

Senate Commerce Committee Holds Hearing on Hurricane Research
report courtesy of Lewis-Burke Associates

On July 28, 2009 the Senate Commerce, Science, and Transportation Committee held a hearing entitled, "Weathering the Storm: The Need for a National Hurricane Initiative." The hearing focused on hurricane research priorities and the proposed National Hurricane Initiative. A diverse array of witnesses testified including representatives from the National Science Board's Task Force on Hurricane Science and Engineering, the National Oceanic and Atmospheric Administration (NOAA), the Center for Space Research at the University of Texas, the Federal Alliance for Safe Homes (FLASH), and the Reinsurance Industry. Senators Bill Nelson (D-FL), David Vitter (R-LA), Mel Martinez (R-FL), and Kay Bailey Hutchison (R-TX) were in attendance.

- All witnesses and Senators expressed support for the creation of a National Hurricane Initiative to increase funding for hurricane research and mitigation. Priorities for research included hurricane forecasting, social and behavioral science, evacuation planning, and economic modeling.
- Dr. Richard Spinrad, Assistant Administrator for Oceanic and Atmospheric Research at NOAA, discussed NOAA's recent improvements in hurricane forecasting. He stated that NOAA has greatly increased the accuracy of its hurricane track predictions, but still needs to make improvements in forecasting intensity, especially predicting rapidly intensifying storms.
- Much of the discussion focused on increasing the mitigation practices through the use of community education and stronger building codes. Ms. Leslie Chapman-Henderson, CEO of FLASH, stated that a post-storm engineering study found that damage costs from hurricanes would be reduced by 40 percent if all buildings were built in compliance with modern engineering-based building codes. Witnesses also discussed the need for improved economic and social analysis to better plan and execute evacuations and emergency management.

Additional information can be found below and on the Senate Commerce, Science, and Transportation Committee website:

http://commerce.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=b8f77570-efa7-4198-a86e-bf6bb3f9d88c.

Last week Senators Martinez and Nelson introduced the National Hurricane Research Initiative Act (S. 1485), which would officially declare an urgent need to conduct long-term multi-entity hurricane research and establish the National Hurricane Research Initiative as a collaboration between NOAA and the National Science Foundation. However, the timetable and prospects for the legislation remain unclear. The Commerce Committee is not likely to take up the hurricane legislation until their work on climate change legislation is complete. We will continue to follow hurricane research legislation and will report on any new developments.

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Sen. Nelson chaired the hearing and opened by stating his concern that hurricanes account for 66 percent of insurance costs from natural disasters but receive less research funding than earthquakes and other hazards. Breaking the usual mold, Chairman Nelson chose to forego formal statements by the witnesses and conducted the hearings as a discussion.

Dr. Kelvin Droegemeier, co-Chairman of the National Science Board's Taskforce on Hurricane Science and Engineering, discussed the multidimensional nature of the hurricane problem and argued that further investment in forecasting is warranted because current technology is far from being able to forecast hurricanes at the limit of predictability. Other witnesses agreed that increased funding for research is necessary.

Dr. Spinrad discussed NOAA's increased capability to forecast a hurricane's track and the need for better forecasting of intensity, especially predicting rapidly intensifying storms. He stated that NOAA is working closely with other Federal agencies to diversify observation strategies, increase social science research, and lengthen the time before landfall when an accurate forecast is possible. He described three priorities for hurricane research at NOAA: observations, modeling, and data assimilation.

Dr. Gordon Wells, Program Manager of the Center for Space Research at the University of Texas at Austin, discussed the need for better emergency response and evacuation planning. He argued that planning requires not only better hurricane forecasting, but also knowledge of sociogeographic factors to determine high risk populations. Dr. Wells stated that modeling needs to be presented in a more dramatic fashion so that homeowners can visualize the risks to their individual town and home.

Ms. Chapman-Henderson, CEO of FLASH, discussed the importance of mitigation in decreasing hurricane destruction. She stated that a post-storm engineering study conducted jointly by the University of Florida, FEMA, and the Institute for Business & Home Safety found that damage costs from hurricanes would be reduced by 40 percent if all buildings were built to modern engineering-based building codes. In addition, she argued that strengthening building codes would allow more people to stay in their homes during hurricanes thus leading to fewer evacuees and more efficient evacuations.

Mr. Frank Nutter, President of the Reinsurance Association of America, agreed that building codes are an important tool for reducing costs associated with hurricane damage. He also argued for better forecasting and better regional models for climate change impacts.

Sen. Hutchison asked about hurricane modification. Dr. Droegemeier stated that his task force has identified four issues associated with modification: (1) forecasts must be extremely accurate in order to modify a storm far from landfall; (2) modification is possible but delivering the modifying influence is a difficult engineering challenge; (3) hurricanes may have positive effects on climate and ecosystems that must be better understood before there are attempts to

eliminate them; and (4) there are many ethical and legal issues that must be addressed. He stated that the National Research Council has found no compelling evidence that modification works, but he thinks that recent technological advances make modification a possibility.

Sen. Nelson asked about the relationship between hurricanes and climate change. Dr. Droegemeier explained that climate change increases hurricane intensity but not hurricane frequency, while hurricanes change the current balance in the ocean and may have other effects on climate. Dr. Wells argued that climate mitigation is extremely important because climate change may be worse than feared even a few years ago. Dr. Spinrad stated that multi-decadal oscillations in hurricane frequency must be recognized when analyzing climate change's impact on hurricanes.