BOEM

Bureau of Ocean Energy Management

A Special Issue Focus from the Bureau of Ocean Energy Management

Traditional Knowledge and Resource Management

WHAT IS TRADITIONAL KNOWLEDGE?

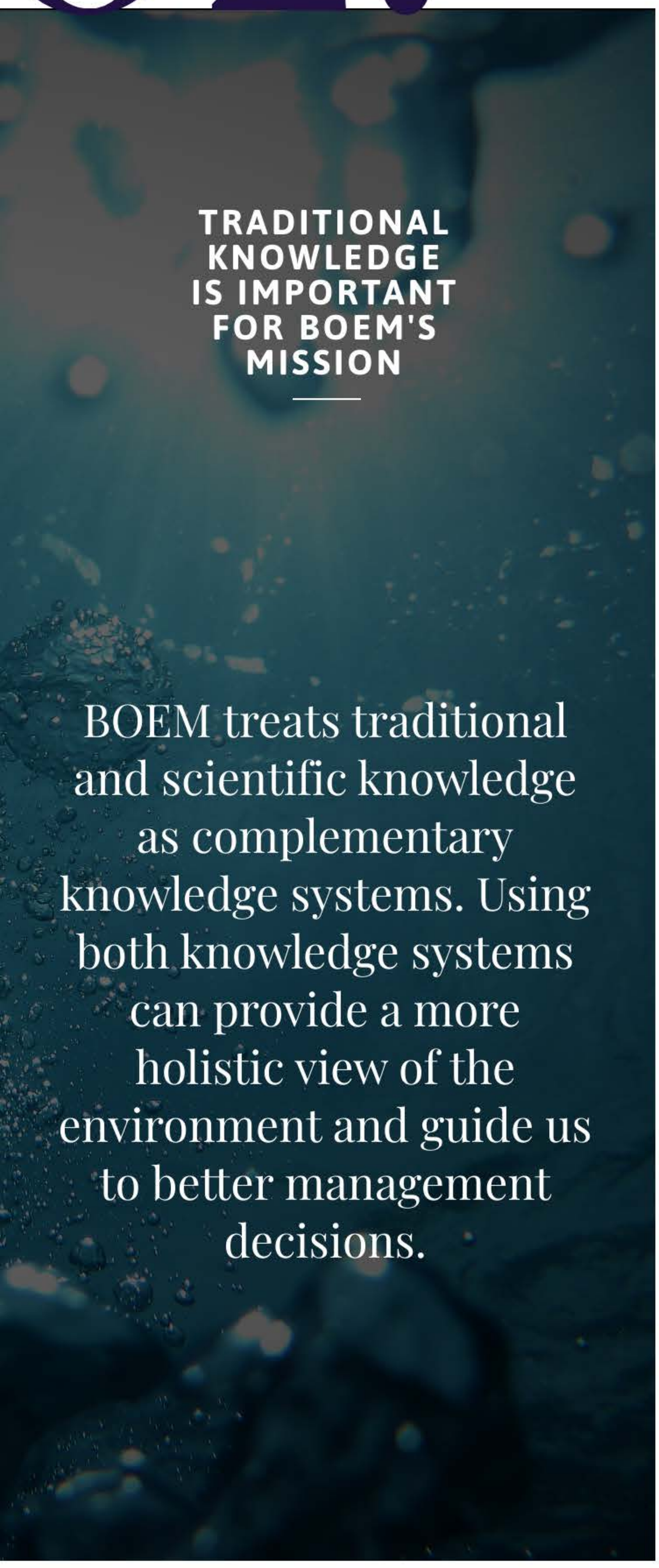
01.

Traditional knowledge (sometimes referred to as indigenous knowledge) can be defined as a body of evolving practical knowledge based on observations and personal experience of indigenous residents over an extensive time period. It can be described as information based on the experiences of a people passed down from generation to generation. It includes an extensive and holistic understanding of the environment and the interrelationships of its various parts. These traditions can provide a framework for determining how resources are used and shared.

BOEM acknowledges that traditional knowledge is:

- local and highly contextual
- shared through kinship and promotes survival and well-being
- dynamic rather than rigid
- based on experience
- more than a collection of observations; it is an important sociocultural component that anchors community values and identities
- a framework that emphasizes a fundamental sense of unity in which people are viewed as part of the environment

02.



TRADITIONAL KNOWLEDGE IS IMPORTANT FOR BOEM'S MISSION

BOEM treats traditional and scientific knowledge as complementary knowledge systems. Using both knowledge systems can provide a more holistic view of the environment and guide us to better management decisions.

BOEM's Mission

BOEM's mission is to manage energy and mineral resources in offshore waters of the United States Outer Continental Shelf in an environmentally and economically responsible way.

Environmental Analysis

Analysis of impacts to natural, biological, and sociocultural resources are vital to sound decision-making concerning energy and mineral activities on Alaska's OCS.

History

Beginning in 1995, BOEM (then called MMS) met with the newly formed Alaska Native Science Commission and the U.S. Fish and Wildlife Service to share views on traditional knowledge issues and learn how to best incorporate them into government documents.

03.

INCORPORATING TRADITIONAL KNOWLEDGE INTO RESOURCE MANAGEMENT DECISIONS

ACKNOWLEDGEMENT

In 1995, BOEM (formerly MMS) committed to incorporate traditional knowledge into the environmental analysis process. BOEM's decision was motivated by a government-wide movement to promote government-to-government relationships with tribes. At the same time, Alaska's North Slope communities urged BOEM to include their knowledge in its process. Local officials and village elders helped BOEM identify sources of traditional knowledge. These sources included transcripts of North Slope Borough Elders Conferences and published interviews. Combined with 25 years of archived public meeting notes from lease sales, the agency has a substantial collection of Native observations that collectively provide a rich source of traditional knowledge.

ACTION

Today, BOEM applies traditional knowledge from three primary sources: public comments, research, and tribal consultations. Traditional knowledge is received in written letters and comments during public meetings. BOEM analysts review social science publications for traditional knowledge findings and incorporate these in analyses where appropriate. BOEM, through its government-to-government relationship with Alaska Native tribes and corporations, formally consults with leaders to hear concerns and gather traditional knowledge.

PRACTICE

BOEM's approach has evolved to apply traditional knowledge at all stages in the decision-making process. At BOEM, traditional knowledge informs scientific research, planning for lease sales, and environmental impact analyses. Incorporating traditional knowledge improves decision-making through more complete and inclusive information, and increases involvement of people in resource management decisions which may affect their way of life. Even after decisions have been made, BOEM continues to use traditional knowledge through an adaptive process of monitoring, collecting, and analyzing additional knowledge, allowing for adjustments to management decisions when appropriate.

04.

RESULTS OF INCORPORATING TRADITIONAL KNOWLEDGE

DIALOGUE

RESULT 1

The establishment of a unique and valuable dialogue between BOEM and the people of the North Slope in which knowledge is shared between various groups.

AWARENESS

RESULT 2

This dialogue has led to awareness among BOEM and its partners including the importance of traditional knowledge in understanding and addressing areas of potential conflict.

SOLUTIONS

RESULT 3

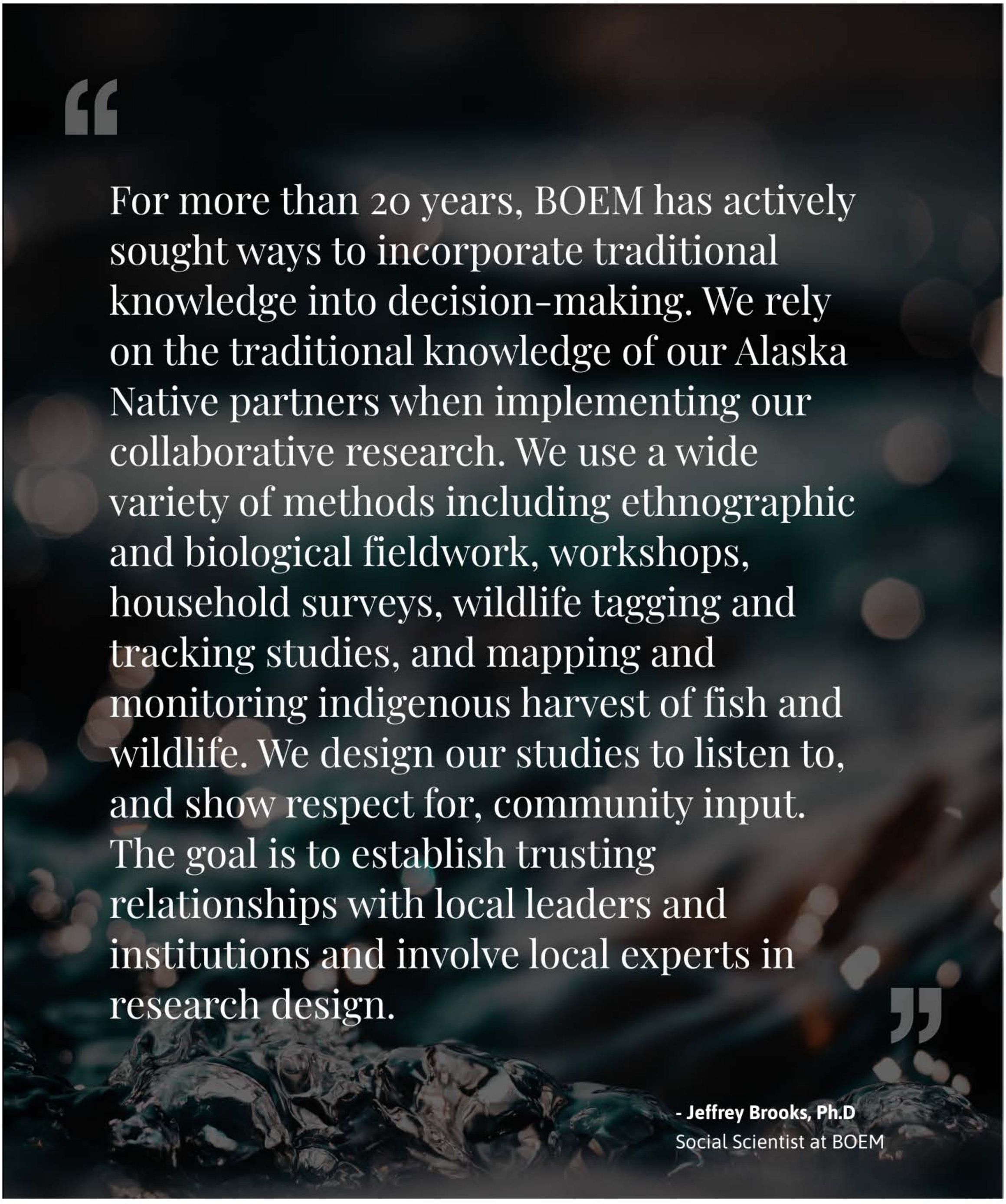
Through dialogue and awareness, there is now agreement among whalers and industry on a conflict resolution process. BOEM and its partners discuss issues of concern and work toward implementing measures that may address potential impacts to subsistence whaling.

ENHANCED DECISIONS

RESULT 4

BOEM has learned that applying traditional knowledge makes decision-making more inclusive by generating mutual understanding between partners; creating understanding and acceptance among a wider group of stakeholders; and enhancing respect for, and understanding of, indigenous perspectives and ways of life by scientists, resource managers, and decision-makers.

05.



“For more than 20 years, BOEM has actively sought ways to incorporate traditional knowledge into decision-making. We rely on the traditional knowledge of our Alaska Native partners when implementing our collaborative research. We use a wide variety of methods including ethnographic and biological fieldwork, workshops, household surveys, wildlife tagging and tracking studies, and mapping and monitoring indigenous harvest of fish and wildlife. We design our studies to listen to, and show respect for, community input. The goal is to establish trusting relationships with local leaders and institutions and involve local experts in research design.”

- Jeffrey Brooks, Ph.D
Social Scientist at BOEM

06.

TRADITIONAL KNOWLEDGE AND BOEM'S ENVIRONMENTAL STUDIES PROGRAM

STUDY HIGHLIGHT

BOEM's mission to responsibly manage ocean energy and mineral resources requires an understanding of indigenous whaling practices. Whaling maintains the social relationships and cultural identity of the Iñupiat due to the communal nature of whale hunts and the widespread sharing of important foods produced from the harvest. Whalers and their elders know that bowhead whales are sensitive to noise in the marine environment, including noise related to industrial activities. Accordingly, BOEM designed a study with the whalers to explicitly document where, when, and how whaling takes place. The study also examined the question of effects of noise from vessel traffic on whaling. The 12-year study included outfitting Beaufort Sea whalers from Nuiqsut, Alaska with GPS units to record offshore hunting tracks, whale sightings, and whale strikes. These tracks were geospatially mapped and color-coded by year. The study combined traditional knowledge with GPS track lines to document important whaling areas. The study also recorded length of whale hunts, offshore interactions of whalers with industrial and commercial vessels, and whale butchering practices. Particular attention was paid to record changes over time, so observed changes could be analyzed in the future in relation to energy exploration and development activities. The information allowed BOEM to better identify the sources of noise that could affect whaling success. Both scientific results and traditional knowledge were used to develop mitigation measures to reduce or avoid interference with whaling. BOEM continues to use the study results to better understand important areas for subsistence whaling and to make better decisions concerning possible development in the Beaufort Sea.

LESSONS LEARNED

We have learned that traditional knowledge can often complement and expand our collective understanding of ocean resources. Thus, it is important to allow local experts time and opportunity to review and contribute expertise to environmental research and analysis. Conducting community workshops and discussion panels with traditional knowledge experts early in the process can greatly improve research design or environmental analysis. This practice demonstrates respect for local expertise while potentially discovering previously unrecorded observations and insights. These discussions can often lead to an improved synthesis of existing data and hypotheses that are more refined.

We have found that the traditional knowledge and cultural practices of Alaska Native peoples contribute important information for studying and managing human activities in the marine environment. As our understanding of traditional knowledge evolves under the mentorship of our Alaska Native colleagues, we have become less preoccupied with how or if traditional knowledge should be integrated with science. Instead, we treat traditional knowledge and science as distinct and complementary knowledge systems that can improve our research, decision-making, and management of ocean resources. BOEM would not have realized these insights without being open to meaningful engagement with Alaska Native peoples.