



CES COASTS AND CLIMATE CHANGE TALKING POINTS

Encompassing over 640 million acres, America's public lands contain a diversity of wildlife, landscapes, and natural human history. Four federal agencies manage these lands—the Bureau of Land Management, the U.S. Forest Service, the Fish and Wildlife Service, and the National Park Service. They are essentially responsible for the long-term health of these lands and resources, but every American has a role and a right to protect them.

WHY COASTAL REGIONS?

Coastal regions are deeply interconnected with the land and the ocean, as well as the human activities taking place in both realms. And in terms of climate change, these coastal regions are literally taking the heat.

We are seeing tangible changes to not only landscape health, but also to the economic and cultural well-being of coastal communities. Ultimately, the health of a coastal ecosystem is an indicator of both the land and the community's health. Because of climate change, oceans and coastal regions may no longer be able to sustain the many species and human communities who depend on their resources.

It's all connected...

NORTHWEST COASTAL PUBLIC LANDS

Marine Protected Areas (MPAs) are above and below water and are set aside primarily for the conservation of habitat and species.

- A **fully-protected MPA** restricts extractive or destructive activities and keeps negative impacts to a minimum (comparable to a wilderness designation).
- A **highly-protected MPA** allows only very light extractive activities, such as subsistence or very small amounts of recreational fishing.
- There are over 1,700 MPAs in the U.S., but only **3%** of U.S. oceans are fully protected while another **20%** are highly protected.
- The West Coast (California, Oregon, and Washington) has the highest number of MPAs of any region.



Coastal Regions as a Cultural Landscape

The ocean supplies food, jobs, and recreation for many coastal communities.

- Ocean-based tourism and recreation contribute about \$124 billion to the U.S. economy each year, and employ almost 2.4 million Americans.
- Tribes and Indigenous people are especially impacted economically and culturally by deteriorating coastal ecosystems, as much of their historical and current way of life is dependent on healthy oceans, clean beaches, and abundant fish and wildlife.

PUBLIC LANDS IN A CHANGING CLIMATE

Although many people imagine public lands to be pristine, protected landscapes, they face a variety of challenges that limit the landscapes' ability to withstand the impacts of climate change.

Oceans have absorbed over **90% of the heat and nearly a third of the carbon dioxide** from our greenhouse gas emissions. The result: an ocean that is warmer, more acidic, less productive, and increasingly starved of oxygen.

- Forests, marshes, wetlands, and grasslands all absorb carbon dioxide from the atmosphere, serving as a carbon sink. We are currently removing and burning far more carbon from the earth beneath these ecosystems than these same ecosystems can absorb. Fossil fuel production on public lands introduces **4.5x** the carbon into the atmosphere than our public land can capture.
- Currently, **extractive fossil fuel activities on public lands make up 25% of U.S. emissions.** These numbers continue to rise.



In the Pacific Northwest, coastal regions are increasingly seeing:

- **Coastal erosion and sea-level rise**, which drastically alters estuary habitats as salt water moves into areas that were previously dominated by fresh water. Sea-level rise threatens to displace coastal communities to higher elevations—as a result, by 2100, sea-level rise of 3 feet would place over 4 million people at risk of inundation.
- **Extreme weather events**, including storm surges and unprecedented flooding. This will continue to be a financial burden on coastal communities, as preparing for these climate impacts could cost billions of dollars.
- **Ocean acidification and temperature rise**, as oceans continue to absorb excess CO₂ from the atmosphere. This jeopardizes the health of oceanic and coastal species, as well as the coastal communities who are dependent on those species for their economies and subsistence.
- **Disproportionate impacts to frontline communities**, including Indigenous peoples, those dependent on natural resources for their livelihoods, and the economically disadvantaged, among others.
 - Vulnerable communities across the planet are already experiencing the harshest impacts of climate change, and yet are often among the lowest emitters of fossil fuels.

BUILDING COASTAL RESILIENCE

Despite these losses, coastal lands and communities can be made more resilient to climate change.

- **Create NEW Marine Protected Areas.** Recent research suggests that the target established by the Convention on Biological Diversity and Sustainable Development should be raised from 10% ocean protection to at least 30% to properly safeguard marine ecosystems in the long term.



Nature-Based Climate Solutions

There is no doubt that climate change will have a dramatic impact on Northwest coastal communities and ecosystems.

However, these ocean and coastal ecosystems have an important--and positive--role to play in a changing climate:

- **“Blue” Carbon Sinks** are coastal ecosystems that capture carbon from the atmosphere via photosynthesis and hold it--first in living plants and, as those plants die and decay, carbon is then stored in soils.
 - Coastal wetlands store organic carbon in deep layers for millennia. They account for almost 50% of carbon storage in ocean sediments despite only occupying only 0.2% of ocean area!
- Coastal ecosystems such as **tidal marshes, seagrass beds, tidal forests, and oyster reefs** are key nature-based solutions to climate change in coastal regions.

Blue Carbon is threatened by changes brought on by climate change. Long-term sea-level rise will decrease these coastal regions’ reserves of carbon. This is a concern if wetlands can’t successfully migrate with rising sea-levels due to being bound by terrain and human development.

Coastal ecosystems can only adapt to climate change and continue to sequester carbon if they have the room to adapt.

Here are a few ways to restore the health of these ecosystems and enhance climate resilience:

- Forest marsh replanting projects.
- Eelgrass bed restoration.
- Oyster reef restoration.
- Dike removal and wetland connectivity enhancements.