



CALIFORNIA
OCEAN
SCIENCE
TRUST

Action Plan: A Roadmap to 2025

OUR VISION AND MISSION

Accelerating progress towards a healthy, productive, and equitable ocean future for California

Recognizing the value of independent science and the wealth of expertise in California's universities, research institutions, and scientific community, California Ocean Science Trust (OST) was created by California legislation as a 501c3 nonprofit organization to bridge the gap between cutting-edge scientific research and sound ocean management¹.

Our organizational theory of change is premised on the belief that science is a powerful tool in uncovering, building, and aligning policy pathways towards solutions for California's coast and ocean. We are a trusted knowledge-broker that legislators, state agencies, and government officials rely upon for actionable science that supports the state's goals. We mobilize resources and capacity to accelerate scientific research on state ocean priorities.

Meeting the urgency of the moment as climate change impacts increase

As we approach our organization's 25th anniversary, our work is more salient and critically important now than ever before. Climate change, the defining challenge of our generation, is making its impacts felt on California's ocean and coast, and those impacts will only grow over time.

To respond to the threats of climate change, our ocean and coast are increasingly being tapped as sites for potential solutions including offshore wind energy development and ocean-based carbon dioxide removal. At the same time, to brace for the inevitable growth of impacts, climate adaptation and mitigation efforts implicating California's ocean and coast abound. Added to this precarious scenario are multiple threats to marine mammals, collapsing kelp forests, and imperiled fisheries.

California has aspirational goals for a healthy and productive ocean future². If we are to meet the challenge presented by climate change, and ensure an equitable future for California's coastal communities, it is science—not politics, profits, or special interests—that can chart the path forward.

¹ [AB2287 California Ocean Resources Stewardship Act of 2000 \(updated 2022\)](#)

² [California Ocean Protection Council Strategic Plan 2020-2025](#)



HOW WE WORK

Strengthening the bridge between ocean science and policy

We bring our organization's mission to life in four core roles. While the issues we work on evolve over time, these roles exist in perpetuity as the most impactful and holistic expression of our mission. We take seriously the responsibility of being a trusted advisor and dot-connector between science and policy. Although we operate as an independent nonprofit, our ties to the executive and legislative branches of California's government anchor our commitment to put science to work in accelerating progress toward the state's goals. We are both responsive to individual needs and requests from state partners, and proactive in bringing science knowledge and solutions to decisions shaping the future of California's coasts and oceans.

BRINGING SCIENCE TO LAWMAKERS

From safeguarding whales to toxic pollution, from blue carbon to clean energy, critical ocean issues transcend political boundaries. Through expert briefings, hearings, and roundtable conversations among experts and elected officials, we serve as an objective broker of science information. We serve as a resource for policy-relevant and solution-focused advice supporting state and congressional representatives, committees, and their staff.

PROVIDING SCIENCE ADVICE TO STATE AGENCIES

Responding to the priorities of state agencies – including sea-level rise planning, biodiversity conservation via 30x30, and climate-ready fisheries – we deliver solution-focused practical science advice, recommendations, peer-reviews and roadmaps to executive branch agencies and departments. As Science Advisor to the California Ocean Protection Council, and chair of its Science Advisory Team, we serve as a trusted nexus between the scientific community and state policymakers.

SUPPORTING AN INCLUSIVE SCIENCE-POLICY WORKFORCE

To bring visibility, resources, and inclusion to the opportunities to pursue an ocean science and policy career pathway, we partner with California State University and University of California programs and institutes to provide internships and fellowships, create venues for illuminating non-academic career opportunities, and seek to grow the funding available for graduate student training and mentorship opportunities.

GROWING RESOURCES FOR SOLUTION-FOCUSED SCIENCE

Implementing our mandate to seek and provide funding for coast and ocean scientific research, we foster novel research-policy partnerships, and advocate for new public and private funding for science to address our state's policy priorities. We are deepening our relationships with science and research federal funding agencies to tap into opportunities for increased investment in science solutions to ocean and coastal challenges.



OUR PRIORITIES

Proactively bringing science to new policy challenges

As we chart a path to 2025 and beyond, and continue to implement our core roles in California, we also recognize the responsibility as an independent science nonprofit and advisor, to proactively bring science solutions to government decisions. Through that lens, we are focused on the issues that threaten California's coastal communities and ocean ecosystems, and where transdisciplinary science—spanning natural, social, and community science disciplines—can accelerate progress. We apply an equity lens to choices about the issues we pursue, partnerships we prioritize, our approaches to collaboration, and beneficiaries of our work.

Unlocking the potential of insurance for coastal resilience

Demonstration projects are moving climate insurance from theory to practice and spurring investments in coastal nature-based solutions to reduce flooding risks

California's coastal communities face growing, climate-driven threats, including rising seas and frequent flooding, which impact both coastal ecosystems and the people who depend on them. The multi-trillion dollar insurance industry, which increasingly views these same coastal-climate impacts as unchecked risks, can also be a tool for mitigating these risks if activated through climate adaptation efforts.

Ocean Science Trust signed a memorandum of agreement with California Department of

Insurance to provide our science services and support on advancing climate resilient coasts and oceans. Together with other academic and nonprofit partners, OST is deploying science-based dialogues to bring the power and financial weight of the insurance industry to bear on building climate resilience for California. In a sequence of convenings, ranging from international dialogues, to statewide symposia, to place-based local workshops, we are bringing together decision-makers, coastal and ocean experts, and insurance industry leaders to design demonstration projects that will equip California with ready-to-go climate insurance programs including nature-based solutions.

We will bring resources and public commitment to demonstration projects and associated research, and create a roadmap for state adoption. California has a unique opportunity to test new policies and programs, to center equity in considering the beneficiaries of this work, and to amplify results and learning nationally and internationally.

Building disaster resilience in California's fisheries

Accelerated development of science solutions is also enabling rapid policy advancements to build fishery resilience ahead of future climate-induced impacts

California's fisheries are already grappling with the effects of climate change-induced impacts, from species movements to fisheries closures to productivity loss. The success of California's climate-ready fisheries management strategies is dependent on the extent to which managers and



decision-makers can proactively mitigate, adapt, or respond.

On topics ranging from aquaculture growers' adaptive capacity, to ocean acidification, to innovations in state and federal fishery policy permitting, to learning from urchin fishery collapse, OST is building academic partnerships and mobilizing research support to accelerate forward-looking science that will equip fishery managers with strategies and approaches to respond to sudden, high-impact, climate-driven emergencies when they are most needed.

In the coming years, we will pursue opportunities to ground cutting-edge research on fishery insurance with the needs and interest of state regulators and coastal fishing communities. We will explore how our mandate to pursue technology innovations can be activated to support fishery data modernization efforts that increase California's ability to detect and respond to climate-induced impacts.

illuminating policy options for ocean carbon dioxide removal (CDR) research

With increased scientific understanding of CDR solutions and technologies, cross-sector collaborative efforts are advancing policy development and opportunities for responsible R&D

Federal agencies are hastily responding to IPCC predictions of the need for active carbon removal from the atmosphere if we are to avert the worst impacts of global climate change. Interest and investment in developing science and technology for seaweed farming as an ocean-based CDR pathway are rapidly expanding, prompting the

need to consider broader risks and costs associated with seaweed aquaculture. Simultaneously, growing private investor interest in technology-driven solutions for CDR, such as alkalinity enhancement, artificial upwelling, and other geo-chemical approaches, is highlighting the need for ethical guardrails for in-water testing and development.

OST is responding to calls to "cut through the noise" and bring objective science to the table. We are equipping California lawmakers with the latest scientific information on the potential for ocean-based CDR, including seaweed aquaculture, and convening experts to provide policy direction on a CDR research agenda for the state that can tap into opportunities for federal science investment.

Supporting accelerated, responsible offshore wind energy development

Science and monitoring investments are on track, and elevated understanding of potential environmental impacts is underpinning monitoring and evaluation program development

California's climate action plan calls for installment of offshore wind energy by 2030. State agencies are working rapidly and under limited capacity to develop management for wind energy siting, environmental impacts, stakeholder engagement, and more. Thoughtful science investments, now, are essential to implement a strategy that effectively mitigates environmental impacts. Accelerated development of an environmental monitoring program is critical for continued learning about environmental impacts and adaptation as new infrastructure is built.



OST is engaging with legislative bill authors and relevant committees to share scientific information, to educate, and bring forward options for policy action. Looking forward, we aim to support state agencies with science research investment recommendations. In tandem, we are connecting agency representatives with new research initiatives designed to catalyze progress on industry technology innovations for environmental

monitoring to ensure state management needs are met. Drawing on our deep network of experts and expertise throughout the state, we aim to support the development of a partnerships approach to monitoring data collection, and ensure that stakeholder interests and local scientific expertise are represented in an environmental monitoring and adaptive management framework.

[Learn more about our work in our reflective 20-Year Impact Report](#)

[Our commitment to Diversity Equity and Inclusion](#)

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