

February 28, 2007

The Honorable Bart Gordon  
Chairman  
Committee on Science and Technology  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

We, the under listed group of concerned scientists, believe the Federal Government should undertake prompt action to institute a comprehensive interagency research program aimed at reducing the impacts of hurricanes for the U.S.A and our neighbors. We hope that your Committee might be persuaded to take the lead on legislation authorizing the establishment of such a program.

The severe hurricane impacts on Florida in 2004, along with the record number and intensities of hurricanes with severe impacts around the Gulf of Mexico and the devastating flooding of New Orleans in 2005, have provided a “wake-up” call that cannot be neglected. A combination of sustained development in vulnerable coastal areas and high levels of hurricane activity has brought us to a critical stage where major action is required to address critical gaps in our capacity to handle growing hurricane impacts that pose both immediate and very real long-term threats to the safety of US citizens and their property, and to local and regional economic activity.

These gaps have been identified by several distinguished scientific entities, including:

- The National Science Board, who has recommended that the relevant Federal agencies commit to a major hurricane research program to reduce the impacts of hurricanes and encompassing all aspects of the problem: physical sciences, engineering, social, behavioral, economic and ecological<sup>1</sup>;
- The NOAA Science Advisory Board, who established an expert Hurricane Intensity Research Working Group that recommended specific action on hurricane intensity and rainfall prediction<sup>2</sup>;
- The American Geophysical Union, who convened a meeting of scientific experts to produce a white paper recommending action across all science-engineering and community levels<sup>3</sup>; and,
- A group of leading hurricane experts have convened several workshops to develop priorities and strategies for addressing the most critical hurricane issues<sup>4</sup>.

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<sup>1</sup> Hurricane Warning: The Critical Need for a National Hurricane Research Initiative [www.nsf.gov/nsb/committees/hurricane/pre\\_publication.pdf](http://www.nsf.gov/nsb/committees/hurricane/pre_publication.pdf)

<sup>2</sup> HIRWG Final Report [www.sab.noaa.gov/Reports/HIRWG\\_final73.pdf](http://www.sab.noaa.gov/Reports/HIRWG_final73.pdf)

<sup>3</sup> Hurricanes and the U.S. Gulf Coast: Science and Sustainable Rebuilding [www.agu.org/report/hurricanes/](http://www.agu.org/report/hurricanes/)

<sup>4</sup> HiFi Science Strategy [www.nova.edu/ocean/hifi/hifi\\_science\\_strategy.pdf](http://www.nova.edu/ocean/hifi/hifi_science_strategy.pdf)

These separate investigations are entirely consistent in advising that we have a major and worsening situation that requires urgent action in the following priority areas:

- **0 to 5 Day Hurricane Forecast Improvements**
  - In particular, skill in forecasting hurricane intensity in terms of expected wind speed and the extent of damaging winds and flood rains is at an unacceptably low level;
  - Understanding the important processes and development of new hurricane forecasting tools will require development of innovative oceanic and atmospheric observing systems combined with the next generation of research and operational hurricane forecast models to enable observations and prediction of the critical internal hurricane processes.
  
- **Long Range Projections of hurricane activity from Weeks to Decades**
  - Climate projections out to 20, 40 and 60 years of the expected variations in the number of Atlantic hurricanes, their intensities and geographical regions affected are critical to sound planning and engineering design, yet these are presently largely unknown;
  - Developing a capacity to predict these longer-term variations and trends requires improved understanding of the complex interactions between hurricanes and the global climate, together with a commitment to development of the next generation of regional climate models.
  
- **Impacts Projections**
  - Hurricane damage arises from the effects of high winds, ocean waves, coastal storm surge, rainfall and associated flooding, land slippage and environmental deterioration;
  - Reducing these impacts will require multidisciplinary collaborations amongst physical scientists, engineers, social scientists, ecologists and community leaders.

Further details on these priorities are provided in the original documents as referenced on the previous page.

We were encouraged by, and supportive of the efforts by Senators Martinez and Nelson who introduced legislation in the last Congress (S. 2004) that proposed the authorization of a national initiative to address these priority areas. We hope that your Committee will consider enactment of legislation along the lines of the legislation introduced last year as part of the agenda for the 110<sup>th</sup> Congress.

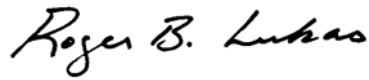
Considerable planning discussions within the scientific community have convinced us that a visionary and comprehensive national hurricane initiative is required. To be successful this program needs to be sustained for at least a decade to ensure that the critical combination of fundamental research and system development can be accomplished. Further, several federal agencies and laboratories and the academic community should be involved in the initiative in a highly collaborative and cooperative manner to ensure the needed depth and diversity of multi-disciplinary expertise and institutional capabilities and to address the many dimensions of federal and state responsibility related to hurricanes.

We stand ready to assist your Committee and the Congress to address the Nation's need for improved understanding and prediction of hurricanes and their impacts.

Sincerely,



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