To: NOAA Aquaculture Program
Submitted Online
April 11, 2011

Comments on NOAA's Draft Aquaculture Policy

Please accept the following comments on NOAA's Draft Aquaculture Policy on behalf of the organizations and individuals who have signed this letter. We represent a network of fishermen, scientists, coastal community members, farmers, and seafood consumers who are working for better management of activities in coastal ecosystems and food sovereignty for local communities nationwide. We are dismayed that this Policy does not consider the broader integration of natural marine ecosystems and their services and food systems that support our coastal communities.

General Comments

- It is not NOAA's mission to "enable" an industry

It is useful to look at NOAA's stated mission (http://www.noaa.gov/about-noaa.html):

Science, Service, and Stewardship:

- To understand and predict changes in climate, weather, oceans, and coasts;

- To share that knowledge and information with others; and

- To conserve and manage coastal and marine ecosystems and resources.

Further, the description of the goals of NOAA's Aquaculture Program (http://aquaculture.noaa.gov/about/welcome.html) are:

Regulation and Policy: Establish a comprehensive regulatory program for the conduct of marine aquaculture operations;

Science and Research: Advance scientific knowledge and develop appropriate technologies to support sustainable commercial marine aquaculture and the restoration of wild fish and shellfish stocks;

Outreach and Education: Conduct education and outreach activities to heighten the public's awareness of issues related to marine aquaculture; and

International Activities: Meet international obligations to promote environmentally sustainable practices for the conduct of marine aquaculture.

Nowhere is enablement mentioned in the overarching NOAA mission or among priorities for the Aquaculture program and we suggest it not become an agency-wide priority with the issuance of this policy. Therefore, our first recommendation is to change the Statement of Purpose to one that ensures that any development of marine aquaculture shall be compatible with local, regional, and national marine ecosystems and the multitude of services they provide. We think there is a sharp

contrast between enabling aquaculture development for its own sake and objectively assessing and addressing potential impacts--both negative and positive--of aquaculture development on natural ecosystems through research, regulation, public accountability, and international cooperation.

We are particularly concerned with the final sentence in the Statement of Purpose, which says that that NOAA believes aquaculture is essential to attaining a list of eight desirable outcomes. We insist that aquaculture may not be essential, and in some cases may be contrary to those objectives; and the wording should reflect that. Instead of a policy that "reaffirms that aquaculture is an important component of NOAA's efforts," it should define NOAA's role in determining whether and under what circumstances and regulations, aquaculture might contribute in a positive way to achieving the list of objectives.

In short, it is essential that NOAA remain neutral in its view of aquaculture in general and be able to rationally and scientifically evaluate the pros and cons of aquaculture development in any given circumstance, place, and time.

- <u>The policy should have the overall goal of achieving NOAA's stated vision</u>.

The agency's vision for the future (http://www.noaa.gov/about-noaa.html) is:

"Resilient Ecosystems, Communities, and Economies. Healthy ecosystems, communities, and economies that are resilient in the face of change."

Any decision NOAA makes about general or specific proposals for aquaculture should be gauged against whether it will move toward achieving that vision, not whether it is enabling aquaculture development. The Draft Policy acknowledges the strategic goal of resilient coastal communities and economies and assumes that aquaculture is a desirable component of that goal. We believe there is abundant evidence from numerous aquaculture development activities worldwide that have had quite different results. We therefore suggest that wording be changed to reflect the need to assess potential impacts of aquaculture before assuming it is a desirable activity.

- <u>There is need for more guarantees of accountability to the public.</u>

The Draft Policy does not acknowledge that the marine environment is a public commons and that NOAA has a responsibility to regulate and manage activities in the commons for the public good. There is no mention of applying the public trust doctrine. There is no mention that the agency and those who undertake aquaculture in the marine environment must be accountable to the public and subject to public oversight. There are no guarantees that aquaculture development must not restrict public access to the marine environment. There is no mention of requirement for Environmental Impact Statements before permitting aquaculture activities. There is no requirement to publically share all facility and monitoring information that

relates to any potential impact on the marine environment by such operations. We feel these omissions are important and should be corrected.

Comments on the Statement of Policy

- A definition of "sustainable" in the context of aquaculture is needed.

We appreciate the detailed definition provided for "aquaculture;" but it is essential that a similarly detailed definition be provided for "sustainable aquaculture." The term sustainable has been used and overused in so many contexts that it has lost clear meaning and now must be defined in each context in which it used. Without such a definition, we cannot be confident that this policy will contribute to the conservation of marine ecosystems and resources. Formulating the definition should incorporate advice from a number of responsible sources, so we do not offer language here.

- The following comments refer to the policy statement of the same number in the Draft Aquaculture Policy. (Any proposed new language is italicized):

1. Revise the language so that, instead of enabling sustainable aquaculture…, the policy becomes *to facilitate the reliable assessment of alternatives, risks and trade-offs so that precautionary decisions can be made regarding aquaculture development that is sustainable* [presuming sustainable is defined in the document]; *including the following attributes: (1) the provision of domestic jobs, products and services in harmony with healthy ecosystems, (2) restoration or maintenance of healthy, productive, and resilient marine ecosystems, (3) compatibility with other uses of the marine environment; and (3) consistency with the National Ocean Policy and Coastal and Marine Spatial Planning.*

2. (no comment)

3. (no comment as long as "sustainable aquaculture" is defined.)

4. Amend as follows: Make timely and unbiased aquaculture management decisions based upon the best scientific information available *and consistent with the policy of risk aversion in the face of uncertainty.*

5. Revise to recognize and incorporate tradeoffs. It is unrealistic to say that all aquaculture activities can simultaneously *benefit* coastal ecosystems, communities, consumers, industry and economy. The best we can hope for is that some of these are benefitted and others are not harmed. The statement is of concern because it brings into question whether NOAA fully understands all the impacts aquaculture can have, and whether the agency is equipped to make responsible decisions regarding whether and under what

conditions to allow or suspend aquaculture activities. Further, when there are tradeoffs between benefits and harm in the context of the five entities listed, it is not clear how NOAA will weigh or resolve them.

6. Amend as follows: Advance public understanding of sustainable aquaculture practices; the associated environmental, social, and economic challenges and benefits; and the services NOAA has to offer in support of sustainable aquaculture *and in support of the public's interest with respect to activities in our marine commons.* [pre-supposes an appropriate definition of sustainable aquaculture].

7. Delete or edit this statement to include the potential need for caps on development. We are concerned that its purpose is to remove constraints to wholesale aquaculture expansion in marine waters, which has proven in other countries to be unsustainable.

8. Revise to recognize the full breadth of information. We agree with the goal of international cooperation and sharing of information, but we believe this statement should also include reference to sharing information about negative impacts of some aquaculture, the impediments to solving some of those impacts, and measures to avoid them.

9. (no comment)

10. We suggest an additional statement that ensures aquaculture development in natural ecosystems be well integrated into the biodiversity, functions and services of the ecosystem and the need for ecosystem goals that can and will be monitored. Tradeoffs must be considered when deciding whether, where, when and under what circumstances aquaculture activities are appropriate.

Comments on support sections

Legal "Basis for the Policy" :
In reference to the Oceans and Human Health Act, we believe that, more to the point of that legislation, you ought to reference the responsibility to make sure aquaculture products do not pose threats to human health. This section might also mention a commitment to assessing the nutritional value of aquaculture compared to wild seafood, especially in the context of NOAA's strategic objective for safe and sustainable seafood.

Delete or move the language of the sections, "Background" and "Challenges and Benefits":

These sections appear to be an attempt to justify the policy but, while there are some good points, the discussions present no more than a laundry list of items, some more relevant than others, based on a snapshot of the current status of

aquaculture. We don't believe this is appropriate for a declaration of policy meant to guide aquaculture development in the future.

If NOAA feels the policy needs justifying, and well you might, we suggest a well-organized appendix based on principals and goals.

- What are NOAA's true intentions with respect to aquaculture?

That said, we would like to express our concern over the final paragraph of the "Challenges and Benefits" section, which we believe raises issues about NOAA's policy beyond aquaculture. It is stated that: "Growing consumer demand for safe, local and sustainably produced seafood, increasing energy costs, and the decline of fishing-related industries and working waterfronts are emerging drivers that support sustainable domestic aquaculture production." Given that much of the decline in fishing and working waterfronts has been caused by failures in NOAA's management to protect fishing communities while taking necessary measures to reduce fishing and recover fish populations, we are concerned that this statement may reflect a methodic NOAA policy. We hope this was simply ill-stated and that it does not actually pull back the curtain on a hidden agenda to replace wild caught fisheries with aquaculture. But this statement, causes us to question whether NOAA may have abandoned the mission to restore our nation's fisheries. And if that is not the case, it is essential that NOAA's aquaculture policy recognize potential conflicts between restoring wild fisheries and promoting aquaculture development rather than pretend that they are always perfectly compatible. Furthermore, it is time NOAA recognize that the consumer demand for safe, local and sustainable seafood is increasingly being met through local marketing of wild caught seafood, which consumers have embraced.

We also object to the statement in the same paragraph that both small-scale and large-scale aquaculture is evolving toward sustainable practices. There is as yet no evidence that this is true for large-scale marine aquaculture in this country, and in other countries, even with the development of better technologies, the expansion of scale of marine aquaculture has confounded possible beneficial outcomes of improved operations.

NOAA's aquaculture priorities

Research on feed may be the wrong focus. Regarding the research agenda to implement NOAA's policy, we strongly suggest that the emphasis on developing alternative feed for carnivorous fish is misguided. A better focus would be on developing methodologies for growing species of fish and shellfish new to aquaculture that naturally feed low on the food chain, possibly including forage fish for human consumption.

Include a commitment to closed culture systems. We would suggest adding some specific direction to the commitment to "develop methodologies to minimize

potential adverse ecosystem and socioeconomic impacts of aquaculture." We would suggest: "including, among others, closed containment aquaculture methodologies that do not conflict with waterfront needs of fishing ports and related industries."

NOAA's research and monitoring of ocean acidification and climate change should include synergistic impacts. We are not only interested in the impacts of acidification and climate change on aquaculture, but also in synergistic effects on wild populations of these major environmental changes combined with impacts caused by aquaculture.

Appendix I: NOAA Principles for Aquaculture in Federal Waters

NOAA must develop a detailed policy and binding regulations and management structure for offshore aquaculture before permitting any such development.

This Draft Policy is not the appropriate venue for issuing guidance for offshore aquaculture development. An appendix attached to a larger policy for aquaculture development is hardly an adequate framework for regulating and managing aquaculture in the EEZ, which has many different concerns than aquaculture on or near land. This is fundamentally different design and scale of aquaculture and there are numerous considerations that must be fully discussed before deciding if, when, where, what kind, and how much aquaculture will take place in these waters. In issuing this set of principles, NOAA indicates the agency does not fully comprehend the magnitude and gravity of regulating and managing this activity in the marine commons on behalf of the American people. We expect and demand better than an ineffective 3-page set of principles largely filled with what other agencies, governments and parties you plan to work with, and little about what NOAA will do to guarantee that aquaculture in the EEZ is "sustainable" (as yet not well defined). There isn't even mention of how NOAA will address conflicts with other marine activities supported within the same agency, let alone other conflicts.

Although we reject Appendix I in its entirety because it is the wrong way for NOAA to oversee offshore aquaculture development, we feel it is important to comment further on one principle listed in the Appendix. It is stated that NOAA will promote the principle of ecosystem compatibility by "supporting the stocking of only native or naturalized species in federal waters, unless best available science demonstrates use of non-native or other species in federal waters would not likely cause undue harm to wild species, habitats, or ecosystems in the event of escape." That sentence should end, full stop, before the word "unless." Furthermore, we believe the pledge to stock only native species should be part of NOAA's overall aquaculture policy. The mention of "other species" (i.e. not native and not non-native) can only mean genetically engineered organisms, and we are particularly appalled with that. GE organisms must not ever be permitted in aquaculture.

While there are some ideas we would support in the Draft NOAA Aquaculture Policy, we feel this set of principles avoids the true issue, which is that NOAA must have not only a policy, but regulations and standards, management plans, monitoring and contingency plans before aquaculture development is permitted in the EEZ. Yet we are aware that NMFS is attempting to approve just such an activity in the waters offshore of the Island of Hawaii. Here we are offered an appendix to an agency policy, when we should be responding to far more serious and binding measures governing offshore aquaculture development.

Yours truly,

Boyce Thorne-Miller (contact)
Science and Policy Coordinator
Northwest Atlantic Marine Alliance
Gloucester, MA
boyce@namanet.org

Robin Alden, Exec. Director
Penobscot East Resource Center
Stonington, ME

Kathryn Alexander, President & CEO
Ethical Impact L3C
Boulder, CO

Edward P. Ames
Coastal Studies Fellow
Bowdoin College
Brunswick, ME
and
Penobscot East Resource
Center
Stonington, ME

Padi Anderson
F/V Rimrack
Rye Harbor NH

Rudy Arredondo, President/CEO
National Latino Farmers & Ranchers Trade Association
Washington, DC

Nikhil Aziz, Ph.D, Executive Director
Grassroots International
Boston, MA

Jim Bates
Member of Congress, 1982-1990
Truth in Labeling Coalition
Ramona, California

Jennifer F. Brewer
Assistant Professor, Department of Geography
Assistant Scientist, Institute for Coastal Science and Policy
East Carolina University
Greenville, North Carolina

Nancy Casady, President & Derek Casady, Vice President
Truth in Labeling Coalition
La Jolla, California

Clay G. Colson
Board Director and Water Issues Chair
Citizens for Sanity.Com, Inc.
Pasco County, Florida

Don Eley, President
Friends of Blue Hill Bay
Blue Hill, Maine

Kelly Feltault, PhD
Impact Evaluation and Food Security Analyst
Peace Corps
Washington DC

Steve Gilman, Policy Coordinator
The Northeast Organic Farming Association - Interstate Council (NOFA-IC)
seven independent state chapters in VT, NH, MA, CT, RI, NY and NJ

Noémi Giszpenc, Executive Director
Cooperative Development Institute, Inc
Shelburne Falls, MA

Lisa Graves, Executive Director and Editor-in-Chief
The Center for Media and Democracy
Madison, Wisconsin

Tessa Hill, President
Kids for Saving Earth
North Branch, MN

James "Howdy" Houghton
Downeast Foodshed
Bar Harbor, ME

Lea Howe
4623 Verplanck Place, NW
Washington, DC

Les Kaufman
Professor of Biology
Boston University Marine Program
and
Senior Marine Scientist
Conservation International

Catherine Kilduff, Staff Attorney
Center For Biological Diversity
San Francisco, CA

Andrew Kimbrell, Executive Director
the Center for Food Safety
Washington, D.C.

Jessica Lattif, MS
CSA Coordinator,
Phat Beets Produce
North Oakland, CA

Pamela K. Miller, Executive Director
Alaska Community Action on Toxics
Anchorage, Alaska

Anne Mosness
Owner, Fisher's Choice Wild Salmon
34 Rocky Ridge Dr
Bellingham, Washington 98229

Terry Nieves
Company Ocean Harvest Sea Vegetable Company
Mendocino, California

Katherine Ozer, Director
National Family Farm Coalition
Washington, DC

John E. Peck, Executive Director
Family Farm Defenders
Madison, WI

Chris Petersen
Professor of Biology
College of the Atlantic
Bar Harbor ME

Lorette Picciano
Rural Coalition
Washington, DC

Alfredo Quarto,
Executive Director
Mangrove Action Project

Analis Salles
Green Sanctuary Earth Institute of Pennsylvania
1038 Hazelwood Drive
Philadelphia, PA 19150

Angela Sanfilippo, President
Gloucester Fishermen's Wives Association, Inc.
Gloucester, MA

Ted Schettler
Science Director
Science and Environmental Health Network
Ames, IA

Christina M. Schiavoni
Director, Global Movements Program
WhyHunger
New York, N.Y

Bob St. Peter, Executive Director
Food for Maine's Future
and Saving Seeds Farm
Sedgwick, Maine

Adriana Voss-Andreae, MD PhD
1517 SE Holly st
Portland, OR

Susan West, Coordinator
Hatteras Connection
Buxton, NC

Susan Youmans, Executive Director
Environmental Partnerships
Producer, What's for Dinner?
Boston, MA