



California’s Ocean Acidification Action Plan: Raising Ambition and Building Resilience in Coastal Communities

Government: State of California, USA

Region: North America

Sector(s): Resilience, Land Use, Oceans

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Healthy ocean and coastal ecosystems help safeguard global populations from intensifying impacts caused by climate change; are critical for ensuring food security in highly vulnerable regions; and support thriving coastal communities and cultures, traditions and economies.

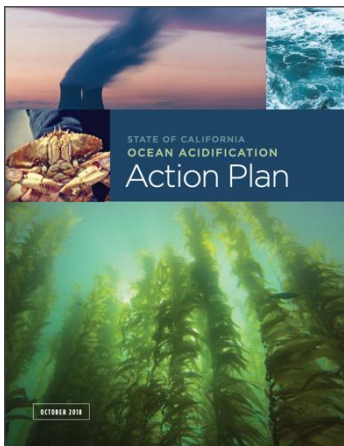
Summary

Global carbon emissions are driving changes not only to the Earth’s climate, but also to the chemistry of the world’s oceans. The oceans are acidifying because they are absorbing a significant share of the carbon dioxide (CO₂) released primarily by the burning of fossil fuels and changing land uses. Ocean acidification (OA) is accelerating rapidly, with enormous implications for the health and productivity of California’s coastal and ocean ecosystems and the communities and industries that depend on them, including California’s ocean-based economy.

In 2016, California co-founded the [International Alliance to Combat Ocean Acidification](#) (OA Alliance), an initiative that is helping to grow scientific knowledge about impacts of ocean acidification and transforming it into increased urgency and ambition for climate mitigation and visible and innovative regional actions. Through this effort, national, subnational, regional and tribal governments are proactively responding to the impacts of ocean acidification as they chart “OA Action Plans” for their regions.

California’s OA Action Plan lays out six strategies and related actions to identify and reduce the causes of OA, improve the resilience of vulnerable groups, and minimize harmful effects:

- 1. Prepare for a full range of OA risk and impacts:** Conduct a statewide vulnerability assessment; make targeted investments in monitoring to inform decision making.
- 2. Activate responsible elements of state government:** Integrate OA into state policies, planning and operations.
- 3. Reduce the pollution that causes OA:** Identify and reduce local water-borne and airborne pollution that exacerbates OA; develop technical tools.
- 4. Deploy living systems to slow OA and store carbon:** Restore and enhance seagrass meadows, kelp forests and salt marshes; evaluate and advance aquaculture approaches that can help.





5. Build resilience of affected communities, industries and interests: Establish a statewide advisory group; advance resilience of shellfish aquaculture industry and fisheries industry.

6. Engage beyond state borders: Import lessons from other geographies to speed up and improve California's OA efforts.

Results and Accomplishments

California has participated and led in a groundswell of action on OA in recent years, including investing in research and monitoring, passing state legislation, and identifying science-based options to address OA at regional and local levels. Meanwhile, California's leadership and co-founding of the OA Alliance has helped contribute to significant progress on OA at regional, national, and international scales.

Assembly Bill No. 2139 authorized the Ocean Protection Council (OPC) to develop an Ocean Acidification and Hypoxia Science Task Force to ensure that council decision making is supported by the best available science.

Senate Bill No. 1363 requires the Ocean Protection Council to establish and administer the Ocean Acidification and Hypoxia Reduction Program which will include funding for grants and loans for projects or activities that further public purposes consistent with the Ocean Acidification and Hypoxia Reduction Program.

Enabling conditions

This State of California Ocean Acidification Action Plan articulates a 10-year vision for addressing ocean acidification and a series of pragmatic actions to work towards that vision. It is designed for integration into public agency operations and to inform decisions made by members of the private sector and scientific community. It was developed within the framework of the OA Alliance by the Ocean Protection Council in partnership with California Ocean Science Trust.

Challenges

The effectiveness of global and regional efforts to reduce CO₂ emissions will play a large role in determining how much the oceans acidify and the overall environmental and social disruption that results.

Key lessons learned

Ocean acidification science is still in its preliminary stages, with policy response and management discussions following suit, making early and frequent collaborations across government, scientists, and impacted communities at a regional level all the more important.

Given the scale and impacts of climate change, it's critical to ensure long-term commitments to mitigation, adaptation and resiliency strategies over time and across appropriate implementing agencies.



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<http://www.opc.ca.gov/oa-action-plan/>