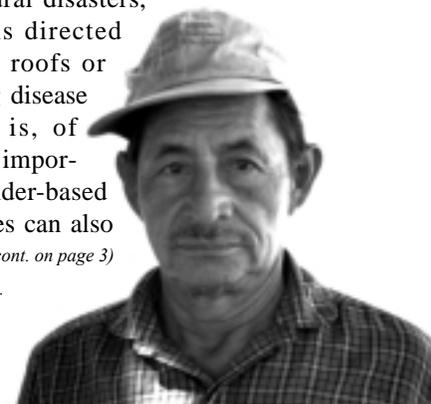


Many experts and practitioners in the development and disaster reduction arena seem to agree that a focus on gender is a key ingredient of successful community development and disaster management programs. There is no doubt that the absence of gender awareness on the part of project planners can explain why some community develop-

ment and disaster prevention initiatives fail, in spite of substantial investments of time and money.

Following natural disasters, most assistance is directed toward providing roofs or food or controlling disease epidemics. This is, of course, extremely important. However gender-based mitigation responses can also

*(cont. on page 3)*



Photos J. Jenkins, PAHO/WHO

# News from PAHO/WHO

## SUMA Receives Stockholm Challenge Award

SUMA, was awarded the Stockholm Challenge Award in the category Health and Quality of Life. In announcing the prize, the jury stated "the Pan American Health Organization has definitely joined the ranks of pioneers of the information society for all. Most importantly, SUMA has proven that information and communications can deliver enormous benefits to people at times when they are at their most fragile and vulnerable. SUMA has indeed transformed into an effective operation the confused and chaotic effort of inventory, priority, and distribution of emergency relief to victims of disasters."

Contact FUNDESUMA at: P.O. Box 114, Plaza Mayor 1225, San José, Costa Rica; fax (506) 291-0286, [funsuma@sol.racsa.co.cr](mailto:funsuma@sol.racsa.co.cr)



## Helping Humanitarian Aid to be Transparent

FUNDESUMA is the NGO specialized in supporting logistical supply management activities, including training and software development. It also manages the SUMA system in times of disaster. FUNDESUMA has just published a special document devoted to the experience of using SUMA during the earthquakes of El Salvador in January and February 2001.

The report describes how SUMA was set up at the reception points of incoming supplies, and follows the flow of goods from classification through distribution to the affected population. The report includes expert testimony, excellent graphics describing how the system operates, statistics and an explanation of the different procedures in the reception of donations.

A very limited number of copies (Spanish only) is available through FUNDESUMA. On the Internet at [www.paho.org/disasters](http://www.paho.org/disasters)

## Buenos Aires, Argentina - April 2002



The third LIDERES course will take place 1-18 April in Buenos Aires, Argentina. This is a high-level course, sponsored annually by PAHO/WHO, to develop the managerial skills of those whose job it is to deal with disasters and emergencies.

This course will concentrate on the managerial aspects of disaster reduction programs, covering the continuum from preparedness through response, emphasizing in risk management.

The participants themselves, all high-level man-

agers in their countries, add an important dimension to this course, which encourages dialogue and debate about many current issues related to disasters. The third LIDERES course will be the first to feature a special session on chemical accidents, a growing threat in the Region.

For more information visit the LIDERES web site at <http://www.paho.org/disasters> (click on LIDERES.) You can also e-mail the course organizers at [curso-lideres@paho.org](mailto:curso-lideres@paho.org).

# Other Organizations



## New Report on Hospitals Vulnerability Analysis

WHO's Collaborating Center in Disaster Mitigation in Health Facilities has developed a practical guide entitled "Methodology for the Evaluation of Seismic Vulnerability" to help hospitals conduct a vulnerability analysis. The document summarizes recent experiences in more than 50 hospitals. Although the publication helps hospitals to evaluate their vulnerability in the face of seismic threats, it also serves as an excellent reference for other types of natural hazards. The report describes the steps in

the vulnerability analysis, the objectives, prerequisites for executing the vulnerability analysis, reference material, required human resources and a time line. Available in Spanish only. For more information, please contact Eng. Rubén Boroschek at [rborosch@cec.uchile.cl](mailto:rborosch@cec.uchile.cl).

## Canadian Centre for Emergency Preparedness

The creation of Canada's Centre for Emergency Preparedness and Response has brought together activities and information that range from laboratory safety to counter-terrorism. The Centre is devoted to the promotion of disaster management to individuals, communities and organizations, in both government and the private sector, with the aim of reducing the risk, impact and cost of natural, human-induced and technological disasters. CCEP's objectives are to raise awareness of the increasing risks of disasters, promote the need for sound disaster management practices and disseminate information on the availability of professional expertise and resources, including technology. CCEP's web site offers a wide variety of information on disaster management principles and practices, education and training, and research results. The Centre is also actively involved in the surveillance of international disease outbreaks and in medical intelligence. Visit the web site at [www.ccep.ca](http://www.ccep.ca).

## Gender and Disasters

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help in the reconstruction of a healthy social fabric and increase the community's resilience. Gender-tailored actions are just as important during complex disasters, such as the displacement of large segments of the population, which fosters an increase in domestic violence and alcoholism.

There is an urgent need to bring this approach closer to all involved actors, local NGOs and government agencies. One way to do this is to make information available from anywhere, to anyone through free web-based services such as those offered by CRID.

The Regional Disaster Information Center has

assembled an international collection of documents on their web site: <http://www.crid.or.cr/>. These include topics such as a survey of compliance with UNHCR'S policies on refugee women, children, and the environment; food aid and gender in emergencies; mainstreaming gender in unstable environments, and more. To access these documents, click on "Other topics of interest" on the right hand side of the home page. Do you have other documents on gender and disasters to add to this collection? Please send them to CRID at the address on page 8.



Photo: J. Jenkins, PAHO/WHO



# Member Countries

## Hemispheric Conference on Disaster Risk Reduction 4-6 December 2001. San José, Costa Rica



The Heads of State of Western Hemisphere countries met in Quebec City for the "Third Summit of the Americas" last April. Their "Plan of Action" committed to reducing the vulnerability of countries to natural disasters. As a follow up, the governments of Costa Rica and the United States are convening this Conference that will focus on disaster risk reduction, with an emphasis on prevention and mitigation and its relationship to development. Disaster response and preparedness will not be covered. The Pan American Health Organization is responsible for health topics, which will include disaster mitigation in health care facilities and water systems.

The meeting is an important opportunity for disaster professionals from many sectors—health, education, agriculture, social services, finance, and civil society (including NGOs and the private sector)—to meet with experts on land use management and information technology. This "meeting of the minds" should allow participants to brainstorm and develop new ideas for potential courses of action over the next few years. The

open format of the meeting is intended to encourage active participation.

The objectives of the meeting are to propose mechanisms to define hemispheric strategies for risk reduction, to contribute to the implementation of a hemispheric plan of action, to identify additional capacities, and to mobilize the support necessary for the execution of a Hemispheric Plan of Action for Risk Reduction.

This Conference will provide a forum for sharing lessons learned on these topics and reviewing the commitments made by the governments present at the International Conference on Disaster Mitigation in Health Facilities (Mexico, 1996) and monitor progress toward these goals. It is expected that, as a result of this Conference, strategies will be crafted to implement the Plan of Action of the Third Summit of the Americas and that activities and key resources needed to execute the Plan of Action will be identified.

For more information visit the Conference web page at:  
[www.ofdalac.org/summit/English/Conference.htm](http://www.ofdalac.org/summit/English/Conference.htm)

## Hurricanes Strike the Caribbean

After racing across the Caribbean islands of Jamaica and the Dominican Republic, Hurricane Iris made landfall, striking Belize on October 9. It was the worst hurricane to hit Belize since Hurricane Hattie in 1961, and the first to hit the southern part of the country since 1942.

The damage caused by the impact of Iris was largely due to the devastating winds and the storm surge. It left 22 people dead and a large number of injured. Between 10,000 and 15,000

people were left homeless.

Less than a month later, Hurricane Michelle began as a tropical depression off the coast of Central America. This was almost exactly three years to the day Hurricane Mitch left its trail of death and destruction in the Region. Michelle then moved on to lash Jamaica, the Cayman Islands, Cuba and Bahamas.

From its formation, Michelle was predicted to have severe potential for destruction and damage. By the time it headed out to the Caribbean islands of Jamaica, Cuba and the Bahamas, its full force was felt.

In Jamaica the worst effects were experienced in Portland where average daily rainfall increased



## Lessons from El Salvador

### Proceedings from the Workshop on Lessons Learned Following the 2001 Earthquakes in El Salvador

This 126-page publication summarizes the discussions and findings of the Workshop on Lessons Learned following the January and February 2001 earthquakes in El Salvador. It includes both the methodology used and the findings of the three-day workshop that took place in El Salvador in July of this year. In addition to technical information on the impact of the earthquakes, this volume includes findings in specific topic areas: emergency medical care; health sector preparedness and response; institutional response and interinstitutional coordination; environmental health; health communication and information in disasters; epidemiological surveillance; field hospitals; shelters; mental health; the international health response and emergency supply management. The Proceedings also include statistics and an analysis of the social, economic and environmental impact of the earthquakes. This is not only a good reference document, but also an excellent tool for keeping alive the lessons learned from this devastating event in the hopes of improving disaster management in the future. A limited number



Photo J. Jenkins, PAHO/WHO

of copies is available from the PAHO/WHO Office in El Salvador. Contact Dr. Horacio Toro, PAHO/WHO Representative at 73 Avenida Sur No. 135, Colonia Escalón, San Salvador, El Salvador, fax: (503) 298-1168; email: [htoro@els.ops-oms.org](mailto:htoro@els.ops-oms.org).

by as much as 600% between October 29-30 and by as much as 90% in five other affected parishes. In Cuba more than 600,000 persons from Havana and Pinar del Rio were evacuated and damage was widespread to the agriculture sector in western and central Cuba. In the islands of the Bahamas, especially New Providence, flood damage to property was extensive and the main potable water source in Abaco contaminated. Public health was a primary concern in all three affected islands, particularly due to contaminated water and food, vector borne diseases as well as acute respiratory and dermatological infections.

## Electronic Resources

[www.who.int/emc/pdfs/BIOWEAPONS\\_FULL\\_TEXT2.pdf](http://www.who.int/emc/pdfs/BIOWEAPONS_FULL_TEXT2.pdf)

WHO's Department of Communicable Disease Surveillance and Response has posted the draft version of a new manual "Health Aspects of Biological and Chemical Weapons" on their web site.

[www.cne.go.cr](http://www.cne.go.cr)

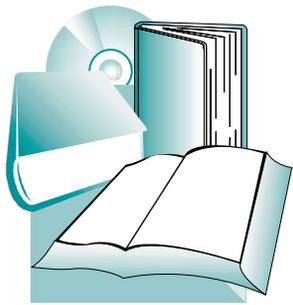
The Dominican Association for Disaster Mitigation (ADMD) has compiled a list of more than 500 links to organizations and information related to all aspects of disasters. Costa Rica's National Emergency Commission has collaborated in posting this resource on their web site.

[www.bt.cdc.gov](http://www.bt.cdc.gov)

The Centers for Disease Control and Prevention (CDC) web site has a great deal of information on aspects of bioterrorism, including anthrax, botulism, the plague, and smallpox, and includes frequently-asked questions.

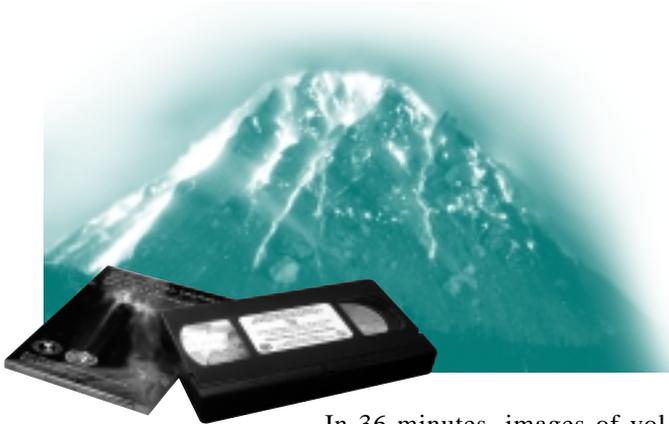
[www.opcw.nl](http://www.opcw.nl)

There is much that local, national, and international authorities can, and should be doing to counter the threat of chemical terrorism. The web site of the Organisation for the Prohibition of Chemical Weapons has the answers to some frequently-asked questions and references to sources of more detailed information.



# Publications and Multimedia

## PAHO'S New Video on Volcanoes



In 36 minutes, images of volcanic eruptions, expert opinions, technical and scientific information, and lessons learned from many recent emergencies are combined in this new video presentation to explain the principal health risks posed by volcanic eruptions. Also included are basic steps that the health sector can and should take to reduce potential damage.

Volcanoes, either dormant or active, coexist with 10% of the world's population (more than 500 million people), placing neighboring communities at very high potential risk. Statistics reveal the particular threat facing Latin American and Caribbean countries: in the 20th century, 76% of the deaths caused by volcanic eruptions took place in this region. In the last 15 years, almost half of

the strongest eruptions in the world took place in this part of the world.

This video is divided in two complementary, but clearly distinct parts that can be used independently. The first part deals with the main health risks resulting from volcanic eruptions. It dispels certain myths concerning the dangers to public health, pointing out that although lava and rocks do pose a grave danger, less spectacular, but more dangerous pyroclastic flows or mudflows have actually caused the greatest number of deaths and injuries.

The second part of the video is centered on health sector preparedness and prevention plans and measures to minimize the damage caused by volcanic eruptions. Plans should cover several possible scenarios, they must be realistic and flexible and they must be carried out with the participation of other scientific sectors and emergency response agencies.

This video is technical in nature and is best suited for health personnel. It comes with a guide that leads users through the narration.

A limited quantity of copies is available through the editor of this bulletin (see address on page 8). See a preview of the video at [www.paho.org/disasters](http://www.paho.org/disasters).



Request a copy of the new catalogue of publications related to emergencies and disasters (see page 8).

Soon, to be available on the Internet.

## New Guide on Labs and Blood Banks in Disaster Situations

Emergencies and disasters require a quick and opportune response from the health services. Recent disasters in Central America, such as the 1998 hurricanes Mitch and Georges or the earthquakes in El Salvador earlier this year, strengthened the need to integrate public health and clinical laboratories and blood banks into health sector disaster contingency plans.

This guide, published by PAHO/WHO, seeks to sensitize and guide health authorities, and directors and technicians of laboratories and blood banks in the identification of responsibilities and functions of these services in



disaster situations, based on priorities, needs and the capacity of the local immediate response. The incorporation of disaster mitigation and vulnerability reduction measures and the reorganization of health services into contingency plans will allow a better response by the health sector in a disaster.

A limited number of copies is available through the CRID (see p. 8).

Web users can download a full-text copy of this guide at: <http://www.paho.org/Spanish/HSP/HSE/laboratorios.htm> (available only in Spanish).

## Do we evacuate our hospitals prematurely?

(from page 1)

fied. It is time to revise this narrow vision in light of recent events that have occurred around the world.

The goal of evacuating a health care facility is to safeguard the health and lives of its occupants. However, if we define the purpose of a health care facility in the aftermath of a disaster, it is to ensure that the population affected by the disaster continues to receive the medical attention it requires, whether inside or outside the hospital. Generally there is an increase in the demands placed on the hospital (due to injuries, illness, etc.) in the hours and days that follow the disaster. In addition, it will take several weeks or even months to completely restore services in a hospital that has been evacuated. An unnecessary evacuation imposes a substantial loss in the quality and quantity of attention the health care system can provide to the population.

Thus, the decision to evacuate a health care facility is a strategic one that will have implications beyond how and where the evacuation takes place. One must consider how the health sector will be able to ensure that the population receives the attention it needs, taking into account that many people will require services that only a complex health care facility will be able to provide. Therefore, many times the decision to evacuate will also depend on whether or not the facility is the only functioning hospital in an area or whether it is part of a health services network.

Preliminarily, these questions should be considered before evacuating a health facility:

- Does the magnitude of the physical damage to the facility make its evacuation necessary? (This opinion should be based on results of vulnerability studies or on the criteria of experts in post-disaster assessments).
- Should the entire facility be evacuated? (In most cases it will be necessary to evacuate only part of the institution.)
- How can the provision of continuing health coverage be guaranteed for the population affected by the disaster?
- Where to evacuate? (Relocation to another health facility, another type of building or a makeshift field hospital.)

With regard to the use of temporary hospitals after natural disasters, special attention should be paid to those situations where it will be necessary to use them for several months or years. Many



times these facilities do not meet minimum standards of hygiene and sanitation, in addition to being very expensive. Furthermore, on some occasions they pose health risks to their occupants, in which case the decision to evacuate defeats its own purpose of safeguarding the health of its occupants.

The decision to evacuate a health care facility should be closely tied to the magnitude of the damage to the hospital's physical infrastructure, but human factors such as the mental health of the occupants (patients and health workers) intervene as well. In some cases only fear and poor information make hospital personnel and the patients themselves risk their lives for an unnecessary evacuation.

In order to avoid this type of situation, it is necessary to strengthen the resiliency of health workers after a disaster. The best way to do this is to educate them about the facility's vulnerability before a disaster so they will be armed with the knowledge they need to respond when a disaster strikes.

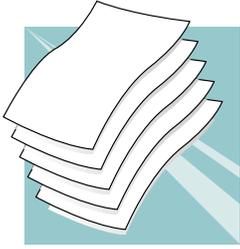
The evacuation of health facilities in disaster situations has much more serious consequences than other types of evacuations such as a fire alarm. Hospital evacuations should be a last resort—a measure taken to preserve the health of the patients and the overall population. Other steps can and should be taken before disaster strikes to reduce the physical vulnerability of the buildings, develop appropriate emergency and disaster plans for hospitals, and educate administrative and professional personnel about the buildings' true vulnerability in the face of disasters.

Avoiding, when possible, the evacuation of a health care facility in the aftermath of a disaster, and consequently preserving its operation, is the best way to ensure an adequate level of health care and medical attention for the population.

## Send Us Your E-mail Address!



*The print version of PAHO's newsletter **Disasters: Preparedness and Mitigation in the Americas** reaches more than 26,000 people in 176 countries worldwide. Almost 20% of these readers also receive periodic updates via the English-language e-mail list **DisasterInfo**. If we have your e-mail address, you are already receiving news updates from **DisasterInfo**. If we don't yet have your e-mail address and you would like to learn about new publications, upcoming meetings or job postings by e-mail, please send your address to [disaster-newsletter@paho.org](mailto:disaster-newsletter@paho.org).*



# 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.

- D.4** Navascués, Isabel Vera. *Apoyo Psicológico en catástrofes*. pp. 20-21 Revista Protección Civil, No. 3, Mar. 2000.
- D.5** Centro Panamericano de Ecología Humana y Salud. División de Salud y Ambiente. *Intoxicación por plomo: De la detección a la prevención primaria*. Indicadores y Noticias de Salud, No.3, Vol. 37, p. 15, Mayo – Jun. 1995 (13070)
- D.6** Mackintosh, Kate. *Principles of Humanitarian Action in International Humanitarian Law: Study 4 in the politics of principle: The principles of humanitarian action in practice*. Humanitarian Policy Group. p. 14, Mar. 2000. (13593)
- D.7** Quinlisk, Patricia. *Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response*. Recommendations of the CDC Strategic Planning Workgroup. Agency for Toxic Substances and Disease Registry. (13571)
- D.8** Enarson, Elaine. *Women, Work and Family in the 1997 Red River Valley Flood: Ten Lessons Learned*. p. 8, (13585)
- D.9** Guha Sapid, Debarati. *Women in the Front Line*. UNESCO Courier, pp. 27-29, Oct. 1997 (13576)

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