



WHITE HOUSE OCEAN PARTNERSHIP WORKSHOP
Alaska Marine Science Symposium Town Hall
Facilitating Public-Private Partnerships,
A Follow-up to the White House Ocean Science and Technology Summit
January 29, 2020

Background

On November 14, 2019, the Office of Science and Technology Policy (OSTP) and the Council on Environmental Quality (CEQ) hosted a *White House Summit on Partnerships in Ocean Science and Technology* bringing together over 100 leaders and experts to identify opportunities for partnerships. Participants represented the private sector, academia, philanthropy, and the Federal government. Immediately thereafter on November 19, 2019, the President, through his memorandum "Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska", directed Federal agencies to develop a national strategy to map the United States Exclusive Economic Zone (EEZ) and a strategy to map the Alaskan coastline to advance our understanding of our oceans and coastlines and to promote efficient permitting related to ocean exploration activities. The Alaska coastal mapping strategy will be released in April 2020.

Setting the stage to advance this effort, in August 2019, the *Fiscal Year 2021 Administration Research and Development Budget Priorities* memo, issued by OSTP and the Office of Management and Budget, included a section specifically on oceans, and directed agencies to prioritize new and emerging technologies and collaborative approaches to efficiently map, explore, and characterize the resources of the U.S. EEZ.

These 2019 actions are based on the November 2018, National Science and Technology Council report *Science and Technology for America's Oceans: A Decadal Vision*, which identified goals to advance U.S. ocean science and technology in the coming decade; and, Executive Order 13840, *Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States*," establishing an interagency Ocean Policy Committee directed to, in part, engage and collaborate with the ocean community to identify priority ocean research and technology needs, and leverage resources and expertise to maximize the effectiveness of Federal investments in ocean research.

AMSS 2020 Town Hall

On January 29, 2020, the Alaska Ocean Observing System (AOOS) and the Bureau of Ocean Energy Management (BOEM) Alaska Region convened a town hall at the annual Alaska Marine Science Symposium (AMSS) as a follow-up to the White House Summit. AMSS is Alaska's premier marine research conference, bringing together scientists, educators, resource managers, students, tribes, and the interested public for over twenty years to discuss the latest marine research being conducted in Alaskan waters.

The challenges and opportunities faced by those who use Alaska's oceans and marine resources are enormous. It is universally accepted that the marine science community needs to increase its understanding of these ecosystems through science and technology to facilitate their conservation, management, and balanced use. However, the scope and scale of issues are too great for any one entity or sector alone. Cross-sector partnerships—among private, academia, government, tribes, and others—are essential to successfully address ocean issues. Partnerships allow the combined strengths and resources of diverse organizations to achieve greater results than individual organizations.

Alaska has a key role in the national and global efforts to advance ocean science and technology through partnerships. To orient and focus participants for this interactive conversation, questions to consider were distributed prior to the event:

- What issues in ocean science and technology are best addressed through partnerships?
- Where should resources be concentrated and focused? Which problems are imminently solvable through organization and leadership and which are more pressing?
- What barriers to ocean science and technology partnership formation exist and how can they be addressed, minimized, or removed?

Co-leads for the Anchorage Town Hall, Molly McCammon, AOOS Executive Director, and James Kendall, BOEM Alaska Region Director, gave a brief review of the background and importance of this initiative to Alaska. This was followed by an interactive discussion using a round-robin / talking-circle format starting with opening comments by 7 invited participants. The floor was then open for all attending to offer their views from the perspective of: 1) concerns and issues, 2) opportunities and solutions, and 3) models and examples of success. The following is a summary of these discussions.

A common theme during the discussions was what is a "Partnership?" As described by the [National Oceanographic Partnership Program \(NOPP\)](#), [partnerships](#) encompass a continuum from a more "global," less formal, sharing of information to a high level of interaction where common objectives are planned and implemented among the partnering entities.

- Coordination – the sharing of information on similar projects
- Cooperation – working together on parallel projects with common objectives

- Collaboration – sharing objectives and working together on common projects

Of particular relevance to this initiative, partnerships can be invaluable tools when:

a) resources are limited; b) priorities that are obvious to all do not fit “squarely” within the wheelhouse of a single organization or sector; or c) priorities are just too big for any single entity.

Throughout these discussions it became apparent that successful partnerships, and particularly collaborations, the highest level, require no less than five requirements: trust; effective and sincere communication; understanding of the needs, perspectives, and operational bounds of each participant; willingness to work within the bounds of each participant (e.g., legislation, laws, regulations, etc.); and, often, the attitude participants bring to the table.

Models/Examples of Success

While challenging, participants agreed that there are clear examples of successes or models which can be used. It was also agreed and acknowledged that most, if not all, are not clear-cut and require “hard work”. One must be flexible, adaptive, think in terms of the “continuum”, and be prepared to “role up one’s sleeves.”

Within the federal sector, NOPP is a clear example of a successful collaborative framework working diligently to include private, academic, and non-governmental organization partners. Countless examples of how to form these collaborations can be found on their website.

Successful partnerships have also utilized cooperative research and development agreements (CRADA or CRDA) - an agreement between a government agency and a private company or university to work together on research and development. In order to meet the standards of a CRADA, there must be a contribution from all parties. This contribution can take the form of materials or instrumentation, as well as so-called "know-how," itself.

Moving towards a more non-governmental approach, the Integrated Ocean Observing System (IOOS) (<https://ioos.noaa.gov/>), locally represented in Alaska by AOOS (Alaska Ocean Observing System, <https://aoos.org/>), is an example of the successful use of partnerships. For example, its work with the National Weather Service and the state to collect and manage water level data is a clear, successful working partnership. AOOS is also a good example for examining successful partnerships with NGOs, industry, non-profits, and the State such as with the Alaska Department of Natural Resources on developing the state’s coastal mapping strategy.

The Alaska Coastal Mapping Strategy is a partnership of federal, state, and private entities to prioritize key gaps in mapping Alaska’s extensive coastline and identify ways to address those gaps in the coming years. Developing the strategy started in 2018 with funding by USGS, NOAA, and the State of Alaska, and is now being used as the basis for the state response to the November 2019 Presidential Memorandum on Alaska mapping.

Another non-governmental organization (NGO) successfully using partnerships is the Marine Exchange of Alaska (MXAK) (<https://www.mxak.org/>). MXAK is a non-profit organization established with the mission to bring the Alaska maritime community together. It assists *the maritime community in complying with state and federal safety, security and environmental regulations, enhancing maritime safety and environmental protection, aiding in the response to emergencies, and saving the lives of mariners*. Captain Ed Page, USCG (retired) and Executive Director of the Exchange, explained how its broad partnerships have been invaluable in developing and providing critical, ongoing support for the Automatic Identification System (AIS) vessel tracking system along the Alaska coast, an area including some of the most challenging coastal and marine conditions for mariners. He encouraged more entities to coordinate their operation and maintenance processes for different sensor programs.

From the private sector, solid partnerships abound; however, more needs to be done to publicize these success stories. For example, Rada Khadjinova of Fugro described the company's ongoing crowdsourced bathymetry program, which uses remote technologies to collect high-resolution bathymetry data in unmapped (or under-mapped) areas while transiting between project sites. These data are being provided at no cost to the global ocean mapping initiative Seabed 2030. Another example of industry furthering publicly funded R&D efforts to benefit a wider range of data users is Fugro's Rapid Airborne Multibeam Mapping System (RAMMS). RAMMS is based on a lightweight, UAV-capable lidar sensor originally developed for the US Navy to detect underwater mines. Fugro worked with sensor developer Areté to adapt the technology to meet commercial hydrographic mapping needs, including updated nautical charts. This capability has important implications for Alaska, where systematic coastal mapping efforts would be massive and are now being planned.

Ginny Eckert, *Alaska Mariculture Task Force*; Austin Estabrooks and Stephanie Madsen, *At Sea Processors Association*; and Nicole Kimball, *Pacific Seafood Processors Association*, representing *Blue Economies* pointed out successful models from their sector. Mariculture, though still in its infancy in Alaska, is using broad partnerships and task forces to successfully expand a sustainable industry. These partnerships often include what may be considered non-traditional members such as the National Fish and Wildlife Foundation (<https://www.nfwf.org/>) and bring together both agency regulators and industry members.

Successful partnerships can also be found in Alaska's fishing and processing industries. These partnerships have and do include federal and state government entities such as NOAA in addressing issues such as by-catch. They also include partnerships with the University of Alaska, Alaska Pacific University, and the North Pacific Research Board to support the sustainability of key species; and academia and educators to provide understanding and opportunities for the next generation of fishers as well as mariculturists, marine scientists, and policy makers. The *At Sea Processors Association* created its own non-profit foundation to fund research projects important to their organization.

At a local, community level, successful partnerships abound and involve multiple diverse entities, including conservation and philanthropic organizations. Mike Barber, *Alaska Conservation Foundation (ACF)*, described how working with the Bureau of Indian Affairs they supported a liaison position with the Pribilof Tribal Association and a sentinel program with the Village of Saint Paul with help from ACF funding. Also, at the community level, Mary Turnipseed reported how the *Gordon and Betty Moore Foundation* supported the Kaviq Research Program, based in Kotzebue Sound, a community-based research and monitoring effort. The Moore Foundation also supported the Audubon Society in their successful partnership to develop synthesized data to produce ecological maps for its Arctic Marine synthesis. Mary described philanthropic funding as either “surge” funding or “catalyst” funding, but usually not “sustained” funding. Funding of this nature can be helpful for technological developments and data synthesis and hopefully encourage federal buy-in.

More generally, other ideas/concepts which should be taken advantage of or explored include: a better use of a “Task Forces”; encouraging industry to take a philanthropic approach coupled with a more sincere effort by partners to publicly acknowledge this philanthropy; the better use of “Crowd Sourcing” to pool knowledge; the development of alternative technology, particularly in remote areas; fostering a “Kickstart” approach followed by a focused effort on sustainable funding; and a fostering and better support of cooperative research agreements.

Concerns and Issues

While the conversation was rich with examples of successful partnerships, participants were not shy about noting issues, concerns, and impediments. Significant data and information needs exist in Alaska, such as water level information, offshore and coastal mapping, and ecosystem processes and functions. These are particularly relevant given the changing Alaska marine environment with its changes in fish and wildlife migration patterns, increased erosion and infrastructure implications, increased vessel traffic, and complications in forecasting, to name but a few. Such issues help emphasize to the scientific community that it’s not all about science (i.e., science for science sake). Community needs and regulatory and resource management issues and decisions are intertwined with science needs and must be at the table as well. The development of new technologies to acquire new, useful information in a rapidly changing ecosystem is already critical and given limited financial resources — partnerships, particularly collaborations, the highest but most difficult level, are the only viable solution, not just for the future, but for the present.

Building capacity, enhancing education, and maintaining institutional knowledge are concerns in many sectors. Austin Estabrooks, *At-Sea Processors’ Association*, pointed out that the fishing industry, as with the ocean research community, is “graying,” and there is a serious need to develop immediate career interest in the next generation in order to pass along knowledge and experience particularly from a sustainability perspective. This includes a need to protect existing information from being lost due to the lack of adequate data management and archival mechanisms.

Concerns were universally voiced that there is a need for establishing and enhancing clear processes/mechanisms for facilitating partnerships such as the NOPP process. Even where they exist, using existing authorities and instruments can be challenging. Efficient inter-agency agreements, even when successful, are difficult to achieve. This is particularly true in terms of the inter-agency transfers of resources (i.e., fiscal resources) which would allow the pooling of funds to address mutual needs. This issue needs immediate attention. The bottom-line here was an acknowledgment that regardless of need, intent, and importance, partnerships are hard work, require focus, and should always be approached as a serious endeavor.

In Alaska, a huge state with a small-town population, developing on-the-ground partnerships with communities and tribes is also critical; however, this often requires the use of another and completely different “knowledge system,” known as Traditional/Indigenous Knowledge (TK/IK). This can be challenging for those not familiar with this system of knowledge. However, it has been demonstrated time and time again, with multiple successful partnerships, that TK/IK must be embraced and incorporated early in the process. Communication networks between the scientific community and local and tribal organizations are essential and must be enhanced with traditional/Indigenous knowledge seriously considered and respected, along with scientific information. Communication among different groups of people is not always easy - scientists use a lot of different acronyms and technical terms that are not familiar to all audiences. Scientific, regulatory, and resource management entities need to have broad discussions with these sectors (i.e., local communities, tribes, etc.), as well as be willing to listen and to adapt to the different language and knowledge system of potential partners. This includes full disclosure of the intention of proposed research and the sharing of results as quickly as possible – all partners must be made to feel that they are equal participants. This can often be a completely new paradigm for researchers not based in, or having previously worked in, Alaska.

Opportunities & Solutions

A significant step forward (i.e., solution) would be the establishments of grants intended to develop new or alternative technologies, as well as for the adaption of such technologies to users’ needs. Accelerating the pace by which effective technologies are accepted into practice is also critical.

Partnerships between industry and non-industry scientists are possible such as putting instrumentation on industry platforms and using private vessels as “ships of opportunity.” For example, Fugro now regularly collects bathymetry data during transits between its commercially funded study areas using remote command and control technologies that allow the company to collect high-resolution bathymetry data without dedicated crew onboard the vessel; this information is freely provided to the general scientific community. Industry is often also willing to include additional instrumentation on their vessels to collect data and information when space and time allows. Other industry partners are willing to do likewise; however, it is important to discuss data needs and requirements up-front for such arrangements (partnerships) to work.

The Alaska mariculture industry identified a general, overall need for building capacity. Fishery processors noted challenges to the commercial fishing industry such as by-catch mitigation, changing ecosystems, and developing career interest in the next generation – these could be opportunities for partnerships. For example, Alaska’s fishing fleet has the potential to provide platforms for data collection (e.g., instruments on vessels of opportunity). The industry already scientifically documents by-catch by employing monitors collecting information pertinent to multiple information gaps. Such activities are often counter to the perception that the large-scale fishing industry is in conflict with science and sustainability. This highlighted the need for all partners to do better at socializing their efforts (i.e., communication), particularly successes.

Philanthropic organizations could be a useful vehicle to discuss opportunities for working with communities to advance understanding and science. This can be important as noted by Danielle Stickman, *Western Alaska Landscape Conservation Cooperative*, and Charlotte Levy, *Aleutians East Borough*, in the co-production of knowledge. Organizations such as Moore Foundation, as noted by Mary Turnipseed, have co-funded projects with communities to facilitate knowledge exchange – several in response to ecosystem changes. This could be particularly important for the incorporation of TK/IK into the discussions. Community-based monitoring can also be used to advance such endeavors. Local communities and tribes are often an untapped resource and a partner who can contribute both resources and knowledge. In general, multiple participants at the Alaska town hall stressed the importance of researchers reaching out to community, tribal, and borough planning and wildlife departments. The creation of a centralized support network to facilitate these exchanges could be helpful. Co-funding projects, such as placing co-funded liaisons in local communities, was also presented as a possible opportunity/solution. Philanthropic organizations should be viewed as potential funding sources to address common issues (e.g., Moore Foundation, Audubon Society) as they have much experience to share in terms of the common challenge on how to apply and fund partnerships across non-traditional sectors.

We need more flexible ways for agencies to partner between each other. For example, it is often easier for some agencies to enter into partnerships with private entities than with each other.

Information maintenance was discussed as both a challenge and an opportunity. While it was agreed that, unfortunately, some historical information has been lost due to the previous lack of a centralized storage/archival mechanism, in today’s working environment this can easily be prevented. There is also the opportunity and the willingness of industry to share their data with such repositories.

There are different approaches to working together, such as use of in-kind funding and alignment (e.g., stakeholder steering committees). It needs to be recognized and accepted that there are different levels and types of contribution to an effort. It doesn’t always have to be in dollars; it can be in-kind support.

Participants also acknowledge the importance of the use of “task forces” and the like to develop mechanisms to make partnerships work; however, it was also noted that efforts must be made not to “re-invent the wheel” when such mechanisms already exists. The National Oceanographic Partnership Program (NOPP) is an example of such a successful mechanism.

Developing a tracking system of existing partnership commitments being used in Alaska could be helpful. This would include the continuous, critical evaluation of these partnerships and socializing both successes and failures under an adaptive management framework. This would be helpful in identifying the next steps of enhancing private-public partnerships in Alaska.

PARTICIPANTS at WHITE HOUSE TOWN HALL, January 29, 2020

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