



DISASTERS

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Preparedness and Mitigation in the Americas

June 2017 Issue 124



Regional Plan for the Americas helps shape the Sendai Framework for Disaster Risk Reduction in Health

This new plan builds on our work with PAHO member countries to reduce risks in the health sector and to strengthen their capacity to ensure full operation of the health system and services in times of emergencies or disasters”,¹ announced **Ciro Ugarte**, Director of PAHO’s Department of Health Emergencies (PHE), in September 2016, once the Plan of Action for Disaster Risk Reduction 2016-2021 was approved, in accordance with the Sendai Framework for Disaster Risk Reduction 2015-2030.

the countries of the Americas is to continue strengthening disaster risk reduction in order to prevent deaths, diseases, disabilities, and the psychosocial impact of emergencies and disasters through people-centered actions and cross-cutting approaches: “a multi-hazard approach; a gender, equity, ethnic group, human rights, and disability approach; and shared responsibility among national and subnational institutions and authorities, and public and private sectors.”²

The purpose of the plan developed by

(continued on page 2) >>

Editorial

Global Platform for Disaster Risk Reduction (GP2017): Mexico offers us more opportunities

The Global Platform for Disaster Risk Reduction (GP2017), hosted in Cancun (Mexico) last May, served as an opportunity to review and evaluate both the achievements and challenges since 2015 in the implementation of the Sendai Framework, and particularly in terms of marking priorities. The GP2017 brought together over five

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Photo: UNISDR

Regional Plan for the Americas helps shape the Sendai Framework for

Disaster Risk Reduction in Health

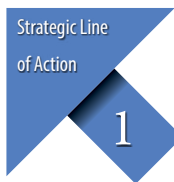


The reason: the American hemisphere ranks second as the region most affected by disasters, after Asia. About 20.6% of the world's disasters between 2007 and 2016 occurred in this area, leading to 255,033 deaths, 898,816 injured, and damages amounting to over US\$470,000 million.³

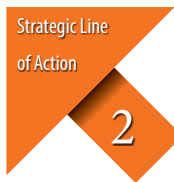
The most common events were water- or climate-related, causing 5.6% of deaths and over 73% of economic losses during this period. Damages caused by earthquakes, tsunamis, cyclones, winds, and high tides are estimated to be between 1.2% and 1.7% of world's gross domestic product (GDP) every year.⁴

Accordingly, the commitment of Member States to reduce the effects of these events was demonstrated by establishing the four strategic lines of the Plan of Action for the health sector: 1) recognizing disaster risks, 2) strengthening governance of disaster risk management, 3) promoting safe and smart hospitals, and 4) strengthening the sector's capacity for emergency and disaster preparedness, response, and recovery.

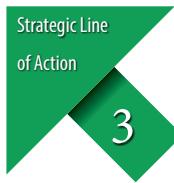
The first strategic line involves the use of evidence-based technical and scientific information for decision-making; promoting partnerships with the private sector and academia to disseminate and share relevant information that would help reduce disaster risks in the health sector; and ensure that early warning systems and multi-hazard forecasts are people-centered.



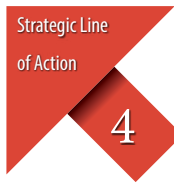
The second strategic line involves the incorporation of disaster risk management within the health sector, with the necessary human and financial resources, and clearly defining decision-making structures, flows, and/or mechanisms at the different levels of authority, responsibility, and coordination.



The third line promotes the Safe Hospital initiative to ensure that the health service network can maintain its operating capacity during emergencies and disasters; and strengthening the actions needed to ensure that structural, nonstructural, and organizational/functional safety components meet the demands of climate change mitigation and adaptation.



The fourth line states that "strengthening response capacity and early recovery from disasters in the health sector should be participatory, inclusive, and effective"⁵; that




operations centers should enable adequate interaction between decision-making and actions; that ongoing practical training of the emergency and disaster teams should be ensured; and that emergency medical teams must meet basic quality standards, including the capacity for clinical management and the integration of national and international coordination and information management mechanisms.

The Global Platform for Disaster Risk Reduction (GP2017), held last May, was an opportunity to further analyze the document entitled "Plan of Action for Disaster Risk Reduction: From theory to practice in health." The discussion panel at this event was made up of emergency and disaster and health sector professionals, as well as PAHO/WHO representatives. It identified good practices reflecting progress and also facilitated the formulation of proposals to overcome obstacles in disaster risk reduction. Opportunities were explored for cooperation among countries for the development of capacities. Recommendations to strengthen the implementation of the Plan of Action, in accordance with Sendai Framework for Disaster Risk Reduction 2015-2030, were prioritized.

Emphasis was given, for example, to the practical importance of information exchange at national borders, the use of threats and vulnerabilities maps, the use of risk matrices and/or technology (drones or global positioning systems-GPS) to improve information analysis, the impor-

tance of adhering to the Safe Hospitals initiative prior to accreditation of a health facility, and educational campaigns so that people know how to respond in an emergency or disaster situation before the health teams reach them.

Sixty-six professionals from 20 Ministries of Health Disasters Offices attended the GP2017: Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Saint Martin, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the United States. This ensured continuity of the Plan and the health sector's contribution to the goals of the Sendai Framework. 

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Editorial

Global Platform for Disaster Risk Reduction (GP2017): Mexico offers us more opportunities



Dr. Gerry Eijkemans, PAHO/WHO Representative in Mexico presents WHO's official declaration.

thousand participants who contributed in the scientific, academic, or public policy domains (at the local, national, and supranational levels), with public health at the heart of the debate, and risk management as the linchpin for disaster and emergency preparedness, response, and recovery.


In this context, it is no mere coincidence that this Fifth Global Platform was the first to be held outside Geneva (Switzerland) since 2009. The Americas rank second as the region most affected by disasters, behind Asia. More specifically, Mexico has been greatly affected following the devastating earthquake in 1985 that left around 10,000 victims –561 in the Hospital of Juárez–and caused the loss of about 6,000 beds. It is also, however, the country that has best integrated the Safe Hospital initiative, which is being extended even to schools and hotels.

Nor it is any coincidence that PAHO Member States and the Region of the Americas, in particular, have spearheaded multisectoral action on disaster risk reduction. During the event, dozens of professionals from the 20 Ministries of Health Disaster Offices in the Americas contrib-

uted to the analysis of the plan of action for the health sector, identifying opportunities for cooperation and establishing recommendations for implementation in accordance with the Sendai Framework.

In other words, that the strategic lines and objectives proposed correspond with priority actions defined a couple of years ago in Japan, namely “understanding disaster risks; strengthening disaster risk governance; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective responses... in recovery, rehabilitation, and reconstruction.”¹

Furthermore, the Global Platform also allowed the possibility of forging and maintaining public-private partnerships to strengthen resilience initiatives; information-sharing and the generation of further information for evidence-based decision-making; the socialization of new technologies; and the “use of tools and methodologies aimed at understanding, and tailoring the economy and investment toward disaster risk reduction.”²

There is no doubt that these efforts by Member States will gradually show results in the quality of health teams and facilities; and even more valuable, these results will signify better conditions and capabilities to withstand and recover from a possible emergency or disaster. 

1 Pan American Health Organization, “New action plan for the Americas seeks to reduce health impacts from disasters” [Internet], Washington (DC): PAHO; 2016 [consulted on 11 June 2017]. Available at: www.paho.org/hq/index.php?option=com_content&view=article&id=12551%3A-new-action-plan-for-the-americas-seeks-to-reduce-health-impacts-from-disasters&catid=8882%3A55-dc-news&Itemid=42099&lang=en.

2 Pan American Health Organization. Plan of Action for Disaster Risk Reduction 2016-2021. 55th Directing Council, 68th Session of the Regional of WHO for the Americas; 26-30 September 2016; Washington, D.C., PAHO; 2016 (Resolution CD55/17, Rev.1*) [consulted on 11 June 2017]. Available at: www.paho.org/hq/index.php?option=com_content&view=article&id=12276&Itemid=42078&lang=en.

3 The OFDA/CRED International Disaster Database. EM-DAT. Reviewed: 26 January 2017.

4 Wallemacq P. CRED CRUNCH (2016), What is the human cost of weather-related disasters (1995-2015)? [Internet]. Brussels (Belgium): CRED; 2016 available at: <http://cred.be/sites/default/files/CredCrunch42.pdf>.

5 Pan American Health Organization. Plan of Action for Disaster Risk Reduction 2016-2021. 55th Directing Council, 68th Session of the Regional of WHO for the Americas; 26-30 September 2016; Washington, D.C., PAHO; 2016 (Resolution CD55/17, Rev.1*) [consulted on 11 June 2017]. Available at: www.paho.org/hq/index.php?option=com_content&view=article&id=12276&Itemid=42078&lang=en.

1 United Nations Office for Disaster Risk Reduction (UNISDR), “Sendai Framework [Internet], Washington (DC): UNISDR; 2015 [consulted on 11 June 2017]. Available at: www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf.

2 Global Platform for Disaster Risk Reduction (GP2017), <http://www.unisdr.org> [Internet], Washington (DC): UNISDR; 2017 [consulted on 11 June 2017]. Available at: www.unisdr.org/conferences/2017/globalplatform/en.



Participants at the meeting.

Member States and NGOs in the Americas on the road to EMT classification

On 4-5 May 2017, an Emergency Medical Team (EMT) workshop was held for NGOs in the Americas to provide them with the tools and knowledge needed as they prepare to become type 1 and type 2 EMTs. Similar meetings were held in Mexico, Nicaragua, and El Salvador.

The aim of the event, organized in Washington D.C., was to strengthen medical teams so that they can respond to national and international emergencies in a professional and coordinated manner. It identified key elements and requirements needed to form an EMT, as well as the processes and structures involved in obtaining this status.

Although this workshop was aimed specifically at NGOs, PAHO has been implementing the Medical Team initiative since 2006, with special attention to strengthening the capacities of countries in the Americas so that they will be ready to provide type 1 and 2 EMTs.

This year, for example, training has been given to:


- Fifteen type 1 EMT from Canada and the USA;
- One type 2 EMT from Ecuador;
- Two EMT specialized cells from Barbados and Canada; and,
- Four EMT in process that will be classified according to WHO's minimum guidelines.

Evidence Aid and its contribution to Disaster Risk Reduction

Evidence Aid (www.evidenceaid.org) is an independent organization that supports disaster risk reduction and humanitarian activities by adopting an evidence-based approach to actions and decision-making to improve outcomes for those who need it. It recognizes the support of PAHO/WHO in furthering this objective which, in turn, leads to the successful implementation of the Sendai Framework.

The aim of the organization is to promote the generation, use, and dissemination of robust evidence from the humanitarian sectors whenever and wherever this is appropriate. To achieve this, solid findings are disseminated, people and institutions are brought together, and knowledge gaps are identified and

addressed. This is carried out with the collaboration of actors from its extensive network and official members, including Cochrane (www.cochrane.org) and the Centre for Evidence-Based Medicine (www.cebm.net) at Oxford University.

By way of background, early in 2016, this NGO, together with Public Health England, ran a parallel event at the Science and Technology Conference organized by the United Nations Office for Disaster Risk Reduction (UNISDR) in Geneva to promote the dissemination of robust evidence. Later, toward the end of 2016, as part of the Fourth Evidence Aid International Conference, together with PAHO/WHO, it ran a training workshop on the use of systematic reviews and evidence. It also recently participated in the Global Platform for Disaster Risk Reduction (GP2017). 





Medical Care in temporary shelters.

Colombia

Avalanche in Mocoa, a challenge for the health response

On 31 March 2017, heavy rainfall in the municipality of Mocoa (Colombia) led to the overflowing of the Mulatto, Sangoyaco and Mocoa rivers. This in turn led to a mudslide later that night that affected the urban center and rural areas around the capital of the Putumayo department: a disaster that left 398 injured, 332 dead, and 71 missing persons. Recovery operations are still underway.

The health sector response was led by the Territorial Office for Emergency and Disaster Management (Ministry of Health and Social Protection). It not only provided care for those affected, but also activated mechanisms to organize and mobilize national medical emergency teams, use the LSS-SUMA tool, deliver medical supplies, and deploy specialized personnel to the area.

Although the health sector was assessed positively overall for the speed and quality of its actions and for the reduction of associated risks, significant challenges included the coordination of actors involved, basic sanitation, and the handling of corpses. Recovery operations are still underway and, at the same time, the lessons learned are being consolidated to serve as an example for future situations. 🌐



624,985 pharmaceutical units donated.



51,227 doses of tetanus, hepatitis A, and chickenpox administered.



4,247 mental health care.



683 health control measures.



398 emergency aid.



299 solidarity and Guarantee Fund (FOSYGA) indemnities to families of the dead.



115 shipments (delivery of medicines, medical equipment, and supplies from the national level, as well as technical assistance).



19 shelters offering health care. One remains active with 135 families.



Photo: César Bombareni PMD/WHO

Water distribution in Narihuala, Piura.

Perú

Rapid response to the coastal “El Niño” in Peru

Since mid-February 2017, persistent rainfall and floods associated with the coastal “El Niño” have been affecting many Peruvian departments including Tumbes, Piura, Lambayeque, La Libertad, and Ancash. Overflowing rivers have damaged crops, transportation routes, and residential areas. Extensive peri-urban areas were flooded on the Peruvian coast, Lima’s metropolitan area, and the district of Chosica.

Peru’s National Civil Defense Institute (INDECI) reported that, as of 1 June 2017, some 1,678,446 people have been affected throughout the country, with 443 inju-

ries and 147 deaths due to the emergency. Affected communities—Tumbes, Lambayeque, Piura, La Libertad, Ancash, and Ica departments—remain difficult to reach due to the collapse of transportation and communications infrastructure.

Impact on the health sector

About 893 public health facilities administered by regional governments have been affected in one way or another¹: 21.5% in Piura, 14.6% in La Libertad, 11.4% in Lambayeque, and the rest in other departments. The Ministry of Health reported that 68

facilities are no longer functioning: 30.8% in Lambayeque, followed by Ancash, Lima, La Libertad, and Piura.

Of these affected health facilities, 28 were primary care facilities and one secondary care facility, the Huarmey hospital, which suffered serious damages to its infrastructure, loss of essential equipment and clinical fixtures, and flooded critical care rooms. Considering the loss of services in those facilities and the Huarmey hospital, it is estimated that over 261,000 people will lose access to health services, generally primary health care.

With persisting rainfall and deteriorating environmental conditions, the number of acute diarrheal diseases (ADD), food-borne and water borne diseases, leptospirosis, dengue, Zika, and chikungunya cases has increased in Tumbes, Piura, Lambayeque, and La Libertad.

By epidemiological week 21, a total of 14,634 *P. vivax* and 4,745 *P. falciparum* malaria cases were reported in 11 departments.

The number of active dengue outbreaks (53,017 cases in 2017 versus 26,020 in 2016, by epidemiological week 21) is increasing, with the majority in the departments of Piura (33,571), La Libertad (4,339), Ica (3,701), Tumbes (2,755), and Lambayeque (2,048).

Furthermore, Zika cases have been reported in nine departments (5,111 in 2017 versus 1,670 in 2016, by epidemiological week 21), and there are active outbreaks of chikungunya in nine departments around the country. Leptospirosis outbreaks have been reported in 20 departments, with Ucayali, Tumbes, Piura, Madre de Dios, and Loreto being the most affected.

Ongoing response operations

As a result of the State of Emergency declared by the National Government,




The Pedregal Grande health Center was affected by the floods.

Photo: César Banchen/PAHO/WHO

PAHO/WHO has deployed 26 national experts to the affected departments, as well as seven international experts to support the emergency operations in Tumbes, Chiclayo, Trujillo, Piura, Ica, and Lima.

This contingent supported the national response in areas such as health services, water and sanitation, epidemiology, mental health, and surveillance of infectious diseases.

Led by the Ministry of Health, the health sector is preparing a coordinated response with the collaboration of key actors. Meanwhile, PAHO will continue to provide support for the following actions with the mobilization of approximately US\$186,000 from USAIDS, and US\$743,000 from CERF funds:

1. Recovery of health care capacity and access to health services, including mental health care;
2. Increase epidemiological surveillance for early detection and timely management of disease outbreaks;
3. Guarantee safe access to water, emergency sanitation measures, and vector control;
4. Ensure efficient information coordination and management to effectively address the most pressing humanitarian needs. 

Population in the most critical emergency areas

Areas ^{2,3}	People affected	Deaths	Injured	Missing
Tumbes	54,909	0	0	0
Lambayeque	180,517	9	5	0
Piura	451,986	17	39	4
La Libertad	451,543	14	48	4
Ancash	135,100	27	126	1
Ica	100,380	0	60	0

¹ INDECI/COE. Executive summary–Rainy Season. December 2016–June 2017. Updated 1 June 2017.

² INDECI/COE. Executive summary–Rainy Season. December 2016–June 2017. Updated 1 June 2017.

³ The figures presented in the table are subject to change due to the ongoing crisis, and periodic reports on the situation.

Health sector has strengthened its ability to serve populations affected by drought



Photo: Virginia Herzig/PAHO/WHO

Activity: Delivery of supplies and equipment to the Nutrition Recovery Center in Ixil, department of Quiché.

Consequently, child mortality associated with acute malnutrition declined by 43% in the Huehuetenango and El Quiché departments compared with rates reported for the same period in 2015. Likewise, the number of deaths associated with acute malnutrition declined, with a 43% reduction in both departments. This information is calculated based on official data provided by the Ministry of Health's situation room on acute malnutrition.

PAHO covered the health and nutritional needs of children under 5 years, and pregnant and breastfeeding women, reaching a total of over 290,000 beneficiaries. Some 16,130 pregnant and breastfeeding women received nutritional support. About 26,167 children with health problems stemming from the food crisis and drought received treatment and recovered.

Health care was also provided and adapted to specific needs with the mobilization of 53 mobile health teams to the most affected communities, making it possible to

rapidly detect and treat malnutrition, acute respiratory infections (ARI), ADD, and vector-borne communicable diseases. The team also promoted good health and nutritional practices.

Furthermore, activities designed to respond to the drought also strengthened the capability of health workers and led to the updating and development of adequate protocols for the diagnosis, registry, and treatment of acute malnutrition, ARI, and TDA. Supplies and health teams were acquired to support the Ministry's response at the local level. This action also supported immunization campaigns and protective measures for vulnerable groups, while at the same time contributing to strategies to prevent and reduce associated chronic malnutrition and mortality. 🌐

Outcomes	
334	children under 5 years identified with acute malnutrition were registered in SIGSA health level 1 and 2, including nutritional recovery centers.
509	children under 5 years with acute malnutrition received nutritional treatment in health centers and nutritional recovery in the intervention areas.
199	children diagnosed with acute malnutrition recovered following treatment given in health centers and nutritional recovery in the intervention areas.
13.160	children at risk of malnutrition were diagnosed with ARI and received treatment.
12.130	children at risk of malnutrition were diagnosed with food- and water-borne diseases and received treatment.
13.536	children under 5 were vaccinated against measles.
235.289	adults received information on preventive practices related to child medical care and nutrition at home.
16.130	pregnant and breast-feeding women received iron and folic acid supplements or were treated for nutritional deficiencies.
387	health staff members received training on standards and protocols for the treatment of acute malnutrition and associated diseases.

Source: Health Information Management System (SIGSA). Ministry of Health, Guatemala



Photo: Francisco Guerrero

Training on the basics of topographic chart and terrestrial navigation.

Ecuador

Ecuador is developing its **Rapid Response Teams for Health Disasters**

The Ministry of Public Health of Ecuador (MPH), with the support of the Pan American Health Organization (PAHO/WHO), organized a national course in Quito on Emergency and Rapid Response Teams for Health Disasters.

From May 17 to 19, 2017 experts received training in different areas in order for them to be able to join a national response team in the event of a possible public health emergency. This group of 30 professionals from the MPH, Secretary of Risk Management (SGR), Ecuadorian Social Security Institute (IESS), and the Ministry of Defense (MIDENA) will form part of a roster that could be mobilized to any part of the Region, within the frame-

work of the Humanitarian Assistance Plan.

This course had had both theoretical and practical components, ending with a simulated volcanic eruption, which enabled a review of the concepts studied in the workshop. Subject areas included preparation for emergency operations, damage assessment, prioritization of needs and identification of potential public health risks, as well as developing a plan of action to cover these needs.

Regional facilitators also participated, either in person or virtually, covering areas such as monitoring water quality, logistics, health services, risk and information communication, the role of international cooperation, among others.

Israel Espinosa, Director of Risk Management at the MPH, underscored the importance of having a well-formed Rapid Response Team capable of responding to disasters. Dr. Alejandro Santander, Sub-regional Advisor for the PAHO/WHO's Health Emergencies Department mentioned that Ecuador has the resources in place to respond to disasters, as was shown during the earthquake of 16 April 2016. However, he indicated that the preparedness process must continue or even be extended with greater human resources that could be mobilized as a Regional Response Team for disasters in neighboring countries. [▶](#)



Dr. Margaret Chang (WHO's Director General), with Dr. Carissa Etienne (PAHO's Director), Dr. Ciro Ugarte (Director of PAHO's Health Emergencies Department), and members from Costa Rica's Permanent Mission to the UN, and CCSS.

Costa Rica

First country in the Americas to receive **Global EMT classification**

On 26 May 2017, the Costa Rican Social Security Fund (CCSS) was granted the global EMT classification within the framework of an initiative to compile a global roster of medical teams that comply with a set of minimum standards and that can be deployed to emergencies affecting any part of the Region in the shortest possible time.

The CCSS's type 1 EMT can serve at least 100 people per day on an outpatient basis, in addition to stabilizing patients who need

to be transferred to higher-level services. This EMT is self-sufficient for at least two weeks, the minimum expected mobilization period.

Costa Rica is the seventh country in the world to be added to the global roster, and the first in the Region of the Americas. About one-third of the countries registered for the verification process are in the Americas. To date, EMTs from Russia, China, Japan, Australia, Israel, and the United Kingdom have attained WHO classification. [▶](#)

3D simulation for management of patients with highly contagious diseases

The United States National Library of Medicine (NLM) has developed a new application to help train health workers who may come into contact with patients with highly contagious diseases, such as Ebola. It can be downloaded free of charge from: https://disasterinfo.nlm.nih.gov/dimrc/virtual_training.html.

The application enables two professionals to interactively practice the process of removing (“doffing”) personal protective equipment following patient contact. This is the first of a series that the NLM plans to develop, others include contaminated waste management, laboratory sample management, x-ray procedures, and others.

The “PPE Doffing” module uses video game technology to simulate how personal protective equipment should be removed following the US Centers for Disease Control and Prevention (CDC) guidelines. The aim is to help health professionals in hospitals and other medical centers to practice these intricate processes prior to—or in



3D Simulator for training.

addition to—practicing in real situations, and to strengthen certain aspects of training that would be much more costly using the actual equipment.

The application requires two computers connected to a local area network, and either Microsoft Windows or Apple OS X operating systems. One of the two people plays the role of the professional that

attended the patient, and the other is the observer who oversees the removal of personal protective equipment following the steps recommended by the CDC.

The application includes 3D simulations and videos of the steps to follow, and offers multiple opportunities to test the user’s knowledge of the procedures. For example, the program could randomly demonstrate correct and incorrect procedures so the user would have to identify the correct option. At the end of the training, the program delivers a performance evaluation of each stage, and also allows users to switch roles.

For further information and links see “Virtual Highly-Infectious Disease Emergency Management Training.” [▶](#)



Virtual personal protection equipment.

Upcoming Events

6th International Conference on Climate Change Adaptation (CCA2017)

16-17 September 2017/Toronto, Canada

<https://www.unisdr.org/we/inform/events/52282>

The event will address the different climate change dimensions with the participation of experts from several countries around the world.

Global Disaster Relief and Development Summit 2017

06-07 September 2017/Washington, United States

<http://disaster-relief.aidforum.org>

This year's program will expand its scope beyond relief operations and will explore emerging global challenges, technological innovations, and opportunities in the international aid and development sector.

Canadian Risk and Hazards Network (CRHNet) 14th Annual Symposium

25-27 October 2017/Halifax, Canada

<http://crhnet.ca/symposiums/2017/first-call-session-proposals-14th-annual-crh-net-symposium>






The subject this year is "Building Resilience".


7th Annual All-Hazards Incident Management Teams Association

02-07 December 2017/San Diego (California), United States

<http://ahimta2017sd.org>

This symposium is designed to promote, support, and enhance incident management by establishing standards and promoting the cooperation of authorities, nongovernmental organizations and the private sector in all phases of incident management.

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 202-974-3527 • Fax: 202-775-4578


Disasters: Preparedness and Mitigation in the Americas
Pan American Health Organization
 525 Twenty-third Street, N.W.
 Washington, D.C. 20037, U.S.A.

Correspondence and inquiries should be addressed to:

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