

NCSE - Biodiversity in a Rapidly Changing World

9th National Conference on Science, Policy and the Environment

Biodiversity in a Rapidly Changing World

Reagan International Trade Building

Washington, D.C.

December 8-10, 2008

U.S. CoML Session entitled:

"Applying Marine Biodiversity Toward Better Ecosystem Management into the Next Decade"

Monday, December 8th from 1:30-5:00 PM

U.S. CoML Sponsored Breakout Session Results:

Earth's ecosystems provide essential processes and services that support human survival and well-being. Thus, an ecosystem approach to management (EAM), encompassing consideration of direct and indirect effects on and interactions among both biotic and abiotic ecosystem components, is now the preferred means of implementing marine resource management. Because biodiversity may play crucial roles in the maintenance of ecosystem functions and services, conservation of natural biodiversity is a central part of EAM. Understanding biodiversity's role within an ecosystem is critical when addressing demands of various stakeholders, managers, and policy-makers. It is critical that policy makers and managers better recognize the extent to which biodiversity not only relates to ecosystem function, but is essential to sustaining human life. To a degree, the future of marine biodiversity research relies on the ability of successful programs and committed scientists to relate their findings, strategies and challenges to managers, decision-makers, and the public. This session explored how to better apply our current knowledge of marine biodiversity to ultimately guide future endeavors and ensure improved marine policies and management within the United States and resulted in the following recommendations for action:

Task 1. The Administration and Congress should establish conservation of natural biodiversity as a national priority and undertake specific actions to implement that policy. Such actions should include, but not be limited to, endorsing and implementing the Valencia Declaration, establishment of a U.S. system of fully protected marine reserves, and support for international biodiversity efforts, which include evidence-based approaches from all major marine ecosystems and programs, such as the international Census of Marine Life.

Task 2. Congress, the Administration, and state governments should require use of the best available scientific information relating to energy, land use, and other projects; such information should encompass consideration of the impacts on marine biodiversity over the long term via a continuing focus on key biodiversity indicators.

Task 3. Congress, federal, state and tribal agencies, NGOs, and private business should develop, fund and complete an effective ocean observing system that includes, as an integral component, measures of marine biodiversity at all appropriate organizational scales.

Task 4. The ocean science community, with involvement from resource managers, should develop, test, and implement marine biodiversity decision support tools for enabling EAM.

Task 5. Scientists and managers should ensure that marine biodiversity programs incorporate the following elements: (1) development of new technologies for research and for education; (2) enhanced understanding of diversity, distribution, abundance and connectivity (includes monitoring), patterns and processes; and (3) solutions to environmental and societal problems.

Task 6. Education institutions at all levels should promote and employ multi-disciplinary approaches to education that incorporate an understanding of biodiversity and other ecological concepts with communication skills to enhance public ocean literacy.

Task 7. Government, industry, and academia should support a science-industry interface to develop best practices for industries tied to major threats of marine biodiversity.

Task 8. The Federal government, working with industry and the states, should set up a system of marine biodiversity risk bonds that industry, with investments above a certain threshold, would be required to put up as insurance against unanticipated environmental impacts resulting from investment over the life of new projects.

Task 9. The ocean science and education communities should foster the development of effective and consistent curricula, education and outreach programs that articulate the societal benefits of biodiversity exploration and conservation.