

Offshore Aquaculture Regulation under the Magnuson-Stevens Fishery Conservation and Management Act

Worldwide, capture fisheries are already fully, or near fully, exploited, but seafood demand continues to increase with a growing global population. As demand rises, aquaculture takes on an increasing importance to the world food supply, and future increases in demand will require increased aquaculture production. Production has expanded dramatically in recent years to meet increasing demand, but little of this growth has occurred in the United States. The U.S. government and aquaculture industry are seeking to stimulate domestic growth, including by promoting a new industry sector located in offshore waters subject to federal jurisdiction.

Care is needed to ensure that the benefits of offshore aquaculture development are not offset—or exceeded—by environmental impacts. Among other impacts, aquaculture facilities may discharge pollutants such as excess feed, fecal matter, chemicals, and parasites; escaped cultured fish and shellfish may interbreed or compete with native stocks; and aquaculture may lead to harm to predators and protected species, such as whales. Multiple regulatory programs must work together in a clear and effective framework for these impacts to be appropriately addressed and balanced against the benefits of offshore aquaculture development.

Role of the Magnuson-Stevens Act

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA) regulates fishing in federal waters pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA), based on Fishery Management Plans (FMPs) created by Regional Fishery Management Councils. Although the MSA was drafted to regulate the harvest of fish from the wild, NOAA has taken the position that aquaculture is also subject to management under the Act. Only a few existing FMPs specifically address aquaculture, but in practice most FMPs

contain limitations on unapproved gear and other requirements that bar the development of aquaculture projects without special authorization. Recently, however, NOAA has issued a national aquaculture policy and indicated that it will issue regulations to implement the first FMP specifically created to provide a regional framework for aquaculture development in federal waters in the Gulf of Mexico and that it will use that FMP as a national model. Therefore, the time is ripe to consider how the MSA may be used to regulate offshore aquaculture.



Recommendations

NOAA and the Regional Fishery Management Councils can take the following actions to ensure that the MSA is deployed most effectively to manage aquaculture and minimize the possibility that aquaculture results in harm to the environment.

- **Use FMPs to address environmental impacts not otherwise regulated under federal law, but improve upon the Gulf of Mexico FMP before using it as a model in other regions.**

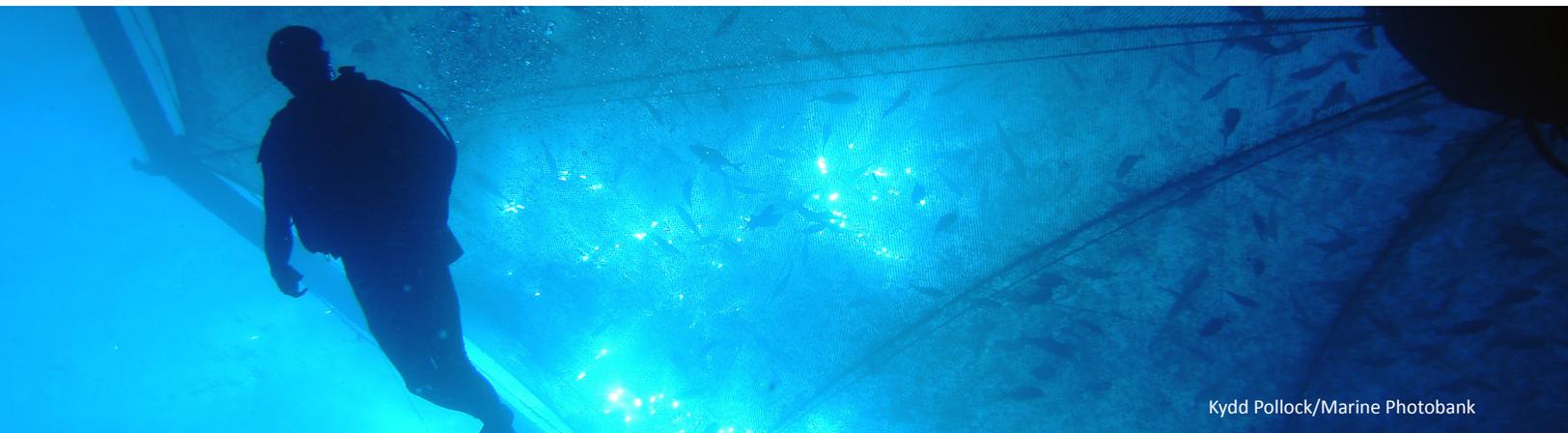
The MSA may be an important link in protecting the environment from the impacts of offshore aquaculture because it authorizes management measures and permit conditions, such as siting restrictions and habitat protections, that are not adequately addressed by other regulatory programs, such as the Clean Water Act. The Gulf of Mexico Aquaculture FMP demonstrates this broad authority but its exercise of this authority can be improved by requiring mandatory evaluation criteria and permit requirements, including assessment and monitoring procedures and mandatory performance measures. Such mandatory criteria would ensure that FMP provisions are enforceable and provide the basis for the revocation or suspension of permits if facilities are found not to be in compliance. NOAA and the Gulf of Mexico Fishery Management Council should address these issues before implementing the FMP or using it as a national model.

- **Provide direction on and support development of models for setting annual yield for aquaculture.**

Because the MSA was drafted to regulate the harvest of fish from the wild, regulatory guidance is needed on how to interpret its statutory requirements, such as optimal yield determination, for aquaculture. In addition to clarifying how to implement the law, NOAA should continue to support development of scientific models for estimating yield targets for aquaculture and ensure that data generated by aquaculture projects are made available to the public.

- **Develop guidance on establishing appropriate management units.**

FMPs are only applicable to organisms included in their defined management units. Currently, Councils must determine on their own whether to manage cultured stocks jointly with wild stocks of the same species or together as one or more multi-species group(s) of cultured organisms. NOAA can fill this gap with guidance on how to define management units to best account for the different environmental impacts associated with different species and production methods.



- **Use short term aquaculture permits to ensure that novel facilities and technologies perform well in real-world conditions.**

Untested facilities may not perform as predicted by models, yet under the only aquaculture-specific FMP (the Gulf of Mexico Aquaculture FMP) they are eligible for 10-year permits. Aquaculture FMPs can minimize possible harm by requiring short-term permits for real-world testing of new facility types as a prerequisite to issuance of long-term permits.

- **Minimize the adverse impacts of aquaculture on Essential Fish Habitat.**

The MSA requires Councils to minimize the adverse effects of fishing on designated essential fish habitat (EFH) in addition to requiring federal agencies to consult NOAA before permitting other activities that may affect EFH. Most Councils have designated aquaculture as a non-fishing activity—an approach incompatible with management of aquaculture as “fishing” under the MSA. Councils should designate aquaculture as a fishing-related activity for EFH purposes and implement management actions required by the MSA to ensure that it minimizes adverse impacts on EFH. While all federal permits that may affect EFH require consultation with NOAA, Council action to incorporate management measures in FMPs and effectively implement those measures would add a layer of environmental protection beyond that offered by consultation.

These actions can ensure that the MSA is an effective part of the regulatory system for offshore aquaculture, providing predictability for prospective producers and effective management measures to avoid harm to marine ecosystems and habitats.

For more information, please refer to *Offshore Aquaculture Regulation Under the Magnuson-Stevens Fishery Conservation and Management Act*, a 2013 publication of the Environmental Law Institute, Emmett Environmental Law & Policy Clinic at Harvard Law School, and The Ocean Foundation.



Find out more at www.eli-ocean.org/fish/offshore-aquaculture



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