



April 1, 2021

The Honorable Benjamin Friedman
Acting Administrator
National Oceanic and Atmospheric Administration
Via Email: OceanResources.Climate@noaa.gov

Dear Acting Administrator Friedman:

We write to thank you for seeking public input on Section 216(c) of Executive Order 14008, and to share our perspectives on how to make fisheries and protected resources more resilient in the face of climate change.

As participants in North Pacific fisheries, we are in many respects on the front lines of climate change. Our region is already exhibiting noticeable shifts in its marine environment—including reductions in seasonal sea ice extent and increased ocean temperature ranges. These shifts have the potential to significantly impact our livelihoods and the wellbeing of coastal communities. It is critical that scientists and managers have the tools they need to understand what is occurring and to ensure that fisheries and protected resources remain resilient.

Implementing science-based strategies to promote resilience in the face of climate change is in everybody's interests. People in our region have long relied upon healthy marine ecosystems for their wellbeing, including for their food and livelihoods. That is the context in which the U.S. pioneered science-based fishery management strategies that have for decades prioritized sustainability and marine ecosystem health. Our region's precautionary and ecosystem-based approach has long been seen as the gold standard in fisheries management, and it has served as a model for other U.S. regions and countries seeking to ensure that both current and future generations can benefit from healthy fisheries. Similarly, in this era of climate change, our sector has the most to lose if fisheries management fails to adapt. That is why we strongly support efforts to ensure resilience to a changing climate is effectively incorporated into every level of the fisheries science and management system.

As the Biden Administration considers how best to proceed with efforts to advance climate resilience in the marine environment, we seek to highlight three overarching points. First, it is critical that science be at the center of the decision-making process. Accordingly, NOAA's regional Science Centers must be funded at a level to maintain critical survey and stock assessment capabilities to meet the daunting challenges ahead. Second, we must ensure that managers maintain flexibility to implement the dynamic management strategies that will be most successful in the face of climate change, including conservation measures that can be adaptive to new information and a changing environment. Third, the North Pacific is well advanced in the development and implementation of strategies to ensure resilience in the face of climate change

and is currently in a multi-year process to better meet this specific objective. We commend to you a detailed understanding of those efforts and engagement with the North Pacific Council as you consider your next steps in developing a national marine climate resilience initiative.

1. Strong science is the essential foundation of climate resilience

At the heart of our region's longstanding fisheries management success is a shared belief among stakeholders that strong science is the essential foundation for effective fisheries management. This abiding conviction has ensured that precautionary management based on the best available science has consistently won support across stakeholder groups, including the strong support of industry participants. As we look to a future in which managers must respond to accelerating changes in the marine environment, we once again view strong science as the critical building block for success.

In that context, a well-funded and high-functioning Alaska Fisheries Science Center is a critical ingredient in building climate resilience for fisheries and protected resources in our region. Throughout its history, the Center has collected and synthesized oceanographic data and biological samples to promote a better understanding of the ocean, including the level of catch that is safe in any given fishery. In recent years the Center has also established critical new workstreams that are building an extensive understanding of climate change in the North Pacific region. The truth, however, is that the demands being made on the Center are not sustainable in the current funding environment.

In the absence of an initiative that recalibrates regional marine science funding to the scale of the challenge that we face, capacity is being sharply eroded year after year. During its February 2021 meeting, the North Pacific Fishery Management Council received a presentation on the 'State of the Center'. The presentation noted that cost-adjusted funding for the Alaska Fisheries Science Center is on a long-term downward trend. Annual increases in core staff costs and the cost of conducting research ship surveys are far outstripping any year-over-year funding increments—leaving the Center with less overall capacity at a time when it is essential that the scope of its activity increases.

The most pressing example is the research surveys conducted by the Center. According to the February presentation, the Center is working to try and ensure that sufficient funding remains available to execute its core fishery and ecosystem research surveys. It is clear, however, that funding constraints have reduced the capacity of the Center in this respect. For example, the bi-annual Gulf of Alaska trawl survey has been reduced to just two vessels, reducing important sampling capacity of the deeper stations. These survey stations are especially critical in the context of more frequent marine heat waves experienced in the Gulf of Alaska. Furthermore, the Eastern Bering Sea slope survey has been forgone in recent years in order to survey the Northern Bering Sea. Core research surveys no longer include adequate funding and staff for a three-vessel survey in the Gulf of Alaska nor an Eastern Bering Sea Slope and Northern Bering Sea survey.

This erosion of survey capacity is coming at a time when climate change is expanding survey needs, as confirmed by the North Pacific Council's Science and Statistical Committee. For

example, the need for increased survey activity in the Northern Bering Sea is becoming increasingly clear; in 2019, the survey indicated 41 percent of the Eastern Bering Sea Pacific Cod biomass was in the Northern Bering Sea. Climate change is precipitating a shift of commercially-important fish populations, including Alaska pollock and Pacific cod, further into the North Bering Sea region, and we can only gain a clear picture of the scale and consequences of those shifts through a consistent stream of survey data. As importantly, the Center needs to be able to support consistent ecosystem surveys and to understand and forecast effects of climate change on marine ecosystems.

No climate resilience strategy for fisheries and protected resources will be effective without sustained increases in regional science capacity. We urge you to make this the first order of business for the administration's marine climate resilience initiative.

2. Dynamic management is even more critical in the face of climate change

As the marine environment changes, it will be absolutely critical to give managers and industry participants the flexibility to rapidly adapt their approach. Our task must be to set clear management objectives, and then to empower Regional Fishery Management Councils to meet those objectives through management strategies that adapt year by year or, where necessary, even hour by hour.

In the North Pacific we have already pioneered dynamic management strategies that are achieving remarkable conservation success. For example, the formation of cooperatives has allowed fishing industry participants to be held individually accountable for their bycatch performance, and in so doing has spurred the development of new and superior techniques for reducing bycatch rates. Whereas previously, a static area-based salmon savings area was established via Federal regulations and maintained regardless of where salmon were actually located at any given moment, shifting responsibility to cooperatives and individual vessels unlocked a wave of industry innovation that led to each vessel sharing data about salmon interactions across the entire fleet in real time and the ability to enact closures in relation to this real-time information. This approach, now well established in the North Pacific, produces instantaneous shifts in fishing effort to avoid salmon.

It is abundantly clear that these kinds of shifts from static to dynamic management approaches will be even more important as ocean climate change accelerates. In the above example, the ability of managers to draw permanent lines on a map to protect salmon would have become only more difficult as climate variables increase the range of possible species distributions. Yet under the current dynamic management approach to salmon avoidance, the fleet can better respond to even significant year-to-year changes in salmon distribution.

In light of this clear need for expansion of dynamic and adaptive management, it does not make sense that some of the advocates who are most forcefully sounding the alarm on ocean climate change are simultaneously seeking to promote outdated static area-based management approaches. Most alarming are efforts to present the scaling up of permanent no-take Marine Protected Areas (MPAs) as a climate resilience 'silver bullet'. Nothing could be further from the truth.

First, the science is increasingly clear that MPAs don't build meaningful climate resilience in the marine environment. For example, in their 2019 *Biological Conservation* paper, *Climate resilience in marine protected areas and the 'Protection Paradox'*, Bates et al sought to understand why “studies have only rarely attributed resilience responses” to MPAs while, by contrast, “large die-offs are well described from MPAs following climate stress events”. Their conclusion, reflecting an increasingly robust body of scientific opinion, is that this “may be in part because protection from one set of pressures or drivers (such as fishing) can select for species that are highly sensitive to others (such as warming), creating a ‘Protection Paradox’”. To be clear, this science suggests that *even within MPAs themselves* marine ecosystems do not appear to be meaningfully more resilient in the face of climate change.

The case against the United States moving to greater reliance on permanent, static area-based closures in the climate change era becomes even more clear when what occurs in the remainder of the ocean, outside these static closed areas, is considered. In short, large-scale MPAs tie the hands of fisheries scientists and managers who could otherwise work to distribute fishing effort over the entire range of their jurisdictional waters in ways that optimize conservation and other management objectives. Static MPAs risk concentrating fishing effort in smaller areas of the ocean in ways that risk *reducing* overall climate resilience and marine ecosystem health.

Stemming from this understanding, there is growing recognition that area-based conservation measures need to be put in place for specific defined purposes, and with clear license for scientists and managers to revisit them and change their parameters as appropriate over time. This approach is consistent with the understanding that the marine ecosystem is a dynamic environment, and that climate change effects on the ecosystem and the appropriate area-based measures and other responses will also vary over time. This is the approach taken by North Pacific fishery managers: the North Pacific Council has implemented area-based protections covering approximately 65 percent of waters under its jurisdiction, yet always for specific purpose and with flexibility to adapt through regulations.

This is also the backdrop against which Other Effective Area-Based Conservation Measures (OECMs) have been recognized and endorsed on the global stage. A definition, criterion, and recommendations for OECMs were formally adopted at the 14th Conference of Parties (COP) to the Convention on Biological Diversity (CBD) in November 2018 (Decision 14/8). Specifically in relation to fisheries, the United Nations Food and Agriculture Organization (FAO) noted during its February 2021 Committee on Fisheries (COFI) meeting that many area-based fisheries management measures (ABFMs) already aim to meet sustainability goals and are well poised to meet the OECM criteria.

An immediate focus on advancing the identification and reporting of OECMs to reflect actions taken by the Regional Fishery Management Councils could be a critical contribution by the Biden Administration to align meaningful climate resilience strategies with the current conversation concerning area-based conservation targets. As countries grapple with how best to identify and report on OECMs in ways that strengthen climate resilience and biodiversity outcomes, operational guidance from the U.S. government could also be helpful in catalyzing further adoption and recognition of sustainable management practices globally.

We urge you to seriously consider this as a second element in the administration’s marine climate resilience initiative.

3. The North Pacific is pioneering new approaches to build climate resilience

It is fortunate that the work of the Biden Administration to develop climate resilience strategies relating to marine fisheries and protected resources does not have to start from square one. On the contrary, we believe that existing statutory authorities provide the tools needed to advance new approaches to building climate resilience; which is precisely what the North Pacific Council is well advanced in doing. The North Pacific Council’s approach should be studied carefully by agency leadership—both for their precedent value, and to ensure they are not disrupted by unnecessary or inconsistent new mandates.

The North Pacific has long served as a leading example of ecosystem-based fishery management. For example, with broad stakeholder support, in 1984 a cap of two million metric tons was placed on the total annual groundfish harvest from the Eastern Bering Sea. Alternatively, a conventional management strategy that would set harvest limits based on the allowable biological catch set by scientists for each species would enable significantly more than a total harvest of 2 million metric tons. Yet industry supports this cap as a precautionary buffer to protect the long-term health of the Bering Sea ecosystem.

At the heart of the North Pacific Fishery Management Council’s climate resilience strategy has been an effort to further nest fisheries management within broader ecosystem considerations. As part of the annual Stock Assessment and Fishery Evaluations (SAFE) document, specific chapters are devoted to reporting the Ecosystem Status of the BSAI and GOA regions. This started in 2014 with the adoption of an explicit Council ecosystem policy and vision statement. Fishery managers committed to take into account environmental variability and uncertainty, changes and trends in climate and oceanographic conditions, fluctuations in marine productivity, and relationships between marine species. This policy led to these ecosystem considerations being incorporated into the analysis and development of all fishery management measures.

Then in 2018, the Council approved a new Bering Sea Fishery Ecosystem Plan, and shortly after, a Climate Change Taskforce with a 5-year implementation plan (through 2025) to better build climate resilience into the fishery management process. As the North Pacific Fishery Management Council notes in separate comments:

...one of the first significant efforts under that plan is our Action Module for Climate Change. The goal of the Climate Change Module is “to facilitate the Council's work toward climate-ready fisheries management that helps ensure both short -term and long-term resilience for the coupled social-ecological system of the Bering Sea.” As a first step to achieve this goal, the Council established a Climate Change Taskforce, consisting of federal and non-federal scientists (including social science, biological, ecological and marine mammal specialists), fishing representatives, tribal organizations, NGOs, and research organization representatives, to collect input from a diverse group of stakeholders and develop tools to make fisheries more resilient to climate change. The

Climate Change Taskforce workplan spans the next five years, and builds a process for operational delivery of climate-informed and ecosystem-based management decision support tools for the management of living marine resources in the Bering Sea....

The Climate Change Taskforce aims to build a three-step process (i.e., collect, synthesize, communicate) to operationalize the delivery of climate change information to the Council and address the intent of EO 14008 including summarizing climate change information, tools, and providing recommendations to improve fisheries resiliency to climate change in all aspects of our management process. Through the course of the 5-year work plan, the Climate Change Taskforce will also create a regular process for the synthesis and delivery of management strategy evaluations of measures that can a) help preserve livelihoods, economies, health and well-being across fisheries and dependent coastal communities; b) support near- and long-term adaptation to climate change; and c) ensure the continued productivity and sustainability of the Bering Sea system.

We add that the North Pacific Fishery Management Council's leadership in developing and implementing its new Bering Sea Fishery Ecosystem Plan has been supported by the commercial fishing industry and other stakeholders. We believe that the collaborative and stakeholder-driven approach of the Council in advancing the plan has been one of its core strengths and will ensure that changes secured through execution of the Plan will be successful and durable. Moreover, we note that this and other measures described above were carried out under existing MSA and other authorities, demonstrating that no new legislative mandates are needed to achieve climate resilience goals.

Thank you again for the opportunity to provide comment. We look forward to continuing to engage as constructive partners as your marine climate resilience initiative moves forward.

Sincerely,



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Executive Director

At-sea Processors Association



Chris Barrows
President

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