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April 11, 2011

NOAA Aquaculture Program
Attn: Susan Bunsick
1315 East-West Highway
SSMC#3-13th Floor Rm. 13152
Silver Spring, MD 20910

Re: Comments on the February 2011 National Oceanic and Atmospheric Administration Draft Aquaculture Policy and the Department of Commerce's Draft National Aquaculture Policy

Dear Ms. Bunsick:

Please accept these comments on behalf of Food & Water Watch regarding the February 2011 National Oceanic and Atmospheric Administration (NOAA) Draft Aquaculture Policy ("draft policy") and the Department of Commerce's Draft National Aquaculture Policy ("DOC policy"). Please note that we have submitted earlier comments on the joint NOAA/USDA Alternative Aquaculture Feeds Report in a letter dated January 18, 2011; this letter and the alternative feeds report will be referenced in the comments below where applicable. Additionally, our comments regarding environmental and social impacts of offshore aquaculture below and alternatives such as recirculating aquaculture systems are applicable to both the draft policy and the DOC policy. Comments particular to one policy or the other are indicated as such.

Food & Water Watch (FWW) is a nonprofit consumer advocacy organization headquartered in Washington, DC that runs cutting-edge campaigns to help ensure clean water and safe food. We work with various community outreach groups around the world to create an economically and environmentally viable future. We advocate for safe, wholesome food produced in a humane and sustainable manner, and public rather than private control of water resources, including oceans, rivers and groundwater. FWW's Fish Program promotes clean, green, safe seafood for consumers, while helping to protect the environment and support the long-term well-being of coastal communities.

We congratulate NOAA's on its efforts to develop a national aquaculture policy, and there are indeed some areas that we applaud. However, we are concerned that the policy still focuses on developing an offshore aquaculture industry, despite NOAA's identification of the many negative impacts associated with this practice. More troubling is that NOAA has offered few alternatives to effectively prevent or mitigate these impacts while still pushing to promote offshore aquaculture. The following comments are designed to help NOAA's Aquaculture Program identify critical areas that were overlooked and address them appropriately. Unless otherwise noted below, quoted portions cite text in the draft policy.

Our comments are subdivided into six categories: (1) Economic impacts, (2) Social / cultural impacts, (3) Environmental impacts, (4) Level of public input/review, and (5)

Clarity regarding implementation of policy and interplay with other regulations, and (6) comments specific to the DOC policy.

ECONOMIC IMPACTS / IMPORT-EXPORT RATIO

Import-Export Ratio, and Domestic Production Does Not Mean Domestic Consumption

For years, NOAA has pointed to the high percentage of imported seafood that U.S. consumers eat (half of it from aquaculture), and asserts that we must ramp up our domestic production to industrial-scale levels to compete with these imports. However, this argument misses the mark on two key areas: first, there is no acknowledgement that the U.S. *exports* seventy percent of its domestic product (wild and farmed), and second, *producing* domestically does not necessarily mean *consuming* that seafood domestically.

Seventy percent of our domestic seafood is exported to seafood-loving countries like Japan and those in the EU, while the U.S. imports about eighty-percent of the fish we eat, mostly from countries with lower health, safety, labor, and environmental standards. In essence, we are exporting higher quality product for more money and importing lower quality product for U.S. consumers to eat at lower prices. Nothing in the draft policy suggests addressing this imbalance. Scaling up industrial aquaculture to compete with the international market could actually mean that the U.S. would continue to export the vast majority of its produced fish, yet keep the pollution and other negative impacts for its citizens. This does not solve the problem of imported seafood.

Racing to the Bottom

Imported farm-raised seafood is often produced under such dirty and unsafe conditions that the U.S. would have to adopt standards and conditions that would not only be dangerously risky to workers and consumers, but to wildlife and the environment as well. Since the U.S. is already known world-wide for quality seafood, it would be better served maintaining this niche protecting wild stocks and farming fish in truly sustainable ways, such as land-based recirculating aquaculture systems (RAS). RAS provide a domestic product that is affordable to local communities. Furthermore, RAS are known for providing many more jobs than automated industrial-scale offshore facilities.

Economic Impacts to U.S. Fishermen

U.S. fishermen also suffer economically from the development of offshore aquaculture for several reasons. First, areas zoned for offshore aquaculture operations (and their buffer zones) will effectively block commercial fishermen's access to potentially prime fishing areas, in essence granting exclusive access to a new industry at the expense of another. Second, diseases and fish escapes, discussed later in these comments, pose major threats to the health of wildlife. Finally – as is acknowledged by the draft policy – U.S. fishermen may receive lower prices for their wild seafood products when ocean farmed fish flood the market. While this final point is mentioned in passing, the draft policy does not offer any

solutions. It is very troubling to invest taxpayer money to develop an industry at the expense of another, particularly when jobs in the existing industry are at stake. Potential jobs gained in the industrial aquaculture sector do not take into the account the potential job losses in the fishing industry, nor the fact that industrial-scale offshore aquaculture operations have been known to rapidly shed jobs as they become more highly mechanized.[1]

SOCIAL AND CULTURAL IMPACTS

In working waterfront coastal communities across the U.S., fishermen are not the only ones who will be harmed by ocean fish farming. Because so many communities are integrally tied to the fishing industry, fishing-support industries may also suffer economically. Examples include bait and gear shops, as well as restaurants that rely upon freshly caught seafood to serve their customers. This can create a chain-reaction of job losses, which may then in turn impact the social connections within a community. Not only do trying economic situations hinder people's abilities to pay rent and purchase food, but they also test people's marriages, family interactions, and overall ability to play a positive role in their communities. Job losses may also lead to increased alcoholism and crime.

In an effort to prevent harm to coastal and fishing communities, detailed review and discussion about fish farming is necessary. An opportunity to increase domestic seafood production, promote green jobs and prevent competition with traditional fishermen is RAS farming. RAS can be located virtually anywhere, and because these farms are entirely closed-loop, they can grow a wide range of products – importantly, those that would not compete with local fishermen. In contrast to jobs linked to offshore aquaculture, jobs created through RAS farms are in addition to fishing jobs, helping to boost the local economy.

Hawaii

The State of Hawaii has been the main testing ground for open ocean aquaculture in the United States. Currently, it has two offshore facilities operating in state waters – yet very little consideration is given to the social impacts of these operations, particularly on native Hawaiians. One example is the effects on religious practices. Open ocean aquaculture operations can alter behavior of, or harm sharks. The Office of Hawaiian Affairs has stated that "to many of our beneficiaries the shark is a sacred animal, and is considered a member of our `ohana [family]. They are `aumakua [guiding sprits] to us."[2] Unfortunately, a tiger shark was killed at an aquaculture site operated by Kona Blue Water Farms in 2005.[3] A recent study has also shown that nurse sharks tend to congregate around the fish cages.[4]

Furthermore, NOAA's Pacific Island Regional Office (PIRO) has noticed intent to issue a fishing permit to Kona Blue Water Farms for the purpose of an offshore aquaculture operation in a 7,200 square mile area of federal waters off the leeward coast of the Island of Hawaii, Hawaii. This displays the need for the agency to consider indigenous rights, practices and concerns more seriously in its decision-making. On March 17, 2011 PIRO

published a Draft Environmental Assessment for the use of fish cages as a new 'gear-type.' The cultural impact section of the assessment relied heavily on a controversial Environmental Impact Statement produced by an ocean aquaculture company, Hawaii Oceanic Technology, Inc., for a 247-acre site leased in state waters. It was not mentioned that the company has had two contested cases filed against it during the permitting process by native Hawaiians. To truly take into consideration impacts to indigenous peoples, PIRO should have conducted their own cultural assessment. To rectify this, consultations with native Hawaiians and tribes should be required in NOAA's policy, and not merely listed as a recommendation.

Assessment of Impacts

On page ten of the draft policy, NOAA states that it plans to "assess" the "likely positive and negative social, economic, and cultural impacts of management decisions" on affected communities. However, we are not provided with details on *how* these impacts will be assessed, nor, more importantly, mitigation measures that would be employed to counteract the "likely" negative impacts. This is insufficient; spending resources to track outcomes without plans to address the anticipated findings is merely an academic exercise, and of no value to those who may be harmed.

ENVIRONMENTAL ISSUES

Many of the harmful impacts caused by industrial-scale offshore aquaculture worldwide are mentioned in the draft policy. And while some strive to make these practices more sustainable, many of these benefits are lost when the plan is to rapidly scale up industrial-scale factory fish farming around the U.S.

The track records of near-shore salmon aquaculture in Maine, British Columbia, and Chile, as well as ocean aquaculture of sea bass and gilthead sea bream in the Mediterranean are evidence of the problems that industrial-scale offshore aquaculture could cause in the U.S. As referenced earlier, these ocean factory farms would also cause conflicts of interest in the areas of fishing grounds and protected and fragile areas, among other conflicts.

Offshore aquaculture threatens wild fish populations in multiple ways. Fish escapes can alter and weaken wild fish populations through intermixing or competition for resources. Even if the cages are well built, it is generally accepted that, regardless of the technology used in cages and nets, fish are likely to escape within the lifetime of an operation due to various complications such as severe weather, equipment failure, aggressive predators destroying the cages, or human error.

Not only do fish escape – diseases do, too. Antibiotics and other chemicals are often needed to curtail illness outbreaks in the fish farms, with negative effects on consumers and the marine environment. Other water pollution concerns include excess food, feces, cage materials and other cleaning/algal growth prohibiting chemicals (antifoulants). Water

flowing out of an aquaculture facility can carry excessive nutrients, diseases, and polluting chemicals. Feed and fecal matter from aquaculture facilities can deplete the dissolved oxygen concentrations in the sediment around the cage, smothering benthic organisms. Previously, NOAA has stated that it would like to establish a $5 billion offshore fish farming industry in the U.S., but an industry of this magnitude could emit waste equal to the *untreated* waste of about 17.1 million people – over twice the population of New York City.

Also, farmed fish are often fed wild forage fish – such as anchovies and menhaden, in various forms (fish oil and fish meal), which increases the pressure on wild fish populations that are crucial to the entire marine ecosystem and people as well. Worldwide, costal countries rely on small prey fish as a key protein source for their communities.

Depending on the species being farmed, it may take several pounds of wild fish to produce just one pound of farmed fish. We acknowledge that NOAA and USDA have partnered in developing the alternative feeds report to explore other viable options, however, we caution that the federal government should not rush to support one ostensibly viable alternative, such as soy, only to cause greater environmental harm than before. To avoid redundancy, these comments do not address the importance of feed ingredients, as we have already submitted these in our January 18th letter.

Finally, it is important to note that the proposed policy allows for the stocking of non-native and genetically engineered (GE) fish. NOAA should mandate that non-native and GE fish be prohibited in all cases in U.S. fish farming and should work with organizations worldwide toward this same goal.

PUBLIC INPUT IN PROCESS

The public input process was very disappointing. The "series of seven public listening sessions during April and May, 2010" were not well publicized and the actual meetings were cut short, and staff paid little attention to commenters. Our staff and colleagues attended each of these meetings, held in various regions of the U.S. Some meetings were not even recorded, and during the public input portion, NOAA employees were clearly seen not taking any notes. In at least one instance, the public comment period was so restricted that members of the public were cut off after three minutes each – despite NOAA having availability in a given room for at least one additional hour. Deciding to adjourn a listening session over an hour earlier than publicly stated sends a strong signal that NOAA was not interested in listening to the public, much less actually considering public input in this draft policy. Serious consideration of public input must replace this charade.

While NOAA's consideration of comments *from* the public is in dire need of reform, we commend NOAA's promise to provide information *to* the public – stated in its final principle on page 11 of the draft policy. Indeed, "making publicly available all monitoring data, results, and information submitted by aquaculture facilities operating in federal waters and the results of research conducted by NOAA and others" does reflect "openness, transparency, and confidentiality." We are relieved to see that NOAA sees through

operators' past efforts to hide the pollution impacts of their facilities by claiming that such data is either confidential business information or protected as a trade secret. We only urge that NOAA, in its research, be sure to engage in its own sampling of the marine environment surrounding the sea cages, and not rely exclusively on data provided by the facilities, given the significant conflict of interest involved. We also ask that you make analysis of this information public, as raw data alone is often not often comprehensible to the general public.

IMPLEMENTATION ISSUES / INTERPLAY WITH OTHER REGULATIONS

There is some confusion as to how this policy will be implemented, specifically in regards to the "tiered approach" outlined on page 7 of the draft policy. One immediate question is whether these tiers will also receive a public comment period, or whether they will be added on as future appendices without any public input. Furthermore, the public is provided with no timeline on when such appendices will be added. As for the content of these appendices, given that they will be "more detailed policies related to specific authority to regulate aquaculture activities," we can only hypothesize that NOAA is referring to how to address the Gulf of Mexico's Fishery Management Plan (FMP) relating to offshore aquaculture.

This leads to NOAA's strange decision to deal later on with the critical issue of clarification regarding Council FMPs on ocean aquaculture. On page 5 of the draft policy, instead of NOAA clarifying its role as to whether and how specifically it can regulate the Gulf of Mexico's FMP (and other similar proposals) under current law, the agency avoids it. The public has been waiting for about a year for this draft policy primarily for this reason, but NOAA states that it will "work with Congress, federal agencies, Fishery Management Councils, and federal advisory councils or committees to clarify NOAA's regulatory authority related to aquaculture in federal waters and to establish a coordinated, comprehensive, transparent, and efficient regulatory program for marine aquaculture in federal waters…"

While NOAA as a whole has had an enormous burden in dealing with other pressing and unexpected matters, not least of which was the BP oil spill last April, it leads us to wonder what the NOAA Aquaculture Program has been doing with taxpayer money all this time. It also remains unclear whether this "coordinated, comprehensive…regulatory program" will originate from Congress, NOAA, other federal agencies, or whether fishery management councils will all create their own plans that roughly coordinate with one another. In sum, we are still left with very little clarity.

DEPARTMENT OF COMMERCE DRAFT AQUACULTURE POLICY

We commend the Department of Commerce (DOC) for clearly identifying the need to increase environmentally sound and sustainable domestic aquaculture production, and in particular for recognizing the potential in RAS farms. However, we have very serious concerns that these increases are to better "compete in the international market."

NOAA and DOC regularly state the reason we need to expand the aquaculture industry in the U.S. is to help boost domestic production to meet domestic consumption. It is clear in this statement from DOC that in fact, the goal is to rather *increase domestic export* of seafood for more money. By supporting development of ocean aquaculture, it is likely the U.S. will end up with the mess these facilities are known to cause (pollution, habitat damage, conflicts with other ocean uses, disruption of wildlife, etc.) and little else, as the products will be sent elsewhere so private firms can collect more money. Increasing profit for private companies while harming our natural environment is not a legitimate use of public resources, nor does it match with the responsibilities the Department of Commerce and NOAA have as stewards of marine resources. We strongly urge you to rethink this goal and remove it from the final DOC policy.

We also applaud the DOC's policy statement #5, which "promote[s] a level playing field for U.S. aquaculture businesses to engage in international trade." Farmed seafood products that are imported to the U.S. must meet requirements that deal with fair trade and food safety. Yet many imports currently are subjected to far less stringent standards than fish coming from the United States, and less than 2% of imported seafood is currently inspected for contaminants such as banned chemicals and filth – a catch all term for things like rat, mouse, and human hair, and disease-carrying insects or parts of insects. This means U.S. consumers receive seafood that may be unsafe for human consumption. Addressing this trade imbalance is important to both economic resiliency and human health, and we commend the DOC's recognition of this fact in its policy.

Due to the many known and potential negative environmental and social impacts that increased expansion of the offshore aquaculture sector could have, we are concerned with DOC's broad aquaculture promotion. We urge you to refine this message to exclude further development of the offshore aquaculture industry.

CONCLUSION

In NOAA's effort to develop a national aquaculture policy, we expect that negative impacts to consumers, coastal and fishing communities and marine wildlife and the environment are not only identified, but are directly prevented. We recommend that NOAA explore better aquaculture alternatives to industrial factory fish farming in the ocean, such as RAS.

Thank you for your attention and consideration, and if you have any follow-up questions on our comments, please feel free to contact us any time.

Sincerely,

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[1] Food & Water Watch. "No Jobs Here: Why Industrial Fish Farming's Promise to Boost Local Economies Falls Flat." [Backgrounder]. June 2010.

[2] Office of Hawaiian Affairs, State of Hawaii. Comments on "Hawaii Oceanic Technology, POH-2009-0363" submitted to the U.S. Army Corps of Engineers. February 19, 2010. On file with Food & Water Watch.
[3] Lucas, Carolyn. "Fish farm seeks second location." *West Hawai`i Today*, May 6, 2006.
[4] Papastamatlou, Yannis P. et. al. "Site fidelity and movements of sharks associated with ocean-farming cages in Hawaii." Marine and Freshwater Research, vol. 61, iss. 12. December 13, 2010 at 1.