

DISASTER RISK MANAGEMENT

(Submitted by WMO)

Summary and purpose of document

To inform CGMS Members on current international developments regarding Disaster Risk Management and on related activities coordinated by the WMO Disaster Prevention and Mitigation Programme.

DISCUSSION

International Movement in Disaster Risk Management

1. The international movement in Disaster Risk management (DRM) following the World Conference for Disaster Reduction (WCDR, Kobe, Japan, January 2005) and its outcome, the Hyogo Framework for Action 2005-2015 (HFA) adopted by 168 countries, aimed to shift disaster risk management at the national level from post emergency response and recovery to a more balanced approach that would include prevention and mitigation strategies, as well as preparedness and contingency planning. This movement is already reflected through changes in the strategic direction of some international and regional humanitarian development and donor agencies supporting activities at the national and regional levels. Many of these agencies work with different ministries at the national level, and thus collaboration could result in enhanced recognition, credibility and financing, providing a bases for better services in support of DRM.

2. The International Strategy for Disaster Reduction (ISDR) System is being restructured to ensure a more effective implementation of HFA globally. The primary goal of the strengthened ISDR system, involving a broad range of international, regional, national agencies and governments, is to proactively engage these entities to provide coherent and coordinated support to the countries for implementation of the HFA and strengthening of their disaster risk management capacities, with a strong focus on prevention and preparedness, while also enhancing capacities for response and relief operations. The ISDR system is supported by i) a Management Oversight Board (MOB), providing strategic advice, ii) a Global Platform for Disaster Risk Reduction (GPDRR), which would be an annual meeting of the members of the ISDR System to review progress and determine bi-annual priorities for an integrated work plan (GPDRR is supported by a Programme Advisory Board and related technical specialized working groups and is scheduled to meet for the first time in June 5-7, 2006). The ISDR Secretariat provides administrative and advocacy support to the strengthened ISDR system. The World Meteorological Organization has been invited to serve through its Secretary General in the MOB, and is participating in the development of integrated planning framework and planning of the first meeting of the GPDRR.

3. The Hyogo Framework of Action 2005-2015, drafted and approved at the World Conference for Disaster Reduction, Kobe, Japan, January 2005, represents a set of outcomes and results that must be achieved if disaster risk is to be reduced. The HFA describes a range of key thematic areas that need to be addressed, particularly in high-risk nations and communities. These include:

- Governance: organizational, legal and policy frameworks;
- Risk identification, assessment, monitoring and early warning;
- Knowledge management and education;
- Reducing underlying risk factors; and
- Preparedness for effective response and recovery.

4. The overall framework of DRM seeks to reduce the likelihood of undesired, negative outcomes such as disasters in the course of pursuing positive goals. This involves three types of actions and activities including, risk identification, risk reduction and risk transfer.

- Risk identification involves the identification of risk levels and the risk factors that cause losses. Risk identification creates the evidence base needed to support risk reduction and risk transfer decision and activities.
- Risk reduction involves measures to prevent losses. Examples of such measures include hazard-resistant infrastructure development, land use planning and zoning, early warning systems based on sound science but targeted at mobilizing action at the local level. Other measures include educational and preparedness programmes

for a wide variety of actors such as decision makers, operational emergency planning and response staff and the development of contingency plans.

- Risk transfer involves the use of financial mechanisms to share risks and transfer them among different actors (e.g., at-risk populations, government, private sector). Examples of such tools include weather derivatives, catastrophe bonds and different types of insurance.

5. Significant initiatives worldwide have emerged to develop national and regional strategic plans for disaster risk management. Furthermore, the report of the UN Secretary General, "In Larger Freedom: Towards Development, Security and Human Rights for All," A/59/2005, to the UN General Assembly on 21 March, 2005, requested the Secretariat of the International Strategy for Disaster Reduction (ISDR) to coordinate a Global Survey of the status (i.e., current capacities and major gaps and needs) of Early Warning Systems. Guided by an ISDR Inter Agency Task Force (ISDR/IATF) Working Group, co-chaired by the World Meteorological Organization (WMO) and United Nations Office for Coordination of Humanitarian Affairs (OCHA), the report of this Global Survey released during the Third International Early Warning Conference, on 27-29 March 2006 in Bonn, Germany confirmed that despite significant developments and progress, many gaps and needs remain.

6. The international movement in DRM provides great opportunity for mainstreaming WMO activities in disaster risk management planning nationally, regionally and internationally. However, a fundamental factor in success is establishment of strategic partnerships with agencies involved in different aspects of DRM.

WMO Natural Disaster Prevention and Mitigation Programme

7. From 1980 to 2005, natural disasters worldwide have taken the lives of nearly two million people and produced economic losses above one trillion (or one thousand billion) US dollars. During this period, weather-, water- and climate-related hazards and conditions accounted for 89% of total number of disasters, 72% of loss of life and 75% of total economic loss. However, over the last few decades, significant developments with monitoring, detecting, analyzing, forecasting and warning of weather-, water- and climate-related hazards have led to significant opportunities for reducing impacts of related disasters. For example, over the last 25 years, there has been nearly a 4-fold increase in the number of disasters and a 5-fold increase in the associated economic losses, whereas the loss of lives has in fact decreased to nearly one-third of its previous value. This is due to several factors, a critical one being the continuous development of natural hazard monitoring and detection and of development of specific end-to-end early warning systems, such as those for tropical cyclones.

8. WMO, through its Fourteenth Congress (Cg-XIV, May 2003) has established a new cross-cutting Natural Disaster Prevention and Mitigation (DPM) Programme with the vision to strengthen further contributions of National Meteorological and Hydrological Services (NMHSs), in a more cost-effective, systematic and sustainable manner, towards improving the safety and well being of communities through mainstreaming of their products and services in the disaster risk management decision processes. This Programme addresses capacity development of NMHSs in supporting disaster risk management (DRM) decisions at the national level in the complete cycle of disaster risk management including prevention and mitigation as well as emergency preparedness, response, recovery and reconstruction.

9. The 58th WMO Executive Council (EC-LVIII) approved a crosscutting coordination framework, for identifying WMO DPM Programme's strategic priorities and concrete projects that would be measurable with respect to their benefits and outcomes. Such crosscutting projects would be prioritized and built upon activities of WMO Programmes, Technical Commissions, Regional Associations, and strategic partners, with clear definition of roles, responsibilities and deliverables.

10. The cross-cutting framework of the DPM Programme is supported by an Executive Council Working Group on DPM (EC WG DPM), high-level focal points in Technical Commissions, Working Groups of the Regional Associations, national focal points designated by Permanent Representatives, the Secretariat Steering Committee on DRM, the DPM Programme Department and the focal points of WMO Departments. Furthermore, it noted the role of Presidents of Technical Commissions to coordinate contributions, particularly related to inter-commission activities. The coordination is facilitated by the DPM Programme Department at the WMO Secretariat.

11. As a benchmark, the Secretariat initiated four fact-finding surveys to document DRM capabilities and major gaps and needs of 187 WMO Members and six WMO Regions; as well as to map related activities of WMO Programmes and Technical Commissions to address these needs. Ongoing consultations with DPM focal points and Working Groups as well as the outcomes of these surveys have been essential in identifying WMO DPM Programme's strategic priorities and identifying crosscutting concrete projects to assist NMHSs in strengthening their capacities to support DRM in their countries. A WMO DPM Programme operating plan is being prepared, outlining the overall WMO strategy in DRM, and within the new WMO result-based approach, providing key areas of focus and related prioritized projects to address Members' needs and gaps more systematically.

12. Based on the outcomes of these surveys and further consultations with Members, WMO DPM Programme has identified seven priority areas, through which it aims to provide systematic support to strengthen Members' NMHSs capacities for strengthened disaster risk management at national, regional and international levels. These include:

- i) Mainstreaming technical capacities such as hydro-meteorological risk assessment and early warning systems in the national disaster risk management and development planning
- ii) Strengthening capacities for hazard monitoring, databases, and methodologies for hazard analysis in support of risk identification, risk reduction and risk transfer activities.
- iii) Strengthening capacities for operational hazard early detection and warnings
- iv) Strengthening capacities for provision of meteorological services in support of pre- and post-disaster emergency response and relief operations
- v) Facilitation of partnerships among NMHSs and other key national agencies for a more coordinated approach to DRM
- vi) Strengthening educational and training programmes of NMHSs and their key stakeholders in DRM such as authorities, emergency response operators and media
- vii) Development of public outreach programmes and materials

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13. With the threat of the climate change and its potential impacts on the trends and severity of natural hazards, WMO through its international climate observing, research and operational programmes, is advancing research on climate variability and climate change, understanding of potential impacts of the trends and severity of natural hazards, their predictability and development of forecasting capacities. WMO is deeply committed to ensure that the latest knowledge and capacities in climate are translated into operational products that would enable WMO Members to enhance their capacities in disaster risk management.

14. A fundamental goal of the DPM Programme is the facilitation of strategic partnerships of WMO and NMHSs, with other agencies involved in disaster risk management at international, regional and national levels, to enhance the visibility, role and contributions of WMO and the

NMHSs in disaster risk reduction. To this end, WMO DPM Programme is working to strengthen existing and establish new collaborations, as appropriate, with agencies such as the World Bank, United Nations Development Programme, International Federation of Red Cross and Red Crescent (IFRC), UNESCO, United Nations Environment Programme and the UN Office for Coordination of Humanitarian Affairs (OCHA), through concrete projects that are aligned with the seven priority areas outlined in item 11.

15. With the goal to establish concrete partnerships for HFA's priority related to "identifying, assessing and monitoring disaster risks and enhancing early warnings," following the Third Early Warning Conference, in May 2006, WMO convened a multi-disciplinary Symposium on "Multi-Hazard Early Warning Systems for Integrated Disaster Risk Management". The symposium brought together 99 experts and practitioners from 18 ISDR partner agencies, fully involved in different aspects of early warning systems, to review the gaps and challenges, and to identify priorities for actions to be directed at assisting countries in the development of their governance, organizational and operational capacities for effective early warning systems. WMO is working together to develop concrete national, regional and international projects, specifically designed to address these gaps and needs, and to ensure that the capacities for hazard monitoring, analysis and early warning systems, as an integral part of disaster risk management, will be improved and made available to all countries, particularly to those with least resources.

Space-based support to DRM

16. A critical element of WMO partnership is close collaboration with the space agencies, to ensure better coordination for enhanced utilization of satellite capacities (communication channels and observations), for improving DRM. WMO DPM Programme in close collaboration with the WMO Space Programme is initiating a project to review the satellite requirements in support of risk identification; risk reduction and risk transfer applications for hydro-meteorological disaster risk management. Such requirements will address utilization of satellite capacities for the entire cycle of DRM including prevention, preparedness, response and recovery. To this end, needs and gaps for satellite information for DRM applications (i.e., risk identification, risk transfer and risk reduction) for the entire cycle of DRM (prevention, preparedness, response and relief operations) will be evaluated. To this end, WMO has initiated discussions with GEO to ensure that similar initiative is undertaken for geological hazards.

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