

25TH National Hurricane Conference Summary

1. **Purpose:** To provide a summary of a special 25th National Hurricane Conference (NHC) Training Session which was moderated by Mr. Samuel P. Williamson, Federal Coordinator for Meteorology, on April 14, 2003 in New Orleans, Louisiana.

2. **Background:** The Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM) and the Federal Emergency Management Agency (FEMA) co-sponsored this session. The theme of the training session was *Risk Assessment: Characterizing the Impact of Hurricanes and Inland Flooding to Help Emergency Managers and the Public Deal with the Risks They Face*. The session was a follow-on activity from the February 5-6, 2001 *Forum on Risk Assessment and Management of Natural Hazards* and built on work in progress or completed by agencies or through interagency cooperation. More than 200 participants attended the two-panel training session where guest speakers highlighted recent progress and current activities in natural hazard risk assessment. The session provided a forum for emergency managers, first responders, public safety officers, academicians, and industry and media representatives to better understand the role and impact of current and pending federal guidance/policy in meeting the needs of decision makers who use risk assessment/management in hurricane and inland flooding events. Current and emerging risk assessment tools and models were also profiled with emphasis on those that can benefit disaster planning, preparation, and response activities.

2. Objectives:

- Review of current federal statutes, policies, guidelines and the implementation of guidelines in operational programs, projects, tools, and techniques for assessing, avoiding, mitigating, and responding to potential risks of natural hazards.
- Identify needed improvements in the current federal statutes, policies, and guidelines to facilitate more efficient implementation of operational programs, projects, tools, and techniques that can help decision makers assess, avoid, mitigate, and respond to potential risks of natural hazards.
- Increase understanding of the linkages between risk communication, education, outreach and user response to potential risks and ways to improve those linkages.
- Increase understanding of the social and economic aspects of federal guidance and tools that assist in their implementation including the impacts and benefits resulting from federally coordinated risk assessments.

3. Key Presentation Points:

- **Introduction.** The Federal Coordinator for Meteorology, welcomed participants, set the stage and reviewed the objectives of the training session, defined hazard and vulnerability terms, and described logistics for the session.
- **Panel 1.** This panel provided information on the federal policies and procedures that enable the decision-making process with respect to risks and threats associated with hurricanes and inland flooding.
 - Dr. Michael Lindell, Director, Hazard Reduction & Recovery Center (Texas A&M University), moderated the panel.
 - Costs of natural disasters are increasing exponentially.
 - The federal government is involved in hazard planning and response activities at all levels of government and has a central

role in improving standards of practice for hazard assessment and management activities.

- Mr. Robert Mann (State Director, Office of Senator John Breaux (LA))
 - Hurricanes and inland flooding are primarily responsible for the deterioration of marshes and contribute to the breakup and inland shifting of the gulf shore.
 - The changing landscape has a negative impact on Louisiana's transportation infrastructure (i.e. ports, bridges, and roadways). Without the use of this land, Louisiana cannot support its infrastructure for \$1 billion of its annual economic base.
 - Coast 2050 Plan is a long-range approach at solving the wetlands problem.
- Mr. Martin Cancienne (Chief of Operations, Office of Congressman Tauzin (LA))
 - Reviewed the widespread life, property, and commerce losses to Louisiana due to hurricanes and tropical storms Audrey, Betsy, Camille, Andrew, Isidore, and Lili.
 - Lessons learned **are** that you can't wait until the last minute to prepare for or repond to a hurricane.
 - Better communications, planning, and coordination of legislation and funding at the local, state, and federal levels are needed to avoid losses of life and property in future storms.
- Mr. John Gambel (Senior Technical Advisor, FEMA)
 - Stressed the need for a better understanding of the end user's risk assessment needs and capabilities.
 - Address needs with a federally coordinated, community-based delivery system which incorporates cost effective information dissemination, technology development, education, and training.
 - Risk assessment is the fundamental building block for disaster preparedness and in applying new technology to deal with risk.
 - Must tie funds to adequate assessments of risk.
- Mr. Harvey Ryland (President of the Institute for Business and Home Safety)
 - Highlighted the "Showcase State" model program that features a partnership approach to engage communities to become safer from disaster.
 - This Institute for Business and Home Safety initiative is an effort to improve interagency coordination and cooperation in developing policies and procedures that mitigate risk and minimize impact.
 - Disaster losses are the predictable result of the interactions of four major systems: nature, people, the economy and the built environment. Application of the Showcase model at the state level can help to institutionalize disaster safety and create a public demand for it.
 - Products include statewide hazard identification and risk assessment, improved statewide planning guidance, safety upgrades of child care centers, and college curriculum that includes hazards.
- Dr. Betty Hearn Morrow (Professor and Director, Laboratory for Social and Behavioral Research, International Hurricane Center (Florida International University))

- A viable risk assessment, mitigation, preparedness, and response system must include and tie together the dynamic, socioeconomic factors that inherently influence the public and private sectors' response to risk information.
 - Need to assess event and outcome risk.
 - Reduce the population's vulnerability and risk through education and outreach. It takes money up front to make life better.
 - Develop framework of models that link hazards risk and population vulnerabilities (day-to-day risks).
 - Questions following panel presentations:
 - What was the name of the book cited by Dr. Morrow? Response by Dr. Morrow: The name of the book was "At Risk".
 - Could more information be given about the "Coast 2050 Plan"? Response by Mr. Mann: A coalition of stakeholders has bought into the plan because of potential losses in the business environment due to continued loss of wetlands. Response by Mr. Cancienne: Not just local businesses are impacted but national interests as well due to impact on oil, gas, and seafood industries.
 - What are the cost implications in terms of the "Showcase" states? Response by Mr. Ryland: There needs to be a commitment of key leaders. There needs to be a sustaining effort of one or more staff, funds to continue efforts after initiative is underway, and funds to implement the plan. Benefits justify cost by preserving more lives and reducing property damage. Insurance payouts are projected at one-third less; future saving of \$155 million per hurricane ramping up to \$350 million per hurricane in 20 years.
- **PANEL 2.** The second panel highlighted the operational tools that will assist decision-makers in assessing the risks associated with hurricanes and inland flooding.
 - Dr. Steve Lyons (Tropical Program Manager, The Weather Channel) moderated the panel.
 - Media are the communication bridge between service providers and decision-makers.
 - TWC uses a five-pronged approach to provide information, forecasts, impacts of hazards, uncertainties involved, and outreach.
 - New products are being introduced during the upcoming hurricane season to convey potential and real-time impacts of hazardous conditions via live video and graphics.
 - Ms. Claire Drury (HAZUS Program Manager, FEMA).
 - Presented an overview of HAZUS_{MH} as a GIS-based, multi-hazard risk assessment and loss estimation software.
 - Features include GIS technology, national databases, national standardized loss estimates and risk assessment methodology.
 - This tool helps enable decision-makers anticipate the scope of hurricane and flood-induced damage, identify vulnerable areas, assess the vulnerability of buildings and infrastructure, estimate potential losses, and develop state and local risk assessments to support mitigation planning.

- Results of HAZUS deliver credible impacts of disasters including physical, economic, and social elements. Analysis outputs provide a matrix of effects.
- Mr. Greg Mandt (Director of NOAA/NWS Office of Climate Water and Weather).
 - Described the new product/service development process within NOAA/NWS.
 - This process embraces a strong partnership with the user community so that the users' needs will be incorporated into new products and services.
 - The 5-day forecast of hurricane track and intensity is an example of the result of this process.
 - Advanced Hydrologic Prediction Service provides probabilistic flood stage and inundation forecasts up to months in advance.
 - Hurricane Strike, developed in partnership with FEMA, the American Red Cross and others, is an interactive training module aimed at middle school children to help them become better prepared for hurricane threats.
- Mr. William Massey (Region IV Hurricane Program Manager, FEMA).
 - Presented a proposal for an inland flooding component to the "Hurrevac" model for tropical cyclones as a tool that will mitigate disasters.
 - Based on recommendations from the 2000 Interdepartmental Hurricane Conference, the updated model will result in stronger partnership, cooperation, information, and communication among Weather Forecast Offices, River Forecast Centers, FEMA, and the public.
 - The goal is to develop a prototype for one state for 2003.
- Dr. Walter Maestri (Director of Emergency Management, Jefferson Parish, Louisiana).
 - Stressed the importance of using all available information (e.g., HAZUS, Hurrevac, NOAA model guidance and forecasts, and FEMA's Hurricane Liaison Team) to assess risk and communicate that risk to the public.
 - Public will respond only if they receive and understand the message.
 - Emergency managers must understand and use risk assessment tools and translate information into an action plan for the communities they serve.
- Questions following panel presentations:
 - Define Tropical Cyclone. Response by Dr. Lyons: A cyclonic low pressure in the tropics which can develop into a depression, storm or more intense phenomenon.
 - What decisions should a commander make when given a 4- or 5- day forecast of a hurricane? Response by Mr. Mandt: You would need to know the scope of the action being considered. Response by Dr. Lyons: it would be case-dependent.
 - How would you put population characteristics into models? Response by Ms. Drury: HAZUS allows the user to bring in their own data sets. Response by Dr. Maestri: GIS also allows changes in data to be added to models.

4. **Conclusions.**

- The April 14, 2003 NHC training session on risk assessment/management guidelines and tools was very successful as an education and outreach venue for emergency managers, first responders, public safety officers, academicians, industry and media representatives.
- The session presentations and discussion highlighted the importance and impact of hurricanes and inland flooding on the Nation's citizenry, economy, coastal resources, transportation infrastructure, and biodiversity.
- Risk assessment/management is a fundamental process/tool for emergency managers and other decision makers planning or preparing for disasters.
- The vulnerabilities and uncertainties associated with hurricanes and inland flooding provide strong evidence and justification for the emphasis given in NOAA's mission goals and strategic planning especially regarding lives and property at high risk in coastal areas of the United States.
- Every component of NOAA has a stake or vested interest in promoting the effective use of risk assessment/management policies and tools in support of the nation's safety and economy.