

Comments for the Ocean Policy Task Force
Public Engagement Working group meeting
Re: Oceans and Human Health
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Oceans and Human Health is a relatively new field of multidisciplinary research. The role of the federal government in supporting a broader OHH strategy began with the US Commission on Ocean Policy which published “An Ocean Blueprint for the 21st Century”. The Commission Report devoted an entire chapter to “Connecting the Oceans and Human Health” which included the following recommendations:

- Expand R&D efforts to encourage multidisciplinary studies of the evolution, ecology, chemistry, and molecular biology of marine species; discover marine bioproducts and develop practical compounds.
- Congress should establish a national multi-agency OHH initiative to coordinate and sponsor exploration, research, and new technologies related to examining the connections among the oceans, ecosystem health, and human health.
- NOAA, EPA and FDA, working with state and local managers, should fully implement all existing programs to protect human health from contaminated seafood and coastal waters.

Following on the recommendations of the Commission Report, the existing interagency ocean science structure was established. Part of this structure is the JSOST interagency working group on Harmful Algal Blooms, Hypoxia and Human Health (aka 4-H). In 2007, the 4-H group published an “Interagency Oceans and Human Health Research Implementation Plan”. The recommendations of this plan included:

- Priority research is needed dealing with pathogens, chemical contaminants, HABs, seafood safety, pharmaceuticals and other beneficial products and in cross-cutting areas such as epidemiology, sentinel species, genomics and related technologies, and social, behavioral and economic sciences.
- Appropriate infrastructure is needed to support research advances in such areas linking to the ocean observing systems, data management and access, development of standards and standardization methods, and access to the sea.
- Transition of research results to applications is essential through targeted outreach and education activities and development of rapid response capabilities.



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In 2008, JSOS published “Charting the Course for Ocean Science in the U.S. for the Next Decade” (aka Ocean Research Priorities Plan). One of the six themes in the plan was “Enhancing Human Health”. Within that theme, the plan included the following research priorities:

- Understand sources and processes contributing to ocean-related risks to humans.
- Understand human health risks associated with the ocean.
- Understand the potential benefits of ocean resources to human health.
- Understand how human use and valuation of ocean resources can be affected by ocean-borne human health threats and how human activities can influence these threats.
- Apply understanding of ocean ecosystems and biodiversity to develop products and biological models to enhance human well-being.

A lot has been accomplished over the past five years in terms of setting priorities and building working relationships between the various stakeholder agencies. The problem lies in the fact that these priorities and initiatives have not received sufficient funding to accomplish any of the goals set forth. This is in part due to the fact that while OHH has a big impact on public health, it falls through the federal interagency cracks. No one agency has the responsibility. NOAA support has diminished; NSF does not have a health mandate; NIEHS doesn't have an oceans charge; EPA focuses on freshwater; the CDC has higher priorities; and the FDA is overwhelmed with food imports.

This is why an interagency approach is so important as part of a larger mandate from the White House. Currently, there is only one interagency structure in place to manage this - the 10 year old codified in law National Oceanographic Partnership Program. NOPP successfully funds about \$30 million a year in research, based on a competitive peer-review process. Agencies and the private sector can opt to participate in any given solicitation to leverage their agency funds to make a greater impact. The NOPP funding topics cover a wide range (including biological sensors) and could easily accommodate a broader spectrum of OHH science. I recommend that this Program be seriously looked at as a mechanism to coordinate and fund interagency Oceans and Human Health research efforts. But once again, this is a voluntary process – so the agencies would need a mandate from above or some other mechanism to entice their participation.

That is only the research piece. There needs to be a larger public health plan for transitioning research to public health. And I will open up the discussion to our public health experts in the room and on the phone in a moment to share their experience and thoughts on the matter. Hence, a strategic plan needs to be created and a group needs to be identified to lead it that has the expertise beyond the ocean research community.

This is an excellent opportunity to marry the two big agenda items of the President- Health and Climate within the National Ocean Policy charge. More than half the people in this country live within 50 miles of the coast and as the coastal environment changes, their exposure to human health threats will likely rise. I hope that the Task Force can successfully incorporate OHH into its policy and implementation strategy so that we can take advantage of this unique opportunity to protect public health.