

Non-Market Economic Value of Recreation Use on the Outer Coast of Washington State and Olympic Coast National Marine Sanctuary



Photo: Kate Thompson

Natural Science and Economics

The natural resources valued in this study were carefully selected based upon existing literature and research, natural science teams and focus groups.

This research was focused on the non-market value that users of the Outer Coast have for improvements to the natural resources. Conducting a literature review, provided information on the natural resources that are important to recreationalists in ONMS. The next step was to work with scientists to understand the existing trends in the natural resources and realistic improvements given additional management or policy interventions. Once the range of improvements was identified by the natural scientists, the next step was to conduct focus groups.

The focus groups were conducted to verify that the natural resource attributes evaluated were both inclusive of the resources users find important and the descriptions of the resources/improvements were easy to understand. It is this process and dynamic interaction between economists, scientists and a sample of the public that result in a comprehensive analysis of the resources that users value.

Background

In 2014-15, Point97 and the Surfrider Foundation conducted an Internet survey using a Knowledge Networks (KN) Panel, which included a random sample of all State of Washington households. The survey addressed visitation to the Outer Coast of Washington with emphasis on outdoor recreation activities.

NOAA's objectives included obtaining information on people's preferences for different marine animals (e.g. seabirds and marine mammals), development of an environmental index for predicting people's non-market economic values, estimation of the non-market economic values, and estimation of how those values change with changes in natural resource attributes and user characteristics.

Non-Market Value

The environment and ecosystems provide many benefits to humans. The ways in which humans benefit from ecosystems have come to be known as ecosystem goods and services. Examples include; recreation and food supply. Recreation depends on water quality, quality of the viewscapes, tide pool quality, abundance and diversity of marine mammals and seabirds, etc. Many goods and services are not traded in markets, meaning a person cannot go to the

store and buy a unit of tide pool quality. Further, many people may never use the resource or directly benefit from the resource. This, however, does not mean that people do not have a monetary value for the resource. It simply means that market transactions, such as purchases for a tide pool do not exist and alternative methods must be used to estimate the monetary value.

The value of the ecosystem and the stream of benefits that it creates to humans can be estimated using non-market valuation. The research discussed in this factsheet uses non-market valuation to estimate the monetary value of several different resources.

What was measured for the Outer Coast of WA and OCNMS?

By surveying Washington residents that use Washington's Outer Coast and OCNMS the monetary value of improvements to natural resources was estimated. The values of marine mammals, seabirds, large predators, number of tidal pool organisms, tidal pool access, water quality, shoreline quality measured by both marine debris and number of beach closures, unobstructed views and crowdedness were estimated.



Photo: OCNMS

An orca breaches the surface off the Olympic Coast of Washington.

The values to the table to the right were estimated based on changes in resource conditions relative to the "Status Quo" or "Low" Condition. Status quo is defined as the condition the resources would be in 10-20 years if no changes in policy/management were made. Scientists then provided a range of resource conditions that were possible to achieve with changes in policy/management. A "medium" and "high" condition was defined for each of the resources in the table to the right. Therefore, what is estimated is the change in non-market value for direct recreation use on WA's Outer Coast and OCNMS for each natural resource attribute as conditions are improved.

Variable	Low to Medium	Medium to High	Low to High
Marine Mammals	\$101.86	\$36.85	\$138.71
Seabirds	\$47.38	-\$29.41	\$17.97
Large Predators	\$73.05	\$19.50	\$92.55
Number Tidal Pool Organisms	\$0.01	\$0.01	\$0.01
Tidal Pool Access	-\$52.87	-\$52.86	-\$105.73
Water Quality	\$96.95	\$66.35	\$163.30
Shoreline Quality - Marine Debris	\$59.29	\$39.52	\$98.81
Shoreline Quality - Number of Beaches Open	\$44.80	\$65.70	\$110.50
Obstructed views from Development	\$101.52	\$50.34	\$151.86
Wilderness Lovers	\$10.10	\$19.27	\$29.37
Crowd Lovers	-\$0.88	-\$1.68	-\$2.56

Ten natural resource attributes were included in the study (see the table above) and three user characteristics. The three user characteristics included per capita household income, whether a recreation user was a first time visitor to the Outer Coast for recreation, and the user's ecological worldview. In addition, one of the ten natural resource attributes was the level of crowding. This was converted to a combination natural resource attribute and a user characteristic by classifying users as "wilderness lovers" (like uncrowded conditions) and 'crowd lovers' (like crowded conditions).

User's ecological worldview was derived using a set of questions called "The New Ecological Paradigm" that is used to create an index to classify people along a continuum of environmental attitudes.

Findings

WA households that recreate on WA's Outer Coast are willing to pay (WTP) the most annually for improving water quality, maintaining unobstructed views from onshore and offshore developments, marine mammal abundance and diversity, shoreline quality (reduced beach closures and marine debris), and the opportunity to see large predators. Using marine mammals as an example, the average WTP to improve the condition from low to medium is \$101.86 annually.

Crowded conditions are currently not a major problem on WA's Outer Coast. Wilderness lovers (people who prefer uncrowded conditions) are willing to pay more than crowd lovers (people who prefer crowded conditions) are to improve conditions.

WA households that recreate on WA's Outer Coast and who have pro environmental worldviews are willing to pay significantly more for improving natural resource conditions. Additionally, return visitors and those with higher per capita household incomes are willing to pay more to improve natural resource conditions.

More Information

A complete copy of the report is available at:

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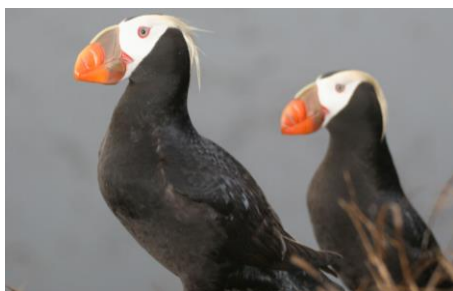


Photo: Mary Sue Brancato

Puffins in OCNMS



Photo: Kate Thompson

A view from OCNMS at sunset.

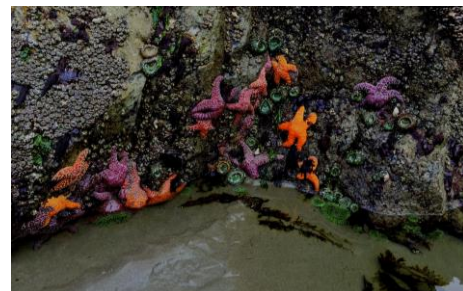


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OCNMS tide pool