Census of Marine Life Statement in Support of the OceanObs'09 Declaration

The over 2000 participants from over 80 countries involved in the Census of Marine Life (CoML) have invested some $750M during the first decade of the 21st century in compiling and distributing information about ocean biodiversity, identifying knowledge gaps and demonstrating new technologies for closing those gaps. The CoML developed from the recognition that no country in the world had the capacity to meet its obligations under the Convention on Biological Diversity (CBD) to catalog marine species. Recognizing that the CBD mandate would require continuing monitoring of diversity, CoML focused on the most economical, rapid and repeatable technologies for all of its Ocean Realm habitats and how best to include biodiversity measures in routine ocean observing systems. These same technologies have proved valuable for providing societal benefits in the GEO, GOOS context. CoML has shown by published examples the power of modern deep sea camera systems for identifying diversity, of tagging and tracking technologies for distribution and of sonar systems for abundance. Advanced sonars can see shrimp three kilometers down and wave-guide acoustics can count fish within a 100km circle. Experimental concepts have become practical tools.

CoML brings its wealth of information on diversity, distribution and abundance of marine species to the IOC with the recent commitment for its Ocean Biogeographic Information System to become the diversity component of IODE. Many CoML projects already have ongoing commitments to provide regular ocean observations of biodiversity and habitat changes beyond the first census in 2010. The Nearshore projects have relatively simple, standardized protocols for repeated, rapid sampling of biodiversity using barcodes and DNA chip technology, for example, monitoring coral reef biodiversity using novel environmental gene sequencing for rapid enumeration. Coastal projects can monitor the movements of commercial and conservation species in near real time and link these to changing oceanographic conditions. These habitat data collected by sensors on animal platforms, particularly in the Ice Oceans are already being integrated into ocean models and providing ground truthing for satellite imagery. Canada and a series of global partners are committed to support the Ocean Tracking Network spin-off project as a GOOS project through 2015. CoML's Open Ocean and Deep Sea projects have been and will continue to be major information contributors to policy development for seamount fisheries, mining, etc. under the FAO and Law of the Sea Convention. Society has difficulty recognizing the need for knowledge about these unseen places, but science does not. Techniques like high resolution upward-looking sonar have clear near real time monitoring potential even in the most difficult Mid-water Realm.

CoML clearly demonstrates the value of the GOOS vision and adds timely capacity to the Declaration's Imperatives to Action numbers 5 to 7. CoML is already providing societal benefits on a global scale and hopes to continue to do so in collaboration with the Working Group partners to develop and incorporate routine biodiversity measures into ocean observing systems. The Census believes 'marine biodiversity" should be more explicit in the proposed WG TORs.

Ron O'Dor and John Gunn for CoML