



Methodology Guide:

BENEFITS VALUATION

Overview

A benefits valuation includes any approach focused on estimation of benefits that does not involve consideration of costs. Results from a benefits valuation can be used in a benefit-cost analysis and other analyses. To this end, consideration of costs may not be needed in certain situations, such as when

- There is a lack of available cost information,
- There is a delay in receiving that information, or
- Cost information is irrelevant to project objectives.

You may also want to conduct a benefits valuation without consideration of costs when

- A preliminary or “back of the envelope” estimate of benefits is sufficient for current economic objectives, or
- Making the public aware of the benefits of a project is a primary objective.

This quick reference provides an introduction to benefits valuation and links to various methods for estimating benefits, whatever your need may be.

Examples

Economists deal with monetary metrics, that is, dollars and cents for both benefits and costs. The methods listed in this document provide ways to estimate the monetary value of anticipated *benefits* for your project. However, non-monetary values can also provide compelling information. Some examples of non-monetary values are number of volunteer hours, number of lives saved, and number of acres of wetlands preserved. While it may be optimal to provide dollar values, benefits valuation results can consist of a number of indicators of value (monetary and numeric).

The first thing you will want to do in a benefits valuation is to choose the activities or benefits that you think will transpire as a result of your project. The second step is to learn more about the methods useful in estimating the value of those activities or benefits. Below, we provide a list of some activities and benefits and the associated methods that can be explored for use in measurement. Note that this list shows examples only and is not exhaustive.

Activities

- Hold a workshop or training (Travel Cost and Opportunity Cost)
- Increase volunteer activities (Travel Cost and Opportunity Cost)
- Protect or restore habitat that provides storm surge protection (Damages Avoided and Replacement Costs)
- Increase access for recreation or increase the quantity or quality of recreational opportunities (Travel Cost and Opportunity Cost, Hedonic Valuation, Stated Preference (Willingness to Pay), Benefit Transfer)
- Protect or restore habitat that negates or reduces the need for gray infrastructure (Damages Avoided and Replacement Costs)

Anticipated Benefits Resulting From Activities

- Increase resilience or other knowledge with a workshop or training (Travel Cost and Opportunity Cost)
- Improve or expand ecosystem services (Hedonic Valuation, Stated Preference (Willingness to Pay), Benefit Transfer)
- Improve ecosystem service function using volunteers (Travel Cost and Opportunity Cost)
- Avoid damages (Damages Avoided and Replacement Costs)
- Reduce costs compared to gray infrastructure (Damages Avoided and Replacement Costs)

Examples

Consider a community project that has two major activities: 1) purchase and restoration of 100 acres of wetlands and 2) a training for citizens living adjacent to the shoreline to educate them about how to decrease erosion on their land.

Under the first activity, the community expects to increase storm surge protection with the purchase and restoration of wetlands. To estimate the expected benefits of increased storm surge protection from the wetlands, the community will want to use the damages avoided method. They may also want to use other methods (hedonic valuation, willingness to pay, and benefits transfer) if other ecosystem services benefits are expected.

Under the second activity, the community expects people to take the knowledge they learned at the training and implement erosion control. To estimate the benefits of an erosion prevention training for shoreline residents, the community can use travel cost and opportunity cost methods to estimate a conservative estimate of the value of the training. Once erosion prevention techniques have been implemented, the community can use the damages avoided method to estimate the value associated with avoided property damages.

Strengths

- May be less time-consuming than other economic valuation options, depending on the method used.
- Does not require cost data, which might be difficult to obtain.

Challenges

- Others may challenge the exclusion of cost information.
- Depending on the benefits that need to be valued, it might be difficult to obtain the necessary data.
- Expertise to fully evaluate benefits might be lacking.
- Once benefits have been quantified, they may not be additive, as they might be ranges of values, or reflect different years.

Tips

1. Go for the low-hanging fruit: Focus first on estimating the largest benefit you anticipate will result from your proposed project, particularly if you have funding or time constraints
2. Seek expertise: Some methods to estimate benefits are more complex and require more economic expertise than others. Consider consulting an economist to help you conduct the more complex analyses and or review your work. For example, developing a willingness to pay survey requires an expert trained in this methodology in order to obtain defensible economic results.
3. Consider indicators of value: If you can't get dollar values as results, you may want to consider using non-monetary indicators of benefits, such as number of hours, number of participants or visitors, or related metrics. While non-monetary results will not be useful for comparison to costs, and because of this cannot be included in a benefit-cost analysis, these results can supplement a benefit-cost analysis to provide additional context.

Additional Resources

Getting Help

- Reach out to our team (econguidance@noaa.gov) for specific questions or to brainstorm how to start your benefits valuation.
- Hire a private consultant or request support from academic partners. Researchers, graduate students, and academic scholars may be able to provide guidance or work directly on your benefits valuation.

Other Resources

- Guidance documents and quick references are provided to learn more about benefits estimation methods. Contact the Office for Coastal Management for project or research consultation (technical assistance).
 - [Benefit Transfer](#)
 - [Damages Avoided and Replacement Costs](#)
 - [Hedonic Valuation](#)
 - [Stated Preference \(Willingness to Pay\)](#)
 - [Travel Cost and Opportunity Cost](#)