BOEM Bureau of Ocean Energy Management

Environmental Program

Assessment and Advancement of Science in BOEM's ESP

22 June 2021

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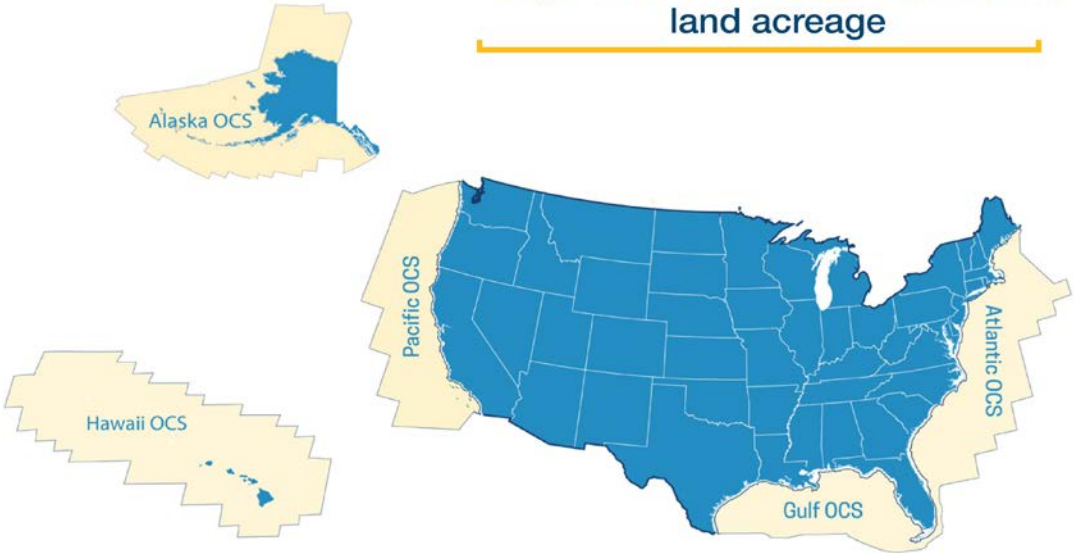
BOEM Mission and Jurisdiction

- The Department of the Interior's Bureau of Ocean Energy Management manages the responsible development of America's offshore energy and mineral resources in an environmentally and economically responsible way.

- With fewer than 600 employees, BOEM is tasked with managing almost 2.5 billion acres of the seabed. BOEM's primary mission focuses are oil and gas energy, renewable energy and marine minerals, with environmental science underpinning all of our efforts.

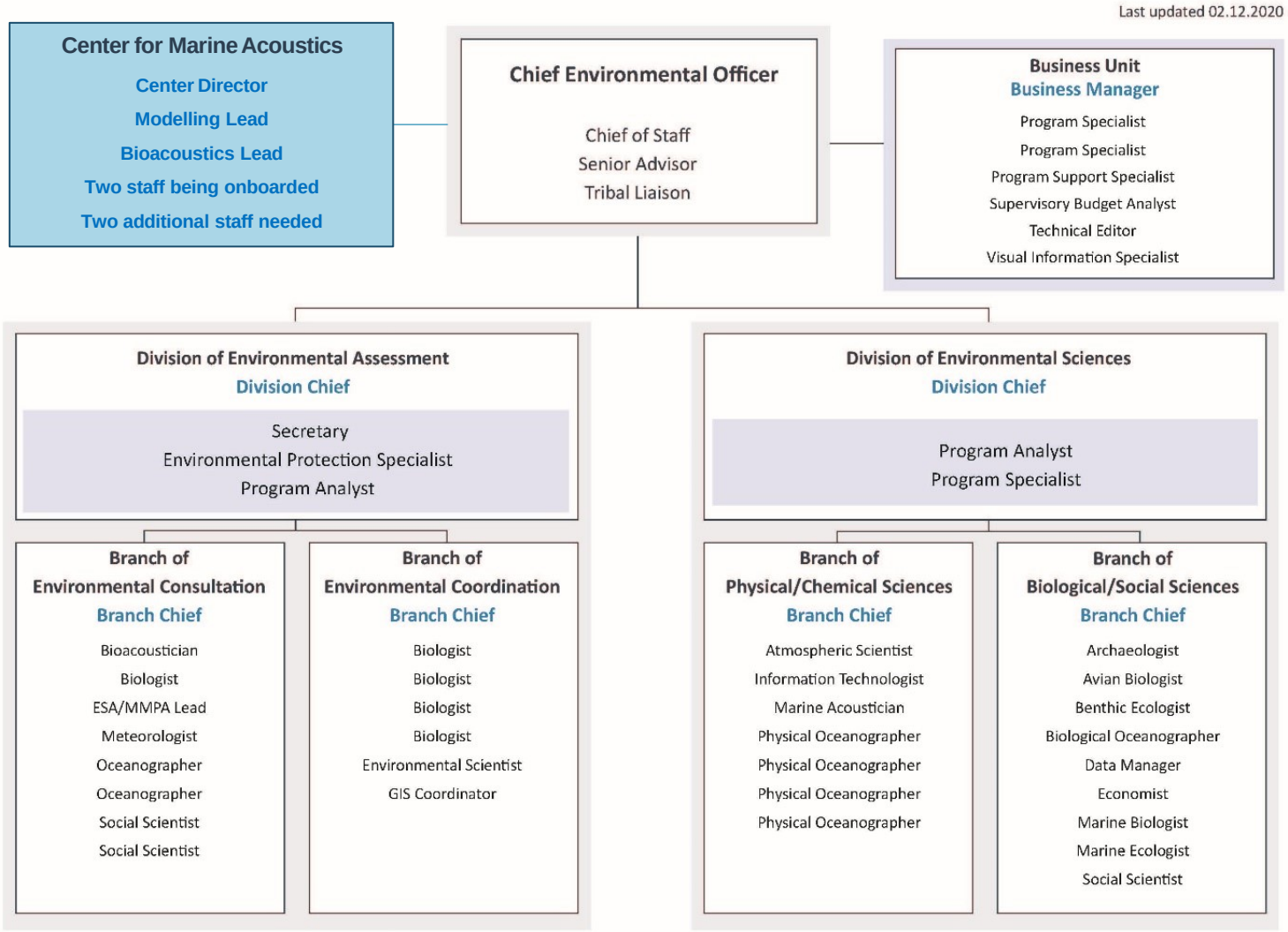
BOEM manages almost
2.5 billion acres
of the Outer Continental Shelf,
larger than the size of the nation's land acreage



Environmental Program Mission

To ensure that environmental protection informed by science and law is a foremost concern and an indispensable consideration in BOEM's decisions on energy and mineral development on the Outer Continental Shelf.

Office of Environmental Programs Organizational Chart



Long-Term Environmental Goals

Drive BOEM's environmental programs to be "first in class" among peer federal agencies

1 Protecting Ecosystems in the Context of Climate Change

Provide robust research, assessment, regulatory measures, products, and services to avoid and mitigate harm to ecosystems from OCS development; consult and coordinate with stakeholders, and assess impacts from climate change combined with steps to redress adverse effects:

- Develop a comprehensive "status of the OCS" environmental information base that supports reviews for all BOEM programs
- Provide and augment a Center for Marine Acoustics that focuses expertise on cutting-edge research and policy applications, becoming a trusted voice on marine acoustics
- Advance the use of emerging technologies for scientific research and monitoring to result in more efficiency, cost savings, and safety with less environmental impact
- Advance the effectiveness and sophistication of communication with internal and external stakeholders

2 Excelling in Consultation and Collaboration with Tribes and Alaska Native Claims Settlement Act Corporations

Substantially advance effectiveness of engagement

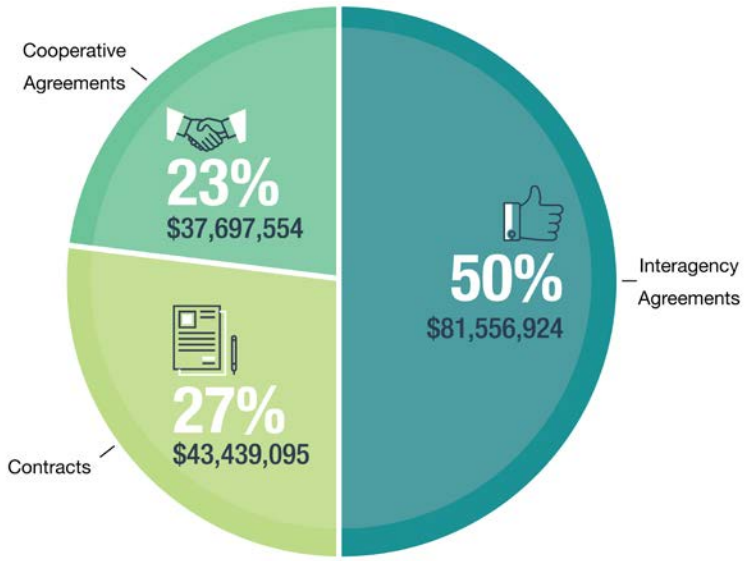
3 Advancing Environmental Justice

Advance environmental justice groups historically disadvantaged by injustice, inequality, or exclusion, including initiatives advancing employment and economic enterprises

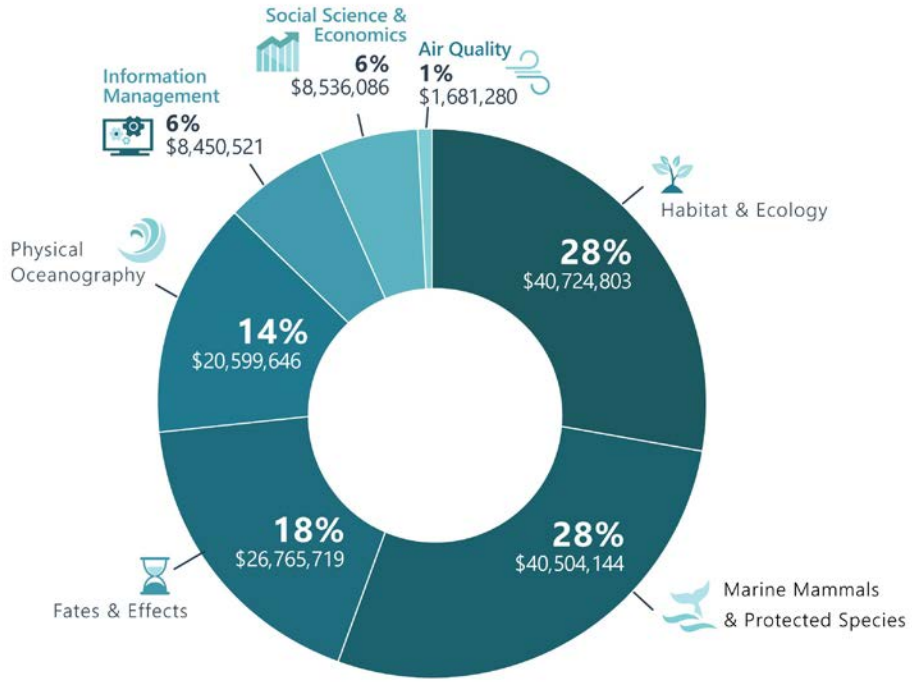
Environmental Studies Program (ESP)

Information to Protect the Environment

- Serves all BOEM Regions and Programs
- Authorized by Section 20 of the OCS Lands Act
- Over $1 billion provided for research since its inception in 1973
- About $30 million in annual funding
- Publications on BOEM website: https://marinecadastre.gov/espis/#/
- Rigorous planning, review and procurement process:
  - interagency agreements
  - cooperative agreements (financial assistance)
  - competitive contracts (FAR)

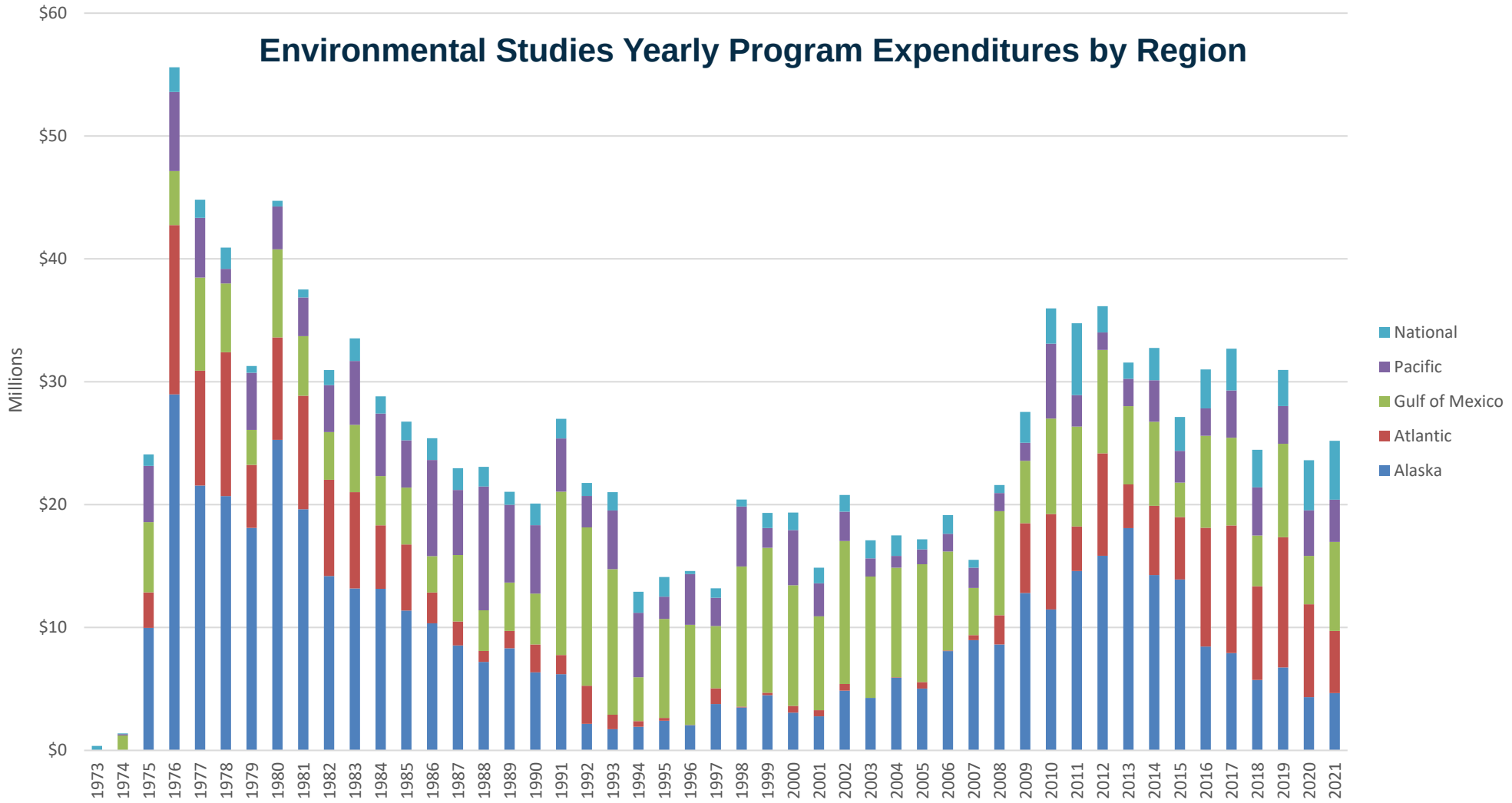


ESP expenditure for FY 2017-2021 by procurement type



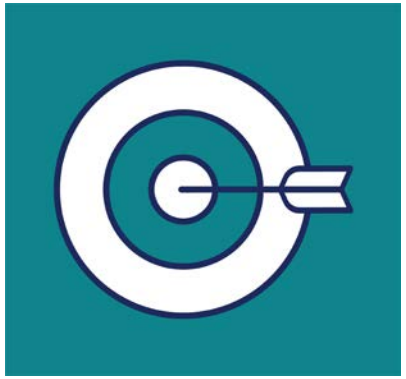
ESP expenditure for FY 2017-2021 by discipline

How ESP Spends Money



Environmental Studies Program Principles

Remain **use-inspired** to apply results towards management decisions



Adhere to the utmost levels of **scientific integrity** and credibility

Seek partnerships to leverage funds and maximize utility of results

Engage regularly with stakeholders and public educational outreach for quality assurance, peer-review planning, and data dissemination

Strategic Framework

BOEM's long-term vision is for the ESP to be **"first in class"** — the best research program there is in the context of BOEM's mission and constraints.

1. **What BOEM Needs to Know**
2. **Criteria for Study Development and Approval**
3. **Strategic Questions**
4. **Process for Study Profile Development, Approval, and Review**

What BOEM Needs to Know

1. Information on the **environmental impacts** from activities authorized by BOEM.
2. Information on the **status, trends, and resilience** of potentially impacted **natural and cultural resources and socioeconomic qualities**.
3. Information from **monitoring of the environmental impacts** of BOEM's authorizations over the entire time during which those impacts will occur.
4. Information to address the requirement of **NEPA, OCSLA, and other statutes** on the **cumulative environmental impacts** of BOEM's authorizations.
5. Information required to demonstrate that BOEM's decisions **comply with all applicable environmental laws**.

Criteria for Study Development and Approval

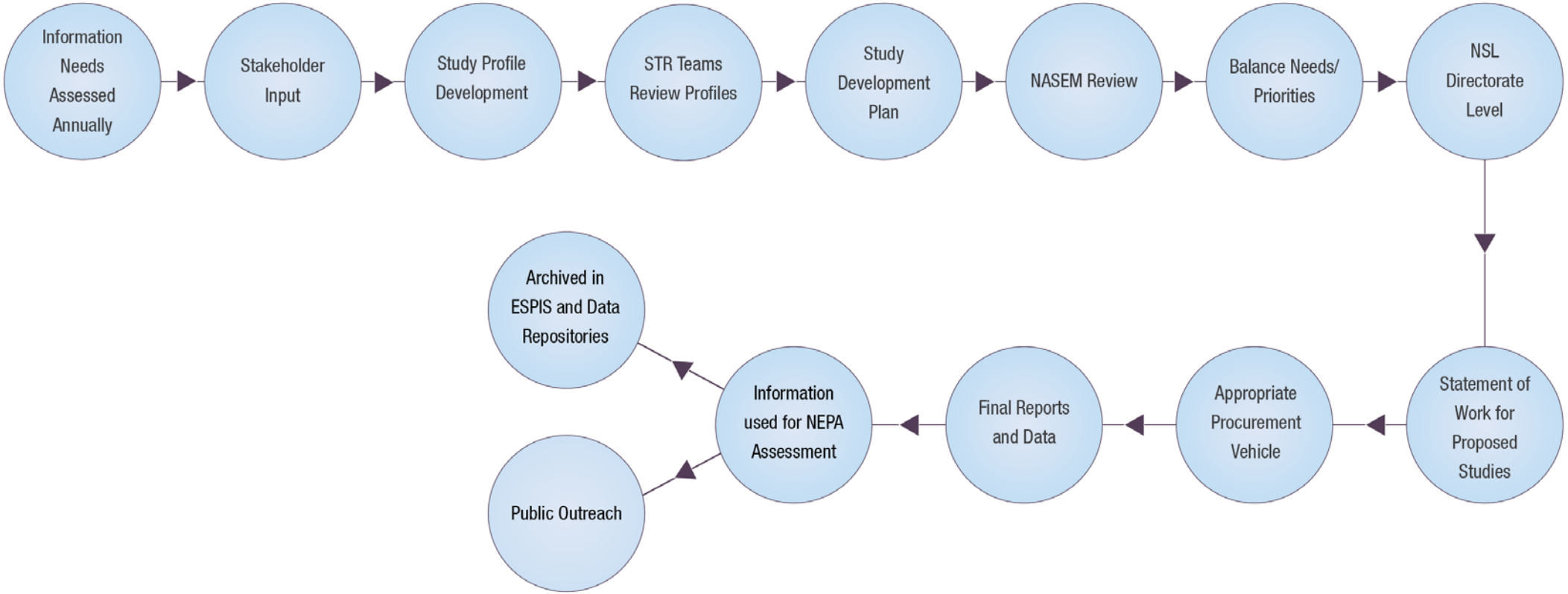
1. Need for information in BOEM decision-making
2. Contribution to existing knowledge
3. Research concept, design and methodology
4. Cost-effectiveness
5. Leveraging funds
6. Partnerships
7. Multi-regional and strategic utility

Strategic Science Questions

1. How can BOEM best assess cumulative effects?
2. What are the acute and chronic effects of sound on marine species and their environment?
3. What are the acute and chronic effects of exposure to hydrocarbons or other chemicals on marine species and ecosystems?
4. What is the effect of habitat or landscape alteration on ecological and cultural resources?
5. What are the impacts of air emissions on the human, coastal, and marine environment?
6. How will future ocean conditions and dynamics amplify or mask effects of BOEM-regulated OCS activities?
7. How does BOEM ensure the adequate study and integration of social sciences?
8. How can BOEM better use technology to achieve more effective scientific results?
9. What are the best resources, measures, and systems for long-term monitoring?

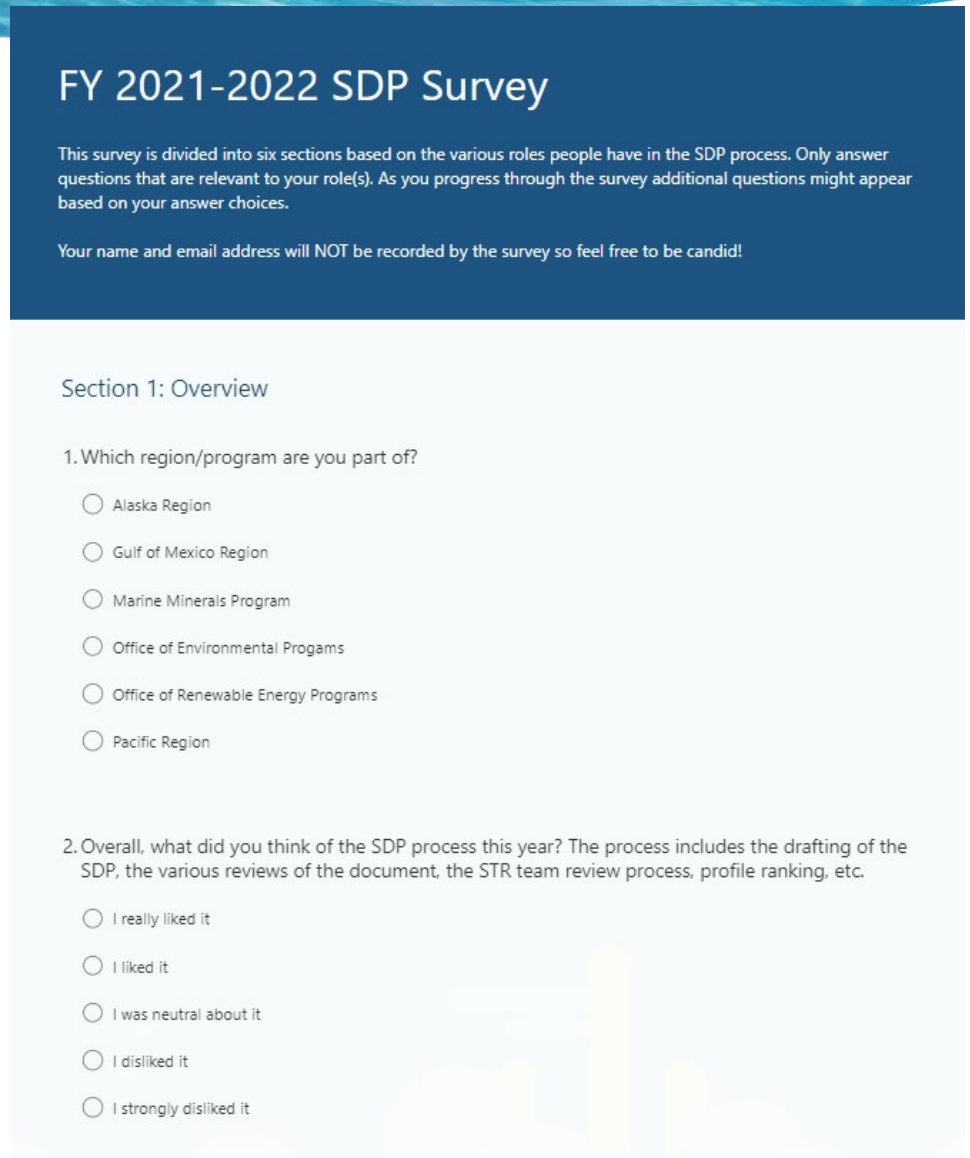
ESP Process

BOEM's Environmental Studies Program is dynamic and flexible enough to respond to changing requirements. New information needs routinely arise outside the annual planning process and, in response, proposed studies are often added or deleted. This schema represents a simplified version of the process and does not entirely capture its complexity and variability.



SDP Feedback and Improvement

- Continuous process for receiving SDP feedback from all of ESP
  - Surveys (2016, 2021)
  - Focus groups
  - Via email
- Identify efficiencies and process improvements (while maintaining a level of consistency from year to year)



FY 2021-2022 SDP Survey

This survey is divided into six sections based on the various roles people have in the SDP process. Only answer questions that are relevant to your role(s). As you progress through the survey additional questions might appear based on your answer choices.

Your name and email address will NOT be recorded by the survey so feel free to be candid!

Section 1: Overview

1. Which region/program are you part of?

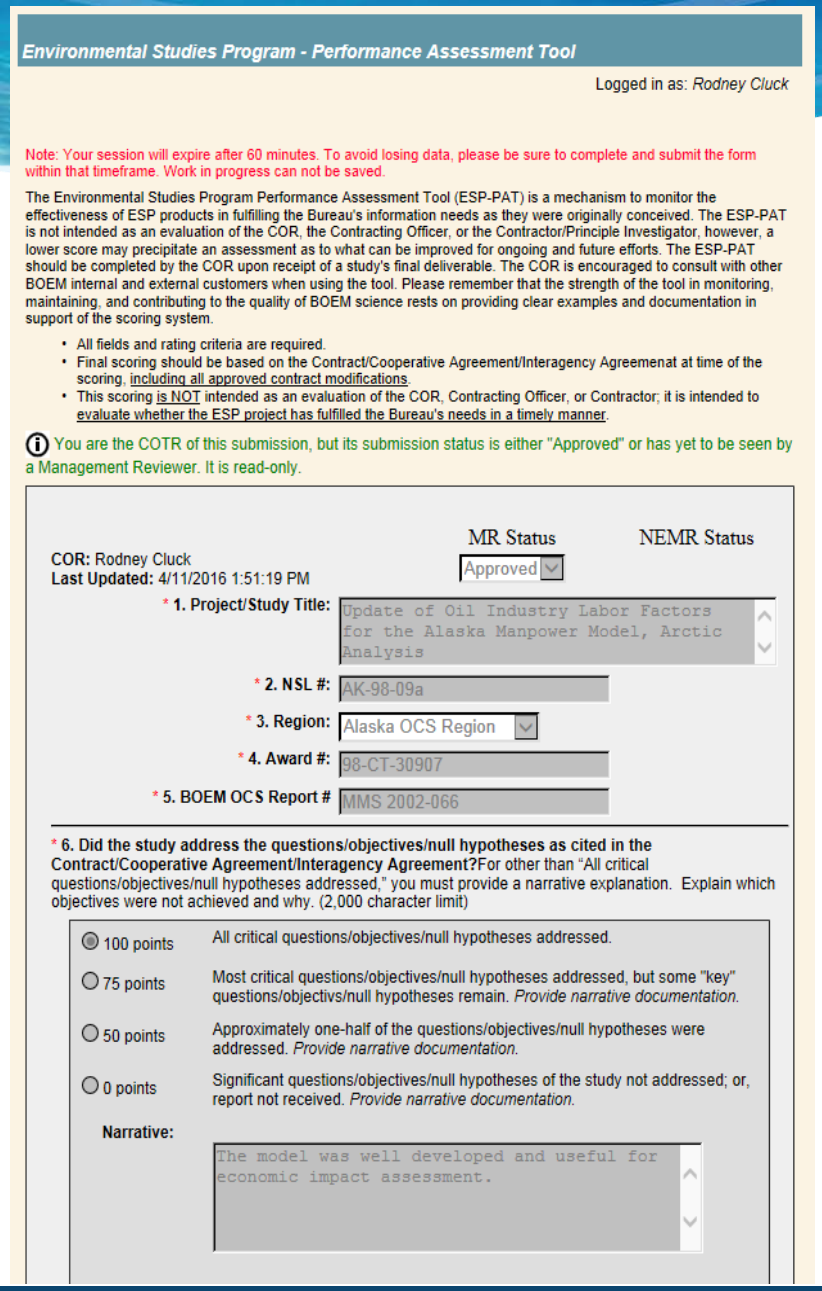
- ◯ Alaska Region
- ◯ Gulf of Mexico Region
- ◯ Marine Minerals Program
- ◯ Office of Environmental Progams
- ◯ Office of Renewable Energy Programs
- ◯ Pacific Region

2. Overall, what did you think of the SDP process this year? The process includes the drafting of the SDP, the various reviews of the document, the STR team review process, profile ranking, etc.

- ◯ I really liked it
- ◯ I liked it
- ◯ I was neutral about it
- ◯ I disliked it
- ◯ I strongly disliked it

ESP Program Assessment Tool

- Mechanism to monitor the effectiveness and efficiency of ESP products in fulfilling information needs
- All studies receiving final reports or proceedings require ESP Program Assessment Tool (ESP-PAT)
- 4 Key Elements
  - Did the study address objectives?
  - Did the study have a clear use?
  - Was the study done on time and in budget?
  - Did the study have peer review?



Environmental Studies Program - Performance Assessment Tool

Logged in as: *Rodney Cluck*

Note: Your session will expire after 60 minutes. To avoid losing data, please be sure to complete and submit the form within that timeframe. Work in progress can not be saved.

The Environmental Studies Program Performance Assessment Tool (ESP-PAT) is a mechanism to monitor the effectiveness of ESP products in fulfilling the Bureau's information needs as they were originally conceived. The ESP-PAT is not intended as an evaluation of the COR, the Contracting Officer, or the Contractor/Principle Investigator, however, a lower score may precipitate an assessment as to what can be improved for ongoing and future efforts. The ESP-PAT should be completed by the COR upon receipt of a study's final deliverable. The COR is encouraged to consult with other BOEM internal and external customers when using the tool. Please remember that the strength of the tool in monitoring, maintaining, and contributing to the quality of BOEM science rests on providing clear examples and documentation in support of the scoring system.

- All fields and rating criteria are required.
- Final scoring should be based on the Contract/Cooperative Agreement/Interagency Agreemenat at time of the scoring, including all approved contract modifications.
- This scoring is NOT intended as an evaluation of the COR, Contracting Officer, or Contractor; it is intended to evaluate whether the ESP project has fulfilled the Bureau's needs in a timely manner.

ⓘ You are the COTR of this submission, but its submission status is either "Approved" or has yet to be seen by a Management Reviewer. It is read-only.

MR Status: Approved | NEMR Status

COR: Rodney Cluck
Last Updated: 4/11/2016 1:51:19 PM

* **1. Project/Study Title:** Update of Oil Industry Labor Factors for the Alaska Manpower Model, Arctic Analysis

* **2. NSL #:** AK-98-09a

* **3. Region:** Alaska OCS Region

* **4. Award #:** 98-CT-30907

* **5. BOEM OCS Report #** MMS 2002-066

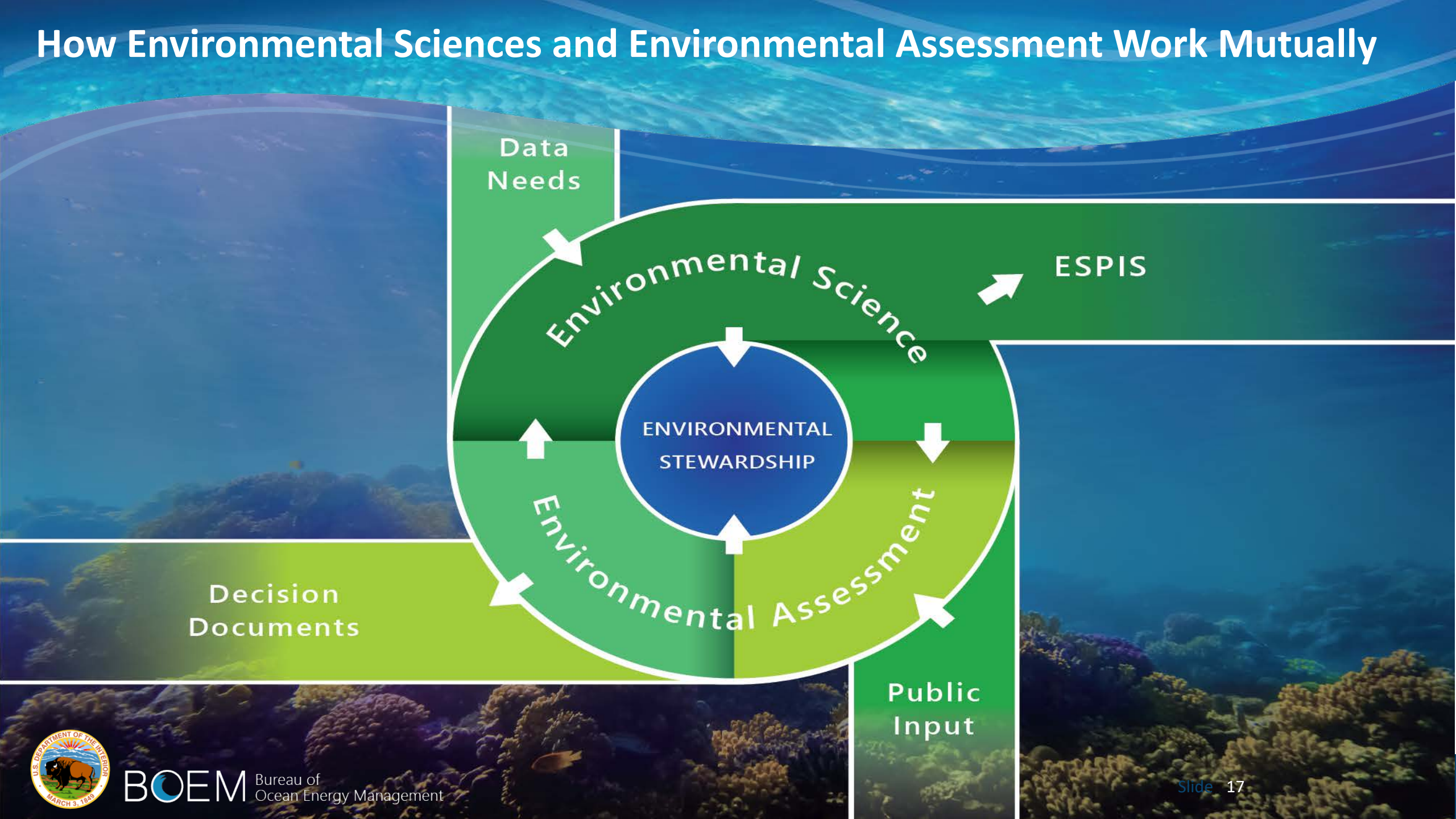
* **6. Did the study address the questions/objectives/null hypotheses as cited in the Contract/Cooperative Agreement/Interagency Agreement?** For other than "All critical questions/objectives/null hypotheses addressed," you must provide a narrative explanation. Explain which objectives were not achieved and why. (2,000 character limit)

- (●) 100 points — All critical questions/objectives/null hypotheses addressed.
- ( ) 75 points — Most critical questions/objectives/null hypotheses addressed, but some "key" questions/objectivs/null hypotheses remain. *Provide narrative documentation.*
- ( ) 50 points — Approximately one-half of the questions/objectives/null hypotheses were addressed. *Provide narrative documentation.*
- ( ) 0 points — Significant questions/objectives/null hypotheses of the study not addressed; or, report not received. *Provide narrative documentation.*

Narrative: The model was well developed and useful for economic impact assessment.

Environmental Studies Program Information System (ESPIS)

How Environmental Sciences and Environmental Assessment Work Mutually



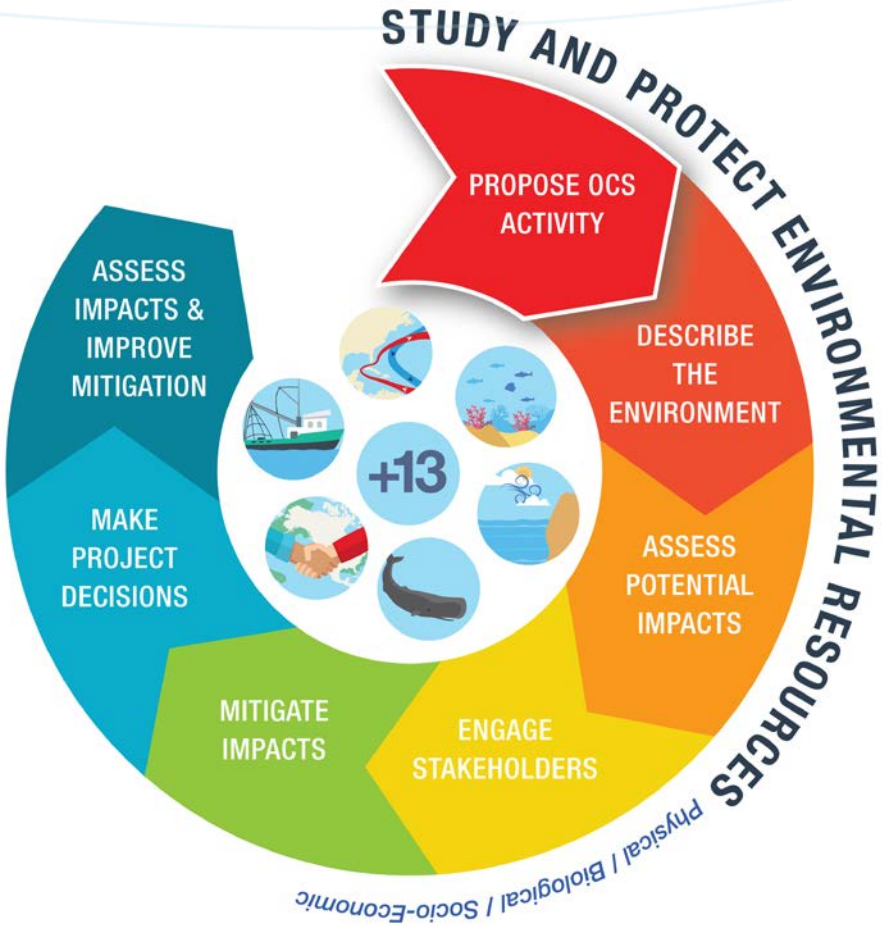
Environmental Assessment

Our Mission

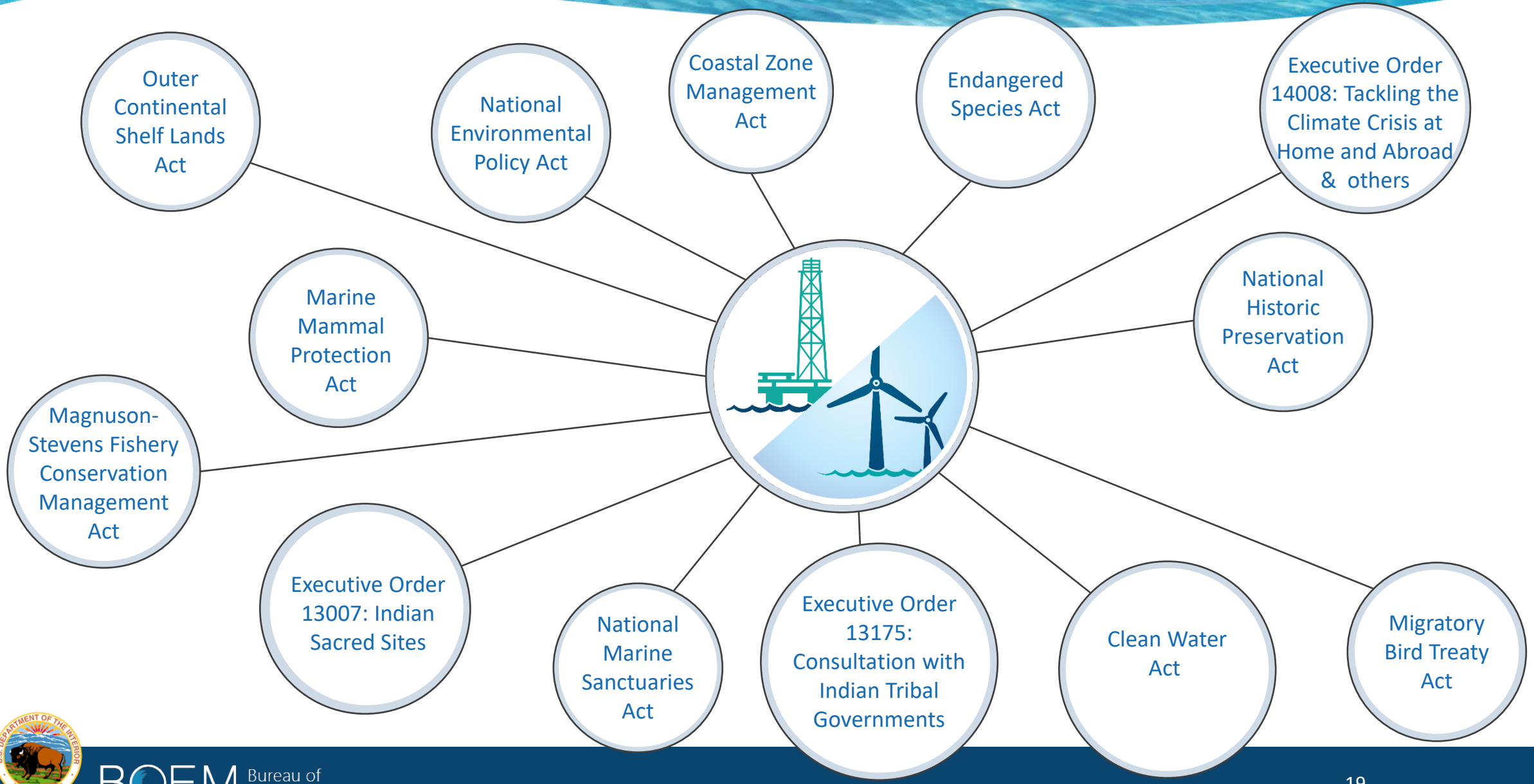
Provide oversight, policy guidance, and direction over all offshore environmental concerns and issues, including compliance with environmental laws and regulations and environmental analysis activities for all programs (118 DM 4)

Our Big Vision

Have 100% of environmental recommendations incorporated into BOEM decisions.



What are the Outputs?



Key Outputs

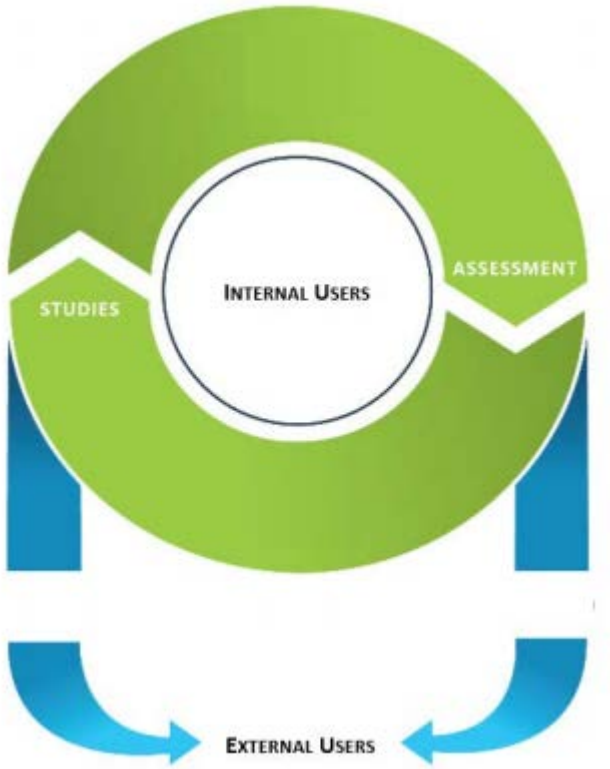
- NEPA and Consultation documents
- Government to Government consultations
- OCSLA National Oil and Gas Program
- Decision briefings
- Environmental mitigations
- Environmental exclusion areas
- Agency environmental guidance and policies
- Technical papers and publications
- Peer-reviewed models
- Future study ideas
- Stakeholder outreach materials
- Interagency agreements to improve environmental protections

Example Program Improvements

- Greenhouse Gas Life-cycle Energy Emissions Model (GLEEM)
- Status of the OCS (SOCS)
- Environmental Justice Methodologies
- Center for Marine Acoustics
- Streamlining documents
- Communicating technical information
- Evaluating Connections

Question: What are some better ways to analyze cumulative effects?

Evaluating Connections Between Studies and Assessments



- Evaluation Methodology Final Report
- Evaluation Methodology Technical Summary

- BOEM is conducting an evaluation to understand **how ESP-funded research contributes to BOEM's assessments and vice versa**.
- BOEM aims to understand the extent to which:
  - study results are incorporated into assessments,
  - information needs are identified through the assessment process, and
  - studies and assessments are informing policy decisions.
- The internal evaluation was executed in spring 2021; the final report will be complete in September 2021.
- The external evaluation will begin in September 2021 with final report anticipated in September 2022.
- It will focus on **evaluating the external influence of BOEM's science and assessments**. The methodology include interviews, surveys, and a social network analysis.
-

Justice, Equality, Diversity, and Inclusion (JEDI)

Action for Native Americans and individuals from Black and other groups historically disadvantaged by injustice, inequality, or exclusion

1 **Foster a culture of Justice, Equality, Diversity, and Inclusion**

Creating a culture where people of all backgrounds, ethnicities, religions, and abilities feel welcome, included, and respected.

2 **Recruit and maintain a diverse talent pipeline**

BOEM's workforce should represent the American public we serve and draw from all segments of society to build a workforce and ensure equal employment opportunity.

3 **Sustain commitment to JEDI through communities of support**

Sustained momentum is needed for the long-term to strengthen diversity and inclusion at BOEM and build coordination across BOEM and the Department.

BOEM Bureau of Ocean Energy Management

"Committed to justice, equality, diversity, and inclusion in its workplace and in the effects of its programs on all people." - Charter signed July 31, 2020

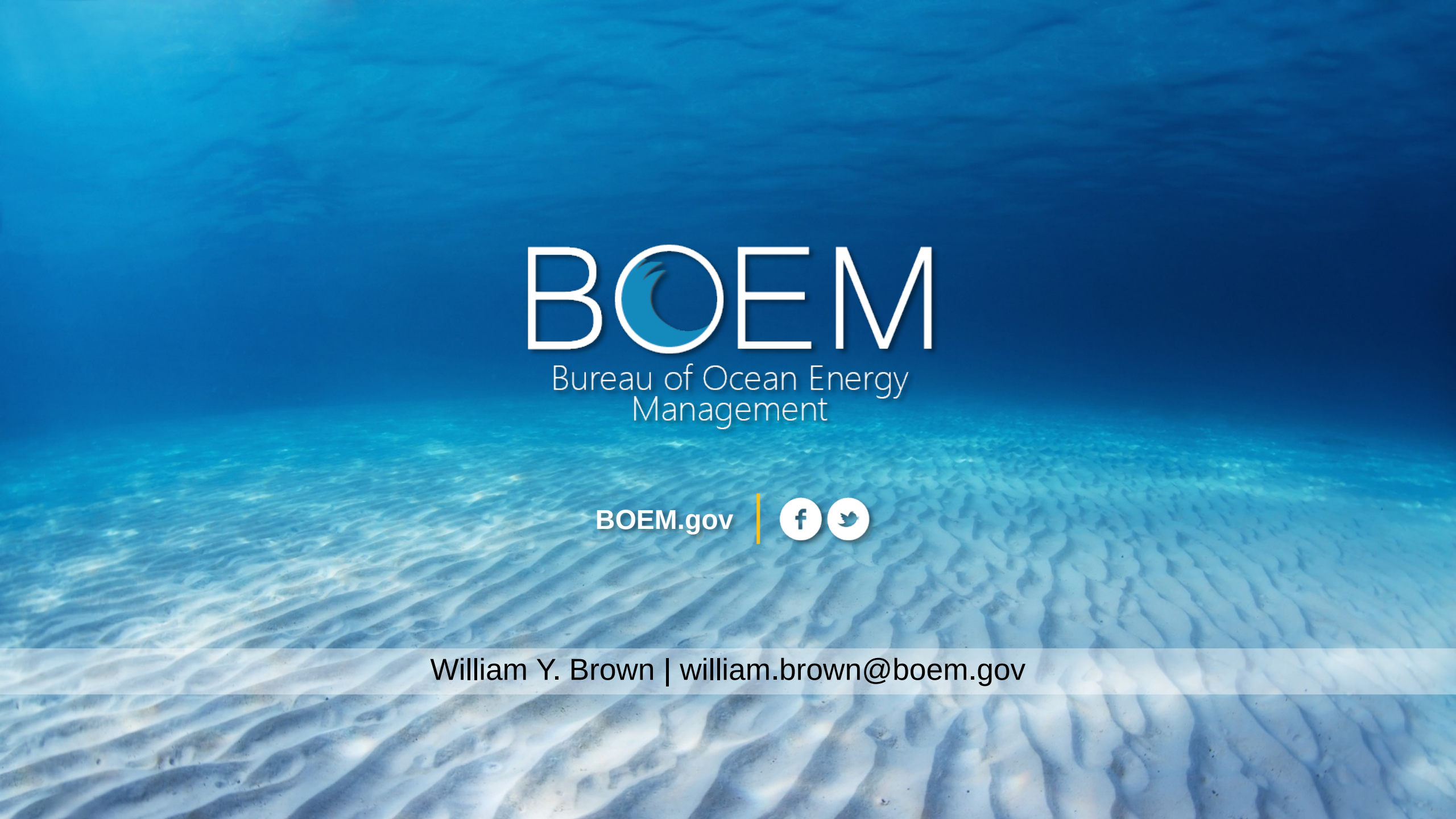
Just and Equitable Environmental Program

- Goal 1: Foster a Culture of JEDI
  - Goal 1.4: Improve Engagement with Historically Disadvantaged Groups, Tribal Representatives, and advance environmental Justice

BOEM's ESP to **broaden studies on EJ topics** addressing the human environment, particularly those focused on the impact of BOEM's actions on tribes, Black, and other historically disadvantaged groups by 2030.

The ESP **will consider EJ and tribal focused efforts a priority** as we continue to examine the effects on the human environment from energy and mineral development.

Independent scientific advisory bodies such as Federal advisory committees, commissions, boards, or standing committees that are funded by BOEM should be comprised of **members with diverse backgrounds** to provide a broader set of perspectives when informing decision makers.



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