

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

Submitted by the Coalition for Action on Open Ocean Aquaculture

1.0 Introduction

In 2011 NOAA reaffirmed it had regulatory responsibility under the Magnuson-Stevens Fishery Conservation and Management Act for siting aquaculture in U.S. federal waters by issuing an important draft policy for marine aquaculture. This positive action is consistent with NOAA's long history of encouraging commercial development of marine aquaculture through programs and activities that:

- Support basic and applied research
- Create innovative technologies and close knowledge gaps
- Evaluate environmental and socio-cultural impacts
- Conduct economic feasibility and impact evaluations
- Provide public education and outreach

Fostering the development of new technologies to grow and sustain seafood production will create new jobs, and help retain and augment our traditional seafood industry. Equally important, marine aquaculture will help secure our domestic seafood supply in a highly volatile global marketplace. Domestic per capita seafood consumption can reach the increased levels recommended by the medical community and the USDA only through increased aquaculture production either in the U.S. or abroad. Considering our existing reliance on foreign producers, the socio-economic benefits of increased production should accrue to our nation – not to other countries selling to our markets.

The purpose of this document is to provide positive stakeholder comments on NOAA's marine aquaculture policy, to stress that it is urgent that it be implemented, and to offer a practical and direct approach to expeditiously demonstrate the technical and economic feasibility of farming in federal waters to begin to meet America's growing need for expanded domestic seafood production.

2.0 The Draft NOAA Policy

On February 9, 2011 NOAA released a draft aquaculture policy for public comment. The draft describes our nation's growing dependence on seafood imports to meet growing demand and highlights the opportunity to produce more seafood domestically by utilizing open ocean aquaculture (OOA) technologies. This forward-looking policy clearly states that "aquaculture is an important component of NOAA's efforts to ... enable the production of safe and sustainable seafood." The draft policy also covers many other aspects of marine aquaculture, such as cooperative research, extension and outreach, expanded marine stock enhancement, etc., but it does not put forward a clear path or commitment to expeditiously develop commercial aquaculture by OOA for seafood. An opportunity exists to further NOAA's draft policy by developing an action plan that focuses on food production and reiterating the urgency for greater U.S. seafood self-sufficiency.

This presentation urges NOAA to expand the draft policy so that the development of commercial marine aquaculture for domestic seafood production is clearly identifiable as the primary policy objective. Without such a clear statement and commitment, the remaining policy objectives have little focus or context. Additionally, by providing specific guidance to focus on greater seafood production, a plan of action could be developed that has measurable objectives and milestones. Moreover, the focus for immediate Agency action should be aquaculture in federal waters as highlighted in Appendix 1 of the policy, entitled “NOAA Principles for Aquaculture in Federal Waters.”

3.0 NOAA’s Regulatory Authority for OOA Development

NOAA has determined that “aquaculture” is considered “fishing,” and the agency has established regulatory authority to permit OOA under the Magnuson-Stevens Fishery Conservation and Management Act, at least for species that are federally managed. Regardless of the species under culture, NOAA has a regulatory mandate to address marine resource conservation issues in all federal waters and in waters under state management, whenever proposed activities might impact federally managed resources (e.g., marine mammals). NOAA has indicated OOA development should be governed by a national policy to ensure a coordinated federal regulatory process for permitting facilities and to provide regulatory oversight and property rights for the industry and its investors, hence the drafting of the recently released policy, that is in part based on a series of nationwide listening sessions.

Interest in expanding U.S. aquaculture development has been building for a long time and recent growth in global seafood demand coupled with the global state of wild fisheries have triggered a critical need for urgent action. Over 30 years ago with the enactment of the National Aquaculture Act of 1980, Congress declared that “aquaculture has the potential for reducing the U.S. trade deficit in fisheries products, for augmenting existing commercial and recreational fisheries and for producing other renewable resources, thereby assisting the U.S. in meeting its future food needs and contributing to the solution of world resources problems. It is therefore, in the national interest and it is the national policy to encourage the development of aquaculture in the U.S.” Thus it has been national policy to support aquaculture development for 30 years.

Recognizing rising concerns over the management of America’s ocean resources, in 2004 the congressionally chartered U.S. Commission on Ocean Policy issued a report to Congress that included a chapter on marine aquaculture, which acknowledged more effort should be made to expand the industry. Later that year, in response to the recommendations of the Commission, the President released the U.S. Ocean Action Plan which encouraged aquaculture development in federal waters. Taking the lead, NOAA, as the federal agency dedicated to stewardship of living marine resources, picked up the challenge and sought lead authority under the National Offshore Aquaculture Act of 2005 to create a regulatory framework for aquaculture in federal waters. The Act failed to move in Congress and an updated version, the National Offshore Aquaculture Act of 2007 was introduced, which also saw no legislative action.

In 2009, Rep. Lois Capps introduced the National Sustainable Offshore Aquaculture Act, which also did not move forward. At the same time, NOAA and the fishery management councils were exploring options for pursuing aquaculture projects through existing statutes. In

2004, the Gulf of Mexico Fishery Management Council began a multi-year process to create an aquaculture enabling amendment to their existing fishery management plans to allow finfish net pen culture in federal waters. As part of this process and over the course of six years, the Gulf Council changed their emphasis from an amendment to existing fishery management plans to a full and complete marine aquaculture fishery management plan for the Gulf of Mexico. As required for all plans, they also completed a Programmatic Environmental Impact Statement (PEIS) as required by the National Environmental Protection Act (NEPA) and a Regulatory Impact Review and a Regulatory Flexibility Analysis as required by the Regulatory Flexibility Act of 1980 and Executive Order 12866.

The Gulf Council's marine aquaculture fishery management plan was passed and approved in 2009, but despite the exhaustive environmental and regulatory analysis already conducted as well as the existence of previous aquaculture policies and implementation plans, NOAA announced that it would first undertake a new effort to craft a nationwide policy prior to approving implementing regulations.

In summary, Congress has recognized that OOA can and should be managed to provide increased domestic production of seafood, while at the same time facilitating living marine resource and habitat conservation. Since 1980, NOAA has drafted multiple policies, implementations plans, technical memoranda, a ground-breaking fishery management plan, and draft legislation as well as supported countless research projects covering nearly every aspect of offshore and inshore aquaculture. For these reasons, it is vital that the final version of NOAA's new national aquaculture policy clearly and unequivocally state that the development of marine aquaculture in federal and state waters is of critical importance to our nation's economic and food security and to our stewardship of the environment. It is equally vital that NOAA must then take proactive steps to make OOA a reality.

4.0 Proposed Interim Regional Aquaculture Goals and Governing Principles

4.1 Commercial-Scale Demonstration Projects

The **highest priority** for NOAA should be to implement the draft policy with an action plan that will provide a well defined path to sustainable commercial aquaculture development. Currently, the draft policy is not infused with a sense of urgency to move aquaculture into the open ocean in a timely manner or a sense of strong encouragement for the private sector to invest in OOA, such that if they desire to establish a commercial facility in federal waters, the process is well defined and success reasonably predictable.

After many years of previous research and commercial farming in the U.S. and overseas, it is apparent that there is sufficient scientific knowledge and understanding and adequate technological capacity to establish an initial OOA permitting and leasing process for federal waters. The only factor lacking is NOAA's direct hands-on experience with applying its regulatory authority to permitting commercial-scale fish farms. This experience can only be acquired by undertaking the review and approval process and then monitoring those same commercial operations over time to evaluate environmental, economic and social factors using an adaptive management approach.

4.2 Proposed Interim Regional Aquaculture Production Goals

We propose that NOAA adopt **Interim Regional Aquaculture Production Goals (IRAPGs)** to advance the near-term development of OOA in the Exclusive Economic Zone as a matter of

urgency and in a manner consistent with existing law, regulations, policy, and Congressional intent. This approach would allow private commercial OOA farms to begin operation in the very near future so that critical uncertainties, if any, can be identified and addressed.

Under this proposal, each of the six NMFS Regions would consider permit applications for a number of commercial aquaculture operations capable of producing a specific volume of cultured product: *regional production goals*. These IRAPGs would be established by the nine Fishery Management Councils. Direct analytical evidence from regularly, prescribed site monitoring would have to demonstrate that the existing farms have met federal environmental operating standards. Lack of compliance by any individual farm would result in the respective Councils taking direct action to require compliance or termination of the farming operation. Multiple farms operating within a specific region would allow evaluation of potential cumulative effects thereby providing a means for direct assessment of predictive environmental and economic models. Proposals to increase the IRAPGs in each region would be reviewed by the appropriate Council and would be contingent on the permitted operations' adherence to the operating standards established when the relative operating permits were issued (e.g., EPA's NPDES permits).

The Gulf of Mexico Fishery Management Council has already established a production limit for aquaculture production. In regions where a Council mandated production goal does not already exist, we propose an initial regional production goal of 12,000 metric tons (MT), a figure derived as follows.

In its 10-Year Plan for the NOAA Aquaculture Program (2006), the Agency used an industry analysis¹ to reflect the potential for increased domestic production. The analysis estimated that domestic production could increase by approximately one million metric tons to an overall annual production of 1.5 million MT. The analysis predicted that 935,000 MT could be marine grown shellfish and finfish. Targeting approximately 8% of the marine production (72,000 MT) as an immediate demonstration goal for OOA— which is less than 2% of the reported landings of all U.S. commercial fisheries – would allow each of the six regions to permit up to 12,000 MT annually. This modest adaptive management approach would promote the deliberate development and demonstration of OOA, while allowing both the regulatory and industry infrastructure to learn and evolve toward becoming more efficient before any further development would be allowed.

Implementation of this interim measure would still require multiple approvals including adherence to the National Environmental Policy Act (NEPA). NOAA would assume the lead agency authority for acceptance of the project Environmental Assessment or Impact Statement. Federal permits from EPA (NPDES permit) and the U.S. Army Corps of Engineers (Section 10 permit) would be required. Other consultations will be required, such as the Coastal Zone Management Act consistency and input from states adjacent to the project, all of which

¹ C.E. Nash; 2004; *Achieving policy objectives to increase the value of the seafood industry in the United States: the technical feasibility and associated constraints*; Food Policy 29; pp 621-641

represent the potential for serious delay and/regulatory gridlock. Therefore, for the IRAPG approach to move forward, it is essential that NOAA provide leadership and facilitation.

4.3 Statement of IRAPG Principles

Further we propose that the IRAPG program be managed under the following principles:

- Sustainable development shall be defined² as *the management and conservation of the natural resource base and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such development conserves land, water, plant genetic resources, is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable.*
- Protect and conserve the ocean environment to support the health of the planet, as well as all the organisms that rely upon that environment.
- Recognize the value of and meet the need for an abundant and healthy supply of farmed seafood for domestic markets by supporting a sustainable industry through the synergy of profitability and protection of the ocean environment
- Use of systematic analysis to develop a scientific consensus that insignificant impact to the environment can be expected before expansion beyond an initial scale may be undertaken
- Support coordination among federal and state regulatory agencies to develop a permitting process that also follows the principles above.

5.0 Benefits to the Nation

Under this proposal, scientifically validated, environmentally sustainable and economically viable aquaculture can be established in federal waters now, providing NOAA with the hands-on experience it needs and the nation with a basis on which to plan for OOA in future (i.e., Marine Spatial and Coastal Planning). Importantly, nothing in this proposal is intended to marginalize the importance of wild fisheries resources, imported seafood or other emerging aquaculture technologies (e.g., recirculating aquaculture systems). Domestic fisheries and seafood imports currently play the dominant roles in our nation's seafood supply and will continue to do so.

Open Ocean Aquaculture development in federal waters offers a rare opportunity to lead globally in the creation of a new, ocean-based industry that will provide economic opportunity for U.S. businesses and jobs in coastal communities while assuring American seafood consumers that they will have a sustainable supply of healthy seafood in the future.

² Food and Agriculture Organization of the United Nations Publication: FAO Council, 94th Session, 1988

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