

**Response to Request for Information on Options for Sustained Support of Research to Support
NOAA Climate Services**

Submitted by: The American Shore and Beach Preservation Association (ASBPA)

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Focus areas: Develop capabilities that focus on climate issues related to coastal zone and living marine resources
Improve capabilities to apply climate information to the regional and local level.

The American Shore and Beach Preservation Association (ASBPA) represents the scientific, technical and social interests along the coast in an effort to shape national research and policy concerning shore and beach management and restoration. Our members are academics, practicing engineers, and federal, state, and local policy makers. We have represented the central knowledge base regarding beach management and enhancement in the country since 1926.

Our members have participated in national climate change studies as they relate to beach management. Most recently two of our members served on the review board for the *U.S. Climate Change Science Program's Synthesis and Assessment Product 4.1, Coastal Sensitivity to Sea Level Rise: A Focus on the Mid-Atlantic Region*. Additionally, the National Academy Press published *Responding to Changes in Sea Level, Engineering Implications* in 1987. The majority of the authors were, and still are, ASBPA members.

Our organization has become more vocal on climate change issues, in particular the implication of accelerating sea level rise on coastal communities, in recent years due to the increased public interest and the large amount of misinformation being distributed to the public. One of our main concerns is the lack of knowledge among policy makers at all levels of government. Local elected officials and staff are looking to higher levels of government for guidance as to how to plan for climate change. Many regional leaders are lacking the necessary information or motivation to begin planning process.

ASBPA believes that it is necessary to educate government officials and staff about the need to plan for sea level rise. This is a challenging area because sea level rise is happening so imperceptibly and its impacts will not affect the careers of those responsible for the planning. NOAA would be doing a great service to its clients by focusing on distilling climate information in the coastal zone and assisting regional and local governments in applying this information to their planning process. The IPCC has paved the way with their 2007 report that included a concise Summary for Policymakers. NOAA should

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continue this tract of education of policymakers by providing additional details and recommendations to local governments.

ASBPA recognizes the importance of basing policy recommendations on sound science. Thus, we are supporting the NOAA focus areas which distribute scientific information to leaders who can adopt policies to implement scientific recommendations. Given that ASBPA represents both groups, we are keenly aware of the disconnect between the academics conducting important research and the policy makers with the power to enact change. We feel that NOAA is uniquely positioned to assume the role of a national clearinghouse of information on climate change and liaison to all levels of government in assisting them in planning for the future. ASBPA commends NOAA on the recently developed Coastal Climate Adaptation Website and we urge you to expand on the local planning component.

How will our nation's barrier islands adapt to sea level rise? Over the next 50 years, many coastal communities with mean elevations around 5 ft above mean high water, will have serious decisions to make regarding the future of their communities. ASBPA has recommended a cost-benefit analysis of the cost of continued shore protection (i.e., beach restoration, erosion-control structures, dikes, etc.) compared to the benefits provided by the local beach economy. As beach management specialists, this is as far as we've taken the analysis. However, it must go farther. If communities attempt to defend their coastal position, the costs will extend far beyond shore protection.

Particularly in beach communities with high economic value, it is likely that the communities will ultimately elect to **adapt to sea level rise** by holding their position with coastal engineering methods. This is the strategy that has been adopted by the Dutch. In this case, local policy makers must take action in the upcoming decades on many social issues. Public Works Departments must factor in drainage, sewage, and road improvements. Building Departments must make serious decisions about setback lines from beaches and wetlands and minimum floor elevations. Planning Departments must adopt land use, zoning, and density policies, and then (perhaps most importantly and least likely) elected officials must approve these policies. Finally, this strategy has serious long-term implications on nearshore ecosystems that should be studied by NOAA's Climate Services group. This may require an interdisciplinary committee of scientists including nearshore biologists and coastal engineers and geologists.

As has been recognized, but not necessarily implemented, perhaps the most opportune time to enact some of these social policies is after major coastal disasters. In the wake of Hurricanes Ike and Katrina, the need for local policies that will hold up in post-storm phase has become obvious. With the changing climate and increased storminess, **post-storm redevelopment planning** is more important than ever. These plans must be interdisciplinary and include input from scientists, engineers, and planners alike.

In addition, coastal storms cause orders of magnitude more damage than sea level rise alone. Essentially, sea level rise is subordinate to increased storm activity in regard to impacts to the physical coast. By preparing for increased coastal storminess, communities are taking an important step toward planning for sea level rise and toward a sustainable **coastal resiliency** for their present and future residents.

In conclusion, ASBPA recommends that NOAA focus on *developing capabilities that focus on climate issues related to coastal zone and living marine resources* and *improving capabilities to apply climate information to the regional and local level*. We recommend that the Climate Program Office establish a research center in conjunction with the **NOAA Coastal Services Center (CSC)**. The CSC already has the capability to outreach to regional and local governments and would be an excellent internal partner in this effort. They have the contacts necessary to develop interdisciplinary study teams to investigate the areas recommended above. ASBPA is interested in participating in this effort.