



Considerations of Evaluating Subsistence Impacts in Alaska

Seeking Tribal Perspectives for Agency Planning

The **Marine Minerals Administration (MMA)**¹ is committed to ongoing engagement with Tribes and **Alaska Native Claims Settlement Act (ANCSA)** corporations. The following discussion results from comments received on the **11th National Outer Continental Shelf Oil and Gas Leasing Program (National OCS Program)** regarding the subsistence analysis, including how subsistence is considered in models such as the **Offshore Environmental Cost Model (OECM)**. The MMA recognizes that for Alaska Native communities, subsistence is fundamental as a way of life that connects people to family, community, culture, and the natural environment and is planning to host further discussions in early 2027.

Perspectives Shared During the 11th National OCS Program Development

During development of the 11th National OCS Program, MMA (then BOEM) received comments from Tribes, Tribal organizations, ANCSA corporations, local governments, public interest organizations, and individuals regarding how subsistence is addressed in economic analyses.

Many commenters emphasized that subsistence is inseparable from cultural identity, food security, community well-being, and traditional ways of life. Several commenters expressed concern about attempts to assign monetary values to impacts on subsistence, while others stated that existing approaches do not fully reflect the importance of subsistence to Alaska Native communities.

Offshore Environmental Cost Model

MMA manages development of U.S. **Outer Continental Shelf (OCS)** energy, mineral, and geological resources in an environmentally and economically responsible way. MMA considers information from many sources when evaluating potential environmental and social impacts to inform agency and Department decision makers. These sources include Tribal consultation, Indigenous Knowledge, environmental analyses, scientific research, public comments, economic analyses, and other inputs. Together, these perspectives and information sources help MMA develop a more complete picture of the potential impacts and community concerns related to managing development of ocean energy and mineral resources.

Economic models are one of the tools MMA uses to inform agency decision makers. These models help organize information about the potential monetary benefits and costs of different actions and provide a way to compare possible outcomes. Like any tool, economic models have both strengths and limitations. Economic models can

Acronyms

ANCSA = Alaska Native Settlement Act
BOEM = Bureau of Ocean Energy Management
MMA = Marine Minerals Administration
National OCS Program = National Outer Continental Shelf Oil and Gas Leasing Program
OCS = Outer Continental Shelf
OECM = Offshore Environmental Cost Model

¹ As of July 10, 2026, the Department of Interior has reunified the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement into the MMA.



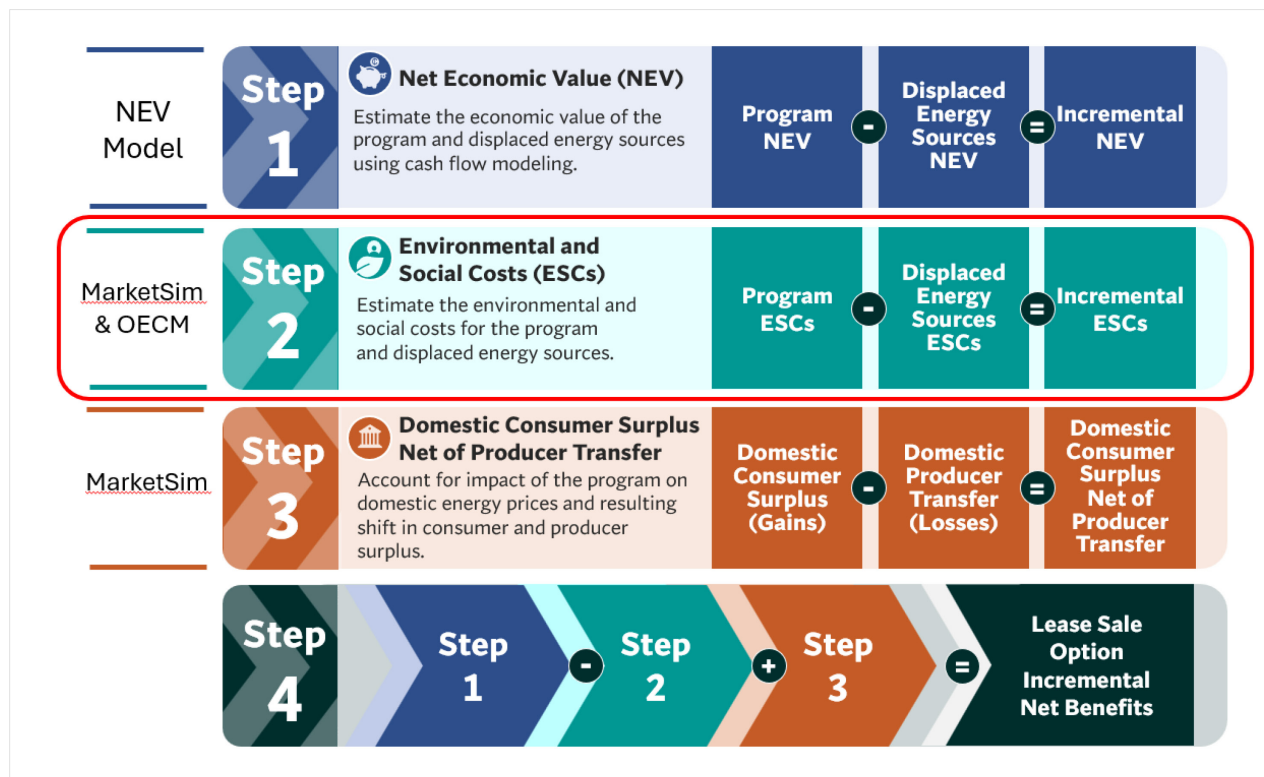
help estimate economic benefits and certain types of impacts, but they do not capture everything that could be important to Tribes, communities, or the public. Results are presented alongside other sources of information for the public and agency decision makers to consider.

Under Section 18(a)(3) of the OCS Lands Act, the Secretary of the Interior is required to consider several factors in making National OCS Program decisions, that is, where and when oil and gas leasing could occur. One of the ways MMA helps the Secretary with this decision making is through the incremental net benefits analysis.

The incremental net benefits analysis considers the benefits of OCS oil and gas development minus the environmental and social costs of that development. The analysis is considered for both OCS activities associated with new production in each program area and costs associated with substitute energy sources that would be displaced because of leasing, such as imported oil or onshore development.

MMA uses the OECM to calculate these environmental and social costs. [Figure 1](#) demonstrates the OECM's role in the incremental net benefits analysis. MMA recognizes that the incremental net benefits analysis does not disaggregate the impacts on individual communities from the monetized impacts on the Nation as a whole. Communities experience a range of impacts on their quality of life due to changes that affect the human environment. MMA qualitatively discusses potential community-scale impacts in environmental analyses separate from the OECM and incremental net benefits framework.

Figure 1. Steps in the Incremental Net Benefits Analysis



Note: The incremental net benefits analysis uses three different economic models to consider the benefits and costs of OCS oil and gas leasing and resulting exploration and development. The OECM helps MMA consider environmental and social costs to inform the net benefits analysis.



The OECM estimates environmental and social costs that could be associated with OCS oil and gas development. The OECM includes six categories of environmental and social costs representing six resource types which, if impacted, could result in costs to:

- Air quality
- Ecology
- Recreation
- Property values
- Commercial fisheries
- Subsistence harvests in Alaska.

Subsistence is incorporated into the model in recognition of its unique importance within Alaska's social, cultural, economic, and legal framework.

Subsistence in the OECM

The OECM includes one type of potential impact on subsistence resources in Alaska. The model estimates the economic costs that could result when non-catastrophic oil spills harm subsistence resources. Specifically, the model calculates the cost of replacing marine resources used for subsistence that could be lost. The model does not quantify impacts of other activities related to OCS oil and gas exploration and development, such as noise from operations or increased vessel traffic.

The OECM describes this approach as a **partial valuation** of subsistence impacts. The model does not attempt to place a monetary value on many critically important aspects of the subsistence way of life in Alaska, such as cultural continuity, community relationships, and spiritual connections. MMA recognizes the critical importance of subsistence in Alaska and understands that its value extends far beyond what can be measured in pounds or expressed in monetary terms. MMA's environmental analyses have historically discussed broader dimensions of subsistence with qualitative descriptions often developed through consultation or engagement, rather than attempting to quantify them. For the National OCS Program, this qualitative discussion accompanies and complements the quantitative analysis and provides important context for the decision maker beyond just the number the model produces.

More About Oil and Gas Economic Modeling

Visit MMA's [Oil and Gas Economic Modeling](#) website for more information about economic modeling, OECM documentation, the National OCS Oil and Gas Leasing Program Economic Analysis Methodology, and greenhouse gas emissions analyses.

The OECM uses a per-kilogram (kg) replacement cost for subsistence resources based on replacement costs used in other Alaska contexts, including natural resource damage assessments and good neighbor policy agreements.² MMA's OECM applies an average of two replacement costs from the literature for a cost of approximately \$147/kg in 2019 dollars.

² Duffield J, Neher C, Patterson D. 2014. Oil spill in northern waters: trial outcomes and the long-term in case of the Exxon Valdez. Arctic Review.; Duffield J, et al. 2014. Appendix J: Bristol Bay wild salmon ecosystem: baseline levels of economic activity and values U.S. In: An assessment of potential mining impacts on salmon ecosystems of Bristol Bay, Alaska, volume 3. Washington (DC): U.S. Environmental Protection Agency. Report No.: EPA 910-R-14-001C.; Sharpe JP. 2001. Plans for the provision of interim transportation, provision of interim alternate food supplies, provision of interim counseling and cultural assistance, and provision of IWC quota restoration assistances. Attachment 1 to the BP Exploration (Alaska) Inc., Good Neighbor Policy, Northstar Project.



Ongoing Discussion and Engagement

MMA recognizes that there are different perspectives on whether and how subsistence should be represented in economic analyses. To help inform future work, MMA will continue discussions with Alaska Native Tribes, Tribal organizations, and ANCSA corporations regarding how subsistence is considered in agency analyses—specifically, we hope to discuss whether and how Alaska Native Tribal partners would like to see subsistence represented in economic analyses used in agency and Department decision making.

Beginning in 2027, MMA anticipates offering a series of discussions intended to create opportunities for participants to:

- Learn about MMA's current approach
- Share perspectives and concerns
- Discuss the strengths, assumptions, and limitations of existing methods
- Identify priorities that could be important for next steps or future analyses
- Explore the implications of different approaches
- Help inform future decisions regarding whether and how subsistence should be represented within the OECM and related analyses

These discussions are not intended to begin with a predetermined outcome. Rather, they are intended to support meaningful dialogue, build shared understanding, and help inform future approaches based on Tribal perspectives, Indigenous Knowledge, community expertise, and agency responsibilities.

MMA values the opportunity to continue these conversations and appreciates the knowledge, experience, and perspectives that Tribes, ANCSA corporations, and community members bring to the discussion.

To express interest in participating in these discussions, contact: Holly.Fowler@BOEM.gov.