



Office of National Marine Sanctuaries

Climate Resilience Plan

2024-2026



October 2023

U.S. Department of Commerce
Gina Raimondo, Secretary

National Oceanic and Atmospheric Administration
Richard W. Spinrad, Ph.D., Under Secretary of Commerce for Oceans and Atmosphere and
NOAA Administrator

National Ocean Service
Nicole LeBoeuf, Assistant Administrator

Office of National Marine Sanctuaries
John Armor, Director



**NATIONAL
MARINE
SANCTUARIES**

Cover photo: A green sea turtle rests on the seafloor in Hawaiian Islands Humpback Whale National Marine Sanctuary. Photo: Ed Lyman/NOAA



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of National Marine Sanctuaries
1305 East-West Highway
Silver Spring, Maryland 20910

Managers of national marine sanctuaries, marine national monuments, and other marine protected areas (MPAs) around the world continue to contend with the accelerating impacts of a changing ocean while increasingly recognizing the role that MPAs play as a nature-based climate change solution. In this way, MPA's often serve as the proverbial "canaries in the coalmine" where the impacts of climate change are often detected first and solutions to addressing those impacts can be tested. The role of MPAs in reducing stressors to increase ecosystem resilience, protecting and restoring blue carbon ecosystems and carbon reservoirs, providing coastal communities protection from flooding and storms, and acting as places for critical research, stewardship, education, and outreach is increasingly recognized and leveraged by managers.

I am, therefore, pleased to share the second edition of NOAA's Office of National Marine Sanctuaries' (ONMS) Climate Resilience Plan. This new plan combines a renewed commitment to foundational climate change impact monitoring, assessment, education, and outreach, with an increased emphasis on climate change mitigation and adaptation activities. It reflects that growing recognition and the progressive movement from **assessment** and **understanding** towards **action** and **adaptation**. While climate science and assessment will continue to be critical to ONMS' work, this plan grows and expands our focus on adaptation, mitigation, and climate-smart operations.

The work outlined in this plan would not be possible without the support of sanctuary communities and sanctuary partners. In particular, we are very grateful for our NOAA colleagues in the National Centers for Coastal and Ocean Science, Integrated Ocean Observing System, Integrated Ecosystem Assessment Program, Climate Program Office, Ocean Acidification Program, and CoastWatch who are working side-by-side with MPA managers to answer many of the real-world questions we face. Working closely with our partners, we will apply the latest climate science to assess impacts to the sanctuary system, identify and implement adaptation solutions, use our outreach capacity to educate visitors and local communities about climate impacts and solutions, and take steps to reduce the greenhouse gas emissions from our operations.

This plan is a critical step forward as we seek to build the climate leadership and climate resilience of the National Marine Sanctuary System. It describes actions we will take over the coming three years to address and adapt to climate change impacts to the sanctuary system and acts as the foundation of sustained efforts to confront climate change in these unique and valuable places. We look forward to building on the foundations of the first ONMS Climate Resilience Plan and continuing to work across NOAA and with our partners to expand our efforts, and demonstrate the value of these important places to a resilient, healthy ocean and Great Lakes.

Sincerely,

John Armor
Director





Table of Contents

Table of Contents	i
Acknowledgements	ii
Chapter 1: Introduction and Guiding Principles	1
Introduction	2
Guiding Principles.....	3
Chapter 2: Goals, Strategies, and Actions	4
Goal 1: Assess current and predicted climate impacts to sanctuary resources.....	5
Goal 2: Identify and implement climate adaptation and mitigation strategies for sanctuaries .	8
Goal 3: Advance ocean and climate literacy through sanctuaries.....	10
Goal 4: Reduce greenhouse gas emissions from sanctuary facilities and operations	12
Chapter 3: Leadership, Organizational Support, Resources, and Staffing	14
Leadership and Organizational Support	15
Resources and Staffing	15



Acknowledgements

This plan reflects expertise, ingenuity, and experience from across the National Marine Sanctuary System. The Office of National Marine Sanctuaries (ONMS) would like to particularly thank the ONMS Climate Team and Climate Team Steering Committee for generating and committing to the approaches and actions outlined in this plan. Our sincere thanks are extended to the ONMS Leadership Team for their review of this document, and to ONMS' leadership broadly for their insights and support. Finally, we particularly recognize the members of the ONMS Climate Steering Committee: Lauren Wenzel, National Marine Protected Areas Center Director/ONMS Headquarters; Atuatasi-Leilei Peau, Superintendent of National Marine Sanctuary of American Samoa; Kevin Grant, Superintendent of Olympic Coast National Marine Sanctuary,; Maria Brown, Superintendent of Greater Farallones and Cordell Bank National Marine Sanctuaries, and Stan Rogers, Superintendent of Gray's Reef National Marine Sanctuary, as well as the role of Zachary Cannizzo, Climate Coordinator at the National Marine Protected Areas Center/ONMS Headquarters and Jillian Neuberger, Climate Associate at the National Marine Sanctuary Foundation/the National Marine Protected Areas Center/ONMS Headquarters in shepherding this plan from initial drafting to publication.

Chapter 1: Introduction and Guiding Principles



During the traditional annual tomol crossing, the Chumash work together to move the tomol (a traditional cedar plank canoe) from mainland California to the Channel Islands. ONMS will need to work together to understand, adapt to, communicate, and mitigate the impacts of climate change in national marine sanctuaries. Photo: NOAA

Introduction

The impacts of climate change are intensifying both globally and locally, threatening America's physical, social, economic, and environmental well-being. National marine sanctuaries and monuments are facing rising water temperatures and sea levels, water that is more acidic and contains less oxygen, shifting species, and altered weather patterns and storms. Although all of our sanctuaries and monuments must face these global effects of climate change, each is affected differently.

While climate impacts are felt at global, regional and local scales, and include many impacts beyond the management authorities of NOAA's Office of National Marine Sanctuaries (ONMS), sanctuaries, along with our partners, can play a key role in reducing and adapting to climate impacts both within and beyond our boundaries. National marine sanctuaries can serve as a type of nature-based solution to climate change. By safeguarding essential ecosystems responsible for local and global contributions to biodiversity, carbon storage, livelihoods, coastal security, cultural heritage, and more, sanctuaries contribute to reducing or removing greenhouse gas emissions and adapting and building resilience to climate change impacts.

In order to facilitate climate change-informed management across national marine sanctuaries, ONMS released its first climate resilience plan in 2021. This initial plan outlined near-term actions sanctuaries could take to integrate climate change into management, and directed ONMS to revisit and update the plan after fiscal year 2023. Now, three years after the release of ONMS' first climate resilience plan, the majority of the plan's proposed actions have been implemented and the plan has driven the establishment of processes and internal communication infrastructure to support climate action. Building upon the success of the first climate resilience plan, ONMS is now releasing a new climate resilience plan that directs actions for fiscal years 2024 through 2026. This plan is aligned with multiple goals and objectives of the new [ONMS Strategic Plan](#) (2023-2027), particularly Objectives 1.2, 1.3, 2.1, and 3.1, and is intended to support ONMS in achieving its mission in the context of a changing climate and ocean. This plan reflects input from the Sanctuaries Leadership Team, the ONMS Climate Team, as well as staff across the sanctuary system. This plan is intended to be updated in fiscal year 2026 to reflect progress towards the goals identified below.

Guiding Principles

Addressing climate change in ONMS:

- is essential for achieving our mission today and in the future;
- requires integrating actions throughout our work and accelerating our efforts;
- involves aligning and focusing existing plans and priorities in the context of a changing ocean and limited capacity and resources;
- necessitates developing strong partnerships with other NOAA offices and external partners to build our climate science, education and outreach, and management capabilities;
- demands more effective and visible communication and outreach to build understanding and support;
- calls for closely working with our Sanctuary Advisory Councils and partners to facilitate climate solutions beyond our boundaries;
- creates opportunities to engage new constituencies;
- demands that sanctuaries consider environmental and climate justice in management, and address equity, diversity, inclusion, and accessibility issues;
- involves working with local communities and their knowledge to address the causes and impacts of climate change within and beyond sanctuaries;
- requires co-production of knowledge that brings together Indigenous Knowledge and science, and the involvement of Indigenous Peoples and their knowledges in climate change research, monitoring, assessment, management, and decision and policy-making;
- involves engaging with international partners to share solutions and bridge the dialogue among climate, biodiversity and sustainable development goals;
- requires building the capacity of ONMS to address climate change now and in the future;
- promotes a creative, flexible and adaptive culture that will help us apply practical, science-based and evidence-based solutions to climate impacts; and
- builds on the foundation of past climate work within ONMS, including the previous Climate Resilience Plan, to guide and expand our efforts to address the rate and scale of change.

Chapter 2: Goals, Strategies, and Actions



Coral reefs, like the one pictured here in National Marine Sanctuary of American Samoa, are particularly endangered by climate change. Through science and assessment, climate change mitigation and adaptation, education and outreach, and more climate-smart operations, sanctuaries can help address the cause and impacts of climate change. Photo: Wendy Cover/NOAA

Goal 1: Assess current and predicted climate impacts to sanctuary resources

Outcome: Sanctuary staff and partners have a common understanding of current and predicted climate impacts to inform management.

Strategies

- 1.1 Build upon the ONMS Sentinel Site program to promote, establish, and fund a system-wide monitoring and data management program through which critical research, data management, climate observation, outreach, and management can be conducted with partners and tracked over time.
- 1.2 Integrate transformational technologies including AI, uncrewed observing systems, eDNA, emerging climate models, and others to enhance our ability to understand, monitor, and address climate change and its impacts in national marine sanctuaries.
- 1.3 Advance the understanding of climate change impacts on natural, cultural, and heritage resources.
- 1.4 Complete climate vulnerability assessments (CVAs) for all sites as a foundation for adaptation strategies.
- 1.5 Integrate climate change considerations into existing natural and social science activities, where appropriate.
- 1.6 Further formalize the integration of climate considerations, including CVAs and climate action plans, into the ONMS planning process and develop synergies across the system.
- 1.7 Work with partners, including other NOAA offices, federal and state agencies, Indigenous communities and governments, private and non-governmental organizations, and others to address ONMS climate priorities and fill technical and capacity gaps through funding opportunities, partnerships, and other means.



Researchers in Stellwagen Bank National Marine Sanctuary tag whales to learn more about their behaviors. This type of data could be used to better understand climate change impacts. Photo: NOAA Fisheries, Permit #775-1600-10

Actions for FY24-26

- 1.a Build on results of ONMS Climate Monitoring Inventory Initiative to improve the breadth, depth, and functionality of ONMS climate change monitoring. (FY26) [HQ] {*Associated Strategies: 1.1, 1.2, 1.3, 1.5, 1.7*}
- 1.b Expand climate monitoring in Flower Garden Banks National Marine Sanctuary (FGBNMS) to advance the understanding of climate change impacts in the sanctuary, including by continuing ongoing carbonate monitoring and installing a SoFar buoy in the sanctuary. (FY25) [FGBNMS] {*1.1, 1.2, 1.3*}
- 1.c Continue and expand baseline and climate monitoring of environmental conditions and heritage resources in Mallow's Bay-Potomac River National Marine Sanctuary (MPNMS) to inform understanding of climate impacts on heritage resources. (FY26) [MPNMS] {*1.1, 1.2, 1.3*}
- 1.d Complete climate impact profiles for newly designated sites. (FY26) [HQ] {*1.2, 1.3*}
- 1.e Identify climate science and information gaps at site, cross-site, and system scales deriving from CVAs and incorporate into science needs documents. (FY24-26) [HQ/Sites] {*1.3, 1.5*}
- 1.f Conduct a Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) scenario planning exercise, using information on current and predicted climate impacts to prioritize adaptation actions. (FY 24) [HIHWNMS] {*1.3, 1.4*}
- 1.g Establish a national CVA team to lead, work with, and aid sites in the design, execution, updating, and incorporation of CVAs and CVA results. (FY 24-26) [HQ/Sites] {*1.4*}
- 1.h Complete CVAs for all sites. (FY 26) [HQ/Sites] {*1.4*}
- 1.i Develop guidance for updating CVAs (FY24) [HQ/GF-CBNMS] {*1.4*}
- 1.j Develop best practices for the incorporation of climate change benefits and costs into economic assessment to develop a broader understanding of climate change impacts in, and benefits provided by, sanctuaries. (FY 25) [HQ] {*1.5, 1.6*}
- 1.k Develop guidance and provide support to ensure increased incorporation of climate change considerations into condition reports, management plans, and other planning and management documents to facilitate the improved alignment of these products (FY 24-26) [HQ] {*1.5, 1.6*}
- 1.l Track and document, across the system, the meaningful application of CVA results to management actions and priorities to better document how CVAs are informing sanctuary management. (FY 24-26) [HQ/WCR/Sites] {*1.6*}
- 1.m Integrate climate change into an updated sanctuary nomination process including the development of guidance for incorporating climate change into nominations. (FY26) [HQ] {*1.6*}
- 1.n Work with the Climate Program Office's Climate Science and Information for Sanctuaries Task Force to develop and produce a climate information dashboard that is useful, usable, and used by sites. (FY26) [HQ] {*1.7*}
- 1.o Leverage NOAA and external capacity in seeking support from detail, fellowship, and other programs to provide additional capacity and support site-based activities including CVAs and adaptation planning. (FY24-26) [HQ/Sites] {*1.7*}
- 1.p Co-develop and convene a system-wide meeting focused on bringing together Indigenous Peoples from across the country and territories to hear their thoughts on

climate change, concerns, needs, and approaches and to aid in building partnerships.
(FY26) [HQ/Sites] {1.7}



Monitoring environmental variables that can inform us about climate change using technology like this Ocean Acidification Buoy in the National Marine Sanctuary of American Samoa, deployed by NOAA's Ocean Acidification Program is an important way ONMS can track and understand climate change.
Photo: NOAA

Goal 2: Identify and implement climate adaptation and mitigation strategies for sanctuaries

Outcome: Sanctuary staff and their partners actively pursue mission-aligned climate adaptation and mitigation strategies in sanctuaries and monuments to maintain ecosystem health and services.

Strategies

- 2.1 Develop and adopt shared principles, approaches, and strategies around mitigation, adaptation, and restoration across the sanctuary system.
- 2.2 Identify priority mitigation, adaptation, and restoration activities at all sanctuaries.
- 2.3 Develop capacity around assessing, conserving, and restoring coastal blue carbon habitats, as a priority at the nexus of adaptation, mitigation, and restoration.
- 2.4 Partner with sanctuary stakeholders, including local communities, and regional actors to engage diverse perspectives, pool knowledge, and leverage resources for adaptation, mitigation, and restoration activities.
- 2.5 Partner with Indigenous Peoples to develop culturally-relevant adaptation, mitigation, and restoration activities that preserve or enhance key ecosystem services within sanctuaries.
- 2.6 Implement, monitor, improve, and report on priority climate adaptation, mitigation, and restoration activities in sanctuaries.



Protecting seagrasses, like this seagrass bed in Florida Keys National Marine Sanctuary, and other blue carbon habitats provide a number of climate adaptation and mitigation benefits. Photo: NOAA

Actions for FY24-26

- 2.a Develop resources on the adaptation guidance needs identified by sites, including: transitioning from CVAs to adaptation planning; avoiding maladaptation and monitoring the performance of adaptation projects; adaptation for offshore sites; adaptation for cultural heritage sites; applying the Resist-Accept-Direct framework in marine contexts; adaptation that directly responds to climate change impacts; and including Indigenous knowledge in adaptation planning. (FY24-26) [HQ] *{Associated Strategies: 2.1, 2.5}*
- 2.b Provide resources, and access to expertise and peer learning, on adaptation and climate-informed restoration by facilitating the ONMS Climate Change Adaptation Community of Practice and identifying supplemental opportunities for knowledge exchange with partners and other protected area programs. (FY24-26) [HQ] *{2.1, 2.6}*
- 2.c Develop guidance for the incorporation of climate change considerations into restoration plans and activities. (FY 25) [HQ] *{2.1, 2.6}*
- 2.d Create implementation guidance for adaptation activities that includes recommendations for partnership development and adaptation efficacy monitoring. (FY25) [HQ] *{2.1, 2.6}*
- 2.e Issue a report on the current and projected impacts of climate change on sanctuary resources, including strategies and resources needed to address them. (FY25) [HQ] *{2.1, 2.2, 2.6}*
- 2.f Integrate adaptation, mitigation, and restoration activities into management plans during the review process and by leveraging CVA results. (FY24-26) [HQ/Sites] *{2.2}*
- 2.g Develop adaptation plans at all west coast region sites in response to CVAs, with specific management actions at site and regional scales. (FY24-26) [WCR/GFCBNMS/OCNMS/MBNMS/CINMS] *{2.1, 2.2}*
- 2.h Integrate climate change considerations into permitting processes, through both considering climate change impacts when reviewing permits and by facilitating permitting for adaptation, mitigation, and restoration. (FY24-26) [HQ] *{2.1}*
- 2.i Develop principles, guidance, and tools for identifying, funding, implementing, and evaluating climate-informed restoration approaches and activities. (FY24-26) [HQ] *{2.2}*
- 2.j Develop an interactive national marine sanctuary system blue carbon map that includes spatial extent and carbon storage information, and highlights existing and future opportunities for research, conservation, restoration, and community engagement. (FY26) [HQ] *{2.3}*
- 2.k Publish Part 3 of the Blue Carbon in Marine Protected Areas series, a report on evaluating seabed sediment carbon and identifying carbon hotspots, which will contribute to efforts to assess and conserve blue carbon in sanctuaries. (FY24) [GF/CBNMS] *{2.3}*
- 2.l Identify opportunities to partner with Sanctuary Advisory Councils, Indigenous governments and communities, and other partners and stakeholders on sanctuary adaptation and restoration actions. (FY24-26) [HQ] *{2.4}*

Goal 3: Advance ocean and climate literacy through sanctuaries

Outcome: NOAA staff, partners, and volunteers are effectively communicating about climate impacts and resilience within and beyond sanctuary boundaries, resulting in an increasingly engaged public making climate-informed decisions in their daily lives.

Strategies

- 3.1 Develop and deliver messages on how climate change is impacting sanctuaries and how sanctuaries can be part of the solution to adapt to, lessen, and/or mitigate climate change impacts.
- 3.2 Develop and deliver messages about how communities, partners, and stakeholders can reduce climate change impacts and increase resilience in sanctuaries.
- 3.3 Train our staff, partners, and volunteers to ensure they understand the latest climate science, evidence-based information, and effective communication strategies, and are communicating in a voice that is consistent across sites.
- 3.4 Assess and leverage existing education programs to emphasize ocean and climate literacy.
- 3.5 Integrate climate messages, science, evidence-based information, and actions into all appropriate ONMS outreach, education, interpretation, and management materials.



Communicating with sanctuary visitors, like these visitors to the historic Point Arena lighthouse near Greater Farallones National Marine Sanctuary, about the impacts and causes of climate change is one important way sanctuaries can support climate action. Photo: Matt McIntosh/NOAA

Actions for FY24-26

- 3.a Develop and widely disseminate public outreach materials (e.g., infographics, videos, and web materials) on how sites, with partners, Indigenous Peoples, and local communities, are addressing climate change to increase support and funding for Sanctuaries as part of the climate change solution. (FY24-26) [HQ/Sites] *{Associated Strategies: 3.1, 3.2}*
- 3.b Update, disseminate, and provide training for all relevant staff on ONMS-specific, national and site-customizable, climate change communications plans, framing and tone guidance, talking points, best practices, case studies, and resources. (FY24) [HQ] *{3.1, 3.2}*
- 3.c Integrate information on the community and socio-economic impacts of climate change into communication materials to increase the reach and relevance of these materials. (FY24-26) [HQ] *{3.2, 3.5}*
- 3.d Continue to host internal learning exchanges and external webinars on climate change issues and solutions. (FY24-26) [HQ] *{3.3}*
- 3.e Develop additional resources and training for staff to enhance staff capacity and understanding with respect to climate change impacts and actions. (FY24-26) [HQ] *{3.3}*
- 3.f Provide training and resources for staff on Indigenous Knowledge and co-production of knowledge in the context of climate education and outreach to inform co-producing educational materials that include Indigenous Knowledge and climate change solutions. (FY24-26) [HQ/] *{3.3}*
- 3.g Continue to support education and training through a B-WET grant provided by the NOAA Chesapeake Bay Office to The Mariners' Museum and Park to empower students to become stewards of their local watershed by growing eelgrass in the classroom and planting it in a shoreline restoration project. (FY24-25) [MNMS] *{3.4, 3.5}*
- 3.h Engage and support NOAA Ocean Guardian Youth Ambassadors in leading on climate change issues and stewardship actions at their schools and in their communities. (FY24-26) [HQ/Sites] *{3.4}*
- 3.i Collaborate with the ONMS Education Team to identify and prioritize opportunities to integrate the latest climate science into ONMS education and outreach programs. (FY24-26) [HQ/Sites] *{3.5}*
- 3.j Continue integrating climate change themes into education, outreach, and interpretive materials at MPNMS to increase the climate change literacy of sanctuary visitors. (FY24-26) [MPNMS] *{3.5}*

Goal 4: Reduce greenhouse gas emissions from sanctuary facilities and operations

Outcome: ONMS reduces its greenhouse gas (GHG) emissions, is on a path to achieve carbon neutrality, and is establishing itself as a global leader in climate-smart facilities and operations (including vehicles and vessels).

Strategies

- 4.1 Regularly and consistently track ONMS direct Scope 1¹ and indirect Scope 2² greenhouse gas emissions for all sites.
- 4.2 Track other Scope 3³ indirect emissions on an ad hoc basis based on site capacity and interest.⁴
- 4.3 Monitor and evaluate ONMS GHG emissions and mitigation efforts.
- 4.4 Integrate GHG emissions reductions into decision making related to ONMS operations (e.g., facilities planning and management, staff travel, vehicle and vessel acquisitions, and telework plans and policies).
- 4.5 Dedicate resources to reduce GHG emissions.



Sanctuary facilities, like the Hawaiian Islands Humpback Whale National Marine Sanctuary Visitor Center pictured here, are working to reduce their greenhouse gas emissions while adapting to the impacts of sea level rise. Photo: NOAA

¹ Scope 1 emissions are direct greenhouse gas emissions from sources that a site controls (cars, ships, furnaces).

² Scope 2 emissions are indirect greenhouse gas emissions resulting from purchased electricity use.

³ Scope 3 emissions are all other indirect greenhouse gas emissions not captured in scopes 1 and 2.

⁴ For a full definition of emissions scopes, refer to the [Greenhouse Gas Protocol](#) or the Environmental Protection Agency's [Greenhouse Gas GHG Inventory Development Process and Guidance](#).

Actions for FY24-26

- 4.a Conduct annual greenhouse gas emissions inventories for the direct Scope 1 and indirect Scope 2 emissions for every sanctuary using the Federal Energy Management Program/Annual Energy Management Data Report Tool to inform reducing emission and setting emissions reduction goals. (FY24-26) [HQ/Region/Sites] {*Associated Strategies: 4.1*}
- 4.b Conduct ad hoc inventories of other indirect Scope 3 greenhouse gas emissions at multiple sanctuaries to inform emission reductions and setting emissions reduction goals. (FY24-26) [HQ/Region/Sites] {*4.2*}
- 4.c Identify, quantify, and report annually on greenhouse gas emissions across the program to inform emission reductions and setting emissions reduction goals. (FY24-26) [HQ/Region/Sites] {*4.3*}
- 4.d Set system-wide greenhouse gas emissions reduction goals based on the results of the greenhouse gas emission inventories. (FY25-26) [HQ] {*4.3*}
- 4.e Create and implement a plan to reduce greenhouse gas emissions from ONMS facilities and operations (vessels and vehicles). (FY25) [HQ] {*4.4*}
- 4.f Identify strategies, technologies, and funding opportunities to reduce greenhouse gas emissions focusing on the largest contributors. (FY25-26) [HQ] {*4.4*}
- 4.g Integrate climate change considerations into operational decision making and ongoing facilities assessment and space utilization planning (including potential for reduced carbon footprint through increased telework). (FY24-26) [Sites/Regions/HQ] {*4.4*}
- 4.h Document costs and savings from implementing emission reduction measures to inform decisions that impact emissions. (FY26) [HQ] {*4.3*}
- 4.i Support identifying, evaluating, and addressing facility vulnerability to climate change. (FY26) [HQ] {*4.4*}

Chapter 3: Leadership, Organizational Support, Resources, and Staffing



Climate change also impact shipwrecks found in national marine sanctuaries, such as this wreck in the Thunder Bay National Marine Sanctuary. Protecting the diversity of culturally, environmentally, and economically significant resources within the National Marine Sanctuary System requires resources, staff, and institutional support. Photo: Tane Casserley/NOAA

ONMS' climate strategy seeks to both address climate change in the context of sanctuaries, and establish sanctuaries as global and national leaders in climate-change informed marine protected area management. Implementation of this strategy will be led by the ONMS Climate Team. The Climate Team includes staff from headquarters and each staffed sanctuary and is overseen by a Steering Committee. The Climate Team has four working groups that cover science and assessment, adaptation and mitigation, education and outreach, and climate-smart operations.

Building the capacity to deliver on ONMS' climate goals will require investment at the site, regional, and headquarters levels, as part of ongoing and new funding for science, management, education, facilities, and vessels.

Specific recommended near-term actions (FY24-26) include:

Leadership and Organizational Support

- **Continue collaboration with NOAA Climate Program Office (CPO), National Marine Sanctuary Foundation (NMSF), and other agency and external partners.**
 - ONMS should continue to grow partnerships with CPO, NMSF, National Centers for Coastal Ocean Science (NCCOS), NOAA Fisheries, and others to meet climate science, management, and communication needs. (FY24-26) [HQ/Regions/Sites]
- **Communicate with NOAA leadership about ONMS' role in addressing climate change adaptation and mitigation.**
 - Advocate and represent the role of sanctuaries, and the broader role of MPAs, in climate resilience, environmental justice, and nature-based solutions. (FY24-26) [HQ]
- **Demonstrate national leadership on MPAs and climate change.**
 - Develop resources on how to integrate climate change into MPA management. (FY24-26) [HQ]
- **Demonstrate international leadership on MPAs and climate change.**
 - Continue to engage internationally to support cooperation on climate through the International Partnership on MPAs, Biodiversity and Climate Change; the Commission for Environmental Cooperation; the North American MPA Network; the MPA Agency Partnership; sister sanctuaries; and other mechanisms. (FY24-26) [HQ/Regions]

Resources and Staffing

- **Ensure ONMS has the capacity and funding to continue to assess, adapt to, communicate, and mitigate climate change in the national marine sanctuary system now and into the future.**
 - Develop a strategy to integrate climate staffing needs into ONMS staffing plans and strategies. (FY26) [HQ/Regions]

- Leverage and facilitate NOAA and external capacity and programs to address capacity gaps through funding and other means including LANTERN and other programs. (FY24-26) [HQ/Regions/Sites]
- Pursue internal and external funding opportunities, including by working collaboratively with partners such as CPO, NMSF, NCCOS, U.S. Integrated Ocean Observing System (IOOS), and others, to accomplish the goals, strategies, and actions laid out in this plan. [HQ/Regions/Sites]
- Establish, and/or work with other NOAA or outside agency partners to establish, a grant program for climate change focused activities in sanctuaries. (FY25) [HQ]



Strong partnerships are critical to addressing climate change in sanctuaries. By working together, like these volunteers helping with debris clean up in Olympic Coast National Marine Sanctuary, we can make our sanctuaries more resilient in the context of a changing ocean. Photo: Karlyn Langjahr/NOAA.



NATIONAL MARINE
SANCTUARIES

AMERICA'S UNDERWATER TREASURES