

Sanctuary Economics

Defining Non-Market Value and its Importance to National Marine Sanctuaries

Economic Value & Natural Resources

Many natural resources, such as those found in national marine sanctuaries have economic value. Although, typically measured in dollars (or some currency), it is the benefit provided by goods and services to a person. The person may or may not be a user of the resource. These benefits may occur within economic markets – through the purchasing of goods and services. This is just one component of economic value. The second component is called non-market value.

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.

Ecosystem Services

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 viewsapes, tide pool quality, abundance and diversity of marine mammals and seabirds, etc. These ecosystem services that people benefit from have economic value.

Non-Market Value

Many of the goods and services provided by natural resources do not require market transactions to derive benefit. Even if a person must spend money to access the resource, such as an entrance fee to a park, the price of admission does not reflect their true value. The difference between the price a person pays and the most they would be willing to pay for the good or service is what economists refer to as consumer surplus. This consumer surplus is a person's non-market value.

Non-Use Values

People may also have value for resources that they do not use. This special type of non-market value occurs when people have never used a resource and may never use the resource. For example, although a person may never go to Antarctica, they still may be willing to pay something to ensure its healthy existence. Let us look closer at the various types of non-use values

- Option Use – A person may have a value knowing that someday they may be able to use the resource. This value can be viewed as an insurance policy that the resource will be available for use in the future.
- Existence Value – This is the value people will pay to know that a resource will continue to exist in a certain condition
- Bequest Value - What people are willing to pay today so that future generations will have access to resources in specific conditions



Photo: Matt McIntosh/NOAA

A white ibis in Florida Keys NMS



Photo: Matt McIntosh/NOAA

The sunsets over Olympic Coast NMS.



Photo: James Watt/NOAA

Green sea turtle in Papahānaumokuākea Marine National Monument.

NATIONAL MARINE SANCTUARY SYSTEM



Scale varies in this perspective. Adapted from National Geographic Maps.

Consumer Surplus

It is based on demand and supply, where demand is a consumer's willingness to pay for different quantities of a good or service, while controlling for other factors (e.g. income, tastes and preferences, and demographic factors). Supply is the willingness to sell by suppliers of a good or service. When consumers are willing to pay more than suppliers are willing to supply a good or service, consumer's surplus exists. This is true of all goods and services whether they are traded in markets or not.

Why is Consumer Surplus and Non-Market Value important?

Natural and cultural resources are often public resources – like national marine sanctuaries. Many of the goods and services provided by national marine sanctuaries are not traded in markets so it is not possible to observe prices and quantities in markets that would allow for estimating demand and supply. Consequently, consumer's surplus cannot be estimated with many natural and cultural resources. Economists have developed several methods for estimating consumer's surplus for publicly owned natural and cultural resources.

How does NOAA or ONMS use this information?

When the non-market value of specific resources are estimated it is possible now conduct cost-benefit analysis. Knowing the monetary value of national marine sanctuaries, allows the public and the government to better understand the ways in which people benefit from healthy resources.

Further, when damage to the resources occurs and quality is adversely effected, there is a loss of benefits to both users and non-users. When the non-market value is quantified, this allows the government to collect monies from the person or entity that damaged the resource.



Photo: Laura Howes

Humpback whale in Stellwagen Bank NMS.



Photo: Patrick Smith

Sea lion swimming in Channel Islands NMS kelp forest.

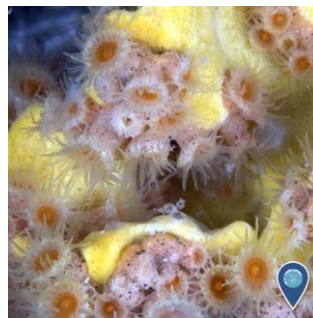


Photo : Greg McFall/NOAA

Soft corals atop a yellow sponge in Gray's Reef NMS.



Photo: Matt McIntosh/NOAA

Bowling Ball Beach at Greater Farallones NMS.

<http://sanctuaries.noaa.gov>