



World Meteorological Organization
Working together in weather, climate and water

**DRR Technical Conference during the XVth
Session of WMO Regional Association (RA) III**
Multi-Hazard Early Warning Systems

Background and objectives

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DRR Technical Conference at XVth Session of WMO Regional Association (RA) III

- **SCOPE**

Initiate a dialogue on Policy, planning, legislative, institutional partnerships and cooperation aspects of EWS.

- **EXPECTED OUTCOMES**

1. Participants will benefit from exchanging experiences and lessons learnt from good practices;
 2. Highlight DRR Developments in the region
 3. Explore a Roadmap for development of Regional/National MHEWS Programme to strengthen capacities in the region
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DRR Technical Conference at the XVth Session of WMO Regional Association (RA) III

AGENDA

- **Session 1**
Opening and introduction
 - **Session 2**
Presentations of good practices in multi-hazard early warning systems
 - **Session 3**
Regional Initiatives in Disaster Risk Reduction and Early Warning Systems
 - **Session 4**
Status of EWS in RA III
 - **Session 5**
Plenary Discussion on regional cooperation for the strengthening of DRR and EWS
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Session 2

Presentations of good practices in
multi-hazard early warning systems



**DRR Technical Conference:
XVth Session of WMO Regional Association (RA) III
Responses TO EWS SURVEY**

Results from 10 countries:

- **Argentina**
- **Brasil**
- **Chile**
- **Colombia**
- **Ecuador**
- **Guyana**
- **Peru**
- **Suriname**
- **Uruguay**
- **Venezuela**

Priorities highlighted in the EWS survey	
Governance and Institutional Arrangements	33 %
Development and utilization of hazard/risk information in emergency planning and warnings	60 %
Hazard monitoring, forecasting, and mandates for warning development	65 %
Warning harmonization and dissemination mechanisms	50 %
SOP and Service Delivery of NMHS to Emergency preparedness and response activities (national to local)	55 %



To date: Documentation of Good Practices and develop Guidelines for Institutional Partnerships in Early Warning Systems

Guidelines on Institutional Aspects EWS with Multi-Hazard Approach
Planning, legislative, financing, Institutional Coordination and Roles of NMHS

Synthesis of First set of 7 Good Practices (4 more in the pipeline)
Role of National Metrological and Hydrological Services

Japan
Multi-Hazard
Early
Warning
System

Bangladesh
Cyclone
Preparednes
s
Programme

Cuba
Tropical
Cyclone
Early
Warning
System

France
“Vigilan
ce
System
”

Shanghai
Multi-Hazard
Emergency
Preparednes
s
Programme

USA
Multi-Hazard
Early
Warning
System

Germany
The
Warning
Management
of the
Deutscher
Wetterdienst

First EWS Publication of a series being published in 2010 and together with a technical WMO guidelines.

Next Phase: Concept of Operations and Service Delivery Issues



Basic principles for effective Early Warning Systems

1. **Political recognition of the benefits of EWS along with effective planning, legislation and budgeting (National to local)**
2. **Effective EWS are built upon four components:**
 - (i) hazard detection, monitoring and forecasting;
 - (ii) analyzing risks and incorporation of risk information in emergency planning and warnings;
 - (iii) disseminating timely and “authoritative” warnings with clarity on the responsibilities and mandate for issuance of warnings;
 - (iv) community emergency planning and preparedness and the ability to activate emergency plans to prepare and respond
3. **Roles and responsibilities of all EWS stakeholders and coordination mechanisms clearly defined, reflected in protocols and Procedures**
4. **Capacities aligned with resources across national to local levels (sustainability)**
5. **Hazard data/maps/analysis, exposure and vulnerability information are used to carry-out risk assessments at different levels**



Basic principles for effective Early Warning System (Continued)

6. Clear, consistent and actionable **hazard warnings**, with **risk information** and issued from a single recognized authoritative source,
7. Level of threat linked to clear actions and behaviors (Color coded, flags)
8. Timely, reliable, redundant and sustainable **warning dissemination mechanisms**
9. **Emergency response plans targeted** to the individual needs of the vulnerable communities, authorities and emergency responders
10. **Regular training and education programmes** in risk awareness and emergency response actions (formal, informal)
11. **Effective feedback mechanisms** throughout levels of the EWS for system improvement over time



Thank You

For more information please contact:

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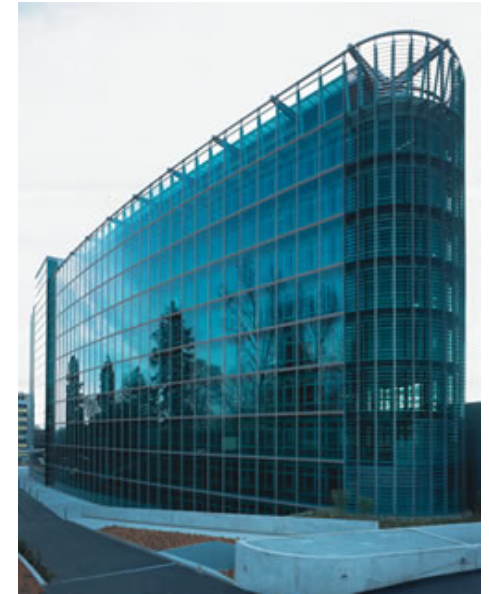
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