

Summary of the 2006 International Session Multi-Hazards Warning Systems

On February 2, 2006, the National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service of the United States organized a special International Session in Atlanta, Georgia that ran parallel to the 86th annual American Meteorological Society meeting. This session, one in a series of International Sessions over the past several years, brings together representatives of National Meteorological and Hydrologic Services (NMHSs), the private sector, academia, and international finance and aid organizations. This forum provides a venue in which to explore and informally debate complex, global issues of particular relevance to the NMHSs. This year, over 70 participants from 24 countries took part in the presentations and discussions on the session topic, multi-hazards warning systems.

These past two years have seen extraordinary global disasters. One encouraging trend amidst the devastation has been a build-up of public awareness and desire to build our collective capacity to prevent and respond to disasters. Related issues that the session sought to address included the real and potential expansion of NMHSs responsibilities to include multiple hazards beyond hydrology and meteorology and the need to address challenges over the long-term, even as each disaster gets less attention once crowded out by new world events.

This workshop on Multi-Hazards Warning Systems should be seen in the context of larger processes taking place at the national, regional and global levels, through which NMHSs and their partners will continue to better understand and respond to society's needs. For instance, the theme for World Meteorological Day 2006 was "Preventing and Mitigating Natural Disasters." A copy of this summary report and a compact disc of the presentations of the informal International Session on Multi-Hazards Warning Systems will be sent to the WMO's Disaster Prevention Programme, so that the experiences and insights discussed at the International Session will benefit those who took part in the discussions directly, as well as others working on this issue.

Session Topics and Presentations

Six speakers were invited to lead talks on the discussion areas described below, and after each presentation, all the session's participants had the opportunity to ask questions, provide comments, and engage in discussion with the group. Dr. William Hooke, Director of the Atmospheric Policy Program and Senior Policy Fellow at the American Meteorology Society, was the session moderator and led a group discussion and summary after all the presentations were completed. Following are the topics and a few highlights from each talk:

1. Global Earth Observation System of Systems (GEOSS) and Multi-hazards Warning Systems, BGEN John J. Kelly, Jr. USAF (ret.), Deputy Under Secretary for Oceans and Atmosphere, U.S. Department of Commerce.

This presentation addressed the need for scientific knowledge to be put to use, ultimately, by policy makers. The presentation emphasized the need for education, as well as the increasing need for NMHSs to work on an international, multi-disciplinary basis. Warnings have proved necessary but not necessary and sufficient – they must be paired with political will and coordination, including interdisciplinary coordination between the meteorological and biological sciences, for example. GEOSS, not an operations system in itself but rather a benefits-driven, global coordinating mechanism composed of national operations systems, seeks to provide a long-term strategic framework in which multi-hazards warning systems can operate effectively.

2. The Evolving Role of the National Meteorological and Hydrological Services, Mr. Michel Jarraud, Secretary General of the World Meteorological Organization (WMO)

This presentation reinforced that the multi-hazards concept must be seen in the context of an overall policy and strategy. Mr. Jarraud discussed the multi-hazards concept in the context of current societal challenges, specifically the evolving roles of the NMHSs in the areas of leadership, economic and social values, capacity building, and cooperation. In addition, he presented key questions related to multi-hazards issues, including the potential benefit of a multi-hazard approach and the need for more systematic socio-economic studies of the potential benefit of preventive versus post-disaster action. The primary conclusions were that NMHSs have an essential role to play in multi-hazards warnings, and the scope of their roles will continue to increase. NMHSs must promote partnerships within civil society to increase cooperation on multi-hazards issues, while clarifying their roles for more effective collaboration.

3. The Organization of International Disaster Warnings, Mr. Ewen McCallum, currently Chief Meteorologist at the United Kingdom Met Office

This presentation highlighted the United Kingdom's perspective on multi-hazards warnings and in so doing, provided important topics for other national hydrometeorological services and their partners to consider at the national level, including the links between NMHS competencies and public health issues, as well as the threat of natural disasters to development and poverty reduction. Mr. McCallum presented the challenges involved both in prioritizing disaster mitigation issues in general and developing warnings in particular. The conclusions of the United Kingdom's Natural Hazard Working Group report to the UK Government in June 2005 were presented for consideration. In addition, Mr. McCallum used Hurricane Katrina as a case study to introduce issues for discussion such as end-to-end and worst-case scenario planning.

4. National Disaster Reduction and Relief Systems and Institutions, Mr. Kriengkrai Khovadhana, Deputy Director-General at the Thailand Meteorological Department

Thailand experienced the devastating effects of the December 26, 2004 tsunami, a phenomenon it was entirely unable to predict, and is working to improve warning and evacuation procedures. Mr. Khovadhana addressed the many challenges related to such evacuations. In addition, Mr.

Khovadhana discussed how Thailand is working to upgrade its seismic sensor network and to further enhance its regional cooperation through the Asian Disaster Preparedness Center. The presentation and subsequent discussion addressed the importance of having a long-term outlook in order to better help protect the public, both in terms of passing down historical knowledge and in terms of the long-term maintenance of warning systems.

5. Effective All Hazards Warning System: A U.S. Perspective, Mr. Mark Paese, Operations Division Director, NOAA's National Weather Service and Co-Executive Director, White House Task Force on Effective Warnings.

All-hazard warnings for both natural and manmade hazards affect everyone, everywhere: this is truly a global challenge with consequences felt at even the most remote, local areas. Given population growth, demographic shifts and economic development, our planet is increasingly sensitive to induced changes, and while warnings are vital, the public needs to receive the warnings as efficiently as possible in order to act. This presentation explored the challenges and opportunities involved in developing future warning systems, using Hurricane Katrina as a case study and highlighting trends such as integrating systems and creating standard protocols rather than trying to create a system that will solve every problem, especially in the unpredictable environment in which we live.

6. Bringing Socio-economic Benefits to the Public through Effective Multi-Hazards Warnings, Dr. Dennis Mileti, Professor Emeritus, University of Colorado at Boulder where he served as Director of the National Hazards Center and Chair of the Sociology Department

Dr. Mileti presented and discussed information in three main areas: monitoring the environment to detect perils, dealing with inter-organizational relations, and delivering information to the public. The focus of discussion moved toward what an effective warning should say and covered the myths and realities of public response to warnings. Despite public apathy at times and all the background noise in our society, it is the NMHSs and their partners who have the responsibility to break through the noise with an authoritative, complete warning – a call to action that will help protect lives while leaving no room for counter-productive rumors.

Concluding Remarks

The session's goals were ambitious: to depart with a common concept of "multi-hazards warning systems," to have a fuller idea of the challenges entailed for the NMHSs as they move from hydro-meteorological to multi-hazards warnings, and to identify what value-added socio-economic benefits could be provided to the public and how better to deliver these benefits. There were themes thread repeatedly throughout the day's discussions regarding coordination, interdisciplinary science, communication, technological innovations, and decision making that all participants seemed to agree were primary areas for future inquiry. By discussing these issues, the international session took a step toward a more fully developed concept of multi-hazards warning systems. As the session concluded, participants said the exchange of ideas regarding the challenges and opportunities of multi-hazards warning systems had been worthwhile and will be useful as these issues are addressed in other forums.