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Recommendations for a Clean Fishing Future

Testimony before the U.S. Commission on Ocean Policy
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The Alaska Marine Conservation Council (AMCC) welcomes you to Alaska and we appreciate the effort you are making to steer the U.S. toward a more forward-looking approach to protecting living marine resources. Thank you for this opportunity to provide recommendations to you for your report to Congress and the Nation.

AMCC is a community-based organization, dedicated to protecting the health and diversity of our marine ecosystem. We work to minimize bycatch, protect habitat, prevent overfishing and promote clean, community-based fishing opportunities. Our membership exceeds 900 residents of Alaskan coastal communities whose livelihoods and ways of life depend on a healthy ocean.

I want to speak to you today about the need to move away from fragmented governance of living marine resources and toward an ecological approach. I will focus on specific concerns and recommendations for fisheries management.

I. Introduction -- Management by Isolation

There are numerous sources of impact on marine ecosystems in Alaska including:

- Persistent Organic Pollutants -- Our oceans are a global sink for chemical pollutants produced in other parts of the world and carried here via atmospheric currents. These pollutants concentrate in the fat tissues of arctic animals presenting unprecedented ecological consequences and human health concerns for indigenous peoples;

- Global Warming -- Environmental effects of global warming will be most apparent in arctic ecosystems because of their greater sensitivity to climate change and relative magnitude of warming compared to other latitudes. This may have severe consequences for ice-dependent species like polar bears and walrus as well as ecological and economic ramifications that are difficult to predict;

- Offshore Oil and Gas -- Existing and potential offshore oil and gas development and related transportation presents another set of risks for living marine resources;

- Fisheries -- Finally fisheries, if managed out of sync with ecosystem resilience, represent a major consideration.

Each of these issues – contaminants, global warming, oil and gas development and fisheries -- is treated by different management authorities in isolation from one another. We do not have a cohesive way to consider them all as a whole. Furthermore, management decisions for human activities are managed quite apart from natural oceanographic cycles. In most cases, we don't understand very much about dynamic fluctuations that occur in Nature on various time scales, much less the synergistic effects of human activities combined with natural oscillations.

Fisheries management goes even further toward a compartmentalized decision-making system through the single-species approach. We manage each fishery on a species by species basis. We frequently respond to consequences for other species through crisis management, which often results in hasty decisions under pressure and a great deal of conflict between stakeholders. **An ecosystem-based approach is needed along the lines of the Ecosystem Principles Advisory Panel report to Congress in 1998.**

II. Specific Fisheries Management Concerns in the North Pacific

One of AMCC's guiding principles is that the ecosystem has intrinsic value and that it's our responsibility to manage our own human behavior in a manner that prevents over-exploitation or destruction of habitat. Of particular concern to us is bottom trawling because of the known impacts on sensitive seafloor habitats. In tact habitat is one of the pillars of a healthy ecosystem, which supports the fisheries we depend on.

A. Bottom Trawling

Research clearly shows that bottom trawl gear is harmful to a variety of different habitat types through 1) alteration of physical structure (such as cobbles, seamounts, bedforms) and biotic communities (such as corals, sponge beds) and 2) reduction in the diversity of marine species occupying those habitats. We recognize that bottom trawled areas can have high fishery productivity but history shows that such productivity tends to be of fewer species or primarily opportunistic species that thrive in disturbed seafloor environments. Altering seafloor habitat in this way may have dramatic effects on the resilience of the whole system over time.

> *In general, relative to unfished habitat, areas fished with bottom trawls are expected to have reduced habitat complexity and species diversity and changes in species composition. The level of habitat complexity depends on the structural components of the living and non-living benthic environment. Habitat complexity is reduced when epifauna that form structures are removed or damaged. Sedimentary bedforms are smoothed, and infauna that forms burrows and pits are removed.* ***Worldwide studies of the effects of bottom trawling have generally found that trawling reduces habitat complexity and these findings have been confirmed by studies conducted in Alaska….***[1]

[1] NMFS. 2001. Draft Programmatic Supplementary Environmental Impact Statement. Chap. 4.7, p.10.

The debate over the effects of bottom trawling is shifting away from whether or not it reduces marine biological diversity and habitat complexity. Instead the debate is now focused on where and to what degree bottom trawling is appropriate. The recent findings and recommendations of the National Research Council are based on this consensus and include a range of management options to reduce impacts.[2]

The seafloor of the North Pacific region has been trawled extensively over the last several decades raising concerns about cumulative impacts. (See map.) In the 1990s the North Pacific Fishery Management Council took certain positive steps toward limiting the impact of bottom trawling; today an impressive 94,602 square nautical miles are currently closed to bottom trawling. (See map.) Over half of that is contained in the Southeast EEZ. While this has been beneficial for sensitive habitats of Southeast, the point is that considerable area throughout the rest of the Gulf and Bering Sea/Aleutian Islands remains exposed to bottom trawling. Some of the heavily trawled areas today include places that were protected from foreign trawl fleets prior to 1976 but were then opened to domestic trawl fleets after the Magnuson Act passed.

The North Pacific fisheries are not managed with a deliberate habitat conservation plan that takes into account the range of habitat types needed to ensure integrity of the ocean ecosystem. **Without a clear habitat focus in management, we believe ecological functions will fail. The benefits provided by in tact systems will decline and ultimately sustainable fisheries important to our community economies will pay a big price.**

B. Bycatch

What does bycatch have to do with habitat?

Over 350,000,000 pounds of marine life are wasted as bycatch in Alaska groundfish fisheries each year.[3] This represents bycatch from all gear sectors participating in groundfish fisheries. It includes groundfish discards, halibut, herring, salmon, crab, coral and sponges. (See bycatch tables.)

The volume is impressive but what may be of equal importance is the species composition of bycatch. This 350 million pounds is made up of at least 1,000 different species.[4] They range from commercially valuable species like halibut and crab to benthic species that have no market value but are nonetheless important components of the ecosystem. Some of them are not identified because on-board observers don't always know what they are. The majority of the 1,000 species are removed from the seafloor. **Each of these species is an integral part of the ocean ecosystem either as a strand in the food web, or shelter for other species.**

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[2] National Research Council. 2002. Effects of Trawling and Dredging on Seafloor Habitat. P. 65.

[3] Alaska Department of Fish & Game. 2002. Discards in Groundfish Fisheries of the Bering Sea/Aleutian Islands and Gulf of Alaska, 1998-2000.
Heifetz, J. NMFS Auke Bay Lab in Oceana memo to NPFMC, May 15, 2002.

[4] NMFS. Data request from Fishery Observer Program, Alaska Fisheries Science Center.

There are severe data gaps that frustrate management. For example:

- While each species taken as bycatch performs some ecological function, we have little if any understanding about them.
- According to NMFS, scientists do not know the marine habitat requirements for any of our managed fish species.[5] NMFS scientists also acknowledge that the status of 86% of the fish species in the North Pacific is unknown.[6]

This absence of information is a reason to be cautious. **Taking action to curtail the effects of bottom trawling is a reasonable and necessary improvement and well justified by the research that has been done to date in Alaska and many oceans around the world.** Of course, it is important to continue refining what we understand about gear impacts and it is certainly critical that we expand our understanding of seafloor habitats in the North Pacific to improve the design of habitat conservation measures. But the time has come to act on what we know about the effects of bottom trawl gear by reshaping our fisheries to be lighter on habitat and waste.

III. Recommendations

Ecosystems:

- The U.S. Congress should ratify 1) the Stockholm Convention to avert further contamination of the marine environment from persistent organic pollutants and 2) the Climate Convention to reduce greenhouse emissions and arrest human-induced climate change.
- An ecosystem-based approach to fisheries management should be phased in reflecting recommendations by the National Ecosystem Principles Advisory Panel report to Congress.

Protecting habitat and reducing bycatch:

- Make habitat conservation a deliberate and central feature of our fishery management system.
- Reform fisheries management to reward clean fishing practices through economic incentives to support a smooth transition from today's bottom trawl fisheries to less intensive practices. The result should be:

    - A transition from bottom trawling to other gear types in fisheries that have appropriate alternatives;
    - For those fisheries that don't have alternatives, we recommend zoning use of the gear to certain areas where its impact would be minimal. This could mean that designated areas would be open to bottom trawl fisheries as a way to control the extent of impact while providing for viable fishing opportunity.

[5] NMFS. 1998. Essential Fish Habitat Environmental Assessment for BSAI and GOA Fishery Management Plans.
[6] NMFS. 2002. 2001 Status of Stocks. P. 11.