



April 11, 2011

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
1401 Constitution Avenue, NW
Washington, D.C. 20230

RE: HSWRI Comments on DOC & NOAA's Draft Aquaculture Policies

Hubbs-SeaWorld Research Institute welcomes the opportunity to offer comments on the Department of Commerce (DOC) and National Oceanic and Atmospheric Administration (NOAA) Draft Aquaculture Policies. Our Institute appreciates DOC's and NOAA's recognition of the importance of marine aquaculture to our nation's seafood supply and their reaffirmation to advancing marine aquaculture.

A call for action

In response to the call for comments on the policies, our Institute met with fellow researchers as well as aquatic farmers, aquaculture industry suppliers (cage manufacturers, feed companies, feed ingredient suppliers) and seafood suppliers, both wholesale and retail, to develop a proactive vision for advancing the managed growth of marine aquaculture. This group, the **Coalition for Action on Open Ocean Aquaculture**, has collectively developed and endorsed the accompanying document, *A Call for Urgent and Deliberate Action to Create American Marine Aquaculture: A Science and Industry Based Approach for the Managed Growth of Sustainable U.S. Marine Aquaculture*. A listing of the members of this Coalition is found on the last two pages of that document.

The Coalition proposes the use of Interim Regional Aquaculture Production Goals (IRAPG) as a management framework by which NOAA may, through its existing regulatory authorities, begin permitting the installation of marine farms in our nation's federal waters as soon as possible. The Coalition members have committed to furthering this effort by working with DOC and NOAA staff to draft a detailed white paper that will examine the existing capabilities and needs of the nation's marine farming, seafood marketing and research communities and to coalesce them with the management imperatives of the federal agencies charged with management of federal waters. The Coalition is eager to move this initiative forward.

Will there be enough seafood for Americans?

Our Institute has been working for decades to not only replenish wild stocks of fish, but also to develop and refine culture protocols that will help feed a hungry world. This line of research has become all the more urgent as we review predictions that our nation's current seafood supply will be disrupted by the economic changes underway in other parts of the world thereby shifting the supply to the growing economies in Asia.

Over the next two decades the global economic center will continue to shift east from North America and Europe to Asia. It is estimated that Asia's proportion of the world's middle class will grow from 28% in 2009 to over 66% in 2030. As Asia's economic wherewithal increases, so will their ability to out compete the US and other western markets for both wild-caught and farmed seafood. With wild harvests at maximum yields and the demand for seafood increasing because of population growth and recognition that seafood is an essential part of a healthy diet, the need to develop an expanded domestic seafood farming industry will become critical if we are to serve the needs of the American people. In view of that, the time to undertake this expansion is now and we have a significant base of experience to draw upon.

American leadership and imagination

The US was largely responsible for developing the technologies that are now used in other countries to produce some of the largest supplies of seafood available. Commercial salmon farming was made possible by hatchery technologies and protocols that were developed in America to support the replenishment of wild stocks. Those hatchery techniques are now used in Europe, Japan and South America to provide the majority of the salmon consumed in the world today. Similarly, shrimp culture techniques were originally developed in the US but are now used in warm waters around the world to provide shrimp to our markets.

Following this history of innovation, our nation's research community has developed new species for culture using open ocean farming technologies and species specific diets required to create new sources of cultured protein for our markets. If we do not act quickly, we will again end up exporting these culture techniques to other countries and then buying the resulting product thereby increasing the nation's trade deficit and losing the potential for job growth, and its economic benefit, for our own citizens.

In February 2009 during his address to Congress, President Obama stated:

"The answers to our problems don't lie beyond our reach. They exist in our laboratories and our universities, in our fields and our factories, in the imaginations of our entrepreneurs and the pride of the hardest-working people on Earth I do not accept a future where the jobs and industries of tomorrow take root beyond our borders.... It is time for America to lead again."

In light of this statement and in consideration of the deficit in our nation's seafood supply and the urgency to create new jobs and to support existing jobs in the seafood industry, it is apparent that this Administration has a mandate to be proactive in the expansion of the aquaculture industry and to use its regulatory authority to promote, not just evaluate the potential for, the development of farming in the Exclusive Economic Zone (EEZ).

Turning policy into action

The Draft Policies reiterate the need for expanded production and state DOC and NOAA authority to regulate. What is missing is a statement of what goals have been set, the actions required to realize those goals and the time line anticipated for executing those actions and realizing the goals. Without that level of strategic planning, it is impossible to assess over time the success being realized or to evaluate the need for additional resources to overcome problems encountered along the way. This may be where adopting traditional management practices for fisheries may be of value.

When managing fisheries, the size of the wild stock is assessed and characteristics of that stock are evaluated and modeled to afford a management scheme to maximize a long-term yield from that wild resource. The process is adaptive in that it reviews annual catch statistics and, when necessary, the harvest rates are modified up or down in response to the condition of the wild stock. DOC and NOAA need to develop such an adaptive management scheme for aquaculture expansion and its current Council and Regional management structures will lend themselves well to facilitating this format.

An interim program to speed progress

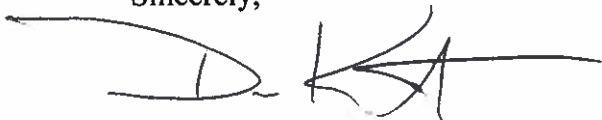
NOAA should establish production goals and a timeline to evaluate and adjust those goals, as prescribed in the IRAPG document. This would allow the Administration and Congress to have a measure by which investments in aquaculture development (research, loans, etc.) could be weighed against job creation, economic value and environmental impacts, if any. The current NOAA Fisheries budget is approximately \$1 billion of which \$15 million is used for non-salmonid aquaculture. Considering that current domestic fisheries, although well managed, will not likely yield any more supply to our markets and that aquaculture has the potential to provide a significant return on invested management and research funding, NOAA Fisheries should begin now to develop goals and to execute the strategic actions required for their realization so that the potential benefits of future federal funding can be readily evaluated.

We have the technologies and the knowhow needed to undertake the expansion of aquaculture into the EEZ. We have ample regulations to govern the permitting process and monitoring techniques and predictive models that can be used to minimize, mitigate or eliminate adverse impacts to the environment. What we need quickly are commercially sized farms located in the open ocean that can use these technologies, provide the jobs, and produce the seafood products our nation needs. These farms would also provide the format for further refinement of the adaptive management strategy that will dictate how fast the industry may grow and under what conditions future farms may operate. The proposed goals need to be delineated across management regions and with milestones set at 5, 10 and 20 years.

Working together

DOC and NOAA should create a long-term vision for this marine farming that includes quantifiable measures of success for both production and temporal goals. Our Institute along with the other members of the Coalition for Action on Open Ocean Aquaculture are ready to assist in this effort.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Kent', with a long horizontal line extending to the right.

Donald B Kent
President