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Weather • Climate • Water
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Our ref.: WDS/DRR/GAR 15 GENEVA, 23 August 2013

Annex: 1

Subject: Invitation for submission of abstracts for the Global Risk Assessment Report 2015

Action required: Submission of multi-authored, coordinated abstracts

Dear Sir/Madam,

I am writing to inform you that the United Nations International Strategy for Disaster Reduction (UNISDR) in collaboration with the World Meteorological Organization (WMO) and a number of other United Nations and international agencies is organizing a major initiative for the development of the Global Risk Assessment Report 2015 (GAR15). This report will be published prior to the World Conference on Disaster Risk Reduction in 2015, in which governments will adopt a successor framework to the Hyogo Framework for Action (HFA).

This initiative seeks input papers for the GAR15 that present research, oriented by indicator, addressing the following issues:

(1) What changes have been observed since the adoption of HFA in 2005, and what has been the impact in terms of risk to society?

(2) To what extent has HFA facilitated the development of Disaster Risk Reduction capacities?

(3) What elements will need to be developed for inclusion in the successor framework to HFA?

To this end, on 9 August 2013, UNISDR issued a call for abstracts as part of the development of GAR15. All details, background documents and concept papers are available at: http://www.preventionweb.net/english/professional/networks/private/hfa-thematic-review/. For your information, the purpose of this call for abstracts is to encourage more contributions from leading practitioners and experts, investigating the degree to which HFA has been fit-for-purpose in affecting change in the management of disaster risk, and in so doing, has contributed to both the formulation of the successor framework to HFA (HFA2) and the development of indicators for effectively measuring the impact of the forthcoming framework. A second call for abstracts will be issued on 15 September 2013 covering the remaining research areas outlined in the generic call for abstracts available on the web page indicated earlier.

To: Permanent Representatives (or Directors of Meteorological or Hydrometeorological Services) of Members of WMO (PR-6718)

cc: Hydrological Advisers to Permanent Representatives

It is my pleasure to inform you that the WMO Secretariat has been invited by the UNISDR GAR15 team to coordinate the development and review of all papers related to Priority for Action 2/Core Indicator 3 (PFA 2/CI 3): Early warning systems are in place for all major hazards with outreach to communities. The concept note is attached as an annex to this letter.

I am writing specifically to encourage you, in collaboration with your partners (e.g. disaster risk management authorities, socio-economic ministries and other national and regional agencies) to consider submitting an abstract for this call, particularly in relation to PFA 2/CI 3.

The deadline for submitting abstracts is one month after the date of each of the two calls (9 September 2013 and 15 October 2013). I would like to draw your attention to the following:

- Abstracts should not be longer than 300 words (a template can be downloaded from the web page provided above);

- Abstracts must be informed by the call for abstracts, guidance document and concept paper available at the web address provided above under PFA 2/CI 3;

- Abstracts should be prepared using the submission form available on the web page indicated above and submitted to Dr Maryam Golnaraghi, Chief of the Disaster Risk Reduction Division of WMO (Coordinating Lead Author (CLA) on PFA 2/CI 3), at: mgolnaraghi@wmo.int, as well as to the GAR15 team, UNISDR, at: gar15_HFA@un.org;

- After review of the abstracts by UNISDR, the coordinating organization, and the CLA, UNISDR will invite successful applicants to develop full GAR15 input papers for submission by the date specified in the respective concept papers and at the latest by 31 December 2013;

- Input papers will be used by the CLA to develop GAR15 background documentation, which will be subject to both an informal peer review and an external peer review.

All input papers will be made available online as an annex to GAR15. In addition, UNISDR will coordinate the submission of all final papers to an academic journal for consideration and publication in a special issue focusing on the state of disaster risk management. The use of input papers in the development of GAR15 background documentation will be at the discretion of the CLA.

Thank you for your cooperation.

I hope you will consider contributing to this initiative together with your national and regional disaster risk management and other partner agencies.

Yours faithfully,

(J. Lengoasa)
for the Secretary-General

WORLD METEOROLOGICAL ORGANIZATION
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WDS/DRR/GAR 15, ANNEX

Global Assessment Report 2015

Priority for Action (PFA) 2 – Core Indicator (CI) 3: Early Warning Systems are in place for all major hazards with outreach to communities

Coordinating Lead Author: Maryam Golnaraghi, Chief of the Disaster Risk Reduction Division, WMO

1. Context

The second high-priority area of the Hyogo Framework for Action (HFA) stresses the need for "identifying, assessing and monitoring disaster risks and enhancing early warning." The Hyogo Framework for Action further stresses that Early Warning Systems (EWSs) must be an integral component of any nation's disaster risk management strategy, enabling governments, at national and local levels, and communities to take appropriate measures toward building resilience in anticipation of disasters. The Second International Conference on Early Warnings (2003) concluded that effective EWSs encompass:

- **Monitoring and warning service:** Hazards are detected, monitored and forecasted, and hazard warnings are developed;
- **Risk knowledge:** Risks are analyzed and this information is incorporated in warning messages;
- **Dissemination:** Warnings are issued by a designated authoritative source and disseminated in a timely fashion to authorities and public at risk;
- **Response capacity**: Community-based emergency plans are activated in response to warnings to reduce potential impacts on lives and livelihoods.

Indeed, many good practices around the world have demonstrated that EWSs should be developed with a multi-hazard, multi-sectoral and multi-level (from national to local) approach. Implementation of these components requires coordination across many agencies at national and local levels for the system to work. Failure in one of the components, or lack of coordination across them, could lead to the failure of the whole system. The issuance of warnings is a national responsibility; thus roles and responsibilities of various public and private sector stakeholders for implementation of the EWS should be clarified and reflected in national and local regulatory frameworks, and in the planning, budgetary, coordination and operational mechanisms.

Various assessments and the outcomes of the mid-term HFA review in 2010 revealed that many countries around the globe operate EWSs for various natural and man-made hazards. However, government priorities, stages of development and overall effectiveness of EWSs at national and local levels vary widely. Many countries, especially those at the highest risks and with least resources, face great challenges in building and sustaining their EWS at national and community levels.

2. Objectives

The GAR15 input on this core indicator will serve five primary objectives including:

(1) document country, regional and global coordinated initiatives for the development of EWSs underpinned by HFA;
(2) assess current state of implementation of EWSs at the country level spanning governance, key drivers (e.g. risk-based), institutional coordination (national and local), sectoral penetration, operational and technical aspects;

(3) assess current state of regional/subregional efforts for the development of inter-operable national EWSs;

(4) evaluate different approaches among developed and developing countries, and fundamental principles that have led to the implementation of effective EWSs – irrespective of governance and institutional structures, and socio-economic and cultural aspects – as a way to develop a framework for monitoring and measuring performance at the country level; and

(5) identify latest trends and future developments of EWSs.

3. Key partners

Key partners will likely include: the Organization for Economic Co-operation and Development (OECD), the United Nations Development Programme (UNDP), the International Federation of Red Cross and Red Crescent Societies (IFRC), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and its Intergovernmental Oceanographic Commission (IOC) (floods and tsunami), the International Telecommunication Union (ITU), the United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA), the United Nations Children's Fund (UNICEF), the United Nations Environment Programme (UNEP), the United Nations Institute for Training and Research (UNITAR), the World Bank, the World Food Programme (WFP), the World Health Organization (WHO), the European Union (EU) and its Joint Research Centre at Ispra, Italy (JRC-Ispra), regional disaster risk management (DRM) agencies associated with socio-economic groupings, such as the Caribbean Disaster Emergency Management Agency (CDEMA) of the Caribbean Community (CARICOM), the African Union, the Economic Community of West African States (ECOWAS), the Intergovernmental Authority on Development (IGAD), and other groupings in Africa, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), the South Pacific Applied Geoscience Commission (SOPAC), etc. Furthermore, co-authored papers will be sought from official government institutions of Member States. Documentation on good practices in a number of countries and regions, as well as lessons learned from 40 or so national multi-hazard EWS projects implemented by WMO and partners, will be included.

4. Evaluation of effective national Early Warning Systems (see template at the end of this annex)

5. Areas of strategic focus

(a) Drivers of decision-making at national level for investment in and development of EWSs:

i) Understanding and quantifying risks (multi-hazard, all hazard, etc.);

ii) A major event with impacts;

iii) International framework agreement and regional strategies;

iv) Evolution and implementation of early warning systems in developed and developing countries;

(b) Multi-hazard approach to EWS (natural or man-made disaster, security aspects):

i) Natural (meteorological, hydrological, climate-related and geological), man-made (chemical, biological and industrial) and their inter-linkages;

ii) Cascading hazards (e.g. tropical cyclones and related severe rain and flooding, land slides, tornadoes, storm surges and coastal inundation);

iii) Complex natural and man-made events (e.g. Japan earthquake/tsunami/nuclear disaster);

(c) Multi-level aspects:

i) International, regional, subregional, transboundary, national and local aspects from various perspectives (policy and institutional coordination, monitoring and warning, risk, communication and emergency planning, and response measures);

ii) Transboundary and large-scale hazards spanning political borders (e.g. basin-level floods, large-scale droughts, forest fires, tropical cyclones and tsunamis);

iii) Coordination for development of warnings;

iv) Key factors for empowering local emergency planning and action;

(d) Multi-sectoral aspects:

From a DRM issue to multi-sectoral framework emergency planning and response operations;

(e) Temporal aspects of the warning:

Preparing and responding to short-term event-driven warnings versus long-term probabilistic warnings;

(f) Role of science, technology and engineering:

i) Science and technology for predicting the hazard;

ii) Managing uncertainties associated with science;

iii) From technical information to actionable warnings;

iv) Advancements in communication technologies;

(g) Future trends:

From warning of natural and man-made hazards and saving lives to a comprehensive approach that includes warning systems for security, financial and civil unrest applications.

6. Proposed methodology and process

The data for this study consist of substantial field-based primary information, secondary data and a significant body of systematic research based on practitioners' experiences and developments in EWSs. Furthermore, this work will reach out to technical working groups and broader consultations with partner organizations. WMO expert advisory group on multi-hazard EWS, comprised of leading experts from technical, emergency management, telecommunication and other relevant areas will be involved in the review process. UNESCO-IOC and other agencies' working groups and teams will be consulted for the review of the papers.

7. Purpose of the call for papers

The specific purpose of this call for submissions is to invite a broad range of partners to contribute primarily to the strategic themes dealt with in their papers and possibly to some aspects of component 3. It is essential that submissions demonstrate the practical experience of authors with respect to implementation of EWSs. Furthermore, multi-authored papers that offer a more holistic view rather than focusing on single components of EWSs, would be highly welcome, as EWS is a cross-cutting issue spanning various sectors, levels, time scales and institutional boundaries.

8. Editing and publishing rights

As agreed previously with UNISDR, WMO will retain the right to use and publish the material gathered under this initiative for other purposes and products. Similarly, while all the background documents chosen through the call for papers may not be utilized for the input paper, WMO will retain the option to publish and edit a compendium of these background papers as part of other knowledge products.

A template for review and documentation of EWSs

1) **Overview of Early Warning Systems (EWSs)**
2) **Background of the establishment of EWSs**
3) **Governance and institutional arrangements (at national and local levels)**
   a) Policy and institutional and legal frameworks to support emergency planning and response
   b) National and local emergency planning, and related linkages to EWS
   c) Organizational structure for implementing the plan
   d) Penetration in the sectors for coordination of emergency planning and response activities
   e) Institutional capacities and concept of operations (coordination and operational collaboration)
   f) Financial and budgetary aspects
4) **Utilization of risk information in emergency contingency planning and warnings**
   a) Organizational responsibilities and arrangements for the development of risk information
   b) Hazard assessment, quantification and mapping (from national to local)
   c) Assessment of vulnerabilities and exposure (from national to local)
   d) Storage and accessibility of disaster and national hazard risk information
   e) Development and utilization of hazard/risk information to support emergency planning and warnings
5) **Hazard monitoring and forecasting, and mandates for warning development**
   a) Organizational responsibilities for monitoring, forecasting and development of hazard warnings
   b) Organizational collaboration and coordination for development of hazard warnings
6) **Development of understandable, authoritative, recognizable and timely warnings**
   a) Warning message development cycle
   b) Warning message improvement cycle
7) **Warning dissemination mechanisms (from national to local)**
8) **Emergency preparedness and response activities (from national to local)**
   a) Disaster preparedness and response planning, and emergency response activation
   b) Community response capacities
   c) Public awareness and education
9) **Sustainability, resources and budgetary commitments**
10) **Improvement of overall operational framework of EWSs through on-going drills, feedback and evaluation during and after an event**
11) **Examples of previous events where the operational EWS has led to improvements in emergency preparedness and prevention**
12) **Overall lessons learned and future steps for improving the contribution of Meteorological, Hydrological and Climate Services to EWSs, focusing particularly on institutional coordination and cooperation with the disaster risk management agencies and EWS stakeholders (public and private)**
