**The History of Offshore Aquaculture in the Gulf of Mexico**

LAURA TIU, UF/IFAS – Sea Grant, 732 N. 9th Street, DeFuniak Springs, FL 32433, lgtiu@ufl.edu

KEYWORDS: Offshore aquaculture

Open ocean aquaculture is broadly defined as the rearing of marine organisms in exposed areas beyond significant coastal influence1. It is also called offshore aquaculture or offshore fish farming. This typically takes place in the U.S. Exclusive Economic Zone (EEZ) or federal waters, generally 3 to 200 nautical miles from shore for most states, but there are exceptions.

Offshore aquaculture is currently well established in many countries with research and commercial facilities in Australia, Chile, China, France, Ireland, Italy, Japan, Panama, Bahamas, Mexico, Vietnam and Norway. In the US, the situation is different. There is one commercial mussel farm in federal waters off California. To date, all other commercial aquaculture facilities have been sited in nearshore waters under state or territorial jurisdiction. Currently, there are currently no commercial finfish or shellfish aquaculture operations in the Gulf of Mexico (GoM) federal waters.

In the US, domestic aquaculture production has been identified as a priority for almost 40 years. In 1980, Congress passed the National Aquaculture Act in recognition of the importance of domestic aquaculture in meeting future food needs in the US2. The Act charged the National Oceanic and Atmospheric Administration (NOAA) to carry out the charge as they have a long history of conducting regulatory, research, outreach, and international activities on marine aquaculture issues. This was the beginning of what was termed the “Blue Revolution.”

Progress developing commercial offshore aquaculture facilities in federal waters during the ensuing decades has been hampered for a number of reasons including an unclear regulatory process, technical uncertainties, potential negative impacts and lack of experience. To address these challenges, at the request of the Administration, the 110th Congress introduced the National Offshore Aquaculture Act of 2007 in both the house and the senate3. Both bills focused on developing a framework to regulate aquaculture in the EEZ. A hearing was held in the House Committee on Natural Resources, but no further action was taken on either of these bills.

The Gulf of Mexico Fishery Management Council (Council) manages fishery resources in the federal waters of the Gulf of Mexico including reef fish, red drum, and as interpreted at that time, Aquaculture. With this directive, the Council voted on January 28, 2009 to approve a Fishery Management Plan (FMP) to issue aquaculture permits and regulate aquaculture in federal waters of the GoM4. The FMP went into effect on September 3, 2009. NOAA immediately announced plans to develop a new National Aquaculture Policy to put the FMP into context. Several groups opposed the Policy and bills5,6,7 were introduced into the house and senate to rescind the authority of the Secretary of Commerce to permit or regulate offshore aquaculture or delay the process. These efforts died in Committee.

The Department of Commerce and NOAA both released policy in 2011 affirming NOAA’s role in fostering marine aquaculture in the U.S. and announcing intent to move forward with the rule making process for the GoM Aquaculture FMP8,9. In August 2014, the National Marine Fisheries Service proposed regulation to implement the FMP, as prepared by the Council in 2009, and requested public comment. They received over 1100 comments and provided 115 responses in the final rule.

The Council’s FMP for regulating offshore marine aquaculture in the GoM final rule was published in the federal register January 13, 201610. It became effective February 12, 2016 and established a regional permitting process to manage the development of an environmentally-sound and economically sustainable aquaculture industry in federal waters of the GoM.

The Center for Food Safety (and others) immediately filed a lawsuit against NOAA arguing that the Magnuson Stevens Fishery Conservation and Management Act (MSA) under which the FMP was developed, was meant to give authority over the harvesting of wild fish, not aquaculture. A judge sided with the plaintiffs and ruled that “existing fisheries management laws were never intended to regulate aquaculture, concluding the NMFS had acted outside of its statutory authority in promulgating its rules.”

The development of responsible aquaculture continues to move forward under the existing regulatory framework within the Environmental Protection Agency. NOAA still has input through the Army Corps permit process and can also still advise through siting guidance and the permit process.

A need for definitive Federal legislation to resolve this issue exists. To that end, in June 2018, Senator Roger Wicker of Mississippi introduced the “Advancing the Quality and Understanding of American Aquaculture Act,” or AQUAA Act, that provides for a regulatory system for marine aquaculture in the United States exclusive economic zone11. Wicker’s legislation has the support of high-profile Florida senator Marco Rubio. Wicker’s bill may also gain the support of the administration, as Commerce secretary Wilbur Ross has spoken repeatedly about his desire to dramatically reduce the ratio of seafood consumed by Americans that is imported – roughly 90%.

Nearly 40 years after the National Aquaculture Act and 12 years after the National Offshore Aquaculture Act, offshore aquaculture in the GoM is on the verge of occurring. Two projects, Vellela (<http://www.kampachifarm.com/>) and Manna (<https://mannafishfarms.com/>), are working through he process of establishing offshore aquaculture in the GoM.

LITERATURE CITED

1. Upton H.F., Buck E.H. Open Ocean Aquaculture (Congressional Research Service Report for Congress) [(accessed on 10 July, 2019)]. Available online:<https://nationalaglawcenter.org/wp-content/uploads/assets/crs/RL32694.pdf>.
2. GovTrack.us. (2019). S. 1650 — 96th Congress: National Aquaculture Act of 1980. Retrieved 10 July, 2019 from <https://www.govtrack.us/congress/bills/96/s1650>
3. GovTrack.us. (2019). H.R. 2010 — 110th Congress: National Offshore Aquaculture Act of 2007. Retrieved 10 July, 2019 from <https://www.govtrack.us/congress/bills/110/hr2010>
4. Gulf of Mexico Fishery Management Council and National Oceanic and Atmospheric Administration Fishery Management Plan for Regulating Offshore Marine Aquaculture in the Gulf of Mexico (Including a Programmatic Environmental Impact Statement, Regulatory Flexibility Analysis and Regulatory Impact Review) [(accessed on 10 July, 2019)]; Available online: <http://gulfcouncil.org/wp-content/uploads/Aquaculture-FMP-PEIS-Final-02-24-09.pdf>
5. GovTrack.us. (2019). H.R. 3534 — 111th Congress: Consolidated Land, Energy, and Aquatic Resources Act of 2010. Retrieved 10 July, 2019 from <https://www.govtrack.us/congress/bills/111/hr3534>
6. GovTrack.us. (2019). H.R. 4363 — 111th Congress: National Sustainable Offshore Aquaculture Act of 2009. Retrieved 10 July, 2019 from <https://www.govtrack.us/congress/bills/111/hr4363>
7. GovTrack.us. (2019). S. 3417 — 111th Congress: Research in Aquaculture Opportunity and Responsibility Act of 2010. Retrieved from <https://www.govtrack.us/congress/bills/111/s3417>
8. DOC, 2011. U.S. Department of Commerce Aquaculture Policy, June 2011, 3p. [file:///C:/Users/lgtiu/Downloads/DOC%20Aquaculture%20Policy%202011%20(1).pdf](file:///C%3A%5CUsers%5Clgtiu%5CDownloads%5CDOC%20Aquaculture%20Policy%202011%20%281%29.pdf)
9. NOAA Marine Aquaculture Policy. 2011 <https://www.afdf.org/wp-content/uploads/8g-NOAA-Marine-Aquaculture-Policy-2011.pdf>
10. Fisheries Management Plan for Regulating Offshore Marine Aquaculture (June 4, 2009) / Federal Register Docket No. 080225276-4124-01 Proposed Rule for Aquaculture & Fisheries of the Caribbean, Gulf, and South Atlantic (August 28, 2014) <https://www.federalregister.gov/d/2016-00147>
11. GovTrack.us. (2019). S. 3138 — 115th Congress: AQUAA Act. Retrieved from <https://www.govtrack.us/congress/bills/115/s3138>