

Geophysical Hazards and Plate Boundary Processes in Central America, Mexico and the Caribbean: A Workshop to Build Seismological Collaboration and Capacity

**October 24 to 28, 2010
Heredia, Costa Rica**

Executive Summary

This three-day workshop brought together eighty seven participants from twenty countries to plan and coordinate initiatives that will contribute to geophysical research and hazard mitigation in the region through international collaboration. The multidisciplinary group included seismologists and other geophysicists from Central America, Mexico, the Caribbean and the United States and stakeholders from the public, private and development sectors.

The workshop activities were highlighted by the presence of dignitaries and officials from the U.S. and regional governments, including:

The goals of the workshop were to address key scientific issues that derive from the unique tectonic environment of the region, to identify concrete steps for strengthening the regional infrastructure and academic community to facilitate seismological research, and to initiate efforts toward generating products with immediate regional societal benefits.

Agenda as Conducted

Workshop Outcomes

**Statement from participants of
"Geophysical Hazards and Plate Boundary Processes in Central America, Mexico, and the
Caribbean: A Workshop to Build Seismological Collaboration and Capacity"
24-27 October, 2010, Heredia, Costa Rica**

The tragic event in Haiti of January 12th, 2010, highlights the vulnerability of Central America, Mexico, and the Caribbean to earthquakes. Looking forward, every country, and the region as a whole, needs to re-assess its exposure to earthquake hazards and examine and improve its resilience to this threat.

In accordance with the Hyogo Framework for Action (HFA), the following actions are recommended by this group for all nations in the region due to their high earthquake hazard:

Priority 1- Ensure that Disaster Risk Reduction (DRR) is a national and local priority with a strong institutional basis for implementation.

Develop national earthquake hazard mitigation plans, including specific activities, agency responsibilities, funding levels, and monitoring.

Priority 2- Identify, assess, and monitor earthquake risks and enhance rapid notification

For earthquake hazard evaluation and notification, earthquake-detection networks, geological and geophysical studies, are essential, and should be undertaken in cooperation with partners through collaborative centers or projects.

Priority 3- Use knowledge, innovation, and education to establish a culture of security and resilience at all levels

The state should prioritize education of the public and implement programs of mitigation at all levels of the society. Technical and scientific education should also be strengthened to provide a vibrant community of earthquake professionals.

Priority 4- Reduce the underlying risk factors

Strengthen earthquake research and use of its results to develop and enforce building codes and land-use planning.

Priority 5- Strengthen earthquake preparedness for effective response at all levels

Prepare responders for earthquake disasters using the best science and resources available.

To adequately address these priorities, regional governments must establish the necessary investment and financial mechanisms.

**We, the Participants in
“Geophysical Hazards and Plate Boundary Processes in Central America, Mexico, and the
Caribbean:
A Workshop to Build Seismological Collaboration and Capacity”**

**Express the Following
Resolution**

The recovery from the 12 January 2010 earthquake and the future economic development of the nation of Haiti depend on the construction of a robust national scientific and technical infrastructure. As earth scientists, the members of the group gathered for this workshop¹ on geophysical hazards pass the following proclamation:

(1) We express our support for the implementation of a sustainable Earthquake Risk Reduction program in Haiti’s reconstruction and we offer to share regional best practices in the development of seismic and geodetic networks (including mobile, fixed, and specialized stations), in the operation and maintenance of the networks, and in the delivery of earthquake products.

(2) We encourage Haiti to strengthen its institutions and establish the necessary infrastructure for the sustainable monitoring and reporting of earthquakes in support of the nation’s needs and participation in robust and open regional collaborative Earthquake Risk Reduction research, education, and implementation.

Furthermore, these statements support and expand on specific key findings from the March workshop² on Haiti’s reconstruction, and continue progress toward rebuilding with resilience.

¹ “Geophysical Hazards and Plate Boundary Processes in Central America, Mexico, and the Caribbean: A Workshop to Build Seismological Collaboration and Capacity”, 24-27 October, 2010, Heredia, Costa Rica.

² “Rebuilding for Resilience: How Science and Engineering Can Inform Haiti’s Reconstruction”, 22-23 March, 2010, Miami, Florida, USA

Follow-up Actions

Formation of Working Groups

Working Groups

1. Hazards and risks

- a. Bill McCann
- b. Grenville Draper
- c. Richie Robertson
- d. Michael Schmitz
- e. **Carlos Valdés**
- f. H. Tho
- g. Vince Cronin
- h. Eugenio Polanco
- i. Juan Martín Gomez
- j. Michel Bolaños Guerrero
- k. Mónica Arcila
- l. Walter Salazar
- m. Eduardo Camacho
- n. Emilio Talavera

2. Preparedness and Response

- a. Art Lerner-Lam
- b. **Christa von Hillebrandt**
- c. Wayne Penington
- d. Yves Fritz Joseph
- e. Lyndon Brown
- f. Eric Calais
- g. Olga Cabello

3. Monitoring and Data Management

- a. Eugenio Polanco
- b. Richie Robertson
- c. **Victor Huérfano**
- d. Carlos Valdés
- e. Mauricio Mora
- f. Rafael Pujols
- g. Jean Robert Altidor
- h. Christa von Hillebrandt
- i. Juan Martín Gomez
- j. Tim Ahern
- k. Jean-Marie Saurel

4. Education and Outreach

- a. **Bill McCann**
- b. Hector Gonzalez
- c. Vince Cronin
- d. John Taber
- e. Roberte Momplaisir
- f. Joan Latchman
- g. Rubén Moreno

5. Research:

- a. **Jay Pulliam**
- b. Marino Protti
- c. Greg Beroza
- d. Carlos Vargas

- e. Javier Pacheco
- f. Heather DeShon
- g. Manuel Rodriguez
- h. Alberto López
- i. Michael Schmitz
- j. Mauricio Mora
- k. Yang Shen
- l. Carlos Huerta
- m. Susan Schwartz
- n. Dan McNamara
- o. Karen Fischer
- p. Jascha Polet

Identification of working group chairs

Follow-up meeting

Participants