Caribbean Early Warning System Workshop

Session 3a: Harmonization of EWS towards Multi-hazard Application

Bridgetown, Barbados
15 April 2016

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Community-centered Flood EWS: the Central American Experience

Background

- 1995: Central America Small Valleys Flood Alert and Vulnerability Reduction Program (SVP): Regional Platform Development, GS/OAS, ECHO, Governments of Ireland and Turkey
  
  Hurricane Mitch, 1998: The case of La Masica and the communities of Arizona, Sisama, Nevada and Kilómetro 17

- 2008-2009: UN Global Platform for the Promotion of Early Warning, UNISDR, GS/OAS, Government of Germany

- 2010-Present: People’s Republic of China – on-line database and comprehensive manual – The Case of Honduras

Some Benchmarks and Milestones

- Hurricanes Mitch and George, 1998
- More than 80 Flood EWS, with about 50% in operation
- 84% implemented by NGOs, 12% by National Meteorological & Hydrological Services, and the remaining private
- 85% lack hydrological studies

Public Policies: Towards the financial and institutional sustainability of EWS ...
Community-centered Flood EWS: the Central American Experience

What constitutes an EWS?

- NOT a Weather Forecast System, or a Communication System, or an Observation and Monitoring System, or Organized Communities
- ALL of the above and more ...

Main Components (*)

- Risk Assessment – Community Self-assessment
- Observation and Monitoring
- Analysis and Forecast
- Communication of advisories, watches and warnings
- Response – Community Organization and Training

166 EWS identified by UNESCO-CEPREDENAC DIPECHO VII project, of which only 149 were actually implemented at some degree: 37 operating, 22 operating with limitations and the remaining did not constitute EWS or were under design.

(*) According to the 2009 UNISDR Terminology on DRR, an EWS comprises of four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received.

NOT all systems implemented in Central America are EWS ...
Challenges

- Lack of Public policies, strategies and guidelines
- Lack of hydrological studies, and low coverage in small valleys –observation and monitoring networks designed for different purposes: i.e. hydropower and irrigation
- Lack of coordination amongst NGOs, which hampers the replication and the optimization of information
- Physical and geo-political challenges: predominance of flash-floods with short concentration times and transboundary basins
- Sustainability relies mainly on international financial aid
- Overlap of competencies in operating the different components –contingency planning and preparedness
- Limitation on the use of high technologies

EWS for landslides and mudslides require more attention on education about triggers, preparedness and response, and further studies on physical and natural conditions.

Good Governance: the single most significant issue ...
Community-centered Flood EWS: the Central American Experience

Manuals and Guidelines
  [Both for community members]
  [For International Organizations, NGOs, and pertinent national organizations that design, implement and operate Flood EWS]

EWS Database
- On-line Database for the registry of Multi-hazard EWS – OAS, 2012
  [In collaboration with CEPREDENAC and UNESCO, and expanded in consideration of the DIPECHO VII UNESCO-CEPREDENAC Inventory]

Decision-making Support Tools ...
Flood EWS for the Commonwealth of the Atlantic Coast of Honduras: La Mamuca

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<th>Área Km²</th>
<th>Amenaza Alta Km²</th>
<th>Amenaza Media Km²</th>
<th>Amenaza Baja Km²</th>
<th>Area bajo amenaza Km²</th>
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<th>% del MAMUCA</th>
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Flood EWS for the Commonwealth of the Atlantic Coast of Honduras: La Mamuca

EWS operating in 2001, in the basins of:

• Lean River: Arizona, Esparta, Tela, Morazan and Yoro
• Cuero River: Esparta, La Masica, San Francisco, Olanchito and Yoro
• Perla River: El Porvenir, La Masica, San Francisco and Olanchito

EWS Inter-municipal Program, PRIMSAT

• La Masica Headquarters
• Municipal Offices, PROMSAT
• Basins of Lean, San Juan, Cuero, Perla-Santiago, Coloradito, Corinto, and Bonito
Flood EWS for the Commonwealth of the Atlantic Coast of Honduras: La Mamuca

Challenges
- Resources: Financial and Human
- Organization and Decision-making: Governance
- Training and equipment

Opportunities
- Commonwealth
- Experience
- Tools for a harmonized approach

Next Steps: Towards Governance for Disaster Mitigation
- Inter-municipal Structuring: Decision-support Information System
- Community organization: Voluntarism
- Modeling and M&O Network Design and Installation, Communication Network Design and Installation
- Training at professional and technical level
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