

DISASTERS

PREPAREDNESS AND MITIGATION IN THE AMERICAS



Issue No. 68

News and Information for the International Disaster Community

October 1996

Looking Beyond Hospitals to Other Health Lifelines

Several years ago, the IDNDR focused on hospitals and schools as the theme of its annual International Disaster Reduction Day. Why? Because these facilities are critical to the well-being of communities —schools in the social sense and hospitals as the lifeline of the health sector.

But health is not limited to medicine or medical treatment alone, and hospitals are not the only critical facility in the health sector that are vulnerable to natural disasters.

Water supply systems in both urban and rural areas of Latin America and the Caribbean are particularly vulnerable to damages caused by natural hazards. When the delivery of water is disrupted or the quality control affected, the consequences on public health can be far more detrimental, although less dramatic, than the impact on medical installations.

Damages to water and sewerage facilities (treatment plants and pipelines) are difficult to assess and expensive to repair. The result is that the population is exposed to a much greater risk of water borne diseases. Following the 1985 earthquake in Mexico, almost all the injured had received medical attention within the first 24 hours. However, millions of inhabitants remained without proper water supply or sanitation facilities for weeks.

The bulk of PAHO's efforts in disaster prevention and mitigation during the past several years have been directed primarily toward reducing damages in medical facilities. In 1995, with support from the European Union (ECHO), four South American countries carried out a ten-month project to assess the vulnerability of key hospitals.

The project targeted 47 hospitals in Chile, Colombia, Ecuador and Venezuela and was designed to help a) ensure that these critical facilities remain operational in the aftermath of a disaster, and b) prevent the hospitals themselves from causing casualties. This short-duration project has generated substantial interest among other countries in the region.

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The problem of water distribution following any type of natural disaster is generally more serious and protracted than the most direct visible impact on medical facilities.

Photo: PAHO/WHO

News from PAHO/WHO



Release of SUMA version 5.0

Thanks to firsthand experience in disaster situations and lessons learned in regional training sessions, PAHO's member countries have asked to improve and expand their capability to manage incoming relief supplies. As a result, SUMA version 5.0 was developed. Where SUMA version 4.2 focused on the inventory and classification of incoming relief supplies at the point of entry, the new version 5.0 also includes a module to manage stock in warehouses and distribution centers. A "Pre-arrival" module is under development.

What's new in SUMA version 5.0

The SUMA system consists of three modules:

SUMA CENTRAL

SUMA FIELD UNIT

SUMA STOCK MANAGEMENT

SUMA CENTRAL operates at the site where national authorities manage the disaster or the emergency. Its main functions are to:

- define the parameters of the **FIELD UNIT** level (such as reception sites, directory of donors, definition of principal users, etc.)
- create the diskettes that enable a computer to work as a **FIELD UNIT**
- incorporate and consolidate information sent by the **FIELD UNITS** into a master database
- permit one to consult all items received in stock or delivered
- generate reports for decision making.

The **FIELD UNIT** operates at the points of entry of relief supplies: airports, harbors, border posts, or local collection centers. The **FIELD UNIT**:

- sorts, classifies and labels supplies at the points of entry
- allows you to consult the database on what has arrived and been registered in the system
- generates reports on consignments and receipts for donors and consignees
- consolidates and sends data to **CENTRAL LEVEL**.

The **STOCK MANAGEMENT MODULE** registers supplies that have already transitted the SUMA System and subsequently enter and exit warehouses or storage centers. This module:

- keeps a balance of local inventory
- generates reports of available supplies and deliveries
- follows up the balance in peripheral warehouses.

The new version of SUMA 5.0 has a number of significant changes. Data entry screens have been completely redesigned and use pull-down menus. The search function is also more flexible. Originally, SUMA was conceived as a laptop-based system for use on-the-go, and version 4.2 did not support a mouse. However, users asked for an easier way to enter data and a mouse is now an option.

The reports generated by the SUMA system have changed significantly; the option of "personalizing" the report allows users to design his/her own report based on specific needs. In addition, reports can be "viewed" in three ways: on the screen, as a file saved to disk, or in print.

We're working on it!

SUMA's World Wide Web page highlights the latest developments —news from within and outside the region, contact persons, and technical requirements.

By the end of this year SUMA users will be able to download the new manuals —**CENTRAL**, **FIELD UNIT**, and **WAREHOUSE MANAGEMENT**— from the www. You will also be able to download and install the SUMA software from the SUMA homepage. Initially, version 5.0 manuals and software will be available in English and Spanish. The French version will be ready in 1997.

Visit the SUMA homepage at the following site:
<http://www.paho.org/english/ped/pedsuma.htm>

Pre-arrival Package

In 1997 SUMA will be expanded to include a new "Pre-arrival" module. This independent module will control and monitor pledges. It will also permit "fine-tuning" of needs within the disaster-affected area and of pledges from the donor community. This module will be developed in cooperation

(cont. on pg. 3)

For more information, or to obtain SUMA manuals and software contact:

SUMA Project

Emergency
Preparedness Program
PAHO/WHO
525 Twenty-third
Street, N.W.
Washington D.C.
20037

Fax: (202) 775-4578

Electronic mail:

disaster@paho.org

Other Organizations

EERI Publishes Investigation Guide

The Earthquake Engineering Research Institute has published a new edition of the Post-Earthquake Investigation Field Guide. Although written primarily for EERI reconnaissance teams in major earthquakes, the guide can be used as a model for gathering information on advance planning, team coordination and field data collection. The Guide covers a variety of subjects such as geosciences, engineering, emergency management and social sciences. The cost is US\$20. Write EERI, 499 14th Street, Oakland, California 94612-1934; fax: (405) 451-5411. □

IDNDR Video Catalogue Available

The International Decade for Natural Disaster Reduction has published a video catalogue, which serves as a clearinghouse for information on video material related to natural disasters. A wide range of video programs is reviewed and information is provided on how to obtain copies. Request a copy from the IDNDR Secretariat, Palais des Nations, 1211 Geneva 10, Switzerland, fax: (4122) 733-8695; e-mail: idndr@dha.unicc.org. □

News from PAHO/WHO (from pg. 2)

ation with CDERA, the Caribbean Disaster Emergency Response Agency.

raining in the U.S.

The American Red Cross and PAHO are scheduled to organize a SUMA training event in the U.S. The three-day session will review the new software and discuss strategies to implement policies for managing relief supplies by countries and regions and by relief agencies in both humanitarian and complex emergencies.

WHO Center to Host International Earthquake Symposium

WHO's Center for Health Development was inaugurated in Kobe, Japan in March 1996 to study health development and the impact that certain variables have on it: social, cultural, economic, demographic, epidemiological and environmental. Within this framework, the Center will host an International Symposium on Earthquakes and People's Health: Vulnerability Reduction, Preparedness and Rehabilitation. The January 1997 meeting will be held in Kobe, site of a major earthquake in 1995. The Symposium program is available on the World Wide Web at <http://www.who.or.jp>; by e-mail wck@who.or.jp; or contact the WHO Center for more information, fax: (8178) 303-1306. □



Our Phone Numbers Have Changed!

PAHO's **Emergency Preparedness Program** has a new telephone number:

(202) 974-3520

Additional numbers:

Training materials: **(202) 974-3527**
SUMA: **(202) 974-3530**
Emergency: **(202) 974-3399**

Our fax number and e-mail address remain the same:

fax: (202) 775-4578
e-mail: disaster@paho.org



Member Countries

Bermuda: Disaster Management Workshop

Bermuda's Department of Health, together with the Emergency Measures Organization, conducted a disaster management/mitigation workshop in late July. Twenty-nine participants from multisector government and non-governmental organizations attended and participated in a tabletop exercise of a cruise ship fire. The exercise helped to clarify and define roles of the major players in disaster situations—in this case a manmade disaster—in Bermuda, a country with a major tourist trade. For more information contact Ms. Jacqueline Lightbourne, Chief Nursing Officer, Ministry of Health and Social Services, P.O. Box HM 1159, Hamilton, Bermuda; fax: (441) 292-7627. □

Bolivia: Disaster Health Policy Published

Bolivia's Directorate of Health has prepared a national policy document to help guide and coordinate the actions of personnel who deal with the health-related consequences of disasters. The first section discusses natural hazards that threaten Bolivia; this is followed by a chapter on norms and procedures for the various phases of disasters

and for specific hazards. A good reference tool for other countries wishing to create their own national norms. A limited number of copies of this publication (Spanish only) are available from the Regional Disaster Documentation Center (ordering information on p. 6). □

El Salvador: Diplomats Discuss Role in Disaster Situations

In September, the Ministry of Foreign Affairs of El Salvador gathered its diplomatic representatives in Canada and the U.S. in a three-day meeting during which they discussed the role of diplomatic missions in disaster situations. PAHO's Emergency Preparedness Program participated in this session. This meeting was in followup to a workshop in El Salvador earlier this year of foreign affairs personnel. At the September meeting, the Manual of Procedures for Diplomatic and Consular Missions in Disaster Situations was reviewed. It should be ready for publication soon. For more information contact Alejandro Kellman, Comité de Coordinación de Desastres, Ministerio de Relaciones Exteriores, San Salvador, El Salvador. □

Peru: University Faculties Offer Studies in Civil Defense

Two faculties of the National University of Trujillo are offering advanced studies in Civil Defense. The faculty of civil engineering offers a post-graduate specialization in the subject for teachers, police and the armed forces in civil protection management in disasters and in managing sustainable development. The faculty of Sciences will offer courses to improve the process of managing disasters and contribute to resolving environmental problems related to disasters in the region. Both areas are comprised of four cycles of four months each. For a syllabus write: Rector, Universidad Nacional de Trujillo, Independencia 431, Oficina 203, Trujillo, Peru; fax: (51-44) 256-629. □

Central American Disaster Coordinators Meet

Disaster coordinators from Central America met in Guatemala from 23-25 October at the VII Subregional Technical Evaluation Meeting. The multisector meeting included representatives from the Ministries of Health and Social Security, national emergency commissions, and university faculties which have included disaster preparedness and mitigation in their health sciences and engineering curriculum. For the first time, observers from Mexico and Belize attended. This important meeting also drew representatives from the U.N. (IDNDR, DHA, UNDP), the Office of U.S. Foreign Disaster Assistance, the Federation of Red Cross Societies, and Central American agencies such as SICA, the Central American Integration System; PARLACEN, the Organization of Central American Parliaments; CEPREDENAC; and NGOs and embassy personnel based in Guatemala. More on the recommendations from this meeting in the next issue of the newsletter. □

(cont. on pg. 5)

Saint Lucia: New Web Site Under Construction

The Office of the National Disaster Coordinator of Saint Lucia has a new home page: <http://www.geocities.com/CapeCanaveral/6278>. The site contains news from throughout the Caribbean on disaster management and links to other sites. Send comments to Timothy James, National Disaster Coordinator, P.O. Box 1026, Castries, St. Lucia; fax: (758) 453-2152; e-mail: jamest@candw.lc □

Ecuador: International Course on Building to Resist Earthquakes

The Catholic University of Guayaquil will offer an International Course on Seismic Resistant Structural Engineering. The 100 hours of coursework will take place between 18-30 November and cover many technical aspects of building design. For the course syllabus contact: Ing. Mercedes Sierra, Facultad de Ingeniería, Universidad de Guayaquil, Apartado 09-01-4671, Guayaquil, Ecuador; fax: (593-4) 200-071. □

Ecuador: Protecting Water and Sewerage Agencies

At an altitude of 2,850 meters, Quito lies at the base of the Pichincha volcano. This makes the region highly vulnerable in the event of flooding or landslides. To reduce this vulnerability, Quito's municipal drinking water and sewerage agency, with other national agencies, has launched a project to identify the risks brought about by heavy rainfall and plan the best way to alert the population when necessary. For more details contact: Dr. Edgar Ayabaca, EMAP-Quito, Apartado Postal 1370, Quito, Ecuador; fax: (593-2) 446-326; e-mail: janeau@orstom.ecx.ec □

CEPREDENAC, the Coordination Center for the Prevention of Natural Disasters in Central America, is a regional, inter-governmental body that promotes natural disaster reduction through a) exchange of experiences, technology and information; b) analysis of common problems; and c) channeling external cooperation.

Upcoming Meetings

May 1997

3-7 The theme of the next U.S. National Disaster Medical System annual conference will be Delivering Health and Medical Services in Catastrophic Disasters. The Conference will be held in Tampa, Florida and will focus on public health, planning, management and coordination, field response and health care facilities. Training courses will be offered prior to the meeting. Contact NDMS for more information at fax (303) 443-5146. □

September 1997

24-27 The 10th World Congress on Emergency and Disaster Medicine will be held in Mainz, Germany. For a copy of the scientific agenda write to the WCEDM Congress Office, Klinik für Anesthesiologie, Langenbeckstr. 1, D-55131 Mainz, Germany; fax: 49-6131-17-6649. □



Review of Publications

The material referred to in this section has been abstracted from review copies sent to the Editor of this Newsletter. Except where noted otherwise, none of the books is available from PAHO. The publisher and the list price (when available) are included for readers who are interested in obtaining the books.

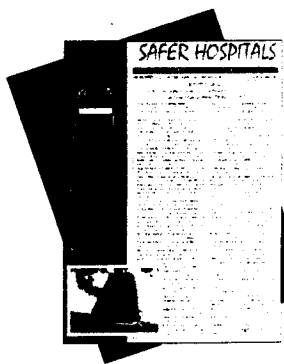
WHO Publishes Field Guides

Field Guide on Rapid Nutritional Assessment in Emergencies takes the user step-by-step through the process of designing, planning, implementing and reporting reliable nutritional assessment information. The 63-page guide is intended to help those who must make rapid but reliable estimates of the nutritional situation in an emergency as a basis for subsequent action. US\$11.25 includes shipping and handling.

Health Laboratory Facilities in Emergency and Disaster Situations is a manual offering guidelines for international agencies, national authorities and other bodies in drawing up contingency plans for providing emergency laboratory services. Any health professional—physicians, nurses, laboratory technicians and others—working in emergency and disaster relief should find this publication useful. US\$7.50 includes shipping and handling.

—Both publications available in *English only*. Send check in US\$ to Distribution and Sales, WHO Office for the Eastern Mediterranean, P.O. Box 1517, Alexandria, Egypt. Or contact EMRO to inquire how to purchase a copy in your country: fax: (203) 4838-916; e-mail: postmaster@who.sci.eg (attention Distribution and Sales). □

Second Issue of Hospital Mitigation Newsletter Published

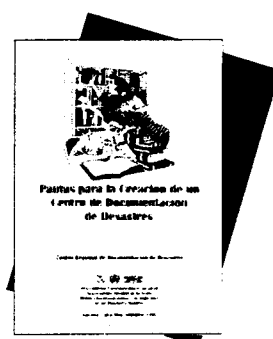


Issue No. 2 of the newsletter *Safer Hospitals for the 21st Century* was published in September. In addition to articles on topics ranging from Hospitals as Safe Havens, to an Argentinian case study on a risk assessment inventory, the newsletter also reviews publications or documents of interest and alerts readers to upcoming events. If you are interested in hospital disaster mitigation in Latin America and the Caribbean and would like to receive future issues of the newsletter, please write to us (see page 8) and if you can, provide us with the reference number in the lower left hand corner of your mailing label. The next issue will be out in early 1997. □

Guidelines for Creating Documentation Centers

Since 1990, the PAHO/IDNDR Regional Disaster Documentation Center in Costa Rica has worked to increase the flow and dissemination of disaster management information in Latin America and the Caribbean. To accomplish this, the Center has systematically employed a number of strategies, one of which is to assist in the creation of or strengthen existing reference centers or specialized libraries and to promote the use of common methodologies.

In support of this initiative, the Center has published **Guidelines for Creating a Disaster Documentation Center**. This *Spanish-language* handbook will help those responsible for setting up disaster documentation centers. The general guidelines accompany a comprehensive technical manual on MicroIris, the software used to index the Center's more than 9,000 records. This manual is intended for librarians and data entry personnel. —Copies available in *Spanish only*. Contact the Regional Disaster Documentation Center, OPS, Apartado 3750-1000, San Jose, Costa Rica, fax: (506)231-5973; e-mail: cddcor@paho.org. □



Health Situation in Haiti on Web

Haiti was thrust into a "complex" disaster during the U.N. embargo from 1991-1994. However, drawing on its mandate for health in the Americas, PAHO won the right to "remain on the bridge" and a complete catastrophe in the health status of Haitians was averted.

Haiti's Ministry of Public Health and the Office of the PAHO/WHO Representative have published *Analysis of the Health Situation - Haiti 1996*, a comprehensive look at the most prevalent health problems and the nation's response to these.

This major publication, available in English, French, and Spanish can now be consulted and downloaded from PAHO's World Wide Web at:

<http://www.paho.org/english/ped/pedhaitien.htm>

For more information contact the Editor of this Newsletter. □

Looking Beyond Hospitals

(cont. from pg. 1)

Now, the health sector is also including the prevention and mitigation of damages to water supply and sewerage systems in its agenda. Reducing the vulnerability of these installations —also critical to health— will minimize economic and human losses due to disasters and allow resources to be channeled to other investment areas.

Several important steps have already taken place.

- Since the early 1980s, PAHO's Center for Sanitary Engineering (CEPIS) in Lima, Peru has worked with regional water authorities to prepare disaster plans and conduct a preliminary diagnosis of vulnerability.
- A number of Spanish-language publications and a nine-set slide series were produced to raise awareness.
- A number of regional universities has included the topic in the curriculum of prospective sanitary engineers.

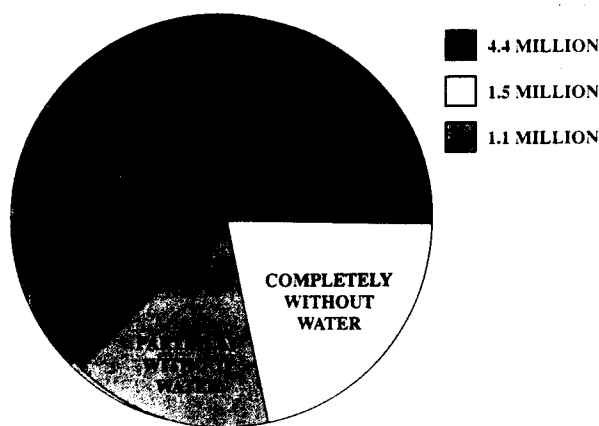
However, region-wide, efforts have not been systematic and a wide discrepancy in the level of preparedness exists from country to country. Recognizing this, several new activities are underway to formalize a methodology for water supply systems in Latin America and the Caribbean to systematically

determine their vulnerability to disasters and incorporate this variable into their disaster mitigation plans and programs. These include:

- preparation of a Spanish-language technical manual on how to assess vulnerability of water supply systems.
- case studies assessing vulnerability of selected water supply systems to specific hazards.
- a regional technical meeting to study how to improve the transmission of a vulnerability analysis methodology throughout the region.

Recently, more than 1000 persons attended the

Interamerican Congress of Sanitary Engineering in Mexico City. One of the plenary panel discussions dealt with vulnerability to natural and environmental risk. This important event has raised consciousness, among a large and varied audience of decision makers, regarding the threats facing water supply systems. It is hoped that this aware-



Water supply problems following the earthquake in Mexico, 1985.

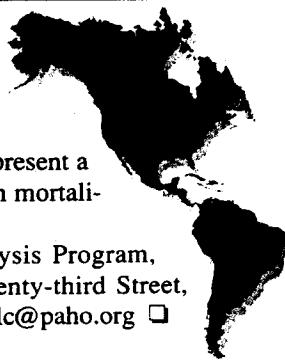
ness will contribute, along with other initiatives underway, to making disaster mitigation as integral part of the daily operations of these "other" health lifelines as water quality control. More information on this major Conference will appear in the next issue of this Newsletter. □

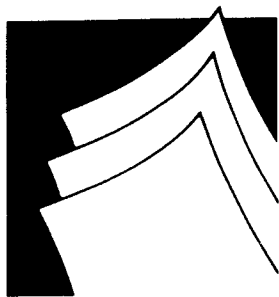
Health Situation in the Americas

Valuable, up-to-date information on the health profiles of the countries of the Americas is available in a new brochure from PAHO.

Fifty-three indicators, selected for their public health importance, present a snapshot of demographic and socioeconomic conditions and give data on mortality and morbidity and on resources access and coverage.

For a copy of *Basic Indicators 1996* write: Health Situation Analysis Program, Division of Health and Human Development, PAHO/WHO, 525 Twenty-third Street, N.W. Washington, D.C. 20037, USA; fax: (202) 974-3674; e-mail: castillc@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.

- T.2** Glazer, H, "Be prepared: The crash of USAir Flight 405," *Disaster Management*, Vol. 5, No.32, pp. 130-4, 1993.
- T.3** Silver, Paul G. et al, "Rupture characteristics of the deep Bolivian earthquake of 9 June 1994 and the mechanism of deep-focus earthquakes," *Science*, Vol 268, pp. 69-73, April 1995.
- T.4** Hyndman, Roy D., "Giant earthquakes of the Pacific Northwest" *Scientific American*, pp. 68-75, December 1995.
- T.5** Russell, Linda A. et al, "Preparedness and hazard mitigation actions before and after two earthquakes," *Environment and Behavior*, Vol. 27, No. 6, pp. 744-70, November 1995.
- T.6** Baxter, Peter J. et al, "Medidas preventivas de salud en caso de erupciones volcánicas," CENAPRED.
- T.7** Cruz, Miguel F., "Diseño de obras civiles importantes: Tarea multidisciplinaria," *Ingeniería*, Vol.1, No. 1, pp. 61-6, 1991.

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) and the Office of Foreign Disaster Assistance of the U.S. Agency for International Development (OFDA/AID).

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