

# Measurement Protocol: Number of Aquaculture Jobs Supported by the Project

Project: GEMS  
<http://bit.ly/NI-GEMS>

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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 measuring aquaculture jobs associated with a project.

We define aquaculture jobs as paid full-time or part-time positions that support commercial aquaculture operations. These positions are typically called aquaculture technicians, and their primary responsibilities are maintaining the daily operations of aquaculture facilities, including loading feeders, removing non-viable specimens, monitoring water quality, harvesting, inputting data, shucking and more.

The “how much” methods measure how many aquaculture jobs are supported as the result of a restoration project. The “who” methods help to document who is and who is not employed in these jobs.

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

Oyster Reef Specific – Oyster Aquaculture

### “How much” methods:

*Overview.* This method helps the project answer: How many aquaculture jobs is a project creating?

This method will document the number of anticipated or actual aquaculture-related full-time employees (FTEs) and part-time employees (PTEs) on a given project.

**“How much” method:**

Method (with link to more detail)	Method Outcomes	Method Description	Human Subject Research Expertise Needed*	Effort Level
<a href="#">Report hiring</a>	Number of FTEs and PTEs supported by the project	Report from project management documents the actual number of FTEs or PTEs the project has hired or expects to hire.	No	Low

\*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:	Economic Activity
“How much” metric tier:	<input checked="" type="checkbox"/> 1 (easier) or <input type="checkbox"/> 2 (harder)
“How much” measurement interval:	Annual
Use this protocol if:	The project will create jobs in the aquaculture industry.

**“Who” methods:**

*Overview.* These methods help the project answer: who has access to and is employed by aquaculture jobs created by the project, and are they representative of the employable population?

These methods can help restoration practitioners assess equity in aquaculture job opportunities. These methods will help identify a) vulnerable groups and historically underrepresented stakeholders in the project service area<sup>1</sup>; b) the accessibility and distribution of aquaculture jobs to communities in the project service area; and c) whether groups may be disproportionately not accessing or benefitting from aquaculture jobs. You can use these methods to better understand if aquaculture jobs provided by the projects are or seem accessible and how well those hired represent the distribution of people looking for aquaculture job opportunities.

**The table below describes a suite of methods that build off each other to provide a more holistic understanding of the communities that are and can be employed by aquaculture jobs on the project site, and how accessible these jobs are for these communities.**

The methods below that involve focus groups, surveys, or participatory exercises require inclusive stakeholder engagement<sup>2</sup> of all relevant communities within the project service area.

<sup>1</sup> The geographic boundary containing those stakeholders for whom a particular project outcome is relevant

<sup>2</sup> 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](#)

“Who” methods:

Method (with link to more detail)	Method Outcomes	Method Description	Human Subject Research Expertise Needed*	Effort Level
<a href="#">Describe stakeholders</a>	Project service area boundaries	Identify geographic boundary that encompasses all communities that may be employed in aquaculture jobs	No	Low
	Demographics and social vulnerability of 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 interested and eligible for employment in aquaculture in the project service area	No	Low
<a href="#">Accessibility checklist</a>	Status of aquaculture job accessibility	Fill out a project checklist to identify accessibility of job information provided and accessibility of aquaculture job-related activities created by the project	No	Low
<a href="#">Assess stakeholder perceptions</a> on access and distribution of aquaculture jobs	Identification of access, barriers to access, and distribution of aquaculture jobs and employment opportunities in the employable workforce. Understanding of whether access and distribution is disproportionate compared to the project service area.	Step 1. Use focus groups, workshops, or surveys <i>targeting people in the project service area</i> to ask questions about access, distribution, and barriers to accessing aquaculture jobs.  Step 2. Consider information collected through step 1 in the context of the “who” information you already collected.	Yes	High

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For more information on the GEMS project metrics and protocols, [visit this page](#).



[energy office programs and policies](#) (NASEO); [Inclusive community engagement](#) (C40 Cities), and; [Stakeholder engagement for inclusive water governance](#) (OECD).