



# Ecosystem Services

## Definition

Ecosystem services are benefits that people derive from the natural world. The value of marine ecosystems is best known for the living marine resources they supply. Harvesting lobsters, mussels, clams, worms, and other species pumps \$10 million into the Frenchman Bay area economy on an annual basis. Other services may not be as obvious but are also important. For example, carbon storage by shoreline and sub-tidal grasses helps to offset ocean acidification and other changes due to increasing carbon dioxide in the atmosphere, and purification of polluted runoff by coastal wetlands, which helps to keep the bay clear and beautiful, and healthy for humans and wildlife. Benefits also include aesthetic, educational, and recreational services.

## Background

Frenchman Bay Partners has been engaging community members in conversations about the benefits we all derive from our connections to Frenchman Bay. By identifying and prioritizing the attributes of the bay that are of the most benefit to us, we can plan to preserve and improve them.

### *Stakeholder meetings*

On November 12 and 13, 2014 and June 2, 2015 the Frenchman Bay Partners hosted three stakeholder meetings to introduce the concept of Ecosystem Services and engage people in helping to create a computer-based Ecosystem Services Value (ESValue) decision support tool for Frenchman Bay. Participants of the first meeting included a broad cross-section of Frenchman Bay Partners who helped to pilot the ESValue process; 29 Partners participated, including facilitators. Participants of the second meeting were all owners of businesses in Bar Harbor, most of whom were not already members of the Frenchman Bay Partners group; 23 people participated, including facilitators. The third meeting was made up of businesses on the Hancock side of Frenchman Bay; 29 people participated, including facilitators

## Factsheet

### Broad Categories of Frenchman Bay Ecosystem Services

- Atmospheric Maintenance
- Tourism
- Food
- Housing
- Quality of Life
- Jobs
- Recreation
- Municipal Revenue
- Habitat
- Education
- Research

### Those Who Benefit

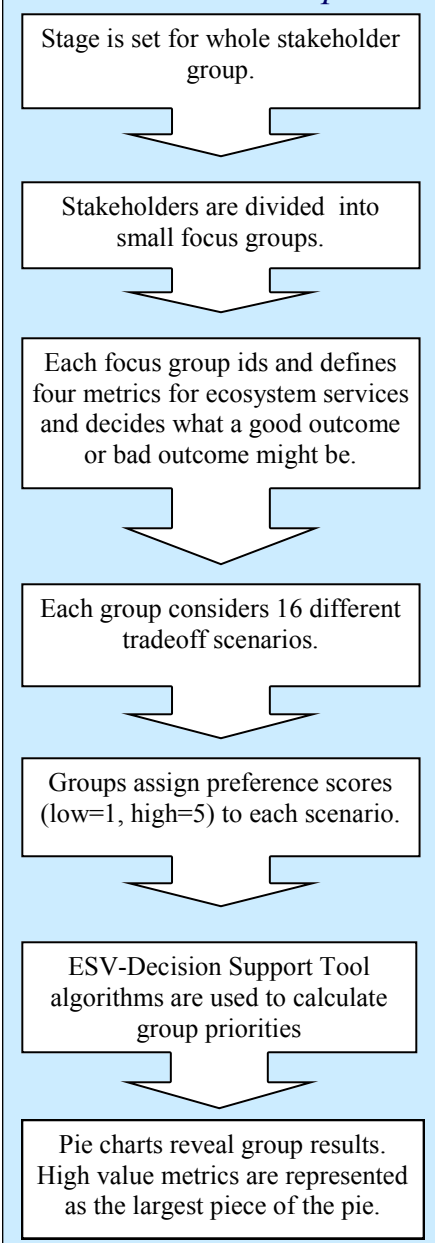
- Fishermen
- Shellfish Harvesters
- Seafood Dealers
- Aquaculture Owners & Operators
- Municipalities
- Tourism-Related Businesses
- Realtors
- Developers
- Shorefront Property Owners
- Educators and Students
- Researchers
- Residents
- Visitors



From: Frenchman Bay Partners  
Market-Based Approach Report Nov. 2013

In preparation for the stakeholder meetings, a survey was distributed to all meeting registrants. A total of 32 completed surveys were submitted; 21 from the November 12 stakeholder group, five from the November 13 stakeholder group, and six from the June 2 stakeholder group. The survey was used as an educational tool, providing survey respondents with definitions and examples of ecosystem services as well as providing practice for decision-making. When asked whether particular bay ecosystem services were of low, medium, or high importance, the majority of respondents from all groups thought that most of the listed services were highly important to them personally and most of the other beneficiaries listed in the survey. Most thought it was likely or very likely that most ecosystem services would suffer noticeable declines in the next 20 years. Survey respondents were given sample trade-off questions to help prepare them for making choices and setting priorities at the stakeholder meetings. In general, respondents were not willing to trade environmental health for increases in visitation or revenues.

### ESValue Tool Development



### The ESValue Decision Support Tool

The ESValue decision support tool engages stakeholders in identifying ecosystem services and values. It can help build a shared vision of resource management for diverse groups of stakeholders, narrow the range of issues and management options that need to be considered, and create a common language for discussion. The flowchart at left outlines how to use the tool in order to assess the priorities of bay stakeholders.

### Using the Tool

The ESValue decision support tool is part of an active decision making process. The first step is working with stakeholders to identify management decisions and develop probable scenarios to project how the provision of services might change in response to those decisions. These choices are run through a computer model, and the outputs provide decision makers with information about the priorities set by stakeholders. Public and private sector decision makers can use this information in conjunction with scientific understanding of the ecosystem and all of its intricacies to formulate sustainable decisions. Working together to create an ESValue decision support tool that helps stakeholders choose among potential alternative scenarios or strategies will strengthen our collective ability to achieve our goals. It will increase the likelihood of successfully planning and carrying out projects that will ultimately keep Frenchman Bay healthy and vibrant for future generations of recreational and commercial users.

**Scenario**  
**Development of a management plan to help guide the future of the Frenchman Bay**

**Beneficiaries of Ecosystem Services**

**Terrestrial Ecosystem Services**

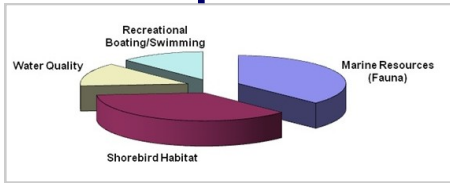
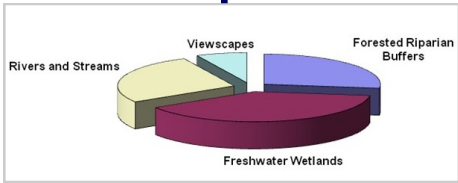
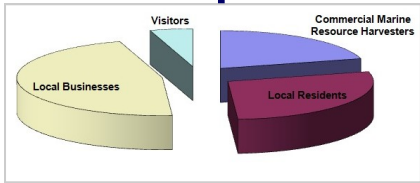
**Aquatic Ecosystem Services**

- 1) Local Businesses
- 2) Tourists/Visitors
- 3) Commercial Marine Resource Harvesters
- 4) Local Residents

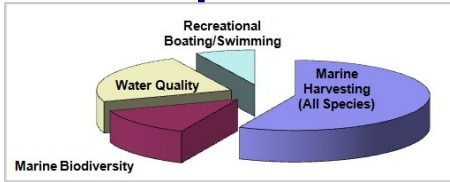
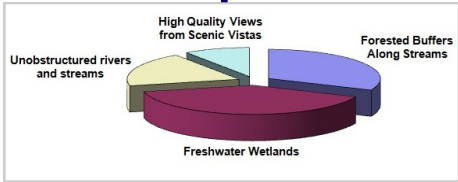
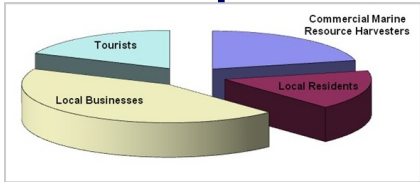
- 1) Freshwater Wetlands
- 2) Forested Riparian Buffers
- 3) Unobstructed Rivers and Streams
- 4) Viewscapes

- 1) Marine Resources/Harvesting
- 2) Shorebird Habitat/Marine Biodiversity
- 3) Water Quality
- 4) Recreational Boating/Swimming

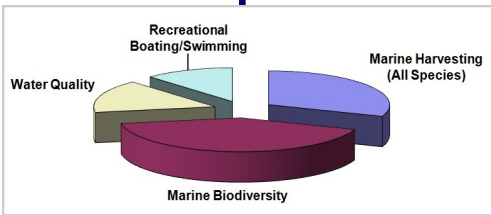
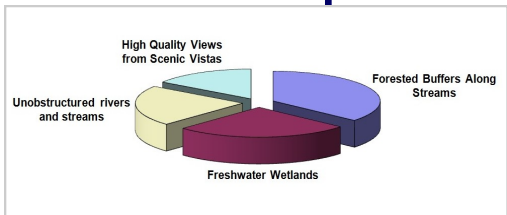
**November 12, 2014: Frenchman Bay Partners**



**November 13, 2014: Bar Harbor Business Community**



**June 2, 2015: Hancock Side of Frenchman Bay Business Community**



- Top Beneficiaries and Priority Services  
 11/12/14 and 11/13/14**
- Local Businesses
  - Marine Harvesting
  - Freshwater Wetlands

- Priority Services  
 06/02/15**
- Marine Biodiversity
  - Forest Buffers Along Streams

Frenchman Bay Partner ESValue stakeholder meeting scenario, groups, and priorities. Top Beneficiaries and Priority Services for each group for each stakeholder meeting are bulleted at the bottom of the page.

## Different Groups, Similar Priorities

Participants at the November 12, 2014 meeting represented a cross section of Frenchman Bay Partners. Participants at the November 13, 2014 meeting were primarily members of the Bar Harbor business community. Participants at the June 2, 2015 meeting were members of the business community on the Hancock side of Frenchman Bay. At the November meetings, stakeholders were divided into three focus groups: one considered the beneficiaries of ecosystem services, the others considered the services provided by aquatic and terrestrial ecosystems. At the first two events, participants expressed most interest in discussing ecosystem services rather than beneficiaries. Therefore, at the June meeting, stakeholders were divided into just two groups: considering priority aquatic ecosystem services or terrestrial ecosystem services.

Results from November 12 are depicted in the first row of pie charts, results from November 13 in the second row, and results from June 2 in the third row. Both November groups prioritized local businesses as primary beneficiaries of ecosystem services, freshwater wetlands as the most important terrestrial ecosystem service, and harvesting marine resources as the most important ecosystem service provided by Frenchman Bay. The June group prioritized forest buffers along streams as the most important terrestrial ecosystem



service, and marine biodiversity as the most important ecosystem service provided by Frenchman Bay. All three stakeholder groups gave top priority to the same two “slices of the pie” for terrestrial ecosystem services (forested buffers and freshwater wetlands). For aquatic ecosystem services, marine harvesting, marine biodiversity, and water quality were most important for all three groups.

The priorities set by focus groups like these can be used at a later date to discuss possible futures, given a development or planning scenario where the future of Frenchman Bay could be impacted.



### *Applications of the Decision Support Tool*

- Shoreline development
- Working waterfront access
- Expansion of cruise ship visitation
- Creation of harbor policy
- Conservation of bay resources
- Area management



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## *What else came out of the process?*

In the process of developing the ESValue Decision Support Tool, stakeholders engaged in conversations that they may have never had before. Through the process, participants began to look at the bay a little differently, asking the question “What are those services provided to me by the bay that I value most?” When presented with scenarios where they had to make choices, they realized that you can’t have everything, and that some things might have to be sacrificed in order to get others. They had to grapple with the question “Where is the balance?”

As a result of the November 13 meeting with Bar Harbor business owners, two business stakeholders became members of Frenchman Bay Partners. As a result of the June 2 meeting with business owners from the Hancock side of Frenchman Bay, one business stakeholder became a member. Evaluations from participants at each meeting has provided good feedback for moving forward. Detailed notes of meetings are available at [www.frenchmanbaypartners.org](http://www.frenchmanbaypartners.org).



## Next Steps

- Follow-up with all participants and encourage membership in Frenchman Bay Partners.
- Work with project partners to develop an on-line version of the ESValue tool development exercise.
- Ask project participants to help in identifying additional stakeholders who may be interested in our process and contribute to on-going development of the tool by participating in an online exercise.
- Apply the ESValues tool to one real world situation as a case study.

## For more information

For more information about our partners, projects, and events, visit our website at [www.frenchmanbaypartners.org](http://www.frenchmanbaypartners.org) or call FBP President Jane Disney at 207.288.9880 x 429. This project was supported by the Alex C. Walker Foundation and Davis Conservation Fund.



Frenchman Bay  
Partners

The mission of the Frenchman Bay Partners is to ensure that the Frenchman Bay area is ecologically, economically and socially healthy and resilient in the face of future challenges.