
If you are encountering GEMS protocols for the first time, please read:

- The GEMS protocols can help you develop a monitoring plan for a restoration project. They were developed based on existing published monitoring methods, but should not be considered prescriptive or the only appropriate way to monitor.
 - Each protocol is written as if you are monitoring a single outcome, but it is very possible you will be measuring multiple outcomes and may be able to use the same or similar methods to do so. Think about ways to be strategic and efficient when combining methods from different protocols. For example, are there ways to ask questions about multiple outcomes using a single survey instrument? Or is there a way to host a workshop that asks community members about barriers to accessing multiple types of outcomes?
 - Please be aware that the “who” methods—aimed at documenting who will be affected by social and economic changes caused by a restoration project—are quite similar across protocols. Where possible and sensible, you should consolidate community engagement methods that assess stakeholder perceptions of project outcomes to avoid stakeholder fatigue.
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Background

This document provides an overview of methods available for monitoring project identified cultural values. This protocol does not describe methods for monitoring a particular metric. Cultural values are unique and place-based, so it is impossible to prescribe a method that will be applicable to a cultural value relevant to all projects. This protocol helps projects select and monitor one or more relevant cultural value indicators.

Cultural values, sometimes called cultural ecosystem services, consist of the non-material benefits realized through human-environment interactions ([Pascua et. al., 2017](#)). Categories of cultural values can include cultural diversity, spiritual and religious value, traditional and formal knowledge of systems, education value, aesthetic value, and sense of place, among others ([Pascua et. al., 2017](#)). For more details about cultural values and a series of examples, see [FAO Ecosystem Services & Biodiversity: Cultural Services](#).

Understanding, acknowledging, and assessing cultural values and associated cultural concerns can help account for the important non-material benefits of restoration projects and facilitate community engagement in management decisions, thereby enhancing management success. Cultural values are inherently difficult to measure given that they are often intangible benefits that people derive from ecosystems. However, they can be among the most important values people hold for natural systems thus monitoring how projects affect the delivery of these types of services can help illuminate important project-related outcomes.

Some communities may not find it appropriate to measure or monitor cultural values, as assigning a quantitative value to a cultural service doesn't capture the complexity of its meaning to the community. For this reason, the methods described here focus heavily on community engagement to identify the most significant cultural values associated with a project and to identify culturally appropriate indicators for those services where possible.

The “how much” methods describe how to identify and measure the amount that cultural value indicators change as the result of a restoration project. The “who” methods help a project document who is being affected by those changes.

The tables below list when methods would benefit from the expertise of social scientists trained in survey design and implementation, statistics, and economics. These experts should have experience with [human subject research](#), following best practices and, if relevant, conducting research in a way that is accountable to their respective institution’s oversight body, often called an [Institutional Review Board](#). If you do not have such expertise in your project or program, many university programs and consulting firms should be able to assist.

Relevant Coastal Restoration Approaches

Habitat Restoration – Oyster Reef, Salt Marsh, Seagrass, Mangrove, Living shorelines, Beaches and Dunes, Restoring Hydrologic Connectivity

Recreational Enhancement – Boat Ramps, Fishing Piers, Trails and Boardwalks

Oyster Reef Specific – All project types

Water Quality Improvement – Sewage System Improvements, Treatment Wetlands, Green Stormwater Infrastructure, Stormwater Outflow Treatment, Agricultural Best Management Practices

“How much” method:

Overview. This “how much” method helps the project identify a relevant cultural value indicator and measure changes in the indicator based on the installation of the restoration project.

“How much” method:

Method (click on method title to see more detail)	Method Outcomes	Method Description	Human Subject Research Expertise Needed*	Effort Level
Select and monitor a relevant cultural value indicator	Change in the cultural value indicator	Select a relevant cultural value indicator with input from community and monitor that indicator accordingly.	Yes	High

*Refer to the [NIH Definition of Human Subjects Research](#) for more information

“How Much” Metric Summary:

Social or economic outcome this metric is linked to:	Cultural Value
“How much” metric tier:	<input type="checkbox"/> 1 (easier) or <input checked="" type="checkbox"/> 2 (harder)
“How much” measurement interval:	How often to measure will depend on the cultural value indicator selected. Monitor at a frequent enough interval so that change based on installation of the project can be tracked
Use this protocol if:	<ul style="list-style-type: none"> The project is likely to affect cultural value(s) Relevant communities agree to the legitimacy and suitability of monitoring cultural value

“Who” methods:

Overview. These “who” methods help the project answer: who is being affected by changes to the cultural value metric that was selected?

These methods can help restoration practitioners assess equity of accessibility and distribution of the selected cultural value. Some of the methods suggested here can be integrated as modifications of the “how much” method described above. Others would require new methods. These methods will help identify a) vulnerable groups and historically underrepresented stakeholders in the project service area; b) the accessibility and distribution of the focal cultural value to communities in the project service area; and c) whether groups may be disproportionately accessing or benefitting from the focal cultural value supplied by the project.

The table below describes a suite of methods that build off each other to provide a more holistic understanding of the communities in the project service area¹ who should provide input on selecting a relevant cultural value indicator, and how the cultural value provided by the project affects the people who care about it.

All of the methods below that involve focus groups, surveys, or participatory exercises require inclusive stakeholder engagement² of all relevant communities within the project service area.

“Who” methods:

Method (click on method title to see more detail)	Method Outcomes	Method Description	Human Subject Research Expertise Needed*	Effort Level
Describe stakeholders	Project service area boundaries	Identify geographic boundary that encompasses all communities that could be derive cultural benefits from the site	No	Low
	Demographics and social vulnerability of the project service area	Collate comprehensive demographic data of the communities in the project service area	No	Low
	List of relevant stakeholders in the project service area	Conduct a stakeholder assessment to understand who is in the project service area	No	Low
Accessibility checklist (from project perspective)	Status of focal cultural value accessibility	Fill out a project checklist to identify accessibility of the site and associated cultural value	No	Low

¹ The geographic boundary containing those stakeholders for whom a particular project outcome is relevant

² There are many resources available that provide best practices and guidance for inclusive engagement. Some examples include: [Five step approach to stakeholder engagement](#) (BSR); [Equitable Community Engagement Toolkit](#) (Boston Public Health Commission); [Designing equity-focused stakeholder engagement to inform state energy office programs and policies](#) (NASEO); [Inclusive community engagement](#) (C40 Cities), and; [Stakeholder engagement for inclusive water governance](#) (OECD).

Assessment of stakeholder perceptions on access and distribution of cultural values	<p>Identification of access, barriers to access, and distribution of cultural values in the project service area.</p> <p>Understanding of whether key stakeholder groups are able to access cultural values they care about.</p>	<p>Step 1. Use focus groups, workshops, or surveys <i>targeting a key stakeholders in the project service area</i> to ask questions about access, distribution, and barriers to accessing the focal cultural value</p> <p>Step 2. Consider information collected through step 1 in the context of the “who” information you already collected.</p>	<p>Yes</p>	<p>High</p>
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*Refer to the [NIH Definition of Human Subjects Research](#) for more information

To see all GEMS project metrics and protocols, [visit this page](#).

