



# Action Agenda for a Blue-Green Future

## U.S. Federal Ocean-Climate Recommendations for 2021

Executive Summary | September 2020

Full report available at [oceanconservancy.org/climate/](https://oceanconservancy.org/climate/)



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**G**reenhouse gas pollution is the greatest threat to the ocean and the communities that rely on its health. Sea level rise and storms are threatening coastal zones and taking a disproportionate toll on those who are already facing social and economic inequities. Meanwhile, ocean warming, deoxygenation, and acidification are profoundly damaging ocean ecosystems.

The next Administration and Congress will have an enormous responsibility. In the wake of the pandemic and its economic fallout, it is essential for them to look beyond an economic reset and toward a sustainable future, setting the country on a steep trajectory to phase out greenhouse gas pollution by midcentury. The power of the ocean can support this work.

Below are the key areas of ocean-based mitigation and adaptation that the Administration and Congress should pursue to complement the full suite of climate policies necessary for economy-wide decarbonization. These include advancing blue carbon storage; reducing emissions from offshore oil and gas; supporting offshore renewable energy; reducing emissions from shipping and ports; and addressing the climate impacts of plastic pollution. They also include advancing climate-smart marine protected areas; managing flooding and sea level rise; developing climate-ready fisheries; and improving ocean and coastal water quality.

- The full report “Action Agenda for a Blue-Green Future” includes the complete set of policy recommendations.

## Advancing Blue Carbon Storage

A key part of avoiding additional carbon dioxide emissions is to achieve zero net loss of coastal “blue carbon” systems, including seagrasses, salt marshes, and mangroves. Per unit area, blue carbon stocks sequester an extremely large amount of biological carbon in organic material. Yet, in the United States, wetlands losses of nearly 14,000 acres per year have been recorded. Loss of blue carbon systems to development must be only in extreme cases where no other reasonable alternatives exist, and compensatory restoration must be used to replace, rehabilitate, or acquire the ecological and functional equivalent of lost systems. It is imperative that steps to achieve zero net loss do not include token efforts to replace lost systems.

There is a variety of accounting protocols and policy guidance emerging for incorporating blue carbon storage and sequestration into climate mitigation strategies. However, U.S. federal agencies have not yet adopted a consistent approach to inventorying, monitoring, and quantifying the services provided by blue carbon systems that would provide a robust basis for assessing U.S. aquatic environments’ role in mitigating climate change.

- Key priorities for the Administration should include a) adopting a unified approach for blue carbon system quantification and planning and b) directing agencies to allow the destruction or degradation of blue carbon systems only when no reasonable alternatives exist, in pursuit of zero net loss.

## Reducing Emissions from Offshore Oil and Gas

Offshore oil and gas activities create overlapping threats to the ocean. Spills and other pollution directly threaten important ecosystems, resources and communities. At the same time, emissions from burning the oil and gas produced contribute to climate change and ocean acidification. The pollution and health effects from these activities disproportionately affect disadvantaged communities and communities of color. The continued viability of the ocean depends on reducing greenhouse gas emissions, which requires a rapid and responsible transition from fossil fuels to renewable energy sources. Laws, regulations and policies must be updated to ensure a fair and just transition away from oil and gas operations on the Outer Continental Shelf (OCS) and to

properly account for climate change and other impacts to the ocean and communities.

- Key priorities for the Administration should include a) not expanding Offshore Continental Shelf (OCS) leasing in the 2022–2027 offshore leasing program and b) preventing future leasing by permanently withdrawing areas of the OCS.

## Supporting Offshore Renewable Energy

Offshore wind is a critical part of making a rapid transition to clean energy and meeting low-carbon electricity goals. Once successfully deployed, it will be a key source of renewable energy to densely populated coastal areas with high energy demands, while also creating well-paying, local jobs and displacing dirtier energy sources that have disproportionate impacts on communities of color and other marginalized groups. The U.S. wind industry is still in its early stages, and reaching a goal of net-zero in the electricity sector will require a dramatic increase in the pace and scale of offshore wind development. Recent calls to double offshore wind by 2030 are ambitious but achievable: the 2015 Department of Energy “Wind Vision” report found the potential to develop 22 GW by 2030 and 86 GW by 2050.



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Hurdles remain to deploying responsible offshore wind at the levels necessary to meet clean energy goals. There are a variety of policies, such as establishment of a national clean energy standard, strengthened tax credits, and investments in power transmission and technology research, that would address some of the barriers. But strengthening planning, engagement, permitting, and monitoring practices is also needed to help mitigate or avoid negative consequences of wind infrastructure construction and provide the increased certainty

developers need to successfully deploy offshore wind at the scale necessary to meet clean energy goals.

Thankfully, the foundations for increasing certainty in the regulatory process are already available. Regional ocean plans, for example, have been developed for the Northeast and Mid-Atlantic that provide the information to properly site offshore wind farms to reduce local impacts to ecological resources and minimize conflict with other ocean uses.

- Key priorities for the Administration should include a) implementing a comprehensive planning and siting strategy for power transmission for offshore renewable energy and b) directing the increased deployment of sustainably sited offshore wind projects through agency actions that enhance permitting certainty, strengthen stakeholder and review processes, and mitigate environmental impacts.

## Reducing Emissions from Shipping and Ports

Shipping transports more than 90% of global trade by volume and has impacts on both our ocean and our climate. As a sector, shipping accounted for approximately 2.6% of global carbon dioxide emissions in 2015, roughly equivalent to Germany's national emissions. Shipping to and from U.S. ports by all vessels of all flags represented approximately 4.1% of all international shipping emissions in 2015 (38.9 million metric tons of carbon dioxide equivalent). Additionally, maritime shipping accounts for a significant and growing portion of black carbon, a potent short-lived climate pollutant. After carbon dioxide, black carbon is the second largest source of shipping's contribution to climate change, and it has an especially adverse impact on the Arctic. The next Administration should work to reduce the sector's current greenhouse gas emissions and develop long-term strategies to urgently move the industry towards full decarbonization.

- Key priorities for the Administration should include a) supporting high ambition proposals for greenhouse gas emissions reductions within the International Maritime Organization and b) enacting a Monitoring, Reporting, and Verification (MRV) scheme for vessels entering the U.S. Exclusive Economic Zone.

## Emerging Issue Spotlight: Climate Impacts of Plastic Production

Plastic pollution and climate impacts create dual threats to ocean ecosystems. More than 99% of all plastics are derived from ethane, a petrochemical produced from fossil fuels, and the production and disposal of fossil fuel-based plastics result in significant greenhouse gas emissions. By 2050, the total greenhouse gas emissions from plastic could be greater than 50 gigatons, which is equivalent to 15% of the global carbon budget. Governments and the private sector need to substantially reduce greenhouse gas emissions from plastics production while also taking steps to prevent plastics from entering—and contaminating—the ocean.

- Key priorities for the Administration should include a) ensuring that emissions reduction policies do not have the unintended consequence of incentivizing enhanced plastics production; b) incentivizing the use of renewable energy in the existing plastics manufacturing sector; and c) optimizing end-of-life management for plastics to not exacerbate climate change.

## Advancing Climate-Smart Marine Protected Areas

Scientists, coastal residents, and resource managers have long recognized the important role of area-based conservation, particularly marine protected areas (MPAs), for habitat, species, and biodiversity conservation. Increasingly, research is showing that these protections also offer a range of important climate adaptation and mitigation benefits, meriting MPAs and other area-based conservation tools an important place in the climate policy toolbox. MPAs can provide ecosystem and coastal community adaptation benefits that address impacts of sea level rise and changing fisheries. At the same time, protected areas have mitigation potential if they are designed to prevent the loss—or allow for the restoration, migration, and expansion—of mangroves, seagrasses, and salt marshes.

Ocean ecosystems are fast reaching a tipping point. In order to ensure a healthy and productive ocean in the

face of the biodiversity and climate crises, more of the ocean needs to be protected. Research suggests that to secure the ocean's resilience in the face of changing conditions, and to meet a range of environmental and economic goals, at least 30% of the global ocean needs to be protected. Approximately 26% of the U.S. ocean is protected, but more work is needed to ensure these areas effectively capture and conserve the full range of biological diversity in U.S. marine waters, while maximizing climate benefits. For example, existing protected areas in U.S. waters are significantly skewed geographically.

- Key priorities for the Administration should include a) developing and implementing a strategy to protect at least 30% of all U.S. lands and ocean areas by 2030 that considers the different starting point, challenges, and opportunities involved in achieving this goal in the ocean and b) ensuring processes for establishing protected areas respect Indigenous rights, include provisions for Tribal-led marine protection mechanisms, consider public access opportunities, and provide meaningful opportunities for public and stakeholder engagement.

## Managing Flooding and Sea Level Rise

Sea level rise, frequency of tidal flooding, and intense rainfall flooding are projected to intensify and continue to pose threats to communities across the country. Coastal areas account for less than 10% of the total land in the contiguous United States and are home to roughly 40% of the country's population. In order to protect communities, a federal strategy with secured funding should be established to support and advise state actions aimed at building resilient infrastructure or implementing adaptation initiatives. Studies and projects looking to armor coastlines should maintain levels of access for all, including valuable economic activities such as fishing and ocean-based tourism. It is notable that investments to prepare for sea level rise and more frequent flooding can create a substantial number of jobs and engage local contractors.

- Key priorities for the Administration should include a) creating a sea level rise and flood management task force, b) adding flood-resilient requirements to DOT-funded projects, and c) conserving flood-prone undeveloped coastal areas to reduce impacts of sea level rise and storm surge.

## Developing Climate-Ready Fisheries

Climate change is already affecting our fisheries and the food security, livelihoods, and opportunities for recreation they provide. Fishermen are finding that target fish populations have moved from their usual fishing grounds, are producing fewer offspring, and are smaller and less resilient. Important fish habitats like corals and kelp forests are also being damaged by warming and acidifying waters, changes in currents, harmful algal blooms and increased nutrient pollution. The United States, a world leader in science-based fishery management under the Magnuson-Stevens Fishery Conservation and Management Act, must rise to face this systemic challenge to the foundations of fisheries sustainability.



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Preparing and adapting fisheries for climate change yields broad benefits. Climate-ready fisheries will continue to provide jobs and food security that are important to economic resilience and can buffer coastal communities. Climate-ready fisheries, if developed in partnership with Tribes, can also support cultural traditions and support Tribal and subsistence uses of fishery resources. Without action, it will be increasingly difficult to maintain sustainable fishing.

- Key priorities for the Administration should include a) providing comprehensive guidance to managers for how to incorporate climate change into management, b) accelerating the use of proven science and management tools that can improve understanding of anticipated changes and plausible outcomes, and c) increasing coordination within NOAA on climate and fisheries.

## Addressing Ocean Acidification and Coastal Water Quality

U.S. water quality has improved greatly since the passage of the Clean Water Act (CWA) in 1972, but climate change is now exacerbating many of the water quality challenges that remain. Point sources of pollutants have become mostly well regulated, substantially decreasing the amount of man-made toxins entering national waters. However, non-point sources of pollution from diffuse origins remain difficult to regulate, yet their impacts are massively compounded by climate change and profoundly affect coastal and oceanic water quality.

Atmospheric carbon dioxide from fossil fuel burning dissolves in the surface ocean to drive ocean acidification. Coastal acidification is a product of this plus nearshore processes that alter aquatic pH and carbon dioxide levels. Non-point sources often release chemicals and persistent organic pollutants, nitrogen and phosphorus from sewage and agriculture, and even high-CO<sub>2</sub>, low-pH fresh water to the coastal zone via surface and groundwater. Ocean acidification has already jeopardized the West Coast's multimillion-dollar Pacific oyster aquaculture industry, which employs thousands in coastal towns and helps sustain Tribes from California to Alaska.

- Key priorities for the Administration should include a) investing in science to understand and manage nonpoint pollution in aquatic environments

experiencing climate impacts and b) funding for storm- and wastewater infrastructure upgrades to accommodate current and future anticipated conditions.

## Setting a Global Example

In addition to implementing an agenda to protect the climate and ocean domestically, the Administration will also have several near-term opportunities to set a global example for ocean-climate stewardship. For example, the Administration should champion the emerging effort to create an ocean-smart U.N. Framework Convention on Climate Change (UNFCCC) and Paris Agreement. The Administration should also formulate its own ocean-climate commitments that could supplement the next U.S. nationally determined contribution (NDC), such as sector-specific commitments on achieving zero loss of wetlands, decarbonizing ports, or scaling up well-sited offshore renewable energy. In addition, the Administration should join and steer ocean-climate ambition coalitions, such as the Pacific Rim Ocean-Climate Action Partnership, to serve as a North Star for ocean-climate stewardship globally.

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