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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

SATIC

Sistemas de Alerta Temprana para Inundaciones en el Istmo Centroamericano y la Republica Dominicana



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 ...



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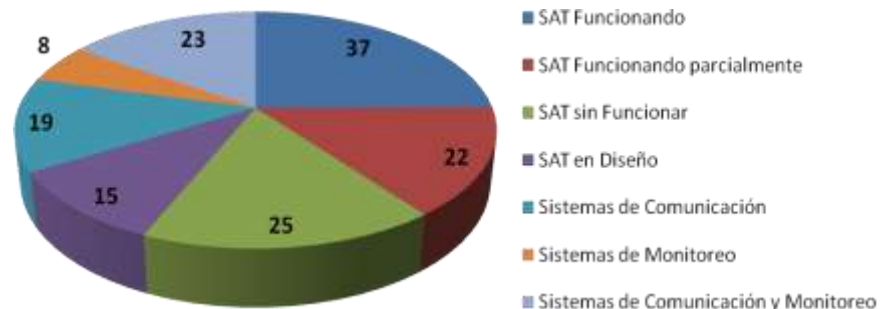


What constitutes an EWS?

- 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-CEPRENAC 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 ...



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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 ...



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Manuals and Guidelines

- ❑ Manual for the Design and Implementation of an Early Warning System for Floods in Small Valleys – OAS, 2001
- ❑ Early Warning Systems for Floods in Small Valleys –IFRC, 2007

[Both for community members]

- ❑ Manual for the Design, Implementation and Operation of Flood Early Warning Systems – OAS, 2010

[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



AREA SUSCEPTIBLE A SUFRIR INUNDACIONES

	Municipio	Área Km ²	Amenaza Alta Km ²	Amenaza Media Km ²	Amenaza Baja Km ²	Area bajo amenaza Km ²	% del	
							Municipio	MAMUCA
1	Arizona	568.77	77.60	20.20	52.20	150.00	26.37	7.49
2	Esparta	398.10	127.60	51.70	27.40	206.70	51.92	10.32
3	La Másica	470.97	50.40	65.10	39.50	155.00	32.91	7.74
4	San Francisco	284.34	58.30	77.30	0.00	135.60	47.69	6.77
5	El Porvenir	280.26	66.30	48.60	0.00	114.90	41.00	5.74
	Total	2,002.44	380.20	262.90	119.10	762.20		38.06



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**



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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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