Panel Discussion on Early Warning Systems

ITU-D Q5/2 Study Group 2 Meeting 8 May 2018



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World Meteorological Organization Organisation météorologique mondiale

WEATHER CLIMATE WATER TEMPS CLIMAT EAU

Agenda

- Multi-Hazard Early Warning Systems: A Checklist
- Climate Risk and Early Warning Systems (CREWS) Initiative
- Implementation of Common Alerting Protocol (CAP)
- Global Multi-hazard Alert System (GMAS)



Multi-Hazard Early Warning Systems: A Checklist



Multi-Hazard Early Warning Conference

- Organized principally by the WMO, UNISDR and UNESCO with contributions from partners in the <u>International Network for Multi-</u><u>Hazard Early Warning Systems (IN-MHEWS)</u>
- Attended by over 400 practitioners
 - 23 Permanent Representatives with WMO
 - NMHS representatives from 45 different countries
 - wide variety of institutional and technical backgrounds
- Discussions aligned with the Sendai Framework's Global Target (g)
 - To substantially increase the availability of and access to multihazard early warning systems and disaster risk information and assessments to the people by 2030.
- WMO delivered a communique that emphasized WMO's commitment to strengthen partnerships with all stakeholders in MHEWS at the national, regional and global levels to strengthen/develop capacities in MHEWS.
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Key Outcomes of the MHEWC

a) Publication: Multi-hazard Early Warning Systems: A Checklist; Published in 2018;

Available on WMO Website: https://library.wmo.int/opac/index.php?lvl=notice_display&id=2022 8#.Wsr_aq6WaUI

Currently in English but French, Spanish, Russian, Arabic and Chinese will be available shortly.

 a) Document on Measuring EWS – currently being finalized for publication by CREWS.



A Checklist

Multi-hazard Early Warning Systems:



First Early Warning Checklist (2006)

- First EW Checklist was developed in 2006 at the EW Conference in Bonn Germany.
- Still utilized in many countries
- However was a decade old and required updating for:
 - Multi-Hazard and impact based approach
 - Alignment with Sendai Framework Agreement



Multi-hazard Early Warning Systems: A Checklist (2018)

Contains checks for four elements of early warning:

- 1. Disaster risk knowledge based on the systematic collection of data and disaster risk assessments;
- 2. Detection, monitoring, analysis and forecasting of the hazards and possible consequences;
- **3.** Dissemination and communication, by an official source, authoritative, timely, accurate and actionable warnings and associated information on likelihood and impact; and
- 4. Preparedness and response capabilities at all levels to respond

Plus checks for cross–cutting issues and key actors



GMAS and Multi-Hazard EWS Checklist

DISASTER RISK KNOWLEDGE		DETECTION, MONITORING, ANALYSIS
1.	Are key hazards and related threats identified?	AND POSSIBLE CONSEQUENCES
2. 3. 4.	Are exposure, vulnerabilities, capacities and risks assessed? Are roles and responsibilities of stakeholders identified? Is risk information consolidated?	 Are there monitoring systems i GDPFS Are there forecasting and warning place? WIGOS Are there institutional mechanis
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W/	ARNING DISSEMINATION AND	PREPAREDNESS AND RESPONSE
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W/ CO 1. 2.	ARNING DISSEMINATION AND MMUNICATION Are organizational and decision processes in place and operational WIS Are communication systems and	 PREPAREDNESS AND RESPONSE CAPABILITIES 1. Are disaster preparedness measures, including response plans, developed and operational? 2. Is public awareness and education conducted?
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Climate Risk and Early Warning Systems (CREWS) Initiative





- Objective: increase the capacity of Least Developed Countries (LDCs) and Small Island Developing States (SIDS) to generate and communicate effective, impact-based, multi-hazard, gender-informed early warnings and risk information
- Supported by Australia, France (Chair), Germany, Luxembourg and Netherlands (+ others joining in 2018)
- Implemented by WMO and World Bank/Global Facility for Disaster Reduction and Recovery (GFDRR) and global alignment through UNISDR
- Operational in Burkina Faso, Mali, Niger, Democratic Republic of the Congo, Pacific Region, Papua New Guinea, Caribbean Region
- Projects focus on improving capacity of National Meteorological and Hydrological Services and of disaster risk management agencies
- Warning communication needs to be strengthened in projects. Good example: CREWS supported 124 reps in Palau, Federated States of Micronesia, Fiji, Tuvalu, Niue and Nauru participated in Common Alerting Protocol (CAP) workshops.





For more information please visit: www.crews-initiative.org

Climate Risk and Early Warning Systems (CREWS) Secretariat World Meteorological Organization





Couple of points from my end – for your information:

- 1. Mexico has just announced it is contributing to CREWS
- 2. WMO is doing a review of the 2017 hurricane season in the Caribbean (funded by CREWS). ITU contributed a review of emergency telecommunications (next slide).
- 3. CREWS is looking to strengthen the communication component of its EWS in its country projects– currently it is a rather weak.
- CREWS Secretariat is keen to work with ITU to measure the use of standardize alert processes (mainly through CAP) and the availability of SOPs that address the communication aspects across LDCs and SIDS and in particular in our country projects.



International Telecommunications Union (ITU)

Assessment of Emergency Telecommunication plans and systems in the Caribbean Region (Job Description #8274) FINAL REPORT Prepared by: Stephen Louis December 2017

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Implementation of Common Alerting Protocol (CAP)



The Common Alerting Protocol (CAP)

- The **Common Alerting Protocol** (**CAP**) is an <u>XML</u>-based data format for exchanging public warnings between alerting technologies. CAP allows a warning message to be disseminated simultaneously over many warning systems to many applications, such as cell phones, faxes, radio, television, digital communication networks etc.
- CAP increases warning effectiveness and simplifies the task of activating a warning for responsible officials.
- The WMO Congress has endorsed adoption of a warnings Standard such as CAP for alerting



Implementation of CAP

- WMO through PWSD programme assists Members through the «CAP Jump-start» arrangement
 - Experts visit NMHSs and provide training and freeware
 - LDCs and developing countries are supported



WMO CAP Jump-start (Link to more information)



The WMO Alert Hub

- A prototype of the WMO Alert Hub has been developed
- The Alert Hub will provide a one-stop platform for alerts provided by authorized agencies/institutions which are registered in the WMO register of Alerting Authorities







Members Participation in the Common Alerting Protocol (CAP)

- Last Updated on 07 May 2018



NOTE:

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Global Multi-hazard Alert System (GMAS)



What is GMAS?

- 1. WMO GMAS is a contribution to Target-G of Sendai Framework for DRR, Paris Agreement for Climate Change Adaptation and SDGs and advised by IN-MHEWS.
- 2. WMO **global platform** will develop an **aggregation** and **repository** facility to provide "one-stop-shop" for access to authoritative warnings and related information.
- 3. It will ensure that, as much as possible, all relevant (authoritative) warnings and information (data, products and advisories) are made available by all stakeholders into the GMAS "cloud" for timely provision to the WMO Members and to the authorized GMAS users, such as UN and humanitarian agencies
- 4. It will also make available relevant information, **tools**, **knowledge and training** to all Members at the global and regional levels, especially for those LDCs and SIDSs.
- 5. GMAS is to connect with all highly relevant Operational Platforms which are run by the relevant international organizations.
- 6. It will also facilitate establishment of the **regional/sub-regional platforms**, such the ones to be developed in Asia and South America to assist Members in the regions.
- 7. It will facilitate increased **standardization/harmonization** of hydrometeorological **warnings.**
- 8. It is extremely important and helpful to the countries who are lacking of capacity to develop and/or deliver the MHEW related information.

WMO Global Multi-Hazard Alert System (GMAS) Framework with its Common Technical Platform (CTP), contributors and users



WMO Secretariat supporting Platform (e.g. facilitation, coordination, collaboration with Members)

WMO Alert Hub within GMAS



HOW

WMO GMAS (virtual) Common Technical Platform



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