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Rosamond L. Naylor
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July 30, 2007

Brian Baird, Assistant Secretary for Ocean and Coastal Policy
California Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Kathleen Drew, Executive Policy Advisor
Office of Governor Gregoire
P.O. Box 40002
Olympia, WA 98504

Jessica Hamilton, Natural Resources Policy Advisor
Office of Governor Kulongoski
900 Court Street NE
Salem, OR 97301

Re: West Coast Governors' Agreement on Ocean Health

Dear Mr. Baird, Ms. Drew, and Ms. Hamilton:

The West Coast Governors' Agreement on Ocean Health is exactly the sort of regional, cross-boundary cooperation that is necessary to address the ocean's most pressing environmental problems. We commend the West Coast Governors for recognizing the importance of - and taking action to protect - our unique ocean and coastal ecosystems. However, one growing concern which we do not see represented in the draft discussion paper is the issue of marine aquaculture.

While aquaculture may help to reduce the nation's seafood trade deficit, it is essential that the development of any such industry be accompanied by strong environmental standards that safeguard our precious marine ecosystems. While marine finfish aquaculture is not yet widespread on the West Coast, several events are pointing to a gathering of momentum behind marine aquaculture. These include:

- The passage of and ongoing rulemaking to implement California's Sustainable Oceans Act (SB 201), which was passed in May of 2006;

- Bills currently circulating in Congress that would legislate federal offshore aquaculture (H.R. 2010, S. 1609), which the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce has stated is one of its top priorities;
- The development of organic aquaculture standards by the National Organic Standards Board;
- Concern over the safety of seafood imports from China and other countries impressing a greater urgency to the need to develop domestic aquaculture resources.

In the face of increasing pressure by the Department of Commerce to develop aquaculture in the U.S., it is necessary to address the potentially deleterious effects of finfish farming and protect the rich ecosystems along our coast from these impacts. California's Sustainable Oceans Act takes a strong step in this direction by setting rigorous environmental standards for marine finfish aquaculture facilities. We encourage the West Coast Governors to incorporate a similarly robust and precautionary statement in their action plan. The last thing we want is to have aquaculture continue the history of human exploitation of marine resources leading to habitat and ecological degradation. Substantial concerns with marine finfish aquaculture include:

- Escaped farm fish impacting wild fish populations. Studies conducted on salmon show that farmed salmon often out-compete wild salmon in both foraging and reproduction. This competition could pose serious threats to many of the West Coast's economically important fisheries. There is also potential for escaped non-native fish species to become established and even invasive;
- Increased transmission of pathogens (disease and parasites) in crowded pens, which can infect wild fish in the surrounding area;
- The impact on wild fish species used to produce aquaculture feeds. As aquaculture grows, the demand for fishmeal and fish oil is increasing, which can lead to the overexploitation of wild fisheries used to make fishmeal and fish oil;
- Effects on marine mammals and birds (e.g., sea lions attempting to prey on farmed salmon and becoming ensnared, birds being attracted to the nets at feeding time and becoming entangled and drowning);
- Ecosystem impacts from excess nutrients, in the form of excreta and unconsumed feed, and chemical inputs such as pesticides, antibiotics, and antifoulants;
- Inappropriate siting of aquaculture facilities, which can impact sensitive habitats, ecosystems, and protected areas as well as areas with conflicting uses.

The Marine Aquaculture Task Force has outlined actions to address these concerns in its report "Sustainable Marine Aquaculture: Fulfilling the Promise; Managing the Risks,"¹ which include only permitting the culture of native fish species and genotypes, shifting aquaculture feeds to sources other than other than wild fish, and minimizing the use of chemicals, among others.

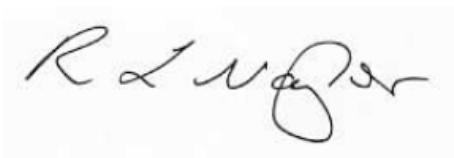
A key point in the West Coast Governors' action plan should be to require strong environmental safeguards, such as those required by California's Sustainable Oceans Act, for any aquaculture that may take place. Specifically, Priority 4 in the discussion paper focuses heavily on the use of the ocean for energy development, but aquaculture uses should be addressed as well. As with energy development facilities, aquaculture facilities must be appropriately sited, cumulative impacts assessed, and strong environmental standards developed. The co-location of fish farms

¹ http://www.pewtrusts.org/pdf/Sustainable_Marine_Aquaculture_final_1_07.pdf

with oil rigs should be prevented, as it could expose farmed fish and those consuming them to harmful substances. (As a side note, Priority 4 "Reduce Adverse Impacts of Offshore Development" seems to simply be the flip side of Priority 7 "Foster Sustainable Economic Development;" an integration of the two may provide clarity.)

It is our hope that by recognizing marine finfish aquaculture as a potentially harmful marine activity, the West Coast Governors can set environmental policies and promote research to allow for truly sustainable aquaculture in the future. Thank you for the opportunity to comment on the West Coast Governors' Agreement on Ocean Health action plan. Please feel free to contact us for any follow-up discussions (Roz Naylor at 650-723-5697, Alice Chiu at 650-724-9335).

Sincerely,

A handwritten signature in black ink, appearing to read "Roz Naylor". The signature is written in a cursive, flowing style.

Roz Naylor, Director
Alice Chiu, Aquaculture Social Science Research Assistant
Program on Food Security and the Environment, Stanford University

cc: Brian Baird
Kathleen Drew
Jessica Hamilton
WCGAcomments@resources.ca.gov