Environmental Studies Program: Ongoing Study

Title	Collaboration with North Pacific Research Board (NPRB) Arctic Marine Research Program (AK-16-02)
Administered by	Alaska Regional Office
BOEM Contact(s)	Rick Raymond (richard.raymond@boem.gov)
Procurement Type(s)	Cooperative Agreement
Conducting Organizations(s)	North Pacific Research Board
Total BOEM Cost	$1,000,000
Performance Period	FY 2016-2022
Final Report Due	September 2022
Date Revised	September 14, 2022
PICOC Summary	
Problem	This study will build upon available synthesis projects to examine areas where collaborative studies can help enhance informed decision-making on the sustainable use of resources in the Arctic marine environment.
Intervention	BOEM will enhance existing working relationships with NPRB, NOAA, USGS, AOOS, industry and others by establishing financial cooperation, coordinated Request for Proposals, data sharing agreements, and logistical support agreements.
Comparison	BOEM and NPRB will partner on collaborative research, leveraging expertise across several partners and funding sources, including NGOs, Federal agencies, Universities, NSB, industry and others in the Chukchi and Beaufort seas.
Outcome	This project will support mutually identified information needs on the physical, biological and social processes in the Arctic marine environment.
Context	Bering, Chukchi and Beaufort seas

BOEM Information Need(s): BOEM needs to leverage funding for updated environmental data collection as significant opportunities arise. The National Science Foundation and the North Pacific Research Board have worked together programmatically and scientifically through the Bering Sea Project since 2007 (http://bsierp.nprb.org). Based on this successful collaboration, BOEM and NPRB plan to partner on new collaborative research in the Arctic, leveraging expertise across several partners and funding sources, including BOEM, NSF, NPRB, NOAA, Alaska Ocean Observing System (AOOS), USGS, ONR, NASA, North Slope Borough, Northwest Arctic Borough, industry and others, specifically in the Chukchi and Beaufort seas. Research from this collaboration will support mutually identified information needs on the physical, biological and social processes in the Arctic marine environment.

Background: The Alaska Office has a long history of supporting multidisciplinary research, beginning with the Outer Continental Shelf Environmental Assessment Program (OCSEAP) surveys conducted between the 1970s and early 1990s and the Beaufort Sea Monitoring Program in the 1980s. The Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) program and its continuation

(cANIMIDA) started in 1999 to provide baseline data and monitoring results for chemical contamination, turbidity, and subsistence whaling in the vicinity of Northstar and Liberty development sites. This work continues today with the studies ANIMIDA III: Boulder Patch and Other Kelp Communities in the Development Area, begun in 2012, and the recently awarded ANIMIDA III: Contaminants, Sources, and Bioaccumulation, which has been expanded to include Camden Bay.

Since 2007, the Alaska Office has also developed a new suite of studies in the Chukchi Sea, leveraging more than $70 million (through FY 2015) to conduct interim baseline research and monitoring in all the following fields of interest: meteorology, ice dynamics and basic oceanography, benthic fauna and sedimentation, marine mammals (including whales, walrus, seals, and polar bear), fish, birds, and social systems. Most of the projects exhibit complex, multilateral collaborations, with explicit inter-disciplinary linkages between the physical and biological sciences, and many of them also provide a role for active participation by Alaska Native residents and input from sources of traditional knowledge. Most of them pursue multi-year data collection efforts on a regional scale, with careful attention to inter-annual variability and ecosystem processes. The newly funded Arctic Marine Biodiversity Observation Network (AMBON) in the Chukchi Sea is a prime example.

Objectives: BOEM seeks to build upon existing working relationships with NPRB, NOAA, USGS, AOOS, industry and others by establishing financial cooperation, coordinated Request for Proposals, data sharing agreements, and logistical support agreements. The foundation for such partnerships will be based on BOEMs Annual Studies Planning Process.

Methods: BOEM, NPRB and other funding partners will build upon newly available synthesis projects (such as Synthesis of Arctic Research [SOAR] and the Pacific Marine Arctic Regional Synthesis [PacMARS] to examine areas where collaborative studies could help enhance informed decision-making on the sustainable use of resources. This collaborative study will be guided by an oversight committee formed of senior scientists and accomplished through an annual request for proposals (RFP). Recommendations for select studies would be based on program development goals. After BOEM review of RFP responses, subgroups of interdisciplinary scientists will work together with NPRB to select specific task orders for BOEM funding. Targeted areas for new research in the Chukchi Sea would include, but are not limited to: influence of sea ice dynamics and advection on the phenology, magnitude and location of primary and secondary production; distribution and life history of upper trophic predators in response to availability of lower trophic prey resources; and improving knowledge about rates of consumption, growth, and reproduction of benthic and pelagic organisms. Deliverables from this study will include final reports, published papers, and synthesis workshops to integrate multi-disciplinary datasets that will include participation of several BOEM-funded PIs.

Specific Research Question(s): What is the range of environmental effects from environmental change occurring in the Arctic marine environment?

Current Status: Awaiting final report

Publications Completed: None

Affiliated WWW Sites:

http://www.boem.gov/akstudies/

https://marinecadastre.gov/espis/#/search/study/100118