



INTERNATIONAL ALLIANCE TO  
COMBAT OCEAN ACIDIFICATION

# STATE OF HAWAII ACTION PLAN



OA MEMBER:

STATE OF  
HAWAII

MEMBER TYPE:  
GOVERNMENT MEMBER

POINT OF CONTACT:

 Division of Aquatic Resources

 DLNR.aquatics@hawaii.gov

LOCATION:



CONTINENT:  
NORTH AMERICA

OCEAN BASIN:  
PACIFIC

POPULATION SIZE:  
1,420,000

KILOMETERS OF COASTLINE:



1,210 km

REGIONALLY SIGNIFICANT  
MARINE ECOSYSTEMS:



HALIMEDA BEDS

THE OA ACTION PLAN  
WAS COMMISSIONED THROUGH:

TASK FORCE OR  
DEDICATED PANEL

REGIONALLY SIGNIFICANT  
USES OF RESOURCES:

Eco-tourism

Coastal  
tourism

Aquaculture

Food  
Security

Cultural  
practices  
or traditions

# ADVANCING OA ACTION PLANNING

## Main reason why an OA Action Plan was created/ decided to work on ocean acidification:

Hawai'i's culture, wellness, local tradition, food supply, and economies are strongly tied to the ocean. From the Hawaiian worldview, as evident in the Kumolipo creation chant, "the ocean is the source of all life." This ancestral relationship is represented in many other oli (chants), mele (songs), mo'olelo and ka'ao (stories and legends), and 'olelo no'eau (proverbs). Hawai'i's residents depend on the ocean and coastal environment for connection across communities, to put locally sourced food on the table, and to support livelihoods from tourism and commercial fisheries.

Specific concerns for Hawai'i include our coral reef environments and shoreline protection, intertidal shelled organisms, such as 'opihi or limpets that have cultural significance. Hawai'i's Halimeda and other calciferous algae, such as crustose coralline algae (CCA) are an important settlement environment for larval coral. Additionally, Hawai'i provides significant amounts of seed for shellfish production.

## Body that approved the final set of recommendations:

Hawai'i Climate Change Mitigation and Adaptation Commission

## OA Action Plan policy context:

The State of Hawai'i OA Action Plan will be an independent plan that is referenced within larger management frameworks. Ocean acidification is mentioned in the Hawai'i Office of Planning Coastal Zone Management 2020 Ocean Resource Management Plan. Components of the OA Action Plan will be detailed within Climate Ready Hawai'i Initiative's Nature-based Resilience and Adaptation to Climate Change in Hawai'i Working Paper from the Hawai'i Climate Change Mitigation and Adaptation Commission. As part of the strategy to assess potential "Blue Carbon" ecosystems, the State of Hawai'i's Wetland Program Plan contains multiple activities that incorporate wetland habitats into climate planning efforts.

## Partners involved in helping to draft or conceive the OA Action Plan:

- Academic institutions
- Government or municipal departments
- Monitoring and science networks

# PRIORITIES & RECOMMENDATIONS

OA Alliance Toolkit themes included in the Action Plan:



Highlights from the OA Action Plan that are unique to jurisdiction/regional context:

**Inventory of monitoring efforts, impacted ecosystem types, resources, and people:**

1. Redistribute existing moorings across the Main Hawaiian Islands.
2. Align biological monitoring and conservation efforts, such as marine management areas, with water quality ocean acidification monitoring or other climate parameters.
3. Formalize a Hawai'i Ocean Acidification Monitoring Network with partners.

**Conduct vulnerability and risk assessments:**

1. Commission a Hawai'i based vulnerability assessments with an emphasis on social, cultural, and economic vulnerabilities, utilizing data from predictive and forecast models

**Support mitigation of carbon dioxide locally:**

1. Support State of Hawai'i Climate Change Mitigation and Adaptation Commission.
2. Participate in and contribute to ocean and marine solutions to Climate Ready Hawai'i Initiative, with a focus on nature-based solutions.
3. Support work on determining the potential of blue carbon ecosystems in Hawai'i.

# MEASURES OF SUCCESS, CHALLENGES & LESSONS LEARNED

## Main challenges encountered while drafting the OA Action Plan:

Developing plans that are responsive to the spatial scale--and uniqueness-- of the Hawaiian archipelago.

Ka pae ʻāina o Hawaiʻi nei (the Hawaiian archipelago) comprises of 137 islands in the north central Pacific Ocean approximately 3,000 miles from any major land mass. The Northwestern Hawaiian Islands are a collection of atolls, reefs, and small islands, designated as Papahānaumokuākea Marine National Monument, covering 582,578 square miles of both land and ocean. In the southeast are the Main Hawaiian Islands, which comprise of the majority of the land area: Niʻihau, Kauaʻi, Oʻahu, Molokaʻi, Lanaʻi, Kahoʻolawe, Maui and Hawaiʻi Island.

With limited resources it's difficult to decide where and how to monitor for coastal change. That's why our OA Action Plan includes assessing current monitoring efforts, locations, and agencies involved (State, Federal and academic). From there, we can prioritize how best to redistribute existing moorings across the Main Hawaiian Islands.

## What will success look like in 5 years?

A statewide vulnerability assessment is currently being conducted which will help inform further actions and priorities for coastal communities.

Success in 5 years would include a designated OA working group coordinated at the state level to support recommendations of the vulnerability assessment and carry forward priorities of the OA Action Plan on a rolling basis.

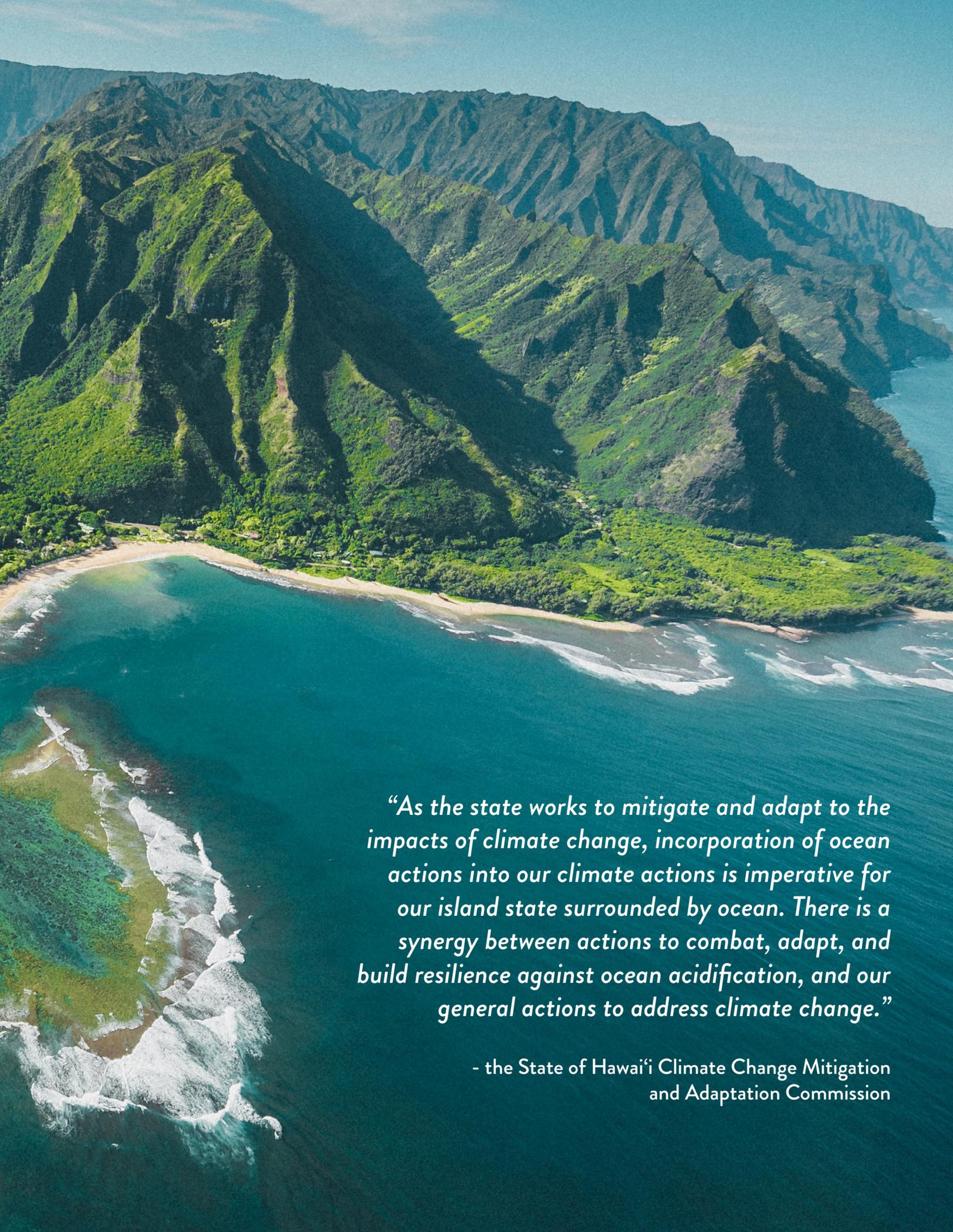
It's important that components of the OA Action Plan are embedded within larger management frameworks. For example the Coastal Zone Management Ocean Resource Management Plan; the Climate Ready Hawaiʻi Initiative on Nature-based Resilience and Adaptation; and the Hawaiʻi Climate Change Mitigation and Adaptation Commission.

## Financial investments/ commitments made to help advance proposed recommendations to-date:

There are several funded projects on Restorative Aquaculture exploring syngensis between aquaculture products and mitigation through carbon sequestration.

The State of Hawaiʻi OA Action Plan was not developed by a formal or mandated working group or task force. In order to ensure sustained implementation of the recommendations outlined, a formal working group or task force should be formed to carry out the approved OA Action Plan, including updating priorities and incorporating new data and information.

While there was meaningful voluntary involvement from departments in the drafting of the OA Action Plan, continued coordination will be needed to ensure integration and synergy of efforts.



*“As the state works to mitigate and adapt to the impacts of climate change, incorporation of ocean actions into our climate actions is imperative for our island state surrounded by ocean. There is a synergy between actions to combat, adapt, and build resilience against ocean acidification, and our general actions to address climate change.”*

- the State of Hawai‘i Climate Change Mitigation and Adaptation Commission



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through the OA Alliance. Visit:  
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This case study was published on 2022.  
However, please note that climate-ocean commitments, policies, and priorities are dynamic. They are responsive to new information, administration changes and funding. Activities reflected here may have changed or evolved since the time of this publication.