Evaluating Connections: BOEM'S Environmental Studies and Assessments, External Evaluation Methodology

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DISCLAIMER

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Contents

List of Figures

List of Tables

List of Abbreviations and Acronyms

BOEM	Bureau of Ocean Energy Management
CAA	Clean Air Act
COR	Contracting Officer's Representative
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DOI	Department of the Interior
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESP	Environmental Studies Program
ESP-PAT	Environmental Studies Program-Performance Assessment Tool
ESPIS	Environmental Studies Program Information System
HQ	Headquarters
MBTA	Migratory Bird Treaty Act
MMP	Marine Minerals Program
MMPA	Marine Mammal Protection Act
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NASEM	National Academies of Sciences, Engineering, and Medicine
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NSL	National Studies List
NTL	Notices to Lessees and Operators
OCS	Outer Continental Shelf
OCSLA	OCS Lands Act
OEP	Office of Environmental Programs
OREP	Office of Renewable Energy Programs
OSRAM	Oil Spill Risk Analysis Model
PO	Project Officer
SDP	Studies Development Plan
SME	Subject Matter Expert
SNA	Social Network Analysis
STR	Science and Technical Review

Executive Summary

BOEM's mission is to manage the development of U.S. Outer Continental Shelf (OCS) energy and mineral resources in an environmentally and economically responsible way.[1] In fulfilling its mission, BOEM must comply with a range of environmental requirements and in doing so develops environmental assessments including National Environmental Policy Act (NEPA) analyses, consultation documents, and other analyses that use the best available information to comply with relevant statutes and policies.[2] Environmental studies sponsored by BOEM's Environmental Studies Program (ESP) provide scientific information to inform BOEM's environmental assessments. BOEM describes this "feedback loop" as the process by which environmental studies inform environmental assessments and environmental assessments in turn inform environmental studies. The project's overarching objective is to evaluate the effectiveness of BOEM's feedback loop process and understand how ESP-funded research is used within and outside of BOEM.

The first two years of this three-year project focused internally (within BOEM). This third year – the external evaluation – will address one overarching evaluation question: **What is the impact of BOEM's scientific research on the external environmental community (e.g., other federal agencies, state agencies, academia)?** Our approach for understanding and measuring the impact of BOEM's science on the external environmental community is informed by the work completed during the internal evaluation, communications with BOEM staff, and other work focused on BOEM's science programs, in particular the National Academies of Sciences, Engineering, and Medicine (NASEM) 2021 report *Attributes of a First-in-Class Environmental Program: A Letter Report Prepared for the Bureau of Ocean Energy Management.*[3] Specifically, we capture data to evaluate the impact – defined as informing and influencing users and advancing the state of knowledge – with a focus on external users. These external users include BOEM collaborators on assessment and study work, including other Federal agencies, states, tribes, and academics.

Environmental studies, environmental assessments, a web-based survey of external stakeholders, and interviews of external stakeholders will be the primary data sources for addressing the evaluation questions.[4] From these data sources, several analytical approaches will help answer the evaluation

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[1] The OCS Lands Act (OCSLA) of 1953, as amended, granted the Secretary of the Interior the authority to oversee the exploration and development of mineral resources on the OCS and the Energy Policy Act of 2005 expanded the Secretary's authority to include management of renewable energy resources.

[2] Assessments include but are not limited to analyses related to the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), Coastal Zone Management Act (CZMA), Magnuson Stevens Fishery Conservation and Management Act, and the National Historic Preservation Act (NHPA).

[3] [NASEM] National Academies of Sciences, Engineering, and Medicine. 2021. Attributes of a First-in-Class Environmental Program: A Letter Report Prepared for the Bureau of Ocean Energy Management. Washington (DC): The National Academies Press. https://doi.org/10.17226/26368.

[4] BOEM obtained approval to conduct the external survey and interviews from the Office of Management and Budget (OMB). Evaluating Connections: Environmental Studies and Assessments - OMB 1010-0194.

questions including an assessment citation analysis, external citation impact analysis, interview coding and qualitative analysis, survey analysis, and social network analysis. Table ES-1 summarizes which analytical approaches will be used to answer each evaluation sub-question. Additional information is available in the Data Sources and Analytical Approaches section of the document. IEc proposes an incremental approach to reporting results to BOEM. This approach is aimed at engaging the BOEM Evaluation Team and other key BOEM personnel in obtaining feedback.

Table ES-1. Analytical Approaches to Address Each Evaluation Question[5]

Evaluation Question	Assessment Citation Analysis	External Citation Impact Analysis	Interview Coding and Qualitative Analysis	Survey Analysis	Social Network Analysis
What is the impact of BOEM's scientific research on the external environmental community (e.g., other federal agencies, state agencies, academia)?	✓	✓	✓	✓	✓
1. How does BOEM science impact external stakeholders and decision-makers?	-	-	✓	-	-
2. How is information on BOEM science communicated to and among external stakeholders?	-	-	✓	✓	✓
3. Are BOEM's environmental products used externally and how?	-	-	✓	✓	-
a. Which BOEM environmental documents are cited in external products, such as assessments produced by other federal or state agencies?	✓	✓	-	-	-
b. Which peer-reviewed publications resulted from ESP-funded projects?[6]	-	-	-	-	-

[5] Data sources contributing to the available information on environmental studies include BOEM's Environmental Studies Program Information System (ESPIS), a database with ESP-funded studies, BOEM reports, and associated publications; the National Studies List (NSL); and the Studies Development Plans (SDPs).

[6] IEc's work as part of the Year 1 Evaluation Approach Methodology identified the body of publications associated with ESP-funded projects between 1999 and 2019 (the evaluation timeframe), using a version of the ESPIS database from October 2020 and additional complementary searches. This resulted in the addition of several publications from *Alaska OCS Region, Fully/Partially Funded or Data/Sample Contribution Peer Reviewed Publications* list, publications reported in ESP-PAT, and publications identified through a Google Scholar search of BOEM (or historical MMS agency) obligation number for inclusions in the acknowledgments of the report. Additional, detailed information on our methodological approach is available in the *BOEM Published Documents and Outside Publications Associated with Studies* section of the Year 1 Evaluation Approach Methodology report. This was a necessary step prior to conducting the Year 2 internal evaluation. Specifically, IEc used this list of publications to conduct the internal assessment citation analysis. For consistency with the internal evaluation, IEc will include the same set of peer-reviewed publications resulting from ESP-funded projects in the Year 3 report; we do not plan to conduct new searches for peer-reviewed publications, but we will add any new peer-reviewed publications that are identified for us by BOEM staff and/or during the external interviews.

Evaluation Question	Assessment Citation Analysis	External Citation Impact Analysis	Interview Coding and Qualitative Analysis	Survey Analysis	Social Network Analysis
c. What is the system for tracking BOEM's impact on the external environmental community and how can it be improved?	-	-	✓	✓	-
4. How do external stakeholders contribute to BOEM's environmental products?	-	-	✓	✓	-
5. What are BOEM's impacts on the career of young scientists, including how BOEM has supported graduate education?	-	-	✓	-	-

1 Introduction and Purpose of the Evaluation

BOEM's mission is to manage the development of U.S. Outer Continental Shelf (OCS) energy and mineral resources in an environmentally and economically responsible way. The OCS Lands Act (OCSLA) of 1953 granted the Secretary of the Interior the authority to oversee the exploration and development of mineral resources on the OCS and the Energy Policy Act of 2005 expanded the Secretary's authority to include management of renewable energy resources.

Section 20 of the OCSLA resulted in the development of BOEM's Environmental Studies Program (ESP) to develop studies that establish information needed for the assessment and management of environmental impacts of oil and gas and other mineral development on the human, marine, and coastal environments. In fulfilling its mission, BOEM must comply with a range of environmental requirements, including but not limited to the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), Coastal Zone Management Act (CZMA), Magnuson Stevens Fishery Conservation and Management Act (MSFCMA), and the National Historic Preservation Act (NHPA). In so doing, BOEM develops environmental assessments, consultation documents, and other analyses that use the best available information. Much of that information flows from BOEM-sponsored research, particularly studies sponsored by the ESP.

Definitions of Knowledge Use

This evaluation focuses on two types of knowledge utilization (use):

- *Instrumental use:* An ESP study (or set of studies) directly informed management, planning, or policy decisions.
- *Incremental (conceptual) use:* BOEM's research advanced the state of knowledge or frame of reference.

BOEM has described this process as a "feedback loop" in which studies inform assessments and assessments inform studies. The goal of the feedback loop is that BOEM science informs BOEM decisions through assessments (i.e., science-to-policy), and vice versa. BOEM initiated this evaluation to understand how ESP-funded research is used within and outside of BOEM. The evaluation defines two types of knowledge utilization, or "use," of BOEM studies.[7] The first type of use, instrumental use, is based on whether the study or set of studies directly informed one or more management, planning, or policy decisions. The second type of use, incremental use, is based on whether the study or set of studies advanced the state of knowledge or frame of reference for a particular field of interest (scientific, technical, policy), without a direct connection to a decision. Through this evaluation, BOEM aims to understand the extent to which study results are incorporated into

[7] The field of social science that studies how knowledge is utilized debates the most appropriate measurement of "use," on a spectrum that includes reception, cognition, discussion, reference, effort (adoption), and influence (Knott and Wildawsky 1980, cited in Landry et al. 2003). Recent research indicates the public's consumption and use of publicly funded science is varied across fields but generally aligns with what scientists consider to be impactful (Yin et al. 2022). Two types of use are often considered. Instrumental use is defined as empirical knowledge that informs a decision-making process and contributes to the outcome (e.g., Caplan 1979). Scholars believe it is a rarer type of use and is less likely to occur than conceptual use, defined as the incremental advancement of the state of knowledge (Caplan 1979; Landry et al. 2003; Shafer 2005). Conceptual, or incremental, use is highly relevant to the way scientific information is typically used, with incremental change in a knowledge base that does not necessarily have direct applicability to decision-making processes (Shafer 2005).

assessments, information needs are identified through the assessment process, and studies and assessments are informing policy decisions and broader scientific understanding. The project covers the period between 1999 and 2019.

The evaluation is a three-year project. The first two years focused internally (i.e., within BOEM). Key topics of the internal evaluation included how well BOEM is communicating information needs and study results across the Bureau, the extent to which results from studies are being incorporated into assessments and informing BOEM's policy decisions, and the extent to which information needs identified through the assessment process inform future studies. Specifically, Year 1 (September 2019 – September 2020) focused on designing the internal evaluation methodology. This resulted in the Year 1 methodology report, *Evaluating Connections: BOEM'S Environmental Studies and Assessments Evaluation Methodology Final Report*. Year 2 (September 2020 – October 2021) focused on implementing this methodology, collecting evaluation data, and developing evaluation findings, conclusions, and recommendations. During Year 2, the team also began preparing for the external evaluation. Year 3 (October 2021 – present) builds on that initial work to describe the proposed methodology for the external evaluation. The external evaluation looks outside of BOEM, including how well BOEM is communicating science to external users, how BOEM collaborates with other federal and state agencies, and whether/how federal and state agencies are using BOEM's science to inform their own environmental policy and planning documents and decisions. Year 3 deliverables will include a Year 3 methodology and final report with evaluation results and recommendations.

This document is organized into seven sections. Following this introduction, Section 2 provides a description of the ESP as well as BOEM's environmental assessment work. Section 3 presents the evaluation questions that will guide this study. Section 4 presents the proposed data sources and analytical approaches for answering the evaluation questions. Section 5 identifies evaluation challenges and how these will be mitigated. Section 6 outlines how the evaluation results will be presented to BOEM, and Section 7 includes our references.

2 Description of the Environmental Studies Program and BOEM's Environmental Assessment Work

2.1 Environmental Studies Program

BOEM's ESP develops, funds, and manages scientific research to inform decision-making. For example, the ESP studies provide information on the status and trends of the human, marine, and coastal environments, and the potential impacts on marine biota from chronic pollution, oil spills, and activities related to offshore development. The ESP prepares an annual Studies Development Plan (SDP), which documents proposed studies for the two upcoming fiscal years. Recent SDPs also provide context and articulate upcoming decisions that drive selected study topics for each office. The SDP includes a profile of each proposed study. This profile describes the study's relevance to BOEM's information needs and outlines study objectives, methods, research questions, and approximate cost.

The SDP serves as an internal planning document for BOEM, and typically not all proposed studies included in the SDP are conducted. Drawing from the SDP, BOEM develops the annual National Studies List (NSL), which narrows down the list of studies from the SDP to the list of new and continuing studies set to receive BOEM funding in the upcoming fiscal year. This process is described in fuller detail in the Year 1 and Year 2 reports.[8]

Consistent with Years 1 and 2 of this project, the scope of this external evaluation encompasses all ESP-funded research; it does not include research funded solely through other BOEM funding mechanisms (e.g., through a program office). While recognizing that other (non-ESP-funded) research also contributes to scientific advancements and informs decisions and policies within and outside of BOEM, the evaluation scope reflects the need to draw clear boundaries around the studies to be included.[9] The criterion that studies must be funded in whole or in part by ESP provides clear parameters for inclusion and facilitates access to the studies, which are housed within BOEM's Environmental Studies Program Information Systems (ESPIS) database. This contrasts with the assessments, which the evaluation team collected from various sources with substantial input from BOEM staff.

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[8] Year 1 report: Kaufman, Daniel; Flight, Maura; Foley, Catherine; Arthur, Courtney; Bunting, Kieran; Smalley, Paige (Industrial Economics, Inc. (IEc), Cambridge, MA). 2020. *Evaluating Connections: BOEM's Environmental Studies and Assessments, Evaluation Methodology.* Cambridge (MA): U.S. Department of the Interior, Bureau of Ocean Energy Management. 101 p. Task Order No.: 140M0119F0039.

Year 2 report: Kaufman, Daniel; Flight, Maura; Foley, Catherine; Arthur, Courtney; Bunting, Kieran; Fox, Emma; Englehart, Greg; Smalley, Paige; Huang, Justine (Industrial Economics, Inc. (IEc), Cambridge, MA). 2021. *Evaluating connections: BOEM's environmental studies and assessments, findings and recommendations.* Cambridge (MA): U.S. Department of the Interior, Bureau of Ocean Energy Management. 128 p. Task Order No.: 140M0119F0039.

[9] Although this project excludes studies that received no ESP funding, we understand based on discussions with BOEM that the excluded studies represent a small fraction of BOEM's scientific studies over the past 10 to 20 years.

2.2 Environmental Assessments, Planning, and Policy Documents

A key part of BOEM's mission is ensuring environmental protection through compliance with environmental statutes, regulations, and executive orders. This typically requires detailed analysis of potential environmental impacts of exploration, development, and production activities in the OCS. For purposes of this project, the term "environmental assessment" encompasses the full suite of analyses that BOEM undertakes related to compliance with environmental statutes, regulations, and executive orders, and is not restricted to Environmental Assessments conducted pursuant to NEPA. Relevant statutes and regulations include:

- National Environmental Policy Act (NEPA)
- National Historic Preservation Act (NHPA)
- Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)
- Endangered Species Act (ESA)
- Air Quality Act (1967) or the Clean Air Act (CAA)
- Coastal Zone Management Act (CZMA)
- Marine Mammal Protection Act (MMPA)
- Migratory Bird Treaty Act (MBTA)
- OCS Lands Act (OCSLA)

BOEM must comply with these and other statutes and regulations to carry out its mission of managing the development of OCS energy and mineral resources in an environmentally and economically responsible way. To do so, BOEM conducts environmental assessments of the impacts (including environmental, social, and economic) of its programs in conventional energy resources, renewable energy resources, and non-energy minerals (e.g., sand, gravel, and critical minerals). BOEM also provides oversight, policy guidance, and direction through consultations within the Bureau and with other agencies. The related environmental assessments were considered part of the universe of assessments during the Year 1 development and Year 2 analysis.

In addition, other federal and state agencies conduct environmental assessments to comply with the statutes and regulations listed above, among others, as well as to inform resource planning and management efforts, provide an understanding of a project's potential impacts for decision-makers and the public, and avoid or minimize potential environmental impacts. For example, the U.S. Army Corps of Engineers and National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) prepare environmental assessments to satisfy the requirements of NEPA, ESA, MMPA, CZMA, and/or NHPA. State natural resource agencies often prepare the same to satisfy state-specific requirements for natural resource protection and minimize environmental impacts.

For the purposes of this Year 3 external evaluation, the inventory of assessments, planning, and policy documents includes federal and state agency environmental assessment documents prepared pursuant to the statutes and regulations listed above, as well as other coastal and marine resource planning and management documents. Generally, the federal and state agencies that rely on BOEM science are coastal and marine resource management and stewardship agencies. The following are types of assessment documents the evaluation team is collecting for this evaluation:

- NEPA Environmental Impact Statements

- NEPA Environmental Assessments
- NHPA Documents (includes Section 106 Evaluations of effects on historic properties and programmatic agreements)
- Essential Fish Habitat Assessments for MSFCMA consultations
- ESA Section 7 Biological Opinions
- Analyses and assessments prepared for CAA, CZMA, and MMPA, including Section 109 State assessments and strategic plans
- Tribal resource planning documents
- Section 106 NHPA State Guidelines
- Economic and other analyses of proposed rulemakings (e.g., Regulatory Impact Analyses and analyses under the Regulatory Flexibility Act/Small Business Regulatory Fairness Enforcement Act)
- State-specific equivalents of the types of documents listed above, to comply with regulations promulgated at the state level
- Other regional, state, or local planning and policy documents

Some documents in the inventory of assessments will align with the types of assessments that BOEM prepares, such as those that assess the environmental effects of an action taking place on the OCS or other marine areas, activities related to oil and gas, marine minerals, or renewable energy, and/or documents prepared with BOEM as an action or cooperating agency. Other documents will provide an external review of a BOEM project, such as NMFS' ESA Section 7 biological opinions, while another category of document will include state-level guidelines influenced or informed by BOEM science and internal documents (e.g., notices to lessees) that coastal states may adopt or use to inform their guidelines and regulations. Further, we expect environmental assessments that examine the effects on resources that BOEM also considers in internal assessments to comprise a significant portion of the assessment inventory. We also anticipate including Tribal resource planning documents as part of our inventory of assessments. In addition to the types of documents listed above, the inventory of assessments, planning, and policy documents will include other planning, policy, and resource management documents drafted by non-governmental organizations, regulatory bodies (e.g., fishery management plans), and others, with a focus on documents that are likely to rely upon BOEM-funded science. Therefore, the inventory of assessments for the external evaluation is by necessity opportunistic in nature and there is not an upper bound to the total number of documents it could include. We anticipate working closely with BOEM staff to develop an inventory that reflects the breadth of external documents that rely upon BOEM science to meet regulatory needs or other stated goals.

3 Evaluation Questions

As specified in the Statement of Work, the external evaluation will address one overarching evaluation question: **What is the impact of BOEM's scientific research on the external environmental community (e.g., other federal agencies, state agencies, academia)?**

The Statement of Work included several sub-questions, which IEc updated based on Year 3 scoping discussions with OEP management and the BOEM Evaluation Team. The updated sub-questions are:

1. How does BOEM science impact external stakeholders and decision-makers?
2. How is information on BOEM science communicated to and among external stakeholders?
3. Are BOEM's environmental products used externally and how?
    a. Which BOEM environmental documents are cited in external products, such as assessments produced by other federal or state agencies?
    b. Which peer-reviewed publications resulted from ESP-funded projects?
    c. What is the system for tracking BOEM's impact on the external environmental community and how can it be improved?
4. How do external stakeholders contribute to BOEM's environmental products?
5. What are BOEM's impacts on the career of young scientists, including how BOEM has supported graduate education?

The next section describes the proposed data sources and analytical approaches for answering the questions.

4 Data Sources and Analytical Approaches

Our approach for understanding and measuring the impact of BOEM's science on the external environmental community is informed by the work completed during the internal evaluation, communications with BOEM staff, and other work focused on BOEM's science programs, in particular the National Academies of Sciences, Engineering, and Medicine (NASEM) 2021 report *Attributes of a First-in-Class Environmental Program: A Letter Report Prepared for the Bureau of Ocean Energy Management.*[10] The NASEM report articulates three attributes associated with the "Impact Phase" of a First-in-Class Program:

1. **Informs and Influences Users**. Informs and has influence on the users who requested or inspired the studies.
2. **Advances the State of Science**. Produces products that are used by other investigators and that incrementally advance the state of scientific knowledge.
3. **Influences Public Understanding.** Influences understanding by the public (beyond the scientific community) and engenders acceptance of agency science and decisions.

Evaluating Connections: Definition of Impact

Our definition of impact aligns with NASEM's first two attributes associated with the "Impact Phase" of a First-in-Class Program and relies upon the concepts of knowledge use introduced in Chapter 1.

- *Informs and influences users:* The degree to which ESP-funded studies inform decisions (instrumental use) and contribute to an advancement in the state of knowledge (incremental use). Through interviews, IEc will probe *how* and *to what extent* BOEM's studies influenced external policy and planning decisions to evaluate instrumental use. As such, interviews are key to our evaluation methodology. In addition, citations to BOEM studies in external assessments, plans, or policy documents indicate incremental use and will be tracked in this evaluation.
- *Advances the state of science:* The contribution of ESP-funded studies to a shared knowledge base, indicating incremental use. We will analyze the extent to which ESP-funded journal articles are cited within the scholarly literature. In addition, we anticipate the interviews with external stakeholders (academics, in particular) will highlight good examples and promising advances that resulted from BOEM's research.

In the internal evaluation report (Year 2), we captured aspects of the "informs and influences users" impact as defined above. Beyond calculating direct references to ESP-funded studies in assessment documents (measured as simple citation counts), we also relied on interviews, a survey, and existing database (ESP-PAT) to understand the degree to which BOEM assessment staff directly attribute particular studies as informing their assessment work. While this approach could not provide a

[10] [NASEM] National Academies of Sciences, Engineering, and Medicine. 2021. Attributes of a First-in-Class Environmental Program: A Letter Report Prepared for the Bureau of Ocean Energy Management. Washington (DC): The National Academies Press. https://doi.org/10.17226/26368.

comprehensive understanding of this impact, we made several recommendations to BOEM to quantitatively capture the impact of BOEM studies on informing and influencing users moving forward.

For the external evaluation, we will continue to capture data and information on the informing and influencing users impact, but for the **external** users. The external evaluation also addresses the advances in the state of knowledge impact. This will include a citation count over time for all BOEM-funded journal articles within the scope of this study that are also indexed in Google Scholar. Additionally, for a subset of publications, we will conduct a deeper analysis focused on additional bibliometrics to better determine the relative scale of impact. The citation analysis section below further describes our approach.

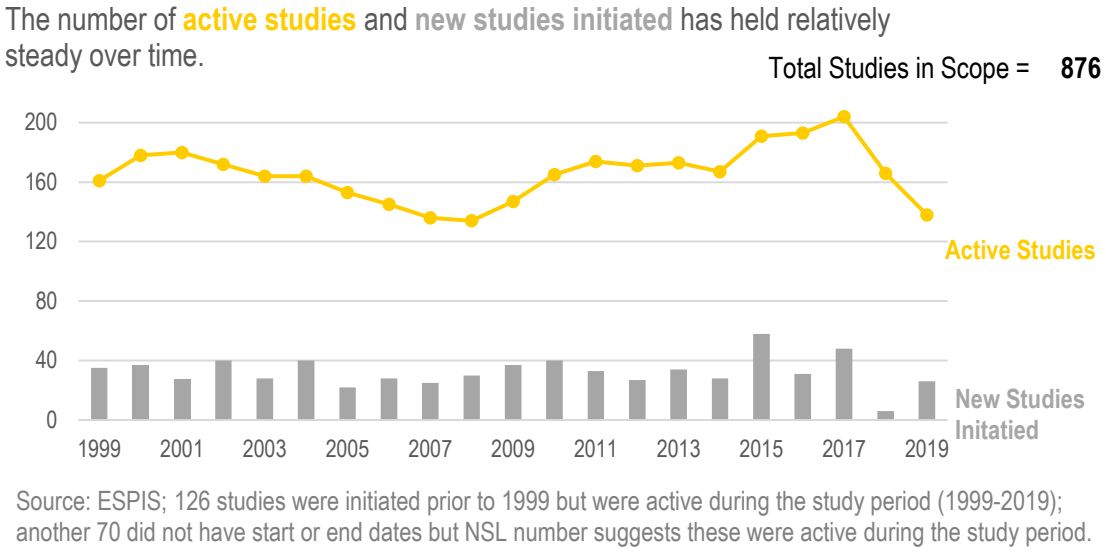
Our methodology does not directly address impact attribute number three ("influencing public understanding") as this is out of scope for the evaluation questions guiding this work. However, if interview or survey responses identify examples of the contribution of BOEM studies to public understanding, we will provide these examples in our evaluation report.

4.1 Data Sources

Environmental studies, environmental assessments, a web-based survey of external stakeholders, and interviews of external stakeholders will be the primary data sources for addressing the evaluation questions. IEc may also reference other documents – internal or external to the agency – to provide additional context and to interpret evaluation findings, however we do not anticipate an extensive document review of these other documents.

- **Environmental Studies.** IEc relied upon three main sources of information related to environmental studies: BOEM's ESPIS, a database with ESP-funded studies and associated BOEM reports and external publications; the NSL; and the SDPs (contains the proposed study profiles). Each of these sources is maintained separately and is focused on specific types of information about BOEM environmental studies; combined, they provide a robust dataset for understanding BOEM study topics and information needs over time. For purposes of this evaluation, IEc refers to the combination of the data contained in these sources generally as "environmental studies." Once consolidated, IEc established criteria, in consultation with BOEM, to determine studies in-scope and relevant for the evaluation. Figure 1 presents the number of studies in scope for the evaluation over time. Criteria for removal included:
    - **Conference.** The study reflects BOEM support for a conference, meeting, symposium, forum, working group, or other type of general meeting support. BOEM and IEc acknowledge these are important mechanisms for sharing information about BOEM studies. However, for the purposes of this evaluation, this "study type" does not reflect BOEM-supported research.
    - **Management.** The study is general management, administrative, or logistical support. Studies falling into this category may include Coastal Marine Institute management support.
    - **Non-research effort.** The study is otherwise a non-research effort. Studies in this category include BOEM's support for a children's activity book.

- **Unverified study.** Several studies that IEc initially included in scope only had accompanying NSL and study title information. Unfortunately, IEc was unable to match these studies with additional sources using the available information. IEc sent this list to BOEM for review where a determination was made to exclude these items since they could not be traced to actual studies.



Source: ESPIS; 126 studies were initiated prior to 1999 but were active during the study period (1999-2019); another 70 did not have start or end dates but NSL number suggests these were active during the study period.

Figure 1. Number of active studies and new studies initiated each year over time.

- **Environmental Assessments.** To compile an inventory of assessments, policy, and planning documents that are likely to be informed by BOEM studies, the evaluation team is in the process of identifying and collecting examples from diverse sources, including:
  - The U.S. EPA NEPA repository,
  - NOAA and NMFS publications and policy documents available online,
  - The U.S. Army Corps of Engineers (USACE) District webpages,
  - The U.S. Coast Guard (USCG) website,
  - The BSEE website,
  - State coastal management websites,
  - External documents previously identified through scraping the BOEM website in Year 2, and
  - Other assessments, policy, and planning documents, including but not limited to, state-level archaeological guidelines, state-level guidelines informed by BOEM NTLs, and documents from data repositories focused on resource management.

  IEc has been working with BOEM staff throughout the beginning phase of the external evaluation to identify key resources for assessments, policy, and planning documents based on BOEM's experience with collaborating agencies and the external scientific community. The inventory to date comprises the following types of documents: 1) assessments, policy, and planning

documents that rely upon BOEM science related to specific locations, habitats, and natural resources (e.g., Biological Opinion drafted by NMFS for project led by USACE; fishery management plans); 2) assessments led by another agency but focused on BOEM projects or activities (e.g., ESA Section 7 consultation with NMFS); 3) assessments in which BOEM is a cooperating agency but not the lead agency (e.g., NEPA EISs focused on LNG project licensing in which USCG is the leading agency); and 4) assessments related to BOEM activities (e.g., NEPA EIS on the designation of dredged material disposal sites in which EPA is the leading agency). Documents that meet one or more of these criteria are more likely to be informed by BOEM studies, and we therefore use these criteria to bound our searches for assessments, policy, and planning documents.

We anticipate that many of the assessments will be ESA Section 7 Biological Opinions, NEPA Environmental Assessments, and NEPA Environmental Impact Statements. This is because most of the external documents we expect to collect will have NMFS or USACE as lead agencies, as BOEM collaboration with these two agencies was referenced by BOEM staff during previous interviews. For example, Year 2 interviewees within the BOEM Marine Minerals Office relayed that the office is often involved with environmental assessments that are drafted by USACE. In addition, we expect to find a large volume of documents that meet criteria 1 and 3 (assessments related to BOEM activities and assessments related to resources extensively studied by BOEM that are reliant upon BOEM science). Given the broad reach of the documents considered as part of the external evaluation, our approach is opportunistic and focused on finding examples of documents that relate back to BOEM studies. We will develop an inventory that reflects the breadth of external documents that rely upon BOEM science to meet regulatory needs or other stated goals.[11]

- **Interviews.** IEc will conduct up to 90 interviews. We seek to interview people who can speak to the use of BOEM science to inform policy decisions and research external to BOEM, including representatives from federal and state agencies, as well as academics/consultants. The interviews will provide additional depth and nuance to the survey responses (see below). The interviews will also complement the external social network analysis. All agencies, organizations, and institutions that BOEM identifies as important for understanding the feedback loop will be contacted for an interview. Interviews will be semi-structured. Respondents will be asked questions tailored to their type of organization. Interviewers will ask respondents to provide insight into how and why linkages between BOEM and respondents are (or are not) present, and how and why respondents are (or are not) using study and assessment information from BOEM. Using the semi-structured interview format creates an opportunity for the interviewer to ask follow-up questions based on initial responses. The interviewers will ask about the respondents' roles or positions within their organizations, how they use BOEM's environmental studies and

[11] The initial inventory may include documents that fit one of the criteria listed above but do not cite ESP-funded studies. We intend to be inclusive in our initial compilation to capture any possible citations to ESP-funded studies or their associated peer-reviewed publication citation. The results of the citation analysis will reveal whether an assessment cites BOEM studies, and assessments that do not cite BOEM studies will be removed from the inventory.

assessment information in their organizations' work, and how their organizations contribute to studies and assessments. Additionally, the interviewers will request the respondents' recommendations on ways to strengthen linkages moving forward. The interview guides are available in Appendix A of this document; they reflect comments and edits previously provided by BOEM. This version has been submitted to the Office of Management and Budget (OMB) for review as part of the Information Collection Request (ICR) approval process.

The interviews will be administered via phone or a commonly used web-conferencing platform (i.e., Microsoft Teams). A cleanly formatted version of the interview questions will be emailed to respondents in advance to allow them time to review the questions and get an idea of the type of information sought. The evaluation team believes the phone interview format offers the best opportunity for obtaining a high response rate and for obtaining high-quality responses, given the semi-structured format of the interview and the potential to ask follow-up questions. As this is not a statistical sampling approach, the interview findings will not be extrapolated to the broader population of BOEM's external partners. This approach is justified to account for the important differences across multiple states and other external partners, who each have different contexts and objectives for participating in BOEM studies and assessments work, and who use studies and assessments differently in their respective decision-making processes.

IEc will identify interview candidates with a goal of 20 federal and 70 non-federal interviews (90 total). The non-federal interviews will target approximately 50 state agency interviews and approximately 20 academic or consultant interviews. Fifty state interviews will allow for two to three interviews in each state that borders a BOEM region. Twenty academic interviews will provide representative coverage of the universities and consulting firms that are most closely involved with BOEM research. To develop the list of interview candidates, IEc included the contacts provided by BOEM staff during Year 3, when we requested information from each office about the use of BOEM science by external stakeholders. Additionally, IEc compiled a list of prospective interviewees from the Year 2 interviews, including a list of potential contacts sent to the Marine Minerals Program Office for confirmation. These lists together provided a core set of interview candidates from which to build. IEc also used Year 2 survey respondent-identified individuals and organizations to add to the core set of interview candidates where individuals were identified by multiple regions. The draft list of interview candidates is available in Appendix D of this document; this reflects edits and additions that BOEM reviewers provided on the draft Methodology Report.

- **Survey.** The survey will be administered online, with an estimated 300 target respondents of external partners of BOEM's ESP and assessment program (e.g., public agencies, academic institutions and scholars, and consultants).[12] Most of the target respondents were identified by BOEM staff who completed the survey for the internal evaluation in Year 2. The target population will receive a notification email that informs them of the survey and provides a link. Upon clicking the link, the survey will open automatically in the respondent's internet browser. The survey will use skip logic to ensure that respondents only answer questions that are relevant

[12] BOEM obtained approval to conduct the external survey and interviews from the Office of Management and Budget (OMB). Evaluating Connections: Environmental Studies and Assessments - OMB 1010-0194.

to them. It will also use drop-down menus and categorical response options whenever possible to reduce burden. The evaluation team will use the survey results to understand how program partners use BOEM's study and assessment information and the network through which this information is disseminated. The external portion of the network analysis will build upon and expand the internal network analysis conducted for the Year 2 evaluation report. Network analysis involves mapping and characterizing a network, which can be defined as relationships between people or organizations. Network analysis identifies pathways for transmitting ideas, knowledge, information, and/or resources. The survey results will provide information about the network structure. BOEM can use this network analysis to understand the network structure, and people or organizations that the Bureau could target or connect to in order to strengthen the use and influence of BOEM's science. The survey instrument is available in Appendix B of this document; it reflects comments and edits previously offered by BOEM, and this version of the survey has been submitted to OMB for review as part of the ICR approval process. The draft list of survey contacts, including refinements that BOEM reviewers provided in the Draft Methodology, is in Appendix D.

- **Other Data Sources.** Other data sources such as program documents, databases, and permits for offshore construction activity provide important information to characterize the influence of BOEM science on external entities and their research, strategic planning, or decision-making. IEc requested that BOEM staff from each office send examples of other data sources that use BOEM science, as well as examples of students who have benefitted from BOEM science in their training or early scientific careers. As examples, BOEM staff shared an offshore wind geodatabase data portal for a coastal state planning authority, and Endangered Species Act consultations used by other federal agencies (NOAA NMFS and the U.S. Fish and Wildlife Service, or USFWS), amongst others.[13] The information request was not comprehensive, but instead asked BOEM staff to focus on examples that they could readily provide. Other data sources, such as the examples shared by BOEM staff, also provide information for understanding current processes, supplementing other sources of information, and for providing context when interpreting findings. IEc uses the general term "other data sources" to refer to multiple data sources including (but not limited to):
    - Information on agencies' websites.
    - Strategic guidance documents.
    - Scholarly publications.
    - External databases used by agency offices, academics, NGOs, or the public.

The information will provide insights into how external program partners receive and use the results of BOEM environmental studies and assessments, how external program partners inform BOEM environmental studies and assessments, and how BOEM study and assessment information influences external decision-making, including resource management and policy decisions.

[13] BOEM environmental consultations relating to renewable energy are a growing area of work, and the studies used to inform the consultations are used by multiple federal and state agencies. More information on this emerging research area can be found here: https://www.boem.gov/environmental-consultations.

4.2 Analytical Approaches

We will employ multiple analytical tools to address the evaluation questions including an assessment citation analysis, external citation impact analysis, interview coding and qualitative analysis, survey analysis, and social network analysis. Table 1 summarizes which analytical approaches will be used to answer each evaluation question, and additional detail on each approach is below the table.

Table 1. Analytical Approaches to Address Each Evaluation Question[14]

Evaluation Question	Assessment Citation Analysis	External Citation Impact Analysis	Interview Coding and Qualitative Analysis	Survey Analysis	Social Network Analysis
What is the impact of BOEM's scientific research on the external environmental community (e.g., other federal agencies, state agencies, academia)?	✓	✓	✓	✓	✓
1. How does BOEM science impact external stakeholders and decision-makers?	-	-	✓	-	-
2. How is information on BOEM science communicated to and among external stakeholders?	-	-	✓	✓	✓
3. Are BOEM's environmental products used externally and how?	-	-	✓	✓	-
a. Which BOEM environmental documents are cited in external products, such as assessments produced by other federal or state agencies?	✓	✓	-	-	-
b. Which peer-reviewed publications resulted from ESP-funded projects?[15]	-	-	-	-	-
c. What is the system for tracking BOEM's impact on the external environmental community and how can it be improved?	-	-	✓	-	-
4. How do external stakeholders contribute to BOEM's environmental products?	-	-	✓	✓	-

[14] Data sources contributing to the available information on environmental studies include BOEM's Environmental Studies Program Information System (ESPIS), a database with ESP-funded studies, BOEM reports, and associated publications; the National Studies List (NSL); and the Studies Development Plans (SDPs).

[15] IEc's work as part of the Year 1 Evaluation Approach Methodology identified the body of publications associated with ESP-funded projects between 1999 and 2019 (the evaluation timeframe), using a version of the ESPIS database from October 2020 and additional complementary searches. This resulted in the addition of several publications from *Alaska OCS Region, Fully/Partially Funded or Data/Sample Contribution Peer Reviewed Publications* list, publications reported in ESP-PAT, and publications identified through a Google Scholar search of BOEM (or historical MMS agency) obligation number for inclusions in the acknowledgments of the report. Additional, detailed information on our methodological approach is available in the *BOEM Published Documents and Outside Publications Associated with Studies* section of the Year 1 Evaluation Approach Methodology report. This was a necessary step prior to conducting the Year 2 internal evaluation. Specifically, IEc used this list of publications to conduct the internal assessment citation analysis. For consistency with the internal evaluation, IEc will include the suite of peer-reviewed publications resulting from ESP-funded projects in the Year 3 report, but do not anticipate conducting any additional work in this year.

Evaluation Question	Assessment Citation Analysis	External Citation Impact Analysis	Interview Coding and Qualitative Analysis	Survey Analysis	Social Network Analysis
5. What are BOEM's impacts on the career of young scientists, including how BOEM has supported graduate education?	-	-	✓	-	-

4.2.1 Assessment Citation Analysis

IEc will search for citations of ESP-funded study documents and associated publications referenced in the inventory of external assessments, as a direct measure of how BOEM environmental documents are cited in external assessment products (sub-question 3a).[16] IEc will conduct the citation analysis in RStudio using an automated query that searches each assessment's reference list for specific BOEM study products (i.e., BOEM published report(s), datasets, and external publication titles). The output will be a list of all assessment reference files that include the document title as well as the specific page, line, and surrounding text for each positive query result. To identify unique BOEM reports and publications, we will match these results to unique identifiers and summarize the results by year and other identifying information (e.g., topic, office/region). IEc will conduct multiple automated and manual quality control steps to ensure the queries identify accurate citations, including identifying and removing duplicates. In addition to this analysis, IEc will manually review a sample of the assessments to understand the context for the citation(s). This step will be important to confirm and validate the RStudio queries.

4.2.2 External Citation Impact Analysis

The external citation impact analysis focuses on understanding the second attribute of impact as described in the NASEM 2021 report: advances in the state of science. Beyond general citation counts over time, several established approaches and metrics exist to measure the relative impact of published research on the broader scientific community. IEc reviewed several of these options:

- **Altmetric.** Altmetric is a paid service that measures influence based on tweets, citations, bookmarking, discussions, etc. (harvested from a variety of web services). The counts do not measure if the sentiment around the tweet, citation, etc. was positive or negative. [17]
- **Connected Papers**. Connected Papers is a free tool that captures direct citations between papers and topical connections. It "connects" on related topics, which may or may not mean that the specific paper itself was influential. Papers that do not directly cite each other can still be closely positioned and related in this interface.[18]
- **Dimensions**. Dimensions is a paid service with some free public data that captures several metrics including total citations, recent citations, field citation ratio, and relative citation ratio (RCR). Field citation ratio is calculated as a ratio of the number of citations a paper has received,

[16] We define citations as references to BOEM reports or associated external publications in environmental assessments. We identify citations by reviewing the reference lists in assessments.

[17] *Altmetric.* 2022. Retrieved from https://www.altmetric.com/.

[18] *Connected Papers.* 2022. Retrieved from https://www.connectedpapers.com/.

and the average number received by documents published in the same year and in the same field of research.[19] Dimensions defines RCR as "citations of a paper, normalized to the citations received by NIH-funded publications in the same area of research and year."[20]

- **Google Scholar.** Google Scholar is a free service that provides simple citation counts by year. On a researcher level, Google Scholar also provide h-index and i10index, both intended to reflect the level of influence the researcher has in their field.[21]
- **InCites (Clarivate Analytics).** This web-based paid platform provides bibliometrics on an organizational level for articles indexed in the Web of Science. [22]
- **iCite.** Sponsored by the National Institutes of Health, this free resource provides RCR for health-related publications (both NIH-funded and non-NIH-funded).[23]
- **ResearchGate**. In this free tool (sign-up is required), the research interest metric reflects scientists' interest in the research, based on activities within this social network platform. However, it only includes people who voluntarily join the network and papers that they submit to ResearchGate as authored by them.[24]
- **scite_**. This paid service (with some access to free data) counts and identifies citations and whether study findings have been supported, mentioned, or contrasted by other investigators and provides visualizations of these connections. [25]
- **Scopus**. Scopus is a paid service that calculates the field-weighted citation impact (FWCI) as the ratio of total citations received and the total citations that would be expected based on the average of the subject field for the last three years.[26]
- **Wizdom.ai.** Wizdom.ai provides metrics on a journal, topic, institution, funder, country, subject, or publication-level. It is a paid service, with some free data. It provides a RCR for available papers. BOEM is also available as an institution in this tool, but the associated research is not comprehensive because it only includes authors who are institutionally affiliated with BOEM (e.g., 168 publications total). [27,28]

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[19] *Dimensions*. 2022. https://app.dimensions.ai/discover/publication.

[20] *Dimensions*. 2022. https://dimensions.freshdesk.com/support/solutions/articles/23000018841-what-is-the-rcr-how-is-the-rcr-score-calculated-.

[21] Google Scholar Metrics. 2022. Retrieved from https://scholar.google.com/intl/en/scholar/metrics.html.

[22] InCites Benchmarking and Analytics. 2022. Retrieved from https://clarivate.com/webofsciencegroup/solutions/incites/.

[23] *iCite*. 2022. Retrieved from https://icite.od.nih.gov/analysis.

[24] Research Interest. 2022. Retrieved from https://explore.researchgate.net/display/support/Research+Interest.

[25] *Scite_*. 2022. Retrieved from https://scite.ai/.

[26] What is Field-Weighted Citation Impact (FWCI). (2020). Retrieved from https://service.elsevier.com/app/answers/detail/a_id/14894/supporthub/scopus/.

[27] *Wizdom.ai.* 2022. Retrieved from https://www.wizdom.ai/.

[28] Bureau of Ocean Energy Management. 2022. Retrieved from https://www.wizdom.ai/institution/bureau_of_ocean_energy_management/grid.484006.e.

As an example of the comparative information available through the options above, Table 2 provides the results from Connected Papers, Dimensions, Google Scholar, ResearchGate, scite_, and wizdom.ai for a single BOEM-funded article within the scope of this evaluation. Information on *An adenovirus linked to mortality and disease in long-tailed ducks (Clangula Hyemalis) in Alaska,* was readily and openly available in these tools (the title of each tool in Table 2 links to the detailed results).

Table 2. Bibliometrics Available for *An adenovirus linked to mortality and disease in long-tailed ducks (Clangula Hyemalis) in Alaska* through several tools.

Bibliometric Tools	Total Citations	Other Metrics Reported
Connected Papers	15	See Figure 2 below Network Analysis
Dimensions	14	Recent Citation: 1 Field Citation Ratio: 1.65 Relative Citation Ratio: 0.27
Google Scholar	24	Not available for publications
iCite[29]	8	Publications Per Year: 1 Cites Per Year: 0.42 mean Relative Citation Ratio: 0.27
ResearchGate	20	Research Interest: 10.1 Reads: 19
scite_	13	Supporting Citations: 0 Mentioning Citations: 4 Contrasting Citations: 0
Wizdom.ai	9	Relative Citation Ratio: 0.19

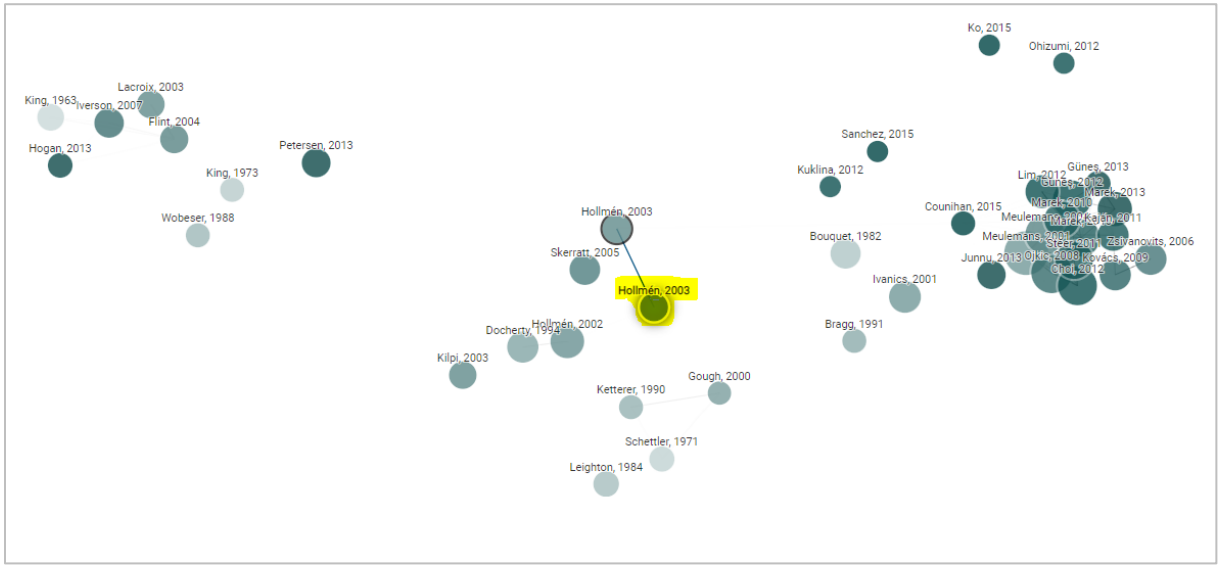

Figure 2. Bibliometrics from Connected Papers for *An adenovirus linked to mortality and disease in long-tailed ducks (Clangula Hyemalis) in Alaska*

[29] iCite website does not provide direct link to search results; to obtain the results, type the title of the article into the search bar.

The total citation counts indicate variation in the results across these bibliometric tools, an expected outcome considering the different databases each of these tools relies on for calculating the metrics. This demonstrates the potential uncertainty surrounding the exact metric values retrieved from any of these tools and a known limitation of any citation impact analysis.

The 2020 NOAA Science Report demonstrates how another Federal agency seeks to compare its scientific performance against institutions focused on similar research areas. The NOAA Science Report utilizes bibliometrics produced using InCites.[30] For calculating metrics, the report defines a NOAA related article as a peer-reviewed publication where one or more of the authors list their affiliation as National Oceanic and Atmospheric Administration. Articles that are funded by NOAA, or receive any other support from NOAA, are not included in their bibliometric counts. This is a distinctly different scope of influence than what BOEM hopes to measure through this methodology. Metrics calculated include total publications, h-index (this metric is the number of articles that have been cited at least that many times), sum of number of citations, percent of articles cited, and percent of articles in the top ten percent by citation. The report also benchmarks these metrics across topic areas with other agencies to provide context; comparative agencies include Department of Defense, Department of Energy, Department of the Interior, Environmental Protection Agency, National Aeronautics and Space Administration, Department of Agriculture, and Smithsonian Institution.

BOEM and IEc attempted to coordinate with NOAA's central library to conduct a similar analysis for the Evaluating Connections study. However, we were unable to leverage NOAA's subscription to InCites or the services of NOAA's bibliometrics librarians. We also tried to coordinate with USGS to explore the capabilities of their USGS Python tool, but ultimately determined that the USGS Python tool served a different purpose than ours. We also inquired with several major citation subscription services, including Clarivate Analytics for their InCites tool and Dimensions, about the cost of a subscription. Only Dimensions responded to our inquiries; they indicated their agreements with federal agencies are annual and generally in the "low six figures" for a federal agency, but also dependent on the number of users. BOEM determined this was cost prohibitive for the Evaluating Connections study.

Therefore, for the purposes of helping answer the Year 3 evaluation question *Are BOEM's environmental products (studies and/or assessments) used externally and how?*, IEc proposes a two-pronged approach:

- **Capture the basic citation count value for all BOEM publications that fall within the scope of this study and are readily available through Google Scholar.** This will provide a comprehensive picture of the suite of publications produced from BOEM's ESP using a metric that is repeatable over time. To complete this, IEc will develop an automated web scraping tool in

[30] [NOAA] National Oceanic and Atmospheric Administration. 2021. 2020 NOAA Science Report. NOAA Technical Memorandum NOAA Science Council-003. Silver Spring (MD): United States Department of Commerce. https://sciencecouncil.noaa.gov/Portals/0/2020%20NOAA%20Science%20Report%20-%20FinalApproved%20-%20508Compliance-IRsubmission.pdf?ver=2021-04-22-100336-233.

R, building on previously developed and readily available resources.[31, 32, 33,34] The resulting product will yield a dataset with the total citation count for each individual publication as of the date that the R tool is run. If Google Scholar allows the R tool access to citation count for each publication by year, IEc will build the tool to retrieve this information; however, this may not be possible.[35,36] Using the topics assigned to each ESP study in Year 1, we will then present the average citation count results by BOEM topic.[37]

- **Collect additional bibliometrics for a subset of publications.** As noted in the NASEM 2021 report, citation counts only provide a limited understanding of the impact of the research.[38] Therefore, for a selected subset of publications, IEc proposes to manually obtain the total citation count, field citation ratio, and relative citation ratio for Dimensions and total citation count and relative citation ratio for wizdom.ai. This set of metrics can provide a better understanding of the impact of the research relative to the research field. Although these data would be more readily available for the complete list of publications through a paid membership to either platform, membership fees are not covered within the current project.[39] To choose the subset of publications to manually query in Dimensions and wizdom.ai, we recommend a purposeful selection including: top 15 articles that are available in these databases based on results from the Year 2 internal assessment citation analysis; another 15 articles based on the top 15 most-cited list retrieved from the Google Scholar R tool; and another 15 articles based on feedback obtained from the interviews suggesting influential publications. This deep dive into the subset of purposefully selected publications will provide BOEM an understanding of the impact of their 'top' publications (defined in three different ways) and will help illuminate the benefit of potentially tracking these metrics for all BOEM publications moving forward.

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[31] https://www.andreashandel.com/posts/publications-analysis-1/.

[32] https://cran.r-project.org/web/packages/scholar/scholar.pdf.

[33] https://www.bibliometrix.org/index.html.

[34] https://serpapi.com/google-scholar-api.

[35] In building out the web scraping tool, it is possible IEc may identify alternative approaches that rely on other databases. If this opportunity arises, IEc will discuss with BOEM whether to pursue this as an option.

[36] A review of Google Scholar showed that not all publications and authors funded by BOEM are captured in the database. Therefore, the outputs of this tool will also be limited by what is contained within Google Scholar. If a high proportion of BOEM funded publications are not represented, this tool may not be useful in tracking the use of BOEM's environmental products.

[37] If time, interest, and budget allow, IEc could also develop a graphic depicting a network of coauthors listed across publications (by author name or affiliation) through Google Scholar outputs. This graphic could help show what organizations BOEM staff are most frequently collaborating with in their publications.

[38] [NASEM] National Academies of Sciences, Engineering, and Medicine. 2021. Attributes of a First-in-Class Environmental Program: A Letter Report Prepared for the Bureau of Ocean Energy Management. Washington (DC): The National Academies Press. https://doi.org/10.17226/26368.

[39] A paid membership to either of these platforms may be an avenue BOEM is interested in pursuing in future years for constancy in measuring impact of research over time. These platforms may also provide the mechanism for comparing BOEM's performance with other government agencies, similar to the comparison presented in the 2020 NOAA Science Report.

Combined, the comprehensive citation count total and the deep dive subset will serve to establish the baseline for understanding BOEM's impact on advances in the state of science.

4.2.3 Survey Analysis

Survey responses will be analyzed and summarized quantitatively based on the percentage of respondents answering each of the possible responses for the individual questions. Responses will be summarized overall and broken out by type of respondent (e.g., for multiple-choice questions about the means through which respondents obtain information about BOEM study results). IEc will also conduct a thematic analysis of responses to open-ended survey questions.

4.2.4 Interview Coding and Qualitative Analysis

The interviews will draw on the institutional knowledge and experiences of the respondents to provide insight into the impact of BOEM's scientific research on the external environmental community. Additionally, the interviews will elicit suggestions and recommendations on ways to strengthen the impact moving forward.

IEc will analyze responses to each interview question to identify themes and summarize responses. Each response may be applicable to more than one evaluation question. IEc will use qualitative analysis to code each open-ended response. The evaluation team will analyze the interview results using a qualitative data analysis software package (i.e., NVivo). We will analyze the interview responses overall and by type of respondent (e.g., state, federal, tribal, etc.). IEc will summarize the frequency with which each theme was raised overall and by different types of interviewees, and we will identify illustrative quotations that capture issues that interviewees frequently raised. We will summarize the interview findings with charts, graphs, and tables as appropriate. Because interviewees may reveal sensitive information in their responses, IEc will not attribute quotations or associate individual respondents with their responses.

4.2.5 Social Network Analysis (SNA)

The evaluation team will use the survey results to conduct a network analysis focusing on the information exchange between BOEM environmental studies and assessment programs and their external program partners. SNA involves mapping and characterizing a network, which can be defined as relationships between people or organizations. SNA identifies pathways for transmitting ideas, knowledge, information, and/or resources.

SNA looks at the ties (connections) between organizations or individuals (nodes) and quantifies the number and characteristics of those relationships, including the pathways that information must take to spread between each individual in the network. Relationships are the unit of analysis, although data is collected at the individual level. The typical output from an SNA includes maps and metrics that illustrate the presence and strength of relationships in a network. As noted above, this year's SNA will build upon and expand the internal network analysis conducted for the Year 2 evaluation report. BOEM can use this network analysis to understand the network structure and to identify organizations that the Bureau could target or connect to in order to strengthen the use and influence of BOEM's science.

SNA is generally similar to other types of surveys and statistical analysis but uses specialized software and analyses to map the strength and structure of networks.[40] Steps for conducting the SNA include:

- *Identify the network:* These are the individuals who will receive the survey (i.e., primarily "external" individuals that BOEM studies and assessment managers and staff identified when they completed the internal survey in Year 2). As noted above, in addition to the general survey questions, a separate section of the survey will ask about connections to gather data for the SNA.
- *Collect social interaction data:* The SNA-related survey questions will ask respondents to indicate their ties to people in BOEM and the larger external scientific network. The survey will also ask respondents about the frequency and subject of their interactions.
- *Clean and analyze the social interaction data:* The results for all respondents will be combined and converted into a data format compatible for conducting SNA, so that connections can be analyzed.
- *Measure network relationships and create network maps:* IEc will calculate metrics of social interactions and display the results on a social network graph. Graphs show individuals or organizations as points ("nodes") and their relationships as lines between the nodes ("ties"). Several off-the-shelf tools are available to calculate network metrics and graphs, including a variety of open-source SNA software packages and data visualization software.

The evaluation team will export the survey results into a commonly used network analysis package (i.e., Gephi) to look at the ties (connections) between organizations (nodes) and quantify the number and characteristics of those relationships, using standard measures of network structure (e.g., measures of centrality). The evaluation team will present maps and metrics that illustrate the presence and strength of relationships in the network, and how information flows from BOEM to external program partners. Results will be presented at the organizational level; individual names will not be disclosed.

4.3 Approach by Evaluation Question

This section describes how IEc will answer each evaluation question using the data sources and analytic approaches described above.

1. How does BOEM science impact external stakeholders and decision-makers? Interview coding and qualitative analysis is the primary analytical approach IEc will use to answer this evaluation question. The interview focus will be on understanding the impact to external stakeholders and decision-makers not otherwise captured through the other evaluation questions. This information is best captured through interviews which allow for discussion in response to open-ended questions.

2. How is information on BOEM science communicated to and among external stakeholders? Interview coding and qualitative analysis, survey analysis, and social network analysis will be the primary approaches for answering this evaluation question. Several questions in the interview guide and survey instrument explicitly ask about the methods of communication from BOEM to

[40] For this analysis, IEc will use Gephi, an open-source social network analysis software package (https://gephi.org/).

external stakeholders and from the interviewed external stakeholders to other external stakeholders (either in or outside their organization). Further, the network analysis is dedicated to understanding how science information flows from BOEM and through their external stakeholder network.

3. Are BOEM's environmental products used externally and how? This question relies on interview coding and qualitative analysis and survey analysis as analytical approaches. External use of BOEM environmental products including studies and assessments is a primary focus of this evaluation work. Multiple interview questions inquire about the respondent's use of BOEM studies, assessments, and analyses in their work. The survey also specifically asks respondents about the use of BOEM studies and assessments through closed-ended and open-ended questions. The answer to this evaluation question will also be informed by the survey questions asking about the usefulness of BOEM studies.

3a. Which BOEM environmental documents are cited in external products, such as assessments produced by other federal or state agencies? Assessment citation analysis and external citation impact analysis will provide the information to answer this evaluation question. The assessment citation analysis directly addresses the use of BOEM studies and assessments in other federal, state, or local environmental assessments. The external citation impact analysis examines the impact of publications resulting from ESP-funded research on the broader scientific community by measuring citation counts and other related bibliometrics.

3b. Which peer-reviewed publications resulted from ESP-funded projects? IEc's work as part of the Year 1 Evaluation Approach Methodology identified the body of publications associated with ESP-funded projects between 1999 and 2019 (the evaluation timeframe), using a version of the ESPIS database from October 2020 and additional complementary searches. This resulted in the addition of several publications from *Alaska OCS Region, Fully/Partially Funded or Data/Sample Contribution Peer Reviewed Publications* list, publications reported in ESP-PAT, and publications identified through a Google Scholar search of BOEM (or historical MMS agency) obligation number for inclusions in the acknowledgments of the report. Additional, detailed information on our methodological approach is available in the *BOEM Published Documents and Outside Publications Associated with Studies* section of the Year 1 Evaluation Approach Methodology report. This was a necessary step prior to conducting the Year 2 internal evaluation. Specifically, IEc used this list of publications to conduct the internal assessment citation analysis. For consistency with the internal evaluation, IEc will use the suite of peer-reviewed publications resulting from ESP-funded projects in the Year 3 report; we do not plan to conduct new searches for peer-reviewed publications, but we will add any new peer-reviewed publications that are identified for us by BOEM staff and/or during the external interviews.

3c. What is the system for tracking BOEM's impact on the external environmental community and how can it be improved? Interview coding and qualitative analysis will inform this evaluation question. However, since the focus of this question also pertains to internal BOEM activities (e.g., system for tracking), IEc also anticipates utilizing the results from the internal evaluation to help answer this question. Suggestions for improvement will emerge from several interview questions, analysis across the analytical approaches, and IEc's professional expertise.

4. How do external stakeholders contribute to BOEM's environmental products? Interview coding and qualitative analysis and survey analysis will be the primary approaches for answering this evaluation question. Several interview questions ask respondents about their experiences contributing to BOEM-funded environmental studies. The survey questions also ask respondents about their collaboration on BOEM studies and assessments.

5. What are BOEM's impacts on the career of young scientists, including how BOEM has supported graduate education? This question relies on interview coding and qualitative analysis and the primary analytical approach. Aimed towards academics and consultants, several questions ask respondents about funding for student work and the effect BOEM research has on the careers of young scientists.

5 Evaluation Challenges and Limitations

We expect challenges will arise throughout the course of the evaluation. Early identification of challenges, an experienced team of experts that cover all subject areas relevant to the analysis, and a clear approach to resolving these challenges will allow us to efficiently and effectively move the project forward through each analytic stage and prevent challenges from becoming obstacles. We highlight the following key evaluation challenges and our approach to managing them:

- **Considerations pertaining to the ICR approval process.** The Paperwork Reduction Act requires that federal agencies obtain approval from OMB before collecting the same or similar information from 10 or more members of the public. In the context of our evaluation, "the public" includes representatives from state agencies, academics, and other non-federal stakeholders that we are seeking to interview and survey. Specifically, ICR approval is required to conduct the 70 external, non-federal interviews and the external survey of non-federal employees.

  BOEM and IEc worked together closely on the ICR process and we submitted the final ICR package to OMB in January 2022. We obtained ICR approval from OMB in June 2022. Delays obtaining ICR approval impacted the project schedule, but did not ultimately impact our methodology. After obtaining ICR approval, we carried out the data collection as planned.

- **Opportunistic approach to collecting external assessment, planning, and policy examples.** By necessity, the external evaluation will be opportunistic in identifying examples of the influence of BOEM's science on external assessments, planning documents, and policy decisions. While we are casting a broad net in terms of the types of external influence that we include in the external evaluation, we will not be able to capture every example of where BOEM's science has influenced external stakeholders. First, the total universe of external (non-BOEM) assessments that could have potentially incorporated BOEM science is unknown. External assessments are dispersed across multiple federal and state agencies and NGOs and may not be publicly available. Where we find examples of external assessments that cite BOEM studies, we will describe the topics that the assessments cover and how they used BOEM science. However, unlike the internal

evaluation, this will not be a comprehensive inventory.[41] Similarly, although we plan to conduct numerous interviews covering a broad group of external stakeholders who are well-positioned to use BOEM's science, the interviews will not be able to comprehensively identify every example of BOEM's influence on the external environmental community. Overall, the interviews will provide informative and compelling examples of how BOEM's science was disseminated to external stakeholders, the decision contexts in which external stakeholders used BOEM's science, and how/to what extent BOEM's science influenced external assessments, policies, and planning decisions. This will provide rich information to answer the evaluation questions, and set the stage for recommendations for how BOEM can effectively disseminate its science to the external environmental community and/or effectively track external use of BOEM science in the future.

- **Potential bias associated with survey non-response.** IEc plans to use an online survey to conduct a census of BOEM partners who are involved in the study and/or assessment process. However, if survey response rates are low, this could introduce bias into the survey findings (e.g., if respondents are systematically different than non-respondents). Similarly, non-response could result in SNA metrics that do not fully reflect the network as a whole. IEc will work with the BOEM Evaluation Team to maximize survey response rates by keeping survey forms brief and easy to use and by sending out multiple requests to non-respondents.

- **Potential bias associated with purposive interview sampling.** The external interviews will be selected using a purposive sample to provide a cross-section of states in which BOEM operates and key academics/consultants identified by BOEM. As this is not a statistical sampling approach, the interview findings will not be extrapolated to the broader population of BOEM's external partners. However, this approach will account for the important differences across multiple states and other external partners, who each have different contexts and objectives for participating in BOEM studies and assessments work, and who use studies and assessments differently in their respective decision-making processes. Interviewing multiple state agencies in each region prioritizes capturing differing perspectives over the most frequent or common interactions between BOEM staff and external partners. Interviewing 20 academics/consultants will capture the most influential members of these groups as identified by BOEM's environmental studies and assessments programs. Because these academics and consultants are important and frequent collaborators in BOEM's studies work, and they bring a range of perspectives based on their individual experiences and subject matter expertise, ensuring their representation in the interviews is important for providing a comprehensive understanding of their interactions with BOEM.

- **Evolving policy context for the use of BOEM's science by external stakeholders.** We are conducting the external evaluation during a transition in federal policy from emphasizing oil and gas development to renewable energy development. This shift is likely to affect the emphasis of

[41] Moreover, the total universe of external assessments, planning documents, and policies that *could have* potentially incorporated BOEM science is unknown; therefore, we will not have a denominator by which to divide the number of assessments, plans, and policies that do cite BOEM studies. In contrast to the internal evaluation, the external evaluation will not be able to provide the ratio of total assessments that cited BOEM studies.

BOEM's research, which will in turn affect how external stakeholders interact with and use BOEM's science. As this shift is currently unfolding, the evaluation will not be able to comprehensively capture BOEM's potential influence in this regard. However, we include questions in the interview guides that ask respondents if/how they expect this shift in focus to change the importance of BOEM's environmental studies and assessments to their work. Overall, the current evaluation will provide a retrospective assessment of the influence of BOEM's science on the external environmental community, supplemented with some forward-looking insights from the interviews.

- **Different tools calculate citation impact metrics using different databases.** There is known variation in the bibliometric results across different tools, an expected outcome considering the different databases each of these tools relies on for calculating the metrics. This demonstrates the potential uncertainty surrounding the exact metric values retrieved from any of these tools and a known limitation of any citation impact analysis. To address this, instead of comparatively viewing the total citation counts across different tools, the Year 3 report will present them as separate indicators, for example, the Google Scholar total citation is a single metric, and the Dimensions total citation value is a separate metric.

6 Reporting Results

IEc proposes an incremental approach to reporting results to BOEM. This approach is aimed at engaging the BOEM Evaluation Team and other key BOEM personnel who may be involved in implementing recommendations based on the evaluation findings.

IEc will engage with BOEM throughout the evaluation process. This includes a planning meeting prior to launching the evaluation for Year 3 (complete); a Draft Report and Draft Technical Summary; a Final Report and Final Technical Summary; and an oral presentation of the Final Report.

In addition, IEc proposes an interim webinar briefing to present and discuss our preliminary evaluation findings. This interim briefing would occur after IEc has collected the evaluation data and conducted our initial analysis, and before we submit the Draft Report. IEc has found that providing an opportunity for interim feedback and discussion of the evaluation findings prior to submitting the Draft Report is an effective way to clarify issues of fact and interpretation, discuss the implications and potential recommendations stemming from the evaluation findings, and to increase the likelihood that evaluation results will be used. Following the interim briefing, IEc will draft the report. After receiving BOEM's comments on the Draft Report, we will deliver the Final Report and presentation.

IEc will strive to keep the report concise, with a brief executive summary that summarizes the evaluation purpose, findings, and recommendations. To protect confidentiality, IEc will present interview and survey results in an aggregated fashion. Illustrative quotations may be provided, but quotations will not be attributed to individuals, and no other identifying information will be included.

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Appendix A: Interview Guides

Advance Notification Email for Interviews

The Bureau of Ocean Energy Management (BOEM) requests your participation in an interview to understand how stakeholders receive, use, and contribute to BOEM-funded environmental studies and assessments. These interviews are part of an ongoing BOEM-sponsored project on *"Evaluating Connections: BOEM's Environmental Studies and Assessments."* This important project aims to understand how BOEM's scientific research contributes to BOEM's environmental assessments and vice versa, as well as their influence on the external (i.e., non-BOEM) community.

During the internal portion of this project, BOEM identified you as a key contact at an agency, institution, or other organization that BOEM collaborates with on environmental studies and/or assessment work (e.g., NEPA, Section 106, etc.). The interviews will focus on how external stakeholders like you use BOEM studies and assessment information; how this information informs external environmental analyses, assessments, or policy decisions; and how external stakeholders contribute to BOEM's studies. We understand that you may have also received an invitation to complete an online survey for this study, and we encourage you to do so. A subset of survey participants was selected for a more in-depth interview.

Interview questions will be tailored to your organization. The interview questions will ask for your insights on topics such as linkages between BOEM and your organization, how you use BOEM's environmental studies in your work, how you contribute to BOEM studies and/or assessments, and your recommendations on ways to strengthen information sharing moving forward. Each interview session will be approximately 60 minutes and will be conducted using Microsoft Teams or another virtual or telephone platform.

BOEM has contracted with Industrial Economics, Incorporated (IEc), an independent contractor, to conduct the interviews. No BOEM personnel will participate in your interview session. The BOEM study team and/or IEc will contact you directly to schedule your interview. Please keep an eye out for follow-up information.

Your participation in the interview is voluntary. Your full and candid responses will help ensure that the study results are accurate and helpful. Individual names of interviewees **will not be disclosed** in the presentation of findings or analysis; responses will be aggregated and presented by type of respondent (e.g., state agencies, research institutions, academics/universities, etc.).

BOEM's Environmental Studies Program and Environmental Assessment Program

BOEM's mission is to manage the development of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way. In fulfilling its mission, BOEM must comply with a range of environmental requirements, including but not limited to the National Environmental Policy Act (NEPA), Endangered Species Act, Magnuson Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act, Coastal Zone Management Act, and the National Historic Preservation Act. BOEM develops environmental assessments, including NEPA documents, consultation documents, and other analyses that use the best available information to comply with

relevant statutes and policies. Environmental studies funded by BOEM's Environmental Studies Program (ESP) provide scientific information (including the biological, physical, and social sciences as broadly defined) to inform BOEM's environmental assessments.

For purposes of the current project, the term "environmental assessment" encompasses the diversity of analyses that BOEM's Environmental Assessment Program undertakes and is not restricted to NEPA environmental assessments. For example, the following types of documents are considered within BOEM's environmental assessments: NEPA environmental impact statements; NEPA environmental assessments; National Historic Preservation Act documents (including section 106 evaluations of effects on historic properties and programmatic agreements); essential fish habitat assessments for Magnuson-Stevens Fishery Conservation and Management Act consultations; Endangered Species Act section 7 biological evaluations or biological assessments; analyses and assessments prepared to comply with the Clean Air Act, Coastal Zone Management Act, and Marine Mammal Protection Act; and analyses and assessments such as engineering analyses, regulatory impact analyses, resource evaluations, additional NEPA-related analyses, site assessments, and cost-benefit analyses prepared for the Outer Continental Shelf Lands Act and other regulatory requirements.

Privacy Notice

We invite you to review the attached Privacy Notice, which provides information about the authority for the data collection, purpose of the collection, method of the collection, who will have access to the collected information, and how the BOEM Evaluation Team and contractor will maintain and use the collected information.

Paperwork Reduction Act of 1995 (PRA) Statement

BOEM is collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501 et seq.) to gather feedback to better understand how stakeholders receive, use, and contribute to BOEM-funded environmental studies and assessments.

Responses are voluntary, and BOEM will not share the results publicly. BOEM estimates the interview will take you 60 minutes to complete either by using Microsoft Teams or another virtual or telephone platform.

BOEM may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB Control Number. OMB has reviewed and approved this interview letter and assigned OMB Control Number 1010-xxxx. Comments regarding the burden estimate or any other aspect of this form may be submitted to the Information Collection Clearance Officer, Bureau of Ocean Energy Management, 45600 Woodland Road, Sterling, VA 20166.

Information Collection Request

{Placeholder for OMB Control Number and expiration date}

Questions

If you have any questions about the project, please contact Megan Davidson at: Megan.Davidson@boem.gov.

Interview Guide

This is a consolidated interview guide. Questions that are specific to different types of stakeholders are designated in parentheses. After the questions have been finalized, IEc will create separate (customized) guides for each type of stakeholder.

Background

1. Please briefly describe (1-2 minutes) your current position/role in your organization.

Use of BOEM-funded environmental studies

2. Have you used information from BOEM-funded environmental studies in your work? "Your work" refers to tasks and responsibilities that you personally carry out for your agency, institution, or organization.

   [*If yes, proceed; if no, move to next section*]

3. How have you used the information from BOEM-funded environmental studies in your work?
4. Are there specific BOEM environmental studies that have been, or currently are, of particular importance to your work? If yes, please explain.
5. In the years ahead, BOEM's scientific work will focus more than in the past on considerations around renewable energy development. Do you expect this shift in focus to change the importance of BOEM's environmental studies to your work?
   a. If yes, please explain.

[The next question is <u>only</u> for public agencies]

6. To what extent do study results inform any of the following at your agency?
   - Research studies conducted by your agency
   - Products derived from research studies (e.g., integrated datasets, modeling inputs or modeling runs, etc.)
   - Environmental assessments developed by your agency
   - Planning or policy decisions taken by your agency

   a. If possible, please answer each item above on a scale from 1-5, where 1 means "not at all," 3 means "to some extent," and 5 means "very much."
   b. Can you think of one or more examples? If yes, please describe.
7. Where do you get information on BOEM-funded environmental studies? *[probe: grey literature vs. primary literature in the sourcing of information on BOEM-funded environmental studies]*
8. Are there information-sharing opportunities that BOEM could take advantage of to expand distribution and use of BOEM-funded environmental studies?
9. What, if anything, could increase the usefulness of BOEM-funded environmental studies in your work?

Contribution to BOEM-funded environmental studies

10. Have you contributed to BOEM-funded environmental studies? We are interested in intellectual contributions, which include but are not limited to: ideas for a new study, principal investigator, participation on a research team, etc.

    [*If yes, proceed; if no, move to next section*]

11. How do you or have you contributed to BOEM-funded environmental studies?

    a. *[Ask Academics and Consultants Only]* Do you conduct BOEM-funded environmental studies (e.g., as a principal investigator or as part of a team of researchers)? If yes:

        i. Does any of the funding you receive from BOEM support student research?

            1. If yes, does this include undergraduate, Masters, and/or PhD-level work?

                - Approximately how many students does this include? (Please break out by undergraduate, Masters, and PhD level, as applicable.)
                - Over approximately how many years has funding that you receive from BOEM supported student research?
                - Has the number of students included in this research increased, decreased, or stayed about the same over time? Please explain.

            2. Based on your direct observation and experience, how does participating in BOEM-funded research affect the students' academic careers? (examples: influences the student's focus of study; supports completion of the student's dissertation; etc.)

            3. Based on your direct observation and experience, how does participating in BOEM-funded research affect the students' post-academic careers? (examples: influences the type of work they do after graduating; influences the type of organization to which they apply for a job; etc.)

            4. Are there other ways that BOEM research supports the careers of young scientists? If yes, please explain.

    b. Have you contributed an idea for a BOEM-funded environmental study? If yes:

        i. What was the forum or format in which you contributed your idea?

        ii. As far as you know, did BOEM subsequently fund any studies that addressed your idea? Note that BOEM studies may address all or part of an idea, or a combination of ideas submitted by different people.

            1. If yes, did you participate in implementing the study? Please explain.

    c. How else, if at all, do you interact with BOEM on implementing or conducting BOEM-funded environmental studies?

12. Do you share the results of BOEM-funded environmental studies to which you contributed with other stakeholders inside and/or outside your organization?

a. If yes, with whom, and how? (e.g., final report, other publications, conferences, presentations, informal communications with colleagues)?

13. What are some uses of the findings or information of the BOEM-funded environmental studies in which you have taken part?
14. What types of information needs do these studies fulfill (e.g., in environmental assessments or for planning, policy, and resource management decisions)?

Contribution to science-informed analyses and environmental assessments

15. Have you contributed to environmental assessments or analyses in cooperation with BOEM (e.g., for which BOEM is a co-lead agency, cooperator, or key stakeholder)? If yes:
    a. What types of assessments or analyses are they (e.g., NEPA, Endangered Species Act consultations)?
    b. Is your agency/organization the lead on the assessments/analyses?
    c. What is BOEM's role in these assessments/analyses?

    [*If yes, proceed; if no, move to next section*]

16. Do these assessments/analyses rely on information from BOEM studies? If yes:
    a. What types of information do they rely on from BOEM studies?
    b. Can you provide specific examples of BOEM studies fulfilling important information needs?
17. How else, if at all, do you interact with BOEM on environmental assessments or analyses?
18. How are these assessments used to inform resource planning, policy, and/or management?
    a. Do you have specific examples?

Use of BOEM environmental assessments or analyses

19. Have you used information from BOEM environmental assessments or analyses in your work?

    [*If yes, proceed; if no, move to next section*]

20. How have you used the information from BOEM environmental assessments/analyses?
21. Are there specific BOEM environmental assessments/analyses that have been, or currently are, of particular importance to your work? If yes, please explain.
22. In the years ahead, BOEM's scientific work will focus more than in the past on considerations around renewable energy development. Do you expect this shift in focus to change the importance of BOEM's environmental assessments/analyses to your work?
    a. If yes, please explain.

[The next two questions are <u>only</u> for public agencies]

23. To what extent does information in BOEM-led environmental assessments/analyses inform any of the following at your agency?
    - Research studies conducted by your agency

- Environmental assessments developed by your agency
- Policy decisions taken by your agency

a. If possible, please answer each item above on a scale from 1-5, where 1 means "not at all," 3 means "to some extent," and 5 means "very much."

b. Can you think of one or more examples? If yes, please describe.

24. Where do you get information on BOEM environmental assessments/analyses?

25. *(If not previously asked)* Do you share BOEM-led environmental assessments/analyses with other stakeholders inside and/or outside of your organization? If yes, with whom, and how?

    a. If yes, with whom, and how? (e.g., written reports, conferences, presentations, informal communications with colleagues)?

Wrap-up

26. Other than what we have already discussed, can you think of any other updates or changes that BOEM could make to share study and assessment results with you and your organization in a more useful way? If yes, please explain.

Appendix B: Survey Questionnaire

Advance Notification Email for the Survey

The Bureau of Ocean Energy Management (BOEM) requests your participation in an online survey to understand how stakeholders receive, use, and contribute to BOEM-funded environmental studies and assessments. This survey is part of an ongoing BOEM-sponsored project on *"Evaluating Connections: BOEM's Environmental Studies and Assessments."* This important project aims to understand how BOEM's scientific research contributes to BOEM's environmental assessments and vice versa, as well as their influence on the external (i.e., non-BOEM) community.

During the internal portion of this project, BOEM identified you as a key contact at an agency, institution, or other organization that BOEM collaborates with on environmental studies and/or assessment work (e.g., NEPA, Section 106, etc.). The survey focuses on how external stakeholders like you use BOEM studies and assessment information; and how information is exchanged between BOEM and external stakeholders.

The survey will ask whether and how you receive and use information about the results from BOEM studies and assessments. It will also ask you to confirm individuals within BOEM with whom you communicate on studies and assessments, provide information about those connections, and indicate whether you disseminate information from your interactions with BOEM to other organizations. Your responses will be used to develop network maps and metrics that explain the structure of BOEM's "network" and how information flows throughout the network.

The PDF attachment includes the names of BOEM personnel in each BOEM office/region who work on studies, assessments, or both or who supervise staff who do. You may wish to review the attached list of personnel to refresh your memory prior to completing the survey regarding your connections to BOEM's studies and assessments.

Your participation in the survey is voluntary. Full and candid responses will help ensure that the study results are accurate and helpful. Please do not provide any Personal Identifiable Information (PII) that you view as sensitive or that viewed in the context of the survey would be considered sensitive (e.g., Social Security number, driver's license, etc.). BOEM has contracted with an independent consulting firm, Industrial Economics, Incorporated (IEc), to collect and analyze the survey responses. All responses will be presented at the organization level; individual names **will not be disclosed** in the presentation of findings or analysis.

Please complete the survey at the following link: {insert survey link}.

Please complete the survey within the next two (2) weeks. It should take 20 minutes or less to complete. We encourage you to take the survey on your laptop or desktop – not a mobile device – for a more user-friendly experience.

BOEM's Environmental Studies Program and Environmental Assessment Program

BOEM's mission is to manage the development of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way. In fulfilling its mission, BOEM must

comply with a range of environmental requirements, including but not limited to the National Environmental Policy Act (NEPA), Endangered Species Act, Magnuson Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act, Coastal Zone Management Act, and the National Historic Preservation Act. BOEM develops environmental assessments, including NEPA documents, consultation documents, and other analyses that use the best available information to comply with relevant statutes and policies. Environmental studies funded by BOEM's Environmental Studies Program (ESP) provide scientific information (including the biological, physical, and social sciences as broadly defined) to inform BOEM's environmental assessments.

For purposes of the current project, the term "environmental assessment" encompasses the diversity of analyses that BOEM's Environmental Assessment Program undertakes and is not restricted to NEPA environmental assessments. For example, the following types of documents are considered within BOEM's environmental assessments: NEPA environmental impact statements; NEPA environmental assessments; National Historic Preservation Act documents (including section 106 evaluations of effects on historic properties and programmatic agreements); essential fish habitat assessments for Magnuson-Stevens Fishery Conservation and Management Act consultations; Endangered Species Act section 7 biological evaluations or biological assessments; analyses and assessments prepared to comply with the Clean Air Act, Coastal Zone Management Act, and Marine Mammal Protection Act; and analyses and assessments such as engineering analyses, regulatory impact analyses, resource evaluations, additional NEPA-related analyses, site assessments, and cost-benefit analyses prepared for the Outer Continental Shelf Lands Act and other regulatory requirements.

Privacy Notice

We invite you to review the attached Privacy Notice, which provides information about the authority for the data collection, purpose of the collection, method of the collection, who will have access to the collected information, and how the BOEM Evaluation Team and contractor will maintain and use the collected information.

Paperwork Reduction Act of 1995 (PRA) Statement

BOEM is collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501 et seq.) to gather feedback to better understand how stakeholders receive, use, and contribute to BOEM-funded environmental studies and assessments.

Responses are voluntary, and BOEM will not share the results publicly. BOEM estimates the survey will take you 20 minutes to complete. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the survey.

BOEM may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB Control Number. OMB has reviewed and approved this survey and assigned OMB Control Number 1010-xxxx. Comments regarding the burden estimate or any other aspect of this form may be submitted to the Information Collection Clearance Officer, Bureau of Ocean Energy Management, 45600 Woodland Road, Sterling, VA 20166.

Information Collection Request

{Placeholder for OMB Control Number and expiration date}

Questions

If you have any questions about this project, please contact Megan Davidson at: Megan.Davidson@boem.gov.

Survey Instrument

Introduction

Thank you for participating in this survey. You received this survey because a BOEM scientist identified you as an external contact for studies and assessment work. The survey focuses on how external (i.e., non-BOEM) stakeholders like you use BOEM studies and assessment information and how information is exchanged between BOEM and external stakeholders.

Your participation in the survey is voluntary. Full and candid responses will help ensure that the study results are accurate and helpful. Please do not provide any Personal Identifiable Information (PII) that you view as sensitive or that viewed in the context of the survey would be considered sensitive (e.g., Social Security number, driver's license, etc.). All responses will be presented at the organization level; individual names **will not be disclosed** in the presentation of findings or analysis.

While taking the survey, it is possible that you will run across a question that is difficult to answer. Please answer to the best of your ability, using your professional judgment. Your responses are important to this research. The survey requires approximately 20 minutes or less to complete. Please ensure that you have ample time to complete the survey as it will reset automatically if you close the browser prematurely.

Note: To move backwards, do not use your web browser's back button as this will erase your responses. Instead, click the "previous" button at the bottom of the screen. The "next" button will advance you to the next page. Please take the survey on a laptop/desktop for a smoother experience.

Respondent's Role in Communicating with BOEM

Note: Throughout this survey, "your work" refers to tasks and responsibilities that you personally carry out for your agency, institution, or organization.

1. In your work, in what role(s) have you communicated with BOEM **within the last 24 months**? Select all that apply.
    a. Principal investigator on one or more BOEM studies
    b. Member of a research team on one or more BOEM studies
    c. Subject matter expert for BOEM studies and/or assessments
    d. Federal, state, or other public agency that manages similar trust resources as BOEM
    e. Research program at a federal, state, or other public agency
    f. Research program at a college or university
    g. Cooperating agency that works with BOEM on assessments

h. Organization/entity affected by BOEM policy or planning decisions

i. Other – please specify *[open text]*

Receiving Information from BOEM Studies

2. Do you receive information from BOEM **studies?**
    a. Yes
    b. No [skip to Question 8]
3. How do you receive information from BOEM studies? Check all that apply.
    a. Conferences
    b. Webinar presentations
    c. Direct interactions with staff at BOEM
    d. Direct interactions with staff at federal agencies other than BOEM
    e. Direct interactions with staff at state agencies
    f. Direct interactions with academics collaborating with BOEM on a study
    g. Newsletter from BOEM office
    h. Internet searches for specific topical information which includes results from BOEM studies or assessments
    i. Visiting BOEM website
    j. Using the BOEM Environmental Studies Program Information System (ESPIS)
    k. Not applicable
    l. Other – please specify *[open text]*

Use of Information – Studies

4. How do you use the information that you receive from BOEM studies? Select all that apply. If you do not use information from BOEM studies, select "Not applicable."
    a. To inform policy
    b. To develop NEPA analyses
    c. To develop other types of environmental, social, or economic assessments
    d. To develop or implement mitigations
    e. For use in an environmental damage assessment
    f. To inform future research
    g. For use in a model
    h. To teach others
    i. Not applicable *[skip to Question 6]*

j. Other – please specify *[open text]*

5. Please list **specific examples** for your answer to the previous question – i.e., specific policies, analyses, assessments, mitigations, damage assessments, research, models, teaching opportunities, etc. that were informed by information you received from BOEM studies. *[open text]*
6. Overall, how **useful** are BOEM studies in providing scientific information to inform your **environmental analyses**? If you do not use information from BOEM studies to inform your environmental analyses, or you do not conduct environmental analyses, select "Not applicable."
    a. Useless
    b. Somewhat useless
    c. Neither useful nor useless
    d. Somewhat useful
    e. Very useful
    f. Not applicable
7. Overall, how **useful** are BOEM studies in providing scientific information to inform your organization's relevant **policy and planning decisions**? If your organization does not use information from BOEM studies to inform its policy and planning decisions, or if your organization does not make policy and planning decisions that relate to BOEM study topics, select "Not applicable."
    a. Useless
    b. Somewhat useless
    c. Neither useful nor useless
    d. Somewhat useful
    e. Very useful
    f. Not applicable

Receiving Information from BOEM Assessments

8. Do you receive information from BOEM **assessments**?
    a. Yes
    b. No [skip to Question 12]
9. How do you receive information from BOEM assessments? Check all that apply.
    a. Conferences.
    b. Webinar presentations.
    c. Direct interactions with staff at BOEM
    d. Direct interactions with staff at federal agencies other than BOEM
    e. Direct interactions with staff at state agencies

f. Direct interactions with academics collaborating with BOEM on a study

g. Newsletter from BOEM office

h. Internet searches for specific topical information which includes results from BOEM studies or assessments

i. Visiting BOEM website

j. Public meetings

k. Public notices on availability of NEPA documents

l. Not applicable

m. Other – please specify *[open text]*

Use of Information – Assessments

10. How do you use the information from BOEM **assessments**? Select all that apply. If you do not use information from BOEM assessments, select "Not applicable."

    a. To inform policy

    b. To develop NEPA analyses

    c. To develop other types of environmental, social, or economic assessments

    d. To develop or implement mitigations

    e. For use in an environmental damage assessment

    f. To inform public comments submitted on specific agency actions

    g. To inform future research

    h. For use in a model

    i. To teach others

    j. Not applicable *[skip to Question 12]*

    k. Other – please specify *[open text]*

11. Please list **specific examples** for your answer to the previous question – i.e., specific policies, analyses, assessments, mitigations, damage assessments, public comments, research, models, teaching opportunities, etc. that were informed by information you received from BOEM assessments. *[open text]*

Information About You

12. Please provide your first name, last name, and organization. This information is needed for the survey analysis to describe connections between your organization and contacts in BOEM programs/regional offices. For example, your response may show if you identified the same contact(s) in your response as the BOEM contact(s) who identified you in their response. As a reminder, all responses will be presented at the organization level; **individual names will not be disclosed** in the presentation of the survey findings or analysis.

First name: *[open text]*

Last name: *[open text]*

Organization: *[open text]*

13. What office or department do you work in? *[open text]*

BOEM Contacts

14. Please list **up to five (5)** people **at BOEM** that you interact with in the development or implementation of BOEM studies, the development of analyses for environmental assessments, or from whom you receive information about BOEM studies or assessments. If you interact with more than five (5) people at BOEM, include the five (5) that you consider the most important for your work. Consider people you interacted with at least once **within the last 24 months**.

    You may wish to refer to the PDF version of the list you received with the notification email to gather your thoughts about your most important connections (and limit scrolling).

    *[**Note for reviewers:** A PDF file with the names of BOEM personnel who work on studies and/or assessments will be attached to the survey notification email. Question 14 will include a dropdown menu with the list of names in the PDF file. Respondents will be allowed to select up to five names from the dropdown menu.]*

15. For each person in the table, please report the **subject of interactions** you have with the individual. Fill out the boxes as though completing the sentence, "I interact with this person to. . ." *[**Note for reviewers:** The survey will show the list of names reported in Question 14]*

Name	(a)…collaborate on BOEM studies	(b)…collaborate on BOEM assessments	(c)…receive information from BOEM studies	(d)…receive information from BOEM assessments
[Pre-filled]	*[Yes/No]*	*[Yes/No]*	*[Yes/No]*	*[Yes/No]*

16. For each person, please indicate how **often** you interact with the person related to your studies and/or assessment work. Please use the drop-down menus in each column to indicate your answer. *[**Note for reviewers:** The survey will show the list of names reported in Question 14]*

Name	Frequency of Interactions
[Pre-filled]	*[Drop-down:* *1) At least once a year, but less than once a month* *2) Once or twice a month* *3) More than twice a month, but less than weekly* *4) At least once a week]*

17. Did you interact with these contacts more often, less often, or about the same before the COVID-19 pandemic started? If you did not interact with any of these contacts before COVID-19 started, select "not applicable."

    a. I interacted with my contacts **more often** before COVID.

    b. I interacted with my contacts **less often** before COVID.

    c. I interacted with my contacts about **the same** amount before COVID.

d. Not applicable.

Other Contacts

18. Please indicate up to **five (5) organizations** that you interacted with to **share** information about BOEM studies and assessments **within the last 24 months**. This includes sharing information from studies and assessments, even if you do not share the study reports or assessment documents themselves. If you shared information with more than five (5) organizations, please include the five (5) that you consider the most important for your work. Please consider contacts at federal agencies, state agencies, academics/universities, tribes, regional organizations, and other external partners. If none, please indicate "None."

External Organization	Office
[Open text]	*[Open text optional]*

Appendix C: Environmental Studies in Evaluation

The complete environmental studies inventory capturing studies that were active between January 1st, 1999 and December 31st, 2019 is presented in the attached Excel file (named AppendixC_EnvironmentalStudiesinEvaluation.xlsx). This is the same inventory of studies that was used for the internal evaluation.

Appendix D: Potential External Survey Contacts and Interview Candidates

IEc is actively seeking BOEM's input on potential external survey contacts and interview contacts.

Survey contacts

The contacts listed in **Table 3** were identified by Year 2 survey respondents (i.e., BOEM managers and staff who are involved with studies and/or assessments). Year 2 survey respondents identified these contacts as a key contact at an agency, institution, or other organization that BOEM collaborates with on environmental studies and/or assessment work. The external survey will be sent to these external contacts, pending any edits to the list. The survey will ask these external stakeholders how they use BOEM studies and assessment information; and how information is exchanged between BOEM and external stakeholders.

Specifically, the survey will ask whether and how the respondents receive and use information about the results from BOEM studies and assessments. It will also ask them to confirm individuals within BOEM with whom they communicate on studies and assessments, provide information about those connections, and indicate whether they disseminate information from your interactions with BOEM to other organizations. Responses will be used to develop network maps and metrics that explain the structure of BOEM's "network" and how information flows throughout the network.

Table 3 includes notes from the survey responses directly; however, bracketed notes are from IEc. The notes cross-reference where individuals were mentioned by BOEM staff in more than one region (i.e., there are several duplicate contacts in the overall table – if a contact was listed in multiple regions, the person was listed in every region where they were identified). Contact designations are listed in the first column (i.e., academic, federal, state, Tribes, industry, or not specified) and the table is organized by BOEM office.

Table 3. Potential External Survey Contacts

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Alaska					
NGO	Alaska Ocean Observing System (AOOS)	Molly McCammon	No email given	Yes	[Retired]
Academic	Coastal Response Research Center University of New Hampshire	Nancy Kinner	nancy.kinner@unh.edu	Yes	Workshop; where Li and Smith shared BOEM modeling information.
ANCSA Corporation	Cully Corporation (Pt Lay)	Marti Awalen	mawalin@cullycorp.com	No	Alaska Native Claims Settlement Act (ANCSA) Corporation.
Academic	Smithsonian Institute	Gregory Ruiz	No email given	No	-
Federal	BSEE	Contracting Officers	No email given	No	-
Federal	BSEE	Kelly Griggs	kelly.griggs@bsee.gov	No	-
Federal	NOAA	Ed Farley	No email given	No	-
Federal	NOAA	Peter Boveng	peter.boveng@noaa.gov	No	-
Federal	NOAA	Robyn Angliss	robyn.angliss@noaa.gov	No	-
Federal	NOAA NMFS	Verena Gill	verena.gill@noaa.gov	No	-
Federal	NPS	Tahzay Jones	tahzay_jones@nps.gov	No	-
Federal	NOAA	Amy Holman	No email given	Yes	-
Federal	USFWS	Crystal Leonetti	crystal_leonetti@fws.gov	No	-
Federal	USFWS	Kathy Kuletz	Kathy_Kuletz@fws.gov	No	-
Federal	USFWS	Patrick Lemons	Patrick_Lemons@fws.gov	No	-
Federal	USFWS	Ted Swem	ted_swem@fws.gov	No	-
Federal	USGS	Dan Monson	dmonson@usgs.gov	No	-
Federal	USGS	John Piatt	jpiatt@usgs.gov	No	-
Federal	USGS	Rudy Schuster	schusterr@usgs.gov	No	[Also identified by Headquarters.]
Federal	USGS	Todd Atwood	tatwood@usgs.gov	No	-

Contact Designation	Organization	Individual	Email		Concerns about contacting?	Notes
Industry	Oil and Gas Industry personnel	Elizabeth Sharp	esharp@hilcorp.com		No	-
Industry	Oil and Gas Industry personnel	Robin McGhee	Robyn.E.McGhee@conocophillips.com		No	-
State/Local	Alaska Regional Library Information System (ARLIS)	Celia Rozen	celia@arlis.org		No	[Retired, formerly employed by the AK Dept. of Fish and Game]
State/Local	Alaska Department of Fish and Game	Elizabeth Mikow	beth.mikow@alaska.gov		No	-
State/Local	Alaska Department of Fish and Game	Lori Quakenbush	lori.quakenbush@alaska.gov		No	-
Tribes	Alaska Eskimo Whaling Commission	Jessica Lefevre	jessica@lefevrelaw.org		No	[Retired]
NGO	Alaska Marine Science Symposium, North Pacific Research Board	Danielle Dickson	Danielle.dickson@nprg.org		No	-
State/Local	ARLIS	Not Specified	No email given		Not Specified	[No contact or additional information given - ARLIS is a joint effort by Federal and State of Alaska agencies and the University of Alaska Anchorage]
State/Local	Alaska State Historic Preservation Office	Not Specified	No email given		Not Specified	[No contact or additional information given]
ANCSA Corporation	Arctic Slope Regional Corporation	Ty Hardt	THardt@arsc.com		No	[Erik Kenning may be able to provide information as well].
ANCSA Corporation	Arctic Slope Regional Corporation	Erik Kenning	EKenning@arsc.com	No	[Ty Hardt may be able to provide information as well].	
Tribes	Kotzebue IRA	Alex Whiting	alex.whiting@qira.org		No	-
NGO	Cook Inlet Regional Citizens Advisory Council/ShoreZone	Sue Saupe	saupe@circac.org		Not Specified	-
NGO	Prince William Sound Science Center (Oil Spill Recovery Institute)	Scott Pegau	wspegau@pwssc.org	No	[Added by Heather Crowley]	
State/Local	State Agencies	Sara Longan	No email given		Yes	-
State/Local	State of Alaska	Not Specified	No email given		Not Specified	[No contact or additional information given]

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
State/Local	The North Slope Borough	Robert Suydam	robert.suydam@north-slope.org	Yes	Dr. Suydam is very busy and may not have time to answer your survey. [From Heather Crowley: Dr. Suydam retired and is no longer working for NSB; he may or may not still be reachable at that email address. Dr. John Citta replaced him, but he too is very busy.]
Academic	University of Alaska Fairbanks	Franz Mueter	No email given	No	-
Academic	University of Alaska, Fairbanks	Peter Fix	pjfix@alaska.edu	No	-
GOM					
Academic	Eastern Research Group	Darcy Wilson	Darcy.Wilson@erg.com	No	[Identified by other regions as well]
Academic	Louisiana State University	Kristine DeLong	kdelong@lsu.edu	No	-
Academic	LSU Center for Energy Studies	David Dismukes	dismukes@lsu.edu	Yes	He's incredibly busy with many responsibilities. I'm concerned that the interaction may take too much of his time. He may be hard to reach given his travel and speaking schedule.
Academic	Nicholls State University	Shana Walton	shana.walton@nicholls.edu	Yes	She will not have time to talk. She is teaching classes and running a very large study for BOEM. She will be hard to reach.
Academic	University of Maryland Baltymore County	Nader Abuhassan	nader@umbc.edu	No	-
Academic	University of Rhode Island	Rod Mather	rodmather@uri.edu	No	-
Academic	University of Southern Mississippi	Leila Hamdan	leila.hamdan@usm.edu	No	-
Federal	API	Andy Radford	No email given	No	[Also identified by Headquarters]
Federal	BSEE	Lisa Algarin	Lisa.Algarin@bsee.gov	No	
Federal	BSEE	Irina Sorset	irina.sorset@bsee.gov	No	[Updated by Heather Crowley]
Federal	BSEE	Herb Leedy	Herb.leedy@bsee.gov	No	[Added by Arie Kaller]
Federal	BSEE	James Sinclair	James.Sinclair@BSEE.gov	No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	BSEE	Guillermo Auad	guillermo.auad@bsee.gov	No	-
Federal	BSEE	Ramona Sanders	Ramona.sanders@bsee.gov	No	
Federal	Department of State, US Embassy at Kyrgyzstan	Dong-Thu Caohuu	CaohuuD@state.gov	No	-
Federal	DOE	Rebecca Green	rebecca.green@nrel.gov	Yes	-
Federal	EPA	Not Specified	No email given	Not Specified	[No contact or additional information given]
Federal	Flower Garden Banks National Marine Sanctuary (NOAA)	Michelle Johnston	michelle.a.johnston@noaa.gov	No	[Also identified by Headquarters.]
Federal	NMFS	Jenny Litz	Jenny.Litz@NOAA.gov	No	-
Federal	NMFS	Jordan Carduner	jordan.carduner@noaa.gov	No	[Identified by other regions as well, but the other BOEM individual indicated that they would like to speak with Jordan first, and was concerned about time commitments conflicting with Jordan's workload]
Federal	BSEE	TJ Broussard	t.j.broussard@bsee.gov	No	-
Federal	NOAA	Andy Strelcheck	No email given	Yes	-
Federal	NOAA	Jason Gedamke	Jason.Gedamke@Noaa.gov	No	-
Federal	NOAA	Mridula Srinivasan	mridula.srinivasan@noaa.gov	No	-
Federal	NOAA Fisheries	Jolie Harrison	jolie.harrison@noaa.gov	No	[Also identified by Headquarters.]
Federal	NOAA National Centers for Coastal Ocean Science (NCCOS)	Matthew Poti	matthew.poti@noaa.gov	No	[Also identified by Pacific Region.]
Federal	NOAA ONMS	Emma Hickerson	emma.hickerson@noaa.gov	No	[Also identified by Headquarters. Another BOEM staffer had reservations about BOEM/IEc contacting for an interview. They suggested that Emma would not have time to respond.]
Federal	NOAA/NMFS	David Dale	david.dale@noaa.gov	No	-
Federal	NOAA/OER	Frank Cantellas	Frank.Cantellas@noaa.gov	No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	NPS	Dave Conlin	Dave_Conlin@nps.gov	No	Submerged Resources Center
Federal	U.S. Naval Oceanographic Office	Allen Reed	allen.reed2@navy.mil	No	-
Federal	U.S. Naval Research Laboratory	Warren Wood	warren.wood@nrlssc.navy.mil	No	-
Federal	US EPA - Environmental Protection Agency, Office of Research and Development	Barron Henderson	No email given	Not Specified	listed in tandem with Brian Gullet, only Brian's email was given.
Federal	US EPA - Environmental Protection Agency, Office of Research and Development	Brian Gullet	Gullett.Brian@epa.gov	No	-
Federal	US NASA - Goddard, Marshal and AMES Space Flight Centers	Brian Duncan	No email given	Not Specified	listed in tandem with Pawan Gupta, only Pawan's email was given.
Federal	US NASA - Goddard, Marshal and AMES Space Flight Centers	Omar Torres	No email given	Not Specified	listed in tandem with Pawan Gupta, only Pawan's email was given.
Federal	US NASA - Goddard, Marshal and AMES Space Flight Centers	Pawan Gupta	pawan.gupta@nasa.gov	No	-
Federal	USACE	Clay McCoy	clay.a.mccoy@usace.army.mil	No	[Also identified by MMP.]
Federal	USFWS	Geoff Gleason	Geoff.Gleason@USFWS.gov	No	-
Federal	USFWS	Jeffrey Gleason	jeffrey_gleason@fws.gov	No	-
Federal	USGS	Cathy Tortorici	No email given	Yes	[Also identified by Headquarters.] Sensitive relationship. Do not contact.
Federal	USGS	James Flocks	jflocks@usgs.gov	No	-
Federal	USGS	Jason Chaytor	jchaytor@usgs.gov	No	-
Federal	USGS	Patrick Jodice	pjodice@g.clemson.edu	No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	USGS (NMS)	Amanda Demopoulos	ademopoulos@usgs.gov	No	[Also identified by Pacific Region and Headquarters. Another BOEM staffer had reservations about BOEM/IEc contacting Amanda suggesting that she would likely not have time to respond.]
Industry	Offshore Operator Committee (OOC)	Greg Southworth	greg@theooc.org	No	[Also identified by Headquarters. GOM had an issue with BOEM/IEc reaching out to Greg]
Industry	Shell	Ruth Perry	No email given	No	[Also identified by Headquarters. Headquarters listed as other important companies with no contact info other than Ruth Perry: Individual companies (BP, Orsted)]
State/Local	Florida DEP	Bob Brantly	robert.brantly@dep.state.fl.us	No	-
State/Local	Gulf of Mexico Alliance	Laura Bowie	No email given	Yes	-
State/Local	IAGC	Nikki Martin	No email given	No	-
State/Local	Louisiana Coastal Protection and Restoration Authority	Not Specified	No email given	Not Specified	[No contact or additional information given]
State/Local	Louisiana CPRA	Syed Khalil	Syed.Khalil@LA.GOV	No	-
State/Local	Louisiana Division of Archaeology	Abigail Bleichner	ableichner@crt.la.gov	No	-
State/Local	State of Florida, Bureau of Archaeological Research	Ryan Duggins	ryan.duggins@dos.myflorida.com	No	-
State/Local	State of Louisiana	Chip McGimsey	cmcgimsey@crt.la.gov	No	-
State/Local/Local	Texas Historical Commission	Amy Borgens	amy.borgens@thc.texas.gov	No	-
State	The Water Institute of the Gulf	Scott Hemmerling	shimmerling@thewaterinstitute.org	Yes	I am concerned that he will not have the time to spare or that his time will be wasted.
OEP (Head-quarters)					
Academic	Academic	Art Popper	No email given	Not Specified	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Academic	Louisiana State University	Samuel Bentley	sjb@lsu.edu	No	Vice President, Office of Research and Economic Development Professor and Billy and Ann Harrison Chair in Sedimentary Geology
Academic	Academic	Chris Clark	No email given	Not Specified	-
Academic	Academic	Doug Nowacek	No email given	Not Specified	-
Academic	AGU	Not Specified	No email given	Not Specified	[No contact or additional information given]
Academic	API	Cathe Kalisp	kaliszc@api.org	No	-
Academic	Cornell	Aaron Rice	arice@cornell.edu	No	-
Academic	Earth Science Information Partners	Arika Varapongse	av@middlepatheco.com	Yes	I have concerns about wasting Arika's time.
Academic	Florida State University	Eric Chassignet	echassignet@fsu.edu	No	-
Academic	Louisiana State University	Kanchan Maiti	kmaiti@lsu.edu	No	-
Academic	National Academies of Sciences, Engineering, and Medicine	Susan Roberts	SRoberts@nas.edu	No	-
Academic	NOVA University	Tracey Sutton	tsutton1@nova.edu	No	-
Academic	Oceanography for Everyone	Andrew Thaler	andrew.david.thaler@gmail.com	No	-
Academic	Offshore Operator Committee (OOC)	Greg Southworth	greg@theooc.org	No	[Also identified by GOM. GOM had an issue with BOEM/IEc reaching out to Greg]
Academic	Private contractors-ERG, RAMBOLL, LAKES Environmental	Brian Matthews	bryan.Matthews@weblakes.com	No	-
Academic	Private contractors-ERG, RAMBOLL, LAKES Environmental	Till Stoeckenius	tstoeckenius@ramboll.com	No	-
Academic	Quantum Geospatial Inc.	Alexa Ramirez	aramirez@quantumspatial.com	No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Academic	Scripps Inst Oceanography (SIO)	Aaron Thode	athode@ucsd.edu	Yes	He did an analysis for us. He completed the work and reports, but he doesn't interact in any other way and he doesn't need to be bothered for this survey.
Academic	Southall Environmental Associates	Brandon Southall	Brandon.Southall@sea-inc.net	No	-
Academic	University of South Florida	Sherryl Gibert	sherryl@usf.edu	No	-
Academic	University of South Florida	Steve Murawski	smurawski@usf.edu	No	-
Academic	Various Academic Orgs	Les Kaufman	Lesk@bu.edu	No	-
Academic	Wildlabs	Stephanie	No email given	No	[No last name given]
Federal	BLM	Amy Stilling	astillings@blm.gov	No	-
Federal	BLM	Rebecca Moore	rmoore@blm.gov	No	-
Federal	BSEE	David Fish	david.fish@bsee.gov	No	-
Federal	BSEE	Doug Peter	douglas.peter@bsee.gov	No	-
Federal	Bureau of Indian Affairs	Bryan Newland	No email given	Not Specified	-
Federal	Bureau of Reclamation	Kelly Titsenor	No email given	Not Specified	-
Federal	Department of Interior	Stephen Simpson	No email given	Not Specified	-
Federal	DoD	D. Kitchen, others	No email given	No	-
Federal	DOI -- EJ NEPA Working Group	Ryan Hathaway	No email given	Yes	I am not comfortable asking external contacts to spend time responding to questions regarding our communications and professional relationship.
Federal	DOI HQ	Christian Crowley	Christian_Crowley@ios.doi.gov	No	Just a caveat - out of the 5 individuals I am least familiar with him and interact the least
Federal	Environmental Protection Agency	Debra Suzuki	No email given	Not Specified	-
Federal	EPA Region 4	Kelly Fortin	Fortin.Kelly@epa.gov	No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	Interagency Coordinating Com. Oil Pollution Research	Captain Ricardo Alonso	clifton.j.graham@uscg.mil	Yes	USCG Co-Chair; LCDR Graham is the contact for the ICCOPR.
Federal	IOOC -- NASA	Laura Lorenzoni	No email given	Yes	I am not comfortable asking external contacts to spend time responding to questions regarding our communications and professional relationship.
Federal	NASA	Andres Martinez	andres.martinez@nasa.gov	No	-
Federal	NASA	Anne Thompson	anne.m.thompson@nasa.gov	No	-
Federal	NASA	Jack Kay	Jack.kaye@nasa.gov	No	-
Federal	NASA ESDIS	Chris Lynnes	christopher.s.lynnes@nasa.gov	Yes	I don't think will know what your asking about, because he is not involved in BOEM Studies or Assessments.
Federal	National Oceanographic and Atmospheric Administration	Sam Rauch	samuel.rauch@noaa.gov	No	-
Federal	National Partnership Program	Reggie Beach, Committee Chair	reginald.beach@navy.mil	No	-
Federal	Natural Resources Defense Council	Michael Jasney	kbirdseye@nrdc.org	No	-
Federal	NAVO	Not Specified	No email given	Not Specified	[No contact or additional information given]
Federal	Navy	Danielle Kitchen	danielle.kitchen@navy.mil	No	-
Federal	NGA/ Coast Guard	Mike Brady	michael.b.brady@uscg.mil	No	-
Federal	NOAA NMFS	Allison Hernandez	allison.hernandez@noaa.gov	No	[Note: need email address and first name for this individual before reaching out]
Federal	NOAA NMFS	Benjamin Laws	Benjamin.laws@noaa.gov	No	[Note: need email address and first name for this individual before reaching out]
Federal	NOAA NMFS	Jordan Carduner	jordan.carduner@noaa.gov	No	[Note: need email address and first name for this individual before reaching out]

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	NOAA NMFS	Karma Norman	karma.norman@noaa.gov	Yes	I am not comfortable asking external contacts to spend time responding to questions regarding our communications and professional relationship.
Federal	NOAA	Cisco Werner	cisco.werner@noaa.gov	No	-
Federal	NOAA	Peter Etnoyer	peter.etnoyer@noaa.gov	No	-
Federal	NOAA NMFS	Jolie Harrison	jolie.harrison@noaa.gov	No	[Also identified by GOM.]
Federal	NOAA NMFS	David Wiley	David.Wiley@noaa.gov	No	-
Federal	NOAA Flower Garden Banks NMS	Michelle Johnston	michelle.a.johnston@noaa.gov	No	[Also identified by GOM.]
Federal	NOAA National Centers for Coastal Ocean Science	Theresa Goedeke	No email given	Yes	I am not comfortable asking external contacts to spend time responding to questions regarding our communications and professional relationship.
Federal	NOAA NMFS	Debi Palka	debra.palka@noaa.gov	No	-
Federal	NOAA NMFS	Harvey Walsh	harvey.walsh@noaa.gov	No	-
Federal	NOAA Office of Ocean Exploration	Rachel Medley	rachel.medley@noaa.gov	Yes	Rachel likely won't have time to respond to a survey
Federal	NOAA Office of Response & Restoration	Chris Barker	chris.barker@noaa.gov	No	-
Federal	NPS	Tom Fish	Tom_Fish@nps.gov	No	-
Federal	NSF	Bill Easterling	weasteri@nsf.gov	No	-
Federal	NSF	Holly Smith	hesmith@nsf.gov	No	-
Federal	US IOOS	Gabrielle Cannonico	gabrielle.canonico@noaa.gov	No	-
Federal	USFWS	Mark Koneff	mark_koneff@fws.gov	No	-
Federal	USFWS	Natalie Sexton	natalie_sexton@fws.gov	Yes	Just a caveat, my interactions with her are largely in formal group meeting settings.
Federal	USGS	Carolyn Ruppell	cruppel@usgs.gov	No	-
Federal	USGS	Cathy Tortorici	No email given	Yes	[Also identified by GOM.] Sensitive relationship. Do not contact.

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	USGS	Crista Straub	No email given	Yes	I am not comfortable asking external contacts to spend time responding to questions regarding our communications and professional relationship.
Federal	USGS	Enrika Hlavacek	ehlavacek@usgs.gov	No	-
Federal	USGS	John Haines	jhaines@usgs.gov	No	-
Federal	USGS	Rudy Schuster	schusterr@usgs.gov	No	[Also identified by Alaska Region.]
Federal	USGS	Steve Hak	jhak@usgs.gov	No	-
Federal	USGS (NMS)	Amanda Demopoulos	ademopoulos@usgs.gov	No	Also identified by GOM and Pacific Regions. Another BOEM staffer had reservations about BOEM/IEc contacting Amanda suggesting that she would likely not have time to respond
Federal	White House Office of Science and Technology Policy	Amanda Netburn	amanda.netburn@noaa.gov	Yes	may not have time to respond
Industry	CSA	Kim Olsen	kolsen@conshelf.com	No	-
Industry	Joint Industry Program on Sound and Marine Life (Shell Oil)	Ruth Perry	Ruth.Perry@shell.com	No	[Also identified by GOM. Headquarters listed as other important companies with no contact info other than Ruth Perry: Individual companies (BP, Orsted)]
Industry	LGL	Benny Gallaway	bjg@lgltex.com	No	-
Industry	Trade Associations (API)	Andy Radford	radforda@api.org	No	[Also identified by GOM]
Industry	Trade Associations (IAGC)	Alex Loureiro	No email given	Not Specified	-
Industry	Trade Associations (OOC)	Not Specified	No email given	Not Specified	[No contact or additional information given]
Not specified	NRL	Not Specified	No email given	Not Specified	[No contact or additional information given]
Not specified	NSTC	Not Specified	No email given	Not Specified	[No contact or additional information given]
Tribes	Mashantucket Pequot	Michael "Kicking Bear" Johnson	No email given	Yes	My contacts are mostly through consultations that are confidential

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Tribes	Mashpee Wampanoag tribe	David Weeden	david.weeden@mwtribe-nsn.gov	Yes	There are sensitivities around the government requesting information from sovereign tribes.
Tribes	Wampanoag Tribe of Gayhead	Bettina Washington	No email given	Yes	My contacts are mostly through consultations that are confidential
MMP					
Academic	LSU	George Xue	No email given	No	-
Academic	LSU	Greg Upton	gupton3@lsu.edu	No	-
Academic	LSU, ULL	Kevin Xu	kxu@lsu.edu	No	-
Academic	Rutgers University	Thomas Grothues	grothues@marine.rutgers.edu	No	FYI - current study using a CESU Network cooperative agreement
Academic	ULL	James Nelson	nelson@louisiana.edu	No	-
Academic	Water Institute	Mike Miner	No email given	Yes	I don't believe BOEM should be contacting our external partners and we have not asked permission to provide their information.
Federal	CESU Network	Not Specified	No email given	Not Specified	[No contact or additional information given]
Federal	NOAA	Mark Finkbeiner	No email given	No	-
Federal	NOAA NCCOS	Chris Taylor	chris.taylor@noaa.gov	No	-
Federal	NOAA NMFS	Karla Reece	No email given	Yes	Though we coordinate with Karla, she is not the best POC in terms of research. I would need to identify a better POC at NMFS is more engaged in research.
Federal	USACE	Clay McCoy	clay.a.mccoy@usace.army.mil	No	[Also identified by GOM.]
Federal	USACE DQM	Rhonda Lenoir	No email given	No	-
					-
Not specified	ASBPA	Nicole Elko	No email given	No	-
Not specified	CPRA	N/A	N/A	Yes	[No contact or additional information given]
Not specified	GLO	Kelly Brooks	No email given	Yes	I don't believe BOEM should be contacting our external partners and we have not asked permission to provide their information.

Contact Designation	Organization	Individual	Email		Concerns about contacting?	Notes
State/Local	Florida Department of environmental Protection	Bob Brantley	robert.brantly@Dep.state.fl.us		No	-
State/Local	NC department of environmental quality	N/A	N/A		Yes	[No contact or additional information given]
OREP						
Academic	CODAR	Dale Trockel	dale@codar.com		Yes	He is a contractor.
Academic	HDR	Anwar Khan	anwar.khan@hdrinc.com		Yes	He is a contractor. [Also identified by GOM]
Academic	University of Maryland	Helen Baily	No email given	No	[Added by Mary Boatman.]	
Academic	University of Maryland	David Secor	No email given	No	[Added by Mary Boatman.]	
Academic	University of Delaware	Matthew Breece	mwbreece@udel.edu		No	-
Academic	University of Rhode Island	John King	jwking@uri.edu		Yes	He is a contractor.
Academic	University of Rhode Island	James Miller	No email given	No	[Added by Mary Boatman.]	
Federal	EPA	Patrick Bird	bird.patrick@epa.gov		No	-
Federal	NOAA NMFS	Jon Hare	jon.hare@noaa.gov		No	most likely won't have time
Federal	NOAA NMFS/GARFO	Alison Verkade	alison.verkade@noaa.gov		Yes	She's extremely busy, so I am concerned that she won't have the time to complete a long survey.
Federal	NOAA NMFS/NEFSC	Andy Lipsky	andrew.lipsky@noaa.gov		Yes	He is very busy so may not have time to complete a long survey, and he may be the primary contact for a couple of us.
Federal	NOAA	John Christensen	john.christensen@noaa.gov		No	-
Federal	NOAA NMFS	Not Specified	No email given		Not Specified	[No contact or additional information given]
Federal	US Coast Guard	Michele Desautels	michele.e.desautels@uscg.mil		Not Specified	[No contact or additional information given]
Federal	USACE	Not Specified	No email given		Not Specified	[No contact or additional information given]
Federal	USFWS	Pam Loring	pamela_loring@fws.gov		No	-
Federal	USFWS	Scott Johnston	scott_johnston@fws.gov		No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	USFWS	Susi von Oettingen	susi_vonoettingen@fws.gov	No	-
Federal	USGS	David Kazyak	dkazyak@usgs.gov	No	-
Federal	USGS	Mona Khalil	mkhalil@usgs.gov	No	-
State/Local	NYSERDA	Not Specified	gregory.lampman@nyserda.ny.gov	Not Specified	[No contact or additional information given]
State/Local	States	Not Specified	No email given	Not Specified	[No contact or additional information given]
Pacific					
Academic	California State Fullerton	Jennifer Burnaford	jburnaford@exchange.fullerton.edu	No	-
Academic	Monterey Bay Aquarium Research Institute	Charlie Paull	paull@mbari.org	Yes	[Concerned about] his time, not sure how long this will take.
Academic	Oregon State University	Daniel Palacios	No email given.	Not Specified	-
Academic	UC Santa Cruz	Peter Raimondi	raimondi@ucsc.edu	Yes	Did a similar exercise in the fall and may confuse efforts, also he doesn't easily respond to emails because of time.
Academic	University of California	Not Specified	No email given	Not Specified	[No contact or additional information given]
Federal	DOE Office of Energy Efficiency and Renewable Energy	Jocelyn Brown-Saracino	Jocelyn.Brown-Saracino@EE.doe.gov	No	-
Federal	NOAA	Jeffrey Leirness	jeffrey.leirness@noaa.gov	No	-
Federal	NOAA NCCOS	James Morris	james.morris@noaa.gov	No	-
Federal	NOAA NCCOS	Matthew Poti	matthew.poti@noaa.gov	No	[Also identified by GOM.]
Federal	NOAA Northwest Fisheries Science Center	Elizabeth Clarke	elizabeth.clarke@noaa.gov	No	-
Federal	NOAA Office of Coast Survey	Richard Brennan	richard.t.brennan@noaa.gov	No	-
Federal	NOAA SWFSC	Shannon Rankin	shannon.rankin@noaa.gov	No	-
Federal	US Forest Service	Ted Weller	ted.weller@usda.gov	No	-
Federal	USFWS	Chris Diel	christopher_diel@fws.gov	No	-

Contact Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	USGS	Amanda Demopoulos	ademopoulos@usgs.gov	No	[Also identified by GOM Region and Headquarters. Another BOEM staffer had reservations about BOEM/IEc contacting Amanda suggesting that she would likely not have time to respond.]
Federal	USGS	Guy Cochran	gcochrane@usgs.gov	Yes	I did a similar exercise in the fall, he might confuse efforts.
Federal	USGS	Josh Adams	josh_adams@usgs.gov	No	-
Federal	USGS Pacific Coastal and Marine Science Center	Guy Gelfenbaum	ggelfenbaum@usgs.gov	No	-
State/Local	California (various state agencies)	Not Specified	No email given	Not Specified	[No contact or additional information given]
State/Local	Ocean Protection Council	Chris Potter	No email given.	Not Specified	-

Interview contacts

Table 4 provides interview contacts identified by BOEM as potential interviewees, or who were identified by internal survey respondents in **Table 3** but who we think could also potentially be good interview candidates. **Table 4** lists individuals by their organization along with their designation (federal, state, etc.) and notes.

The primary goal of the interviews is to understand how the external environmental community has used and been influenced by BOEM's science). The interviews will focus on how external stakeholders use BOEM studies and assessment information; how this information informs external environmental analyses, assessments, or policy decisions; and how external stakeholders contribute to BOEM's studies.

We are aiming to conduct 20 federal and 70 non-federal interviews (90 total). For the non-federal interviews, we are targeting 50 state agency interviews (two to three interviews in each state that borders BOEM regions) and 20 academic or consultant interviews. The 20 academic/consultant interviews should provide representative coverage of the universities and consulting firms that are most closely involved with BOEM research.

Table 4. Potential Interview Candidates

Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Alaska					
NGO	Cook Inlet Regional Citizens Advisory Council/ShoreZone	Sue Saupe	saupe@circac.org	No	[Do some Google searching about ShoreZone and contact Cathy Coon for additional information about Sue's work prior to interview]
Academic	University of Texas at Austin	Ken Dunton	ken.dunton@utexas.edu	No	[Do some background research on Boulder Patch studies in ESPIS and contact Cathy Coon for additional information. Also identified by GOMR]]
State/Local	AK Department of Fish and Game	Lori Quakenbush	lori.quakenbush@alaska.gov	No	-
State/Local	AK Regional Library (ARLIS)	Not specified	No email given	Not specified.	-
State/Local	AK SHPO	Not specified	No email given	Not specified.	-
State/Local	Director of North Slope Borough Department of Wildlife	Taqulik Hepa	No email given	No	-
Federal	NOAA	Robyn Angliss	No email given	No	-
Academic	University of Alaska	Not identified	No email given	No	[IEc note: Added at Heather Crowley's suggestion with no specific contact; however, there are multiple UAF contacts in the survey contact list]
State/Local	State of Alaska	Not specified	No email given	Not specified.	-
GOM					
Academic	Cornell University	Aaron N. Rice	No email given	No	Used by REN and industry
Academic	CSA Ocean Services	Mary Jo Barkaszi	mcahill@conshelf.com	No	The information from this contract has been used by the Marine Mammal Commission to evaluate BOEM regulated seismic activity impacts in the GOM. Report was provided to NMFS as part of the programmatic consultation for the GOM Oil and Gas Program that was completed in 2020.

Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Academic	HDR, Inc.	Anwar A. Khan	anwar.khan@hdrinc.com	No	NMFS and Industry interest and gone out to them. Available and relevant literature and data on previous and ongoing passive acoustic monitoring in the Gulf of Mexico (GOM) were compiled. This information was reviewed to characterize potential sound sources and their distribution in the GOM, as well as to identify existing methodologies for acoustic source detection, localization, tracking, and classification.
Academic	JASCO Applied Sciences USA	David Zeddies	david.zeddies@jasco.com	No	The new information from this contract may inform revisions to underwater calculator potentially informing future consultation discussion.
Academic	JASCO Applied Sciences USA	Not specified	No email given	Not specified.	Used by REN and industry
Academic	Louisiana State University	Kristine DeLong	kdelong@lsu.edu	No	In October 2020, based on the results of a related study, Alabama Congressman Bradley Byrne submitted a bill for the establishment of the Alabama Underwater Forest National Marine Sanctuary. In December 2021, Alabama Congressman Jerry Carl submitted a new bill for the same purpose. This study has resulted in numerous peer-reviewed publications, conference presentations/posters, and public presentations (NPR, etc.) by project personnel. Alabama environmental reporter Ben Raines produced a documentary on the site with This is Alabama.
Academic	Research Planning, Inc. (RPI)	Jacqueline Michel	No email given	No	Used by REN and industry
Academic	TDI-Brooks	Michael Kullman	mk@tdi-bi.com	No	The new information from this contract may inform updated avoidance guidelines and removal policy for BOEM and BSEE, as well as potential stakeholder and Federal, state, and local partners use to develop mitigation suggestions and/or for use in consultations.
Academic	Texas A&M Research Foundation	Not specified	No email given	Not specified.	Additional cooperation and funding support from the Industry Research Funders Coalition (IRFC), the Office of Naval Research, and (beginning in year 2) the National Science Foundation

Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Federal	Flower Garden Banks NMS (NOAA)	Michelle Johnston	michelle.a.johnston@noaa.gov	No	BOEM has funded long-term monitoring at East and West Flower Garden banks in the Flower Garden Banks NMS for over 30 years. The results of past and current iterations of this project has resulted in numerous peer-reviewed publications aside from the technical report. The sanctuary uses the data and information derived from this study for active management of the environmental resources located within the sanctuary. [Michelle was also identified by GOM and Headquarters as a survey contact].
Federal	NOAA NCCOS	Matthew Poti	matthew.poti@noaa.gov	No	Worked with BOEM staff on several studies.
Federal	NOAA NMFS Southeast Fisheries Science Center	Lance P. Garrison	lance.garrison@noaa.gov	No	Study looking at habituation of sperm whales to O&G in GOM...generally used in NEPA and ongoing NMFS research
Federal	U.S. Geological Survey, Southeast Ecological Science Center	Dan Slone	dslone@usgs.gov	No	Data currently used by government and private entities
Non-Region Specific					
Academic	AGU	Danielle Woodring	dwoodring01@gmail.com	No	-
Academic	AGU	Nancy Bompey	NBompey@agu.org	No	-
Academic	Florida Institute of Technology	John Trefry	jtrefry@fit.edu	No	-
Academic	LSU	James Coleman	chanjc@lsu.edu	No	-
Academic	LSU	Larry Rouse	lrouse@lsu.edu	No	CMI Director for years
Academic	Texas A&M	Worth Nowlin	wnowlin@tamu.edu	No	-
Academic	UCSB	Milton Love	https://msi.ucsb.edu/people/research-scientists/milton-love	No	Worked with Pacific
Academic	University of Alaska, Fairbanks	Not specified	No email given	Not specified.	-

Designation	Organization	Individual	Email	Concerns about contacting?	Notes
Academic	University of California	Not specified	No email given	Not specified.	-
Academic	University of Southern Florida	Eugene Shinn	eshinn@marine.usf.edu	No	-
Academic	University of Southern Mississippi	Denis Wiesenburg	Denis.Wiesenburg@usm.edu	No	Worked at Texas A&M and University of Alaska, Fairbanks
Academic	University of Texas	Ken Dunton	ken.dunton@utexas.edu	No	[Also identified by Alaska Region]
Academic	Virginia Institute of Marine Science	Bob Diaz	diaz@vims.edu	No	Served on science advisory committee
Academic	Wildlabs	Not specified	No email given	Not specified.	-
Academic	CESU Network	Not specified	No email given	Not specified.	[Contact for CESU identified for MMP below.]
Federal	NAVO	Not specified	No email given	Not specified.	-
State/Local	Regional Advisory Councils	Not specified	No email given	Not specified.	-
Not specified	NAS	Jim Ray	No email given	No	Worked for Shell
MMP					
Academic	CESU Network, Rutgers	Thomas Grothues	grothues@marine.rutgers.edu	No	CESU network meant to facilitate cooperative agreements; otherwise, the network itself does not necessarily use BOEM science.
State/Local	CPRA	April Newman	april.newman@la.gov	No	-
State/Local	CPRA	Syed Khalil	syed.khalil@la.gov	No	-
Academic	Stantec	Not specified	No email given	Not specified.	Subcontractor of CPRA
Federal	NOAA NCCOS	Chris Taylor	chris.taylor@noaa.gov	No	Incorrectly listed at HCD
Federal	U.S. Army Corps of Engineers	Nicole Bonine	nicole.bonine@usace.army.mil	No	-
Federal	USGS Critical Minerals	Amy Gartman	agartman@usgs.gov	No	-
Federal	USGS Critical Minerals	Kira Mizell	kmizell@usgs.gov	No	-
Federal	USGS, St. Petersburg/USCRP	Hilary Stockdon	No email given	No	-
State/Local	LA Office of Costal Management	Charles Reulet	Charles.Reulet@la.gov	No	-

Designation	Organization	Individual	Email	Concerns about contacting?	Notes
State/Local	NC Department of Environmental Quality, Coastal Management	Heather Coats	heather.coats@ncdenr.gov	No	-
State/Local	NC Department of Environmental Quality, NC DMF Habitat	Anne Deaton	anne.deaton@ncdenr.gov	No	Also identified in Year 1 and 2 interviews.
Federal	NOAA, MNFS HCD	Pace Wilber	pace.wilber@noaa.gov	No	-
OREP					
Federal	Department of Energy (DOE) Wind Energy Technology Office	Katherine Ball	katherine.ball@ee.doe.gov	No	Department of Energy's Wind Energy Technology Office: Ball, Katherine (FELLOW) katherine.ball@ee.doe.gov did a literature review of offshore wind studies last year in preparation for DOE's RFP for social science
Federal	NOAA Sea Grant's Federal Partnership Liaison Initiative:	Abbey Greene	abbey_greene@uri.edu	No	-
Federal	NOAA Sea Grant's Federal Partnership Liaison Initiative:	Claire Hodson	claire_hodson@uri.edu	No	NOAA Sea Grant's Federal Partnership Liaison Initiative: have linked to BOEM studies on the Offshore Wind Energy Liaison Initiative website (currently fisheries focused). Jen McCann (1st email) is leading the effort and the other two women have been heavily involved, probably best to reach out to Abbey and Claire first to see if the info they can provide is sufficient:
Federal	NOAA Sea Grant's Federal Partnership Liaison Initiative:	Jen McCann	jmccann@uri.edu	No	-
Federal; State/Local	Responsible Offshore Development Alliance (RODA)	Not identified	No email given	No	[IEc added – is there value in interviewing a RODA representative?]
State/Local	NC DEQ	Anne Deaton	anne.deaton@ncdenr.gov	No	[Also identified by MMP.]
State/Local	NC DEQ	Christine Goebel	christine.goebel@ncdenr.gov	No	-

Designation	Organization	Individual	Email	Concerns about contacting?	Notes
State/Local	Unknown	Doug Huggett	Unknown	No	[Formerly affiliated with NC DEQ- - Deena Hansen identified that he is a contractor for a private firm now -- did not list contact information.]
State/Local	NC DEQ	Jennifer Mundt	jennifer.mundt@ncdenr.gov	No	-
State/Local	NC DEQ	Linda Culpepper	linda.culpepper@ncdenr.gov	No	-
State/Local	NC DEQ	Michael Regan	michael.regan@ncdenr.gov	No	-
State/Local	NC DEQ	Steve Murphy	steve.murphey@ncdenr.gov	No	-
State/Local	NYSERDA	Kate Press	kate.mcclellanpress@nyserda.ny.gov	No	-
State/Local	NYSERDA	Sherryll Huber	sherryll.huber@nyserda.ny.gov	No	-
Pacific					
State/Local	CA Department of Fish and Wildlife	Brian Owens	brian.owens@wildlife.ca.gov	No	-
State/Local	CA Department of Fish and Wildlife	Scott Osborn	scott.osborn@wildlife.ca.gov	No	-
State/Local	CA Fish and Game Commission	Valerie Blue	valerie.termini@fgc.ca.gov	No	-
State/Local	CA Natural Resources Agency	Marina Cazorla	marina.cazorla@resources.ca.gov	No	-
State/Local	CA State Land Commission	Cheryl Hudson	cheryl.hudson@slc.ca.gov	No	-
State/Local	CA State Land Commission	Esther Essoudry	esther.essoudry@slc.ca.gov	No	-
State/Local	CA State Land Commission	Jaimie Huynh	jaimie.huynh@slc.ca.gov	No	-
State/Local	CA State Land Commission	Jajal Abedi	jalal.abedi@slc.ca.gov	No	-
State/Local	CA State Land Commission	Patrick Huber	patrick.huber@slc.ca.gov	No	-