



**Summary of NOAA's Aquaculture Listening Session
University of Rhode Island, Corless Auditorium
Narragansett, Rhode Island
April 14, 2010**

Chair: Andrew Winer, NOAA Director of External Affairs

Scientific Expert: Dr. Barry Costa-Pierce, University of Rhode Island

Participants: 38

Public Comments: 16

Held on April 14, 2010, this listening session was the first in a series of public listening sessions conducted by the National Oceanic and Atmospheric Administration (NOAA). The complete list of meetings is below.

At 6:00 p.m., Andy Winer, NOAA's Director of External Affairs, opened the meeting and thanked participants for attending and providing their input on a marine aquaculture policy for NOAA. The chairman's opening remarks highlighted NOAA's interest in developing a new policy for marine aquaculture that:

- Addresses all forms of aquaculture (seafood production, enhancement, and restoration)
- Supports development of a robust U.S. marine aquaculture industry that is environmentally and economically sustainable, creates new jobs and business opportunities, and enhances U.S. food security.
- Promotes protection of ocean resources and marine ecosystems.
- Addresses the fisheries management issues and opportunities posed by aquaculture. He noted that NOAA is currently seeking public input to help shape the scope and objectives of a draft policy.

Mr. Winer also noted that, for purposes of the NOAA policy, aquaculture is defined as the propagation and rearing of aquatic marine organisms in aquatic environments for any commercial, recreational, or public purpose. He noted that the definition covers all production of finfish, shellfish, and other marine organisms, excluding marine mammals, for:

1. Human consumption and other commercial uses
2. Wild stock replenishment
3. Rebuilding populations of threatened or endangered species
4. Restoration of marine habitat (e.g., oyster reefs)

The chairman also noted that:

- The policy will provide a foundation for sustainable aquaculture that will create employment and business opportunities in coastal communities; provide safe, sustainable

seafood; and complement NOAA's comprehensive strategy to maintain healthy and productive marine populations, species, and ecosystems and vibrant coastal communities.

- NOAA is particularly interested in hearing ideas about how the policy can most effectively guide and support science; provide clear regulations; support outreach, education, and innovation; and define the U.S. role in this international industry.
- Once the public comment period is over, NOAA will take the input and develop a draft policy that will be released for additional review and public comment.
- Once NOAA has that input, the agency will finalize, adopt, and begin to implement the new policy.

The chairman then directed participants to the meeting hand-out and the seven questions that are intended to guide discussion at the public listening sessions and the comments submitted in writing. Those questions are:

1. What opportunities exist for developing sustainable marine aquaculture nationwide? What are the major impediments?
2. What are the most important environmental considerations and how can these be addressed?
3. Which social and economic consequences or outcomes will be the most important in the next 5 years or in the next 20 years?
4. How can NOAA best support essential research and innovation? What should be the goals of NOAA-funded research related to aquaculture?
5. How can NOAA best communicate with the industry and public on aquaculture issues? What are the opportunities for partnerships?
6. What role should NOAA play with respect to aquaculture issues and initiatives at the international level?
7. What other considerations need to be addressed in NOAA's aquaculture policy?

The chairman also outlined additional ways interested stakeholders could share their suggestions with NOAA through a national teleconference on May 6th, or via the internet at any time 24 hours a day. Details about these options are posted on the NOAA Aquaculture Program website at <http://aquaculture.noaa.gov>.

Mr. Winer then introduced Dr. Barry Costa-Pierce of the University of Rhode Island to give an overview of U.S. aquaculture within a global context and his assessment of the challenges and opportunities for U.S. marine aquaculture. Dr. Costa-Pierce is Professor of Fisheries and Aquaculture at the University of Rhode Island where he also directs the Rhode Island Sea Grant College Program. He has a Ph.D. in Oceanography from the University of Hawaii and a M.Sc. in Zoology from the University of Vermont. He is a Fellow of the American Institute of Fishery Research Biologists, a Senior Fellow at the World Fish Center, and a member of the Board of Directors of the World Aquaculture Society. His URI group works on environmental interactions and ecological designs for sustainable aquaculture, life cycle assessments, and carrying capacity modeling.

When Dr. Costa-Pierce's presentation was over, Mr. Winer then opened the meeting for public comments. Fifteen people signed up to give remarks. They were called on in random order.

People choosing to give comments represented shellfish farmers, university researchers, state agencies, a fishing association, a shellfish restoration group, two environmental NGOs, a Native American tribe, and a fishing/aquaculture equipment manufacturer. Please see the list at the end of the document for the names and affiliations of the people who gave comments.

The following list is a condensed version of the public comments given at the listening session as compiled by the NOAA Aquaculture Program staff.

The new NOAA marine aquaculture policy should:

Technology and Innovation

- Ensure a strong shellfish component since shellfish farming has greatest potential for expansion.
- Support coordinated research and demonstration projects for shellfish and a substantial increase in research funds and priorities.
- Recognize the potential of shellfish farming and restoration for nutrient credit trading.
- Ensure that the U.S. is a leader in technology development and sustainable standards.
- Support Integrated Multi-trophic Aquaculture (IMTA).
- Focus future research and demonstration efforts on land-based aquaculture and IMTA rather than offshore aquaculture.
- Ensure that research on stock enhancement is only focused on restoration.
- Support pilot projects for finfish aquaculture.
- Not foster large-scale finfish culture.
- Recognize that marine aquaculture – including open ocean aquaculture – has a role to play and needs strong but efficient regulatory standards.
- Include a plan for small-scale, recirculating, land-based, community aquaculture.
- Ensure that there is room for growth of industry and allow for/promote new methods, gear, feeds, etc.

Economic and Social Issues

- Recognize that the major impediments to aquaculture are economic and regulatory.
- Ensure that aquaculture does not displace existing capture fisheries. There is no room in the market for more finfish.
- Begin with a positive statement that the development of sustainable U.S. aquaculture is a benefit to the nation and should be encouraged.
- Support tax incentives for sustainable U.S. aquaculture.
- Pursue a sustainable plan, not one that the public is against.
- Recognize that there are economic, social, and environmental issues to overcome.
- Recognize that aquaculture creates jobs and spurs innovation.

Environmental Issues

- Recognize the environmental benefits and services of commercial shellfish aquaculture (similar to those of shellfish restoration).

- Ensure that shellfish restoration aquaculture is practiced in ways that benefits the environment.
- Recognize that the most important environmental considerations are not exceeding environmental carrying capacity and preventing escapes of genetically-“different” fish (which can be grown in secure containment facilities on land).
- Provide strong environmental standards and protection of broader public interests.
- Recognize that feeds, diseases, escapes, and scale need to be considered.
- Ensure that the recovery of wild populations is considered.
- Recognize that land-based aquaculture is expensive and has its own set of environmental challenges due to high energy inputs.
- Recognize the important role of appropriate veterinary care.

Aquaculture in Federal Waters

- Ensure that aquaculture in federal waters is one of the uses being considered through the federal marine spatial planning effort.
- Address the need for a regulatory framework for aquaculture in federal waters (fish and shellfish).
- Encourage aquaculture in federal waters but proceed with coordination and caution. Start with pilot projects supported by NOAA.
- Not include offshore fish farming but focus on marine aquaculture in land-based systems.
- Embrace the findings and recommendations of the high level ocean commissions.
- Ensure that open ocean aquaculture proceeds only under a comprehensive national plan that address marine spatial planning, follows the precautionary principle, establishes rigorous environmental standards to guide rulemaking, ensures that the public be fairly compensated for use of resources, and that operators held liable for environmental damage.
- Recognize that there are opportunities for shellfish aquaculture in federal waters (for example, mussels) and that shellfish culture may be an appropriate use of marine protected areas.

Institutional

- Ensure that the goals of NOAA Sea Grant and U.S. Department of Agriculture (USDA) programs match with the NOAA Aquaculture Program.
- Ensure that the latest scientific information is made available to the public.
- Emphasize the need for federal agencies to coordinate their efforts marine aquaculture.
- Ensure that aquaculture not displace commercial fishermen.

Market Development

- Support promotion of local foods and support a campaign to educate the public on the issue of domestic versus imported aquaculture.
- Recognize that proactive steps must be taken to market U.S. aquaculture products and to create new markets for U.S. shellfish to avoid a price collapse due to overproduction.
- New policy should be supportive of local, not global, markets for food.

International

- Recognize that seafood fraud is the biggest issue with seafood (i.e., mislabeled Vietnamese catfish being sold as grouper and sole in the U.S.).
- Recognize that additives and antibiotics in imported aquaculture products are issues.
- Ensure that all seafood imports require a health certificate.
- Ensure that the economic playing field for domestic seafood products (wild and farmed) is leveled.
- Ensure that the U.S. retains its scientific and production know-how and creates more jobs in the U.S.

Following the final comment, Mr. Winer thanked participants and adjourned the listening session.

See next page for list of attendees.

First Name	Last Name	Affiliation	Speaker
Joel	Avanesian	Rhode Island Fishermen's Association & AAFC & CFA	
Dave	Bengston	University of Rhode Island	x
Dave	Beutel	Rhode Island Coastal Resources Management Council	x
Charles	Biddle	Citizen	
Sean	Bowen	Massachusetts Dept. of Agricultural Resources	
Carrie	Byron	University of Rhode Island	
David	Carey	Connecticut DoA BA	
Jerry	Carvelko	Rhode Island Fishermen's Association	
Anoushka	Concepcion	Connecticut Sea Grant	
Judith	DiBello	JAU	
Robert	Dwyer	Ocean Stewards Institute & International Copper Association	
James	Ferro	The Ocean Conservancy	x
Jeff	Gardner	ECSGA board member	x
Tessa	Getchis	Connecticut Sea Grant	
Sarah	Griscom	Sears Point Aquaculture	
Kifle	Hagos	University of Rhode Island	
Kathy	Hladki	New England Aquarium	
Joel	Hondenisian	Rhode Island Fisherman's Alliance/ Commercial Fishermen of America	x
Rachel	Hopkins	Pew Charitable Trusts	
Rob	Hudson	Save the Bay	x
Greg	Huhn	University of Rhode Island	
Phil	Larson	Jamestown Aquaculture Movement	x
Harry	Mears	NOAA Fisheries Service	
Jay	Miller	Sierra Club - Marine	
Craig	Pennypacker	Riverdale Mills Corporation	x
Perry	Rasso	Shellfish farmer/ restaurateur	x
Bob	Rheault	East Coast Shellfish Growers Association	x
Cathy	Roheim	University of Rhode Island	
Salvatore	Ruggerio	On behalf of an individual in the Shinocock Indian Nation	x
Diane	Rusanowsky	NOAA Fisheries Service	
Bill	Silkes	American Mussel Harvesters	x
Roxanna	Smolowitz	Roger Williams University	x
Boyce	Thorne Miller	Northwest Atlantic Marine Alliance	x
Renee	Vogelsang	Food & Water Watch	
Jim	Walsh	Food & Water Watch	x
Larry	Walsh	Riverdale Mills Corporation	
Justin	Willig	The Ocean Conservancy	
Scientific Expert			
Barry	Coast-Pierce	University of Rhode Island	

NOAA Staff			
David	Alves	NOAA Aquaculture Program Northeast Regional Coordinator	
Christine	Blackburn	NOAA	
Chris	Botnick	NOAA Aquaculture Program	
Susan	Bunsick	NOAA Aquaculture Program	
Kate	Naughten	NOAA Aquaculture Program	
Michael	Rubino	NOAA Aquaculture Program	
Andy	Winer	NOAA	