

FISHERMEN'S NEWS

The Advocate for the Commercial Fisherman



Pacific Coast Federation of Fishermen's Associations

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Aquaculture: Keep it Onshore! *By Glen Spain*

This is an update of an article by PCFFA that appeared in the July 2009 issue of Fishermen's News, originally authored by Nate Grader.

DAVID ARNOLD, A HISTORIAN, wrote in his recent book, *The Fishermen's Frontier: People and Salmon in Southeast Alaska*, that despite the recent record catches in the Alaska salmon industry, the industry remains in a state of crisis due to the rise of the global salmon farming industry. An air of inevitability always pervades these assessments based on the simple calculus of: 9 billion people by 2050 plus declining stocks of fish worldwide equals expanded aquaculture production and supposedly "the end of wild fisheries."

Never mind that aquaculture still relies heavily on wild fish for fish meal despite the best efforts of fish nutritionists, or that the aquaculture industry is far more interested in developing high value fish such as blue fin tuna (Clean Seas Tuna Ltd. in Australia will begin production soon), halibut, and blackcod than fish that will feed the world. Aquaculturists tend to roll their eyes when you suggest they should raise tilapia and other low trophic (and low value) plant-eating fish. These things don't enter into their economic equation.

Economic competition with aquaculture is also driving many of the changes in the fishing industry because of declining ex-vessel market prices (on aggregate) for wild fish. The spread of

disease and the threat of escapes from fish farms, in addition to their reliance on forage fish, could also affect the fishing industry as profoundly as competition already has. The future of the fishing industry seems inextricably linked to the continued development of the aquaculture industry.

Fisheries managers have begun to respond, often poorly, to rapidly changing seafood markets by trying to redesign management structures that are supposed to enable wild fisheries to remain profitable in the new marketplace. The renewed push for "catch shares," community fishing associations, co-ops, and co-management cannot be properly understood without taking into account the effect that aquaculture has already had on the fishing industry. Some of these untested new systems, such as "catch shares," are proving to be highly counterproductive in the long run.

Likewise, the competition from aquaculture has also driven the efforts by fishermen to market their products directly, locally, and as niche products, facilitated by new "wild caught" labeling laws our industry fought for over many years.

The commercial fishing industry will continue to operate alongside aquaculture, despite what some alarmists may say. Wild salmon fisheries continue to coexist with farmed salmon -- but the markets are quite different from what

they were 20 years ago. As Gunnar Knapp, an economist for the University of Alaska, has shown, farmed salmon took over the middle of the market for salmon and pushed some species of salmon, such as king and in some cases sockeye and silvers, to the top and the rest to the bottom of the market. This market differentiation did not happen on its own, but was the result of the salmon fishing industry in Alaska and on the West Coast marketing their fish differently.

But what will the future commercial fishing industry look like? True it will still exist, but in what form? Will "catch share" management be the only viable way for fishermen to make a living, as NMFS and some NGOs believe? Or will there be a more diverse range of options for fishing communities to choose from in order to adapt to the new realities of the market?

Indeed the twin policy and regulatory goals of NMFS to implement both "catch share" programs and offshore aquaculture are two sides of the same coin. The real question is not whether or not the fishing industry can survive aquaculture, but how should it change in order to adapt to the continued development of the aquaculture industry.

That question cannot be answered without first looking at how the aquaculture industry is likely to be regulated here in the United States, and



where changes in the way aquaculture is regulated are likely to occur. In short, what is the future of the aquaculture industry in the United States, and how is it likely to affect the commercial fishing industry?

Salmon Aquaculture: Major Changes In Store?

There are several major reforms needed in commercial at-sea fish farm net-pen operations to protect wild populations from their many negative impacts, and salmon aquaculture reform advocates have tried to keep up the pressure. In British Columbia, Biologist Alexandra Morton has inspired many of these efforts by scientifically documenting and verifying these impacts, which include the spread of sea lice and other fish pathogens from net-pen operations to nearby wild stocks, with verifiable research science.

In British Columbia, where many estuaries now have salmon fish farms, the debate rages on over the regulation of salmon aquaculture. On 9 February 2009, after almost two decades of purely Provincial control, the British Columbia Supreme Court placed the responsibility for salmon farm regulation on Canada's Federal Crown Government. The British Columbia Supreme Court then ruled the B.C. regulation of fish farms to be unlawful, unconstitutional and void. That key ruling redefined B.C. fish farming as an extension of Canada's fisheries, rather than a division of agriculture.

As a result of the 2009 ruling, hundreds of BC fishermen then submitted a petition to the British Columbia Fisheries Minister and the Pacific Director General of the Department of Fisheries and Oceans regarding the regulatory status of aquaculture farms. The petition demands that the federal government should hold fish farms to the same standards as the commercial fishing sector.

The petition asked for a number of immediate measures to protect wild salmon populations and increase transparency within the BC aquaculture industry. Since the BC aquaculture operations are now to be federally regulated, the fishermen want the federal department to enforce the Canadian Fisheries Act. Under that Act, observers and cameras will be required during deliveries of aquaculture salmon to watch for by-catch of wild fish species. To further increase transparency, the group has called for fish cleaning stations to be monitored for the presence of wild fish in each farmed fish's digestive tract. They also say that vessels transporting farmed fish should be licensed like commercial fishing boats and submerged lights on underwater pens should be removed to prevent wild species from being drawn to the pens.

Then on May 6, 2015, the Canadian Federal Court of Justice handed down the decision in *Morton vs. Minister of Fisheries & Oceans, et al.* (Case No. T-789-13) that DFO has been unlawfully allowing the salmon farming industry to transfer farmed salmon into marine net pens that are carrying diseases with the potential to "severely impact" the wild fishery at an international level. He ruled that DFO is abdicating its legal responsibility to protect and conserve wild fish by handing

off decisions about transferring fish with diseases to the salmon farming industry. This landmark ruling and much other information on the impacts of salmon fish farms that spread sea lice and other diseases to wild salmon populations in BC can be found on Alexandra Morton's web site at: www.alexandramorton.ca. Another BC group working on these issues is the Living Oceans Society: www.livingoceans.org.

In Chile, periodic outbreaks of disease have ravaged the salmon farming industry. The Chilean government has approved new regulations to its fisheries laws aimed at preventing the outbreak and spread of ISA. The new regulations will reorganize the way salmon farms are located and also will require salmon farms to be stocked at lower densities. It is still unclear how effective these regulations will be.

The salmon farming industry is also undergoing regulatory changes elsewhere to meet more stringent environmental guidelines. Changes in the way the salmon farming is regulated around the world are likely to have a large impact on the aquaculture policy debate in the United States.

Gulf Council Fishery Management Plan

On 28 January 2009, the Gulf of Mexico Fishery Management Council voted for a Fishery Management Plan (FMP) to regulate offshore marine aquaculture in the Gulf of Mexico, despite widespread outcries from the public and private sector organizations including PCFFA. The Council voted 15-11 in favor of allowing offshore aquaculture within the federally regulated Exclusive Economic Zone (EEZ), which extends from 3 to 200 miles offshore.

The new proposed Aquaculture FMP would make the Gulf of Mexico EEZ the first coastal waters in the U.S. to develop a permitting system for open ocean fish farming. Proponents of the plan assert that this open ocean aquaculture would reduce America's dependence on seafood imports by producing 64 million pounds of marine finfish a year, relieve pressure on overfished local fish populations, and help the nation gain a greater foothold in the growing global aquaculture business. Amberjack, red snapper, and other native Gulf finfish would be raised in these offshore aquacultures.

Despite the arguments from aquaculture supporters for a green light on aquaculture in the Gulf of Mexico, there is still strong concern that the Council's decision was made prematurely. In a letter signed by over 112 conservation organizations, consumer organizations, fishing groups, seafood businesses, independent scientists, and other concerned parties, opponents to the plan argued that the "Aquaculture FMP would establish a harmful precedent for regulating offshore aquaculture when future plans for national legislation under a new Administration, a new Congress, and a new leadership at NOAA are unresolved."

The letter also addressed concerns that the Aquaculture FMP is not in accordance with the National Environmental Policy Act (NEPA) and Endangered Species Act guidelines, that Gulf Council and NOAA don't have the legal authority under the Magnuson Stevens Act to develop a permitting



system for aquaculture in the EEZ, and that the standards of the Aquaculture FMP are not strong enough to adequately protect surrounding environments and the communities that depend on them. Members of Congress have also raised similar concerns, and it is unclear whether that Aquaculture FMP would ever be able to meet legal muster if it is implemented.

As of December, 2015, this Aquaculture Fishery Management Plan has not yet been implemented. See the Gulf Council website for a copy of the FMP and its environmental impacts analysis at: <http://gulfcouncil.org>.

The Obama Administration proposed Draft Aquaculture Rules back in February of 2011, but no action has been taken on them. Those proposed Rules can be found at: www.nmfs.noaa.gov/aquaculture/docs/noaadraftaqpolicy.pdf.

Closed Containment, Onshore Operations

The George W. Bush Administration inserted language into the Energy Policy Act of 2005 that would have allowed for "alternate uses" on existing and future offshore oil platforms. In a proposed 2008 rule the then Minerals Management Service (MMS) (now defunct) interpreted aquaculture operations as an "alternate use." The publication of the proposed rule drew widespread criticism.

Conservation and fishing groups and some in Congress have argued that off-shore and at-sea aquaculture operations should not be allowed in the EEZ at all, until proper national regulations and environmental protection standards are developed. There is currently no clear authority over aquaculture operations under US law.

It is time, however, to add another feature to any national legislation – and that is a policy to develop and favor shore-based closed containment aquaculture. The risks in and to the fragile ocean environment, and to wild stocks, are often simply too great to hazard, especially when there are economically

viable, technologically proven on-shore and closed containment options.

The technology for closed containment aquaculture systems that re-circulate water have been developing rapidly and several are already in commercial use. When there is a viable alternative to open ocean aquaculture already available, fishing groups and environmental groups should insist on a policy that explores this option further.

There can be a different way forward for aquaculture. The United States does not have to repeat the environmental mistakes that other countries made when they developed aquaculture only offshore. A national policy that considers shore-based systems as a first priority could go a long way towards developing truly sustainable aquaculture.

Aquaculture and the Fishing Industry

It is imperative that fishing groups and environmental groups continue to weigh in on the aquaculture policy debate. Much will be decided in the next few years that will likely set in place a regulatory framework that will govern the industry for decades.

Fishermen and the fishing industry stand to lose a lot if regulating aquaculture is not done right. The fishing industry will be able to adapt to the aquaculture industry, but only if that aquaculture is regulated with proper environmental safeguards, takes into account the socioeconomics of coastal communities, and continues to explore the possibility of moving primarily to closed containment systems on shore. **FN**

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