

The health of our Gulf and our oceans is linked to our own

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Local input was an essential part of worldwide 'report card'

As reported in the Sun Herald on January 31, the Joint Ocean Commission Initiative recently released its second report card on the state of the world's oceans.

As University of Southern Mississippi scientists and marine educators, we were proud to serve as advisors on the 16-member Science Advisory Panel to the U.S. Commission on Ocean Policy that contributed to the creation of the joint initiative. We now serve as science advisors to JOCI, and we would like to share the implications that the JOCI report card has for the Mississippi Gulf Coast.

What are the Gulf of Mexico states doing right?

The Gulf of Mexico states received an "A-minus" while the nation received a "C-minus." JOCI chairmen have cited the leadership of Gulf of Mexico governors in working collaboratively to address problems of the Gulf.

Perhaps the single most important action that led to the Gulf states' receiving an "A-minus" was creation of the "Gulf of Mexico Governors' Action Plan for Healthy and Resilient Coasts," with Mississippi Gov. Haley Barbour now leading implementation of the plan.

The realization among state leaders that many of our regional needs cross state boundaries was a primary factor that resulted in the Gulf of Mexico receiving a higher grade than the nation. Their vision allowed our state agencies, organizations and industries to better coordinate efforts.

Our five-state region has become more effective in collaborations, partnerships and networking. Southern Miss is in the vanguard of the Gulf states' efforts, especially in the arenas of marine education and the relationship of the ocean to human health.

There remains at the national level, however, woefully insufficient fiscal resources for research, science and education and a lack of national ocean leadership and coordination, which impacts regional and local efforts.

There is also no national priority to develop and implement an exciting, proactive campaign to foster the general public's awareness of the relevance of the ocean to their everyday lives.

What is the status of marine and aquatic education in the Gulf of Mexico states?

Teachers of the Gulf of Mexico region, including K-12 classroom teachers and informal educators in aquariums, museums and science centers, are working together on common goals. These collaborative efforts focus on:

- Enhancing the understanding among all ages of the importance of coasts, of watersheds and of the collective oceans of the world acting as one connected ocean.
- Engaging scientists and educators in bridging the gap between the research being conducted and the importance of those findings to all of us.

Participating teachers are also involved in developing resource materials for their colleagues through our professional development programs. Work is in progress to reach underrepresented and underserved children, as well as to introduce high school, undergraduate and graduate students to career choices in ocean sciences and related fields.

These efforts span a spectrum of issues, including global climate change, hurricanes, tornadoes, water quality, sustainable fisheries, oceans and human health, coral reefs, the value of marshes and wetlands, conservation and preservation, and the management of our marine and aquatic resources. All contribute to achieving basic ocean literacy through innovative partnerships among federal and states agencies, nonprofit organizations, businesses and industries.

Challenges ahead require that we continue to be:

- Proactive concerning increased partnerships with enhanced coordination and leveraging of human and fiscal resources.
- Accountable within our collaborations.
- Aggressive when seeking increased and sustained funding for our marine and aquatic education programs.

What is the human health status of the Gulf of Mexico?

In May 2005 the University of Southern Mississippi and the Mississippi-Alabama Sea Grant Consortium hosted a workshop at the University's Gulf Park campus in Long Beach on the connection of the Gulf of Mexico with human health. The workshop, which followed up on the Ocean Commission's health-related recommendations to the president, has served as a springboard to further exploration of the issues in other states.

The workshop focused on natural products and diseases, the two main aspects of the ocean and human health.

Natural products experts discussed unique opportunities for drug and chemical discovery in the Gulf, collaborations with Mexican scientists, creation of a Gulf communications network, and a regional response to ocean and human health issues addressed in the Bush administration's Ocean Action Plan and federal legislation.

Disease experts looked at better methods for the detection of disease-causing microorganisms (i.e., pathogens), integration of such monitoring methods with ocean observing systems, the role of harmful algae and pathogens in the health of the Gulf ecosystem, and educational needs and opportunities.

Conclusions

It is important that residents living in the Gulf of Mexico states appreciate the influence the ocean has on them and their influence on the ocean.

The world ocean covers 71 percent of the Earth's surface. It provides 60 percent to 80 percent of all the oxygen we breathe. It drives our weather patterns. It serves as a sink for carbon dioxide.

The ocean is critical to the nation's economy, human health, global transportation, fisheries, national defense and security, and social structure. It is an endless source of recreation and tourism. It has fascinated people since the beginning of time, from its destructive power to its tranquility and serenity.

We can no longer take our ocean for granted. Very simply, the ocean is the cornerstone for our life support system on this planet. Our lives and our quality of life depend on it.

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