



WMO Statement for the

UNFCCC expert meeting on a range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather and slow onset events

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In Central and South America, most socio-economic sectors are at risk to extreme weather events and impacts of climate variability and change. According to CRED, in Central America between the years of 1980 and 2007, around 79 per cent of the extreme events, over 50 per cent of casualties and 60 per cent of economic losses were caused by weather--related extremes and conditions, while in South America around 83 per cent of the events, over 30 per cent of casualties and 76 per cent of economic losses were caused by weather extremes. According to a WMO Disaster Risk Reduction survey in 2006, drought, river flooding, flash flood, drought, landslide or mudslide, tropical cyclone and coastal flooding, landslide or mudslide, strong winds, forest or wild land fire, thunderstorm or lightning, are among extreme events of concern to countries in this region, impacting socio-economic development. Furthermore, recurrent patterns of El Nino Southern Oscillation have profound impacts on the economy of the region, owing to the changing characteristics of the extreme weather events.

Local and national decision-makers in many sectors such as agriculture and food security, water resource management, energy, infrastructure and planning and disaster risk management have the opportunity to make effective use of climate information to support the development of risk-information needed to evidence-based decision-making.

A fundamental requirement for risk assessment is the availability of historical and real-time hydro-meteorological data, metadata, as input to statistical analysis of hazards and risk analysis and forward looking climate modelling from short term to long-term time scales. This would require:

1. Ongoing, systematic and consistent observations of environmental parameters for defining the hazards, climatic and environmental trends;
2. Quality assurance and proper archiving of the data into temporally and geographically referenced and consistently catalogued observational datasets;
3. Ensuring that the data can be located and retrieved by users; and
4. Sustainability of the infrastructure, data management system and human expertise to operate.
5. Access to analytical tools for statistical and forward-looking hazard mapping and forecasting of the changing characteristics of hazards

However, there is a wide range in the capacities of the National Meteorological and Hydrological Services' in Central and South America. Specifically, based on seven countries feedback to WMO DRR Survey in 2006, in Central America:

1. 71% of countries need amendments or restructuring of their national policies and legislation as the role of National Meteorological Services need to be clearly reflected in policies, legislation, national plans linked to DRR and adaptation,
2. 100% NMS need some level of strengthening or full modernization of institutions and infrastructure, particularly related to the observations, forecasting systems, communication, data rescue and management;
3. 100% NMS need some level of technical and management training of staff, especially with regards to development of data bases, mapping and analysis and (meteorological, hydrological and climate), forecasting and analysis tools and Quality management Systems;
4. 100% of NMS need guidelines, standards for maintenance of hazard data, metadata, analysis and mapping tools, including statistical and forward looking tools; and
5. 50% of NMS need to strengthen or build multi-sectoral institutional partnerships, and coordination and service delivery to provide data and other services.

For South America, based on response from 10 countries:

1. 60% of countries clarification of the role of National Meteorological Services in policies, legislation, national plans linked to DRR and adaptation, and ensuring that appropriate funding and resources become available to these agencies,
2. 88% NMS need some strengthening of institutional and infrastructure modernization, particularly for the observations, forecasting systems, communication, data rescue and management;
3. 75% NMS need technical and management training of staff, especially in regards to data bases, mapping and analysis and (meteorological, hydrological and climate), forecasting and analysis tools and Quality management Systems;
4. 100% of NMS need guidelines, standards for maintenance of hazard data, metadata, analysis and mapping tools, including statistical and forward looking tools; and
5. 40% of NMS need to strengthen or build multi-sectoral institutional partnerships, and coordination and service delivery to provide data and other services.

To address these challenges, WMO through its Disaster Risk Reduction Programme has established an Expert Advisory Group on Climate Services for Hazard/Risk Analysis (EAG-HRA), which is comprised of leading experts from the diverse DRR user community (public and private sectors), UN and international partner agencies, academia as well as NMHSs. This group will work with the extensive technical network of WMO to develop standards and guidelines for hazard definition, standardization of hazard databases, metadata and statistical analysis and forecasting techniques of hazard analysis to support risk modeling for meteorological, hydrological and climate related hazards. These guidelines and standards will be implemented through national capacity development projects, already underway in a number of regions, including Central America and the Caribbean and later extended to south America, where members request support.

Furthermore, following the endorsement by the Third World Climate Conference in 2009, a Global Framework for Climate Services is being considered building on existing capacities to enable better management of the risks of climate variability and change at all levels, through development and incorporation of science-based climate information and prediction into planning, policy and practice. With significant progress in forecasting of El Nino Southern Oscillation and the Inter-annual and seasonal climate forecasting tools, central and south America can benefit.

On regional and sub-regional levels, WMO is undertaking a number of initiatives in both central and South America. Specifically, WMO has been making concerted efforts to implement Regional Climate Centres (RCCs). One of the key mandatory functions of WMO RCCs is to issue regional climate watches to support early warning of impending extreme climate events. At the fifteenth session of WMO Members in South America, discussions were held on the establishment of three RCC/RCC-Network structures to cater the needs of the northern, southern and western sub-regions of South America. Subsequently, the way forward was agreed to establish three RCCs in RA III: CIIFEN to serve as an RCC for Western South America; Brazil and French Guyana to set up an RCC-Network for Northern South America; and Argentina and Brazil to set up an RCC-Network for Southern South America. Implementation plans for the demonstration phases of the

RCC/RCC-networks in RA III are under development. There has also been a strong interest in the establishment of WMO RCCs for North America, Central America and the Caribbean. Countries in North America, namely Canada, Mexico, and the United States are moving forward with the establishment of the North America Climate Services Partnership (NACSP). The Caribbean Institute for Meteorology and Hydrology (CIMH), Bridgetown, Barbados, is preparing to commence a demonstration phase to serve as a WMO RCC, with the domain of interest being the English-speaking countries of the Caribbean.

Lastly but very importantly, in recent years, concern has grown world-wide that droughts may be increasing in frequency and severity given the changing climatic conditions. Responses to droughts in most parts of the world are generally reactive in terms of crisis management and are known to be untimely, poorly coordinated and disintegrated. In order to address drought issues more effectively, WMO and Global Water Partnership are jointly launching the Integrated Drought Management Programme (IDMP). The IDMP aims to provide preventive and demand-driven support mechanisms for the communities, countries and regions affected by drought. Linked to the development of the IDMP, WMO and other partner organizations are organizing a High Level Meeting on National Drought Policies in Geneva from 11-15 March 2013. The outcomes from this High-Level meeting will provide the first guidance material to guide governments and their technical agencies towards development of an integrated approach to drought risk assessment and management.

WMO and its network value partnerships and leveraging capacities, expertise and resources to support the development of risk information that is vital for informed decision making.

Thank you,