

# Assessment Report of Oregon's Marine Reserves

## Executive Summary

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### Background

In 2012, Oregon completed the planning and designation of five marine reserves. The implementation and management of these marine reserves is led by the Oregon Department of Fish and Wildlife (ODFW) and is based on guidance from Executive Order 08-07 (2008), House Bill 3013 (2009), Senate Bill 1510 (2012), and agency administrative rules.

The **Goals** of Oregon's marine reserves are to:

*Protect and sustain a system of fewer than ten marine reserves in Oregon's Territorial Sea to conserve marine habitats and biodiversity; provide a framework for scientific research and effectiveness monitoring; and avoid significant adverse social and economic impacts on ocean users and coastal communities.*

*A system is a collection of individual sites that are representative of marine habitats and that are ecologically significant when taken as a whole.*

Senate Bill 1510 mandated that the ODFW Marine Reserve program complete a decadal self-assessment in 2022; as such, ODFW produced the ODFW Marine Reserve Program Synthesis Report. SB 1510 further mandated that the Synthesis Report be evaluated by a team of outside experts from an Oregon public university. This is that evaluation, termed the University Assessment Report. The **Charge** for this evaluation was, in brief, to

- A. Assess the social, economic, and environmental factors related to the reserves.
- B. Recommend administrative actions and legislative proposals related to the reserves.
- C. Provide any other scientifically based information relevant or material to the reserves.

### Approach

The University Assessment Report was prepared by researchers at Oregon State University, in collaboration with researchers from other universities. This team has expertise spanning the Natural Sciences (marine ecology, fisheries, oceanography) and the Social Sciences (environmental economics, psychology, and communication), with decades of combined experience in marine reserve science.

The assessment followed the evaluation framework developed by the Scientific and Technical Advisory Committee (STAC) of the Oregon Ocean Policy Advisory Council (OPAC). The university team evaluated the Synthesis Report and all accompanying appendices and supporting materials. Subsequent legislative and administrative recommendations are based on their expert judgement and current best practices in marine reserve science.

### Key Findings

- Oregon's marine reserves were, in general, effectively designed and implemented to achieve the goals and objectives set forth in legislation and OPAC recommendations.
  - It is too soon to evaluate whether some ecological goals will be met, such as whether the reserves can promote ecological resilience. Ongoing monitoring and research are needed to evaluate those goals.
  - Monitoring of social and economic effects revealed positive and adverse impacts that varied by location and social group. Adverse impacts were unevenly distributed. Overall, fewer and less extreme adverse impacts were recorded than might have been expected. More adequately evaluating socioeconomic impacts will require developing and monitoring clearly

defined social and economic indicators.

- Lessons learned over 10 years of the Marine Reserve Program (including evaluations such as this report) provide the feedback needed to:
  - Move into a phase of consistent long-term marine reserve monitoring and research.
  - Support Oregon in evaluating and potentially adjusting its marine reserve system moving forward in an adaptive management process.

## Key Recommendations

1. To support the legislated goals of conserving biodiversity while avoiding adverse socioeconomic impacts, the **Oregon Legislature should consider these actions:**
  - a. Appropriate funds to allow ODFW to continue the Marine Reserves Program at the necessary capacity. This includes funding for new human resources and programmatic activities, including: management, policy, and program administration; ecological monitoring; human dimensions monitoring; and outreach and community engagement.
  - b. Provide a mandate that supports the development of an Adaptive Management plan (as described below) for the ongoing management and evaluation of the marine reserves program.
  - c. Define a detailed collaborative process through which social monitoring data can be interpreted to affect policy decisions. This process should include steps for decision making, conflict management, and clarity on who the state of Oregon is concerned with impacting (through the Marine Reserve Program), and in what ways. The Magnuson-Stevens Act could serve as an example for describing such a process.
2. To fulfill the goals of conserving marine habitats and biodiversity while avoiding adverse socioeconomic impacts, ODFW should develop an **adaptive management plan** for the Oregon Marine Reserve Program that includes clear objectives, defined decision-making criteria and timelines, and stakeholder engagement processes. **This will require ODFW to:**
  - a. Develop specific, measurable, achievable, relevant, and time-oriented objectives for ecological and socioeconomic monitoring and research, including a timeline for adaptive decision-making.
  - b. Develop consistent measurable indicators of social impacts.
  - c. Implement efficient and consistent ecological sampling protocols.
  - d. Assess the capacity for the marine reserves to enhance ecological resilience to environmental disturbances. This requires longer time-series of data and evaluation of how well the reserves operate as a network.
  - e. Develop defined goals for outreach and engagement, including with Tribes, and undertake assessments to evaluate the effectiveness in achieving these goals.

The adaptive management plan should include criteria for determining whether modifying existing reserve boundaries or the number of marine reserves and marine protected areas is needed to meet legislative objectives. The plan should include details for a community-engaged process for planning and implementing any changes.

The full report is available online: (<https://www.oregonocean.info/index.php/opac-documents/workinggroups/stac/2741-or-marine-reserves-assessment-report-sept-30-2022/file>). A paper copy may be requested from the chair of the scientific & technical committee of the Ocean Policy Advisory Council.