



Hawaiian Islands Humpback Whale National Marine Sanctuary

NON-GOVERNMENT (Voting)

Tetsuzan Benny Ron
Business Commerce

Cindi Punihaole Kennedy
Citizen-At-Large

Richard Davison
Commercial Shipping

Barbara (Maka'ala) Kaaumoana
Conservation

Liz Kumabe (Vice-Chair)
Education

Philip Fernandez
Fishing

Alex Sheftic
Hawai'i County

John (Jack) Kittinger
Honolulu County

Sharon Pomroy
Kaua'i County

Solomon Pili Kaho'ohalahala
Lana'i Island

Robin Newbold
Maui County

Walter Ritte
Moloka'i Island

Trisha Kehau Watson
Native Hawaiian

Doug Cole
Ocean Recreation

Adam Pack, Ph.D. (Chair)
Research

Kimoeko Kapahulehua
Tourism

Jim Coon
Whale Watching

Gina McGuire
Youth Member (non-voting)

GOVERNMENT (Non-Voting)

Marnie Meyer
DBEDT - OP

Vacant
DBEDT Science and Technology

Vacant
DLNR - DAR

Vacant
DLNR - Hawaiian Islands Humpback Whale
NMS

Vacant
DOH

Sandra Rossetter
DOT - Harbors

Gene Brighthouse
Fajatele Bay NMS

Malia Chow
Hawaiian Islands Humpback Whale NMS

Everett Ohta
OHA-Voting

Take Tomson
NMFS - Law Enforcement

Lisa Van Atta
NMFS - PIRO

Aulani Wilhelm
Papahānaumokuākea MNM

Eric Kingma
WESPAC-Voting

Athline M. Clark
US ACOE

Eric Roberts
US Coast Guard

Rebecca Hommon
US Navy

7 June 2011

Malia Chow PhD
Sanctuary Superintendent
Hawaiian Islands Humpback Whale National Marine Sanctuary
NOAA Office of National Marine Sanctuaries
6600 Kalaniana'ole Hwy STE 301
Honolulu, HI 96825

Dear Malia,

The Hawaiian Islands Humpback Whale National Marine Sanctuary (sanctuary) has unique experience in open ocean aquaculture and the Hawaiian Islands Humpback Whale National Marine Sanctuary Advisory Council (SAC) wishes to share its concerns regarding aquaculture development. The sanctuary has had operating commercial ocean aquaculture operations within the boundaries as well as proposed aquaculture operations that were eventually withdrawn.

The SAC offers the following comments and recommendations, which apply to the marine jurisdiction of the sanctuary. These recommendations may also apply beyond the state and federal waters of the Hawaiian archipelago and other US insular Pacific Islands:

Adopt a precautionary approach¹

By precautionary approach, we mean that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action. The recommendation of the SAC is to encourage a precautionary approach in the development of aquaculture throughout its entire marine jurisdiction. The SAC fully recognizes the potential benefits of aquaculture, if implemented with sensitivity to local cultural norms, minimum negative impact to the marine ecosystem and habitat, and minimum impact to existing uses such as fishing and tourism activities.

Opportunity to collect aquaculture impact data in Hawai'i

NOAA should lead the effort to study existing aquaculture operations and its impact on marine ecosystems and coastal communities. When done in a sustainable manner, aquaculture is a reasonable alternative to reduce fishing pressure on wild stocks and to meeting increasing seafood demand in the United States and beyond. However, much independent information is lacking regarding impact of open ocean aquaculture pens and related infrastructure and activities on the marine environment, including impacts on the behavior of existing marine species, impacts on migration patterns of fish, marine mammal, and marine birds, impacts on feeding habits, impacts on reproduction and juvenile fish. NOAA must require and support collection of data and information on the above mentioned impacts as well as those already identified in the draft policy statement, before wide spread aquaculture development is encouraged. To this end NOAA should require and support third party periodic environmental and social impact assessments of all existing open ocean aquaculture operations to rapidly build a database, which could be used for future policy-making.

Encourage grass-root and community-based aquaculture development

An open ocean aquaculture business requires significant financial resources and technical knowledge to start. NOAA needs to develop research capability to support the development of small-scale aquaculture technologies to encourage community-based aquaculture businesses. Current open ocean aquaculture requires extensive venture capital resources that are unavailable to most rural communities. Additionally, as opposed to land-based aquaculture, open ocean aquaculture requires specialized technical knowledge. NOAA's research should focus on small scale rather than large scale aquaculture development.

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Technical support for coastal and island communities

Due to historical origin of NOAA's mission, the agency's focus has largely been in the science and management of wild fish for harvest. The production of fish for sale and consumption via aquaculture is relative new in comparison. However, aquaculture must be managed holistically with attention to the human dimensions of sustainable seafood and the supply systems that bring such products to markets. This includes, for example, consumer demand for farm-raised fish or shellfish, hatching and growing fish, processing and packaging of aquacultured fish, and finally marketing of the product. Currently NOAA and USDA share responsibilities and intend to collaborate with other agencies. However, to succeed as an aquaculture management agency, NOAA must develop new capabilities to serve the growing aquaculture industry. NOAA should develop these capabilities modeled after successful USDA agencies such as the National Resource Conservation Service which oversees the stewardship of grazing land, and the Cooperative Extension System of the National Institute of Food and Agriculture for educating and training coastal communities.

Governance fragmentation & public involvement in decision-making processes

NOAA should work toward consolidating national marine aquaculture management within one agency rather than keep it fragmented across various national agencies, so that services could be delivered efficiently to coastal communities. Fragmentation of governance should be avoided when possible in order to locate user knowledge and institutional expertise within a specific division or agency sub-group. NOAA should also work with its partners to involve the public in all decision-making processes regarding open ocean aquaculture. Involvement of the public and the various ocean user stakeholders in decision-making processes in a participatory fashion can reduce conflict and increase transparency, leading to greater support for decisions that affect local communities.

Technical support for appropriate facility siting, for regional and state governments

NOAA has more technical capabilities than regional and state governments in inventorying and assessing various marine areas to determine if they are compatible and or suitable for aquaculture. In Hawai'i, most of the marine waters within the State's jurisdiction are zoned as Conservation Zones. However, within these Conservation Zones, aquaculture is an identified use within the Protective Subzone (HRS 15.5.11). With national coastal and marine spatial planning and state zoned waters, NOAA should develop criteria for locating aquaculture activities that consider the cultural, biological, and socioeconomic importance of the area (i.e. not only compatibility, but also suitability). Science-based siting of facilities coupled with utilization of native traditional, place-based, and local users' knowledge should result in optimal location of current and future aquaculture projects and facilities.

Considerations for development of future aquaculture projects

NOAA should lead the development of criteria for locating aquaculture activities in the sanctuary and the state and federal waters of Hawai'i and other US insular Pacific islands that consider the cultural, biological, and socioeconomic importance of the area (i.e. not only compatibility, but also suitability). Also, NOAA should utilize science, native traditional, place-based, and local users' knowledge in the development of such criteria. Having an inventory of suitable marine areas for aquaculture, based on scientific study, will encourage the development of aquaculture. Additionally, for future projects, scientific and cultural evaluations should take place before, during, and following the completion of the project.

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Mahalo Nui Loa

A handwritten signature in black ink, appearing to read 'Adam Pack'.

Adam A. Pack, Ph.D
Chair, Hawaiian Islands Humpback Whale
National Marine Sanctuary Advisory Council

'The *precautionary principle* or precautionary approach states that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action

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