

# Five Reasons to Protect Kelp

Undersea forests that sequester carbon, support fisheries, and protect shorelines are dying at alarming rates

The kelp forest is one of the most productive ocean ecosystems on Earth, supporting a greater diversity of plants and animals than almost any other marine habitat. Giant kelp and bull kelp also play an important role in protecting coastal areas in California, Oregon, and Washington... and helping to sustain the fishing and tourism economy.

Along the West Coast, however, bull kelp has been decimated as warming ocean waters led to an outbreak of sea star wasting disease that all but eliminated this crucial purple urchin predator. As a result, the urchin population exploded and consumed vast swaths of the kelp forest. In the past six years, more than 90% of the bull kelp in Northern California has disappeared. Here are five services that kelp forests provide to nature and people, demonstrating why we need to work to restore and protect kelp.

## 1. Absorb carbon dioxide

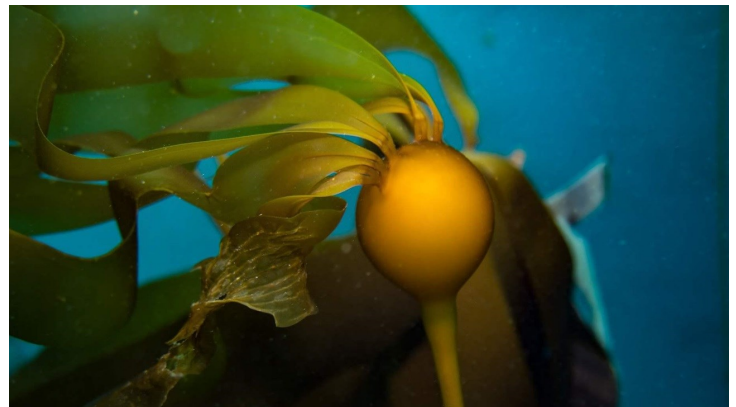
Kelp and other types of marine vegetation absorb an estimated 20 times more carbon dioxide per acre than forests on land, making it a powerful force in storing this persistent greenhouse gas and mitigating the effects of climate change. In addition, studies suggest that kelp sequesters more carbon than all other marine plants combined.

## 2. Shelter sea life

Kelp forests provide food, nursery areas, and shelter—including protection from predators and storms—for hundreds of commercially and recreationally important fish species as well as West Coast marine wildlife.



Sardines find food and shelter in the kelp forests near Anacapa Island, part of the Channel Islands National Marine Sanctuary in California. Photo: Robert Schwemmer/NOAA National Marine Sanctuaries



Bull kelp, one of the two predominant species of this important submerged algae, absorbs climate-warming gases and provides other vital ecosystem services. Photo: Laura Tesler



Fish, such as this female greenling, find shelter from predators and storms in the kelp forests of Puget Sound, Washington. Photo: Laura Tesler

### 3. Protect the shoreline

Nearshore kelp forests serve as a buffer against waves, a particularly valuable function during the storms that frequently batter the West Coast. Kelp also helps to prevent coastal erosion and filter pollutants from the water.

### 4. Support coastal economies

Kelp forests provide vital habitat for red abalone and red urchins, which are prized by fishermen, along with other important species such as rockfish and cabezon.

### 5. Fuel the food web

Kelp forests are an important part of the marine food web, absorbing nutrients such as nitrogen from the water and making them available to a variety of species that feed on their leaves (blades).

This, along with kelp's role in mitigating the impacts of climate change, nurturing fish and wildlife, and supporting coastal economies, makes kelp protection and restoration vital to the future of Oregon's nearshore marine environment.

*Extracted from an article by Jennifer Browning and Gillian Lyons. Browning directs The Pew Charitable Trusts' project on conserving marine life in the United States, Puerto Rico, and the Caribbean. Lyons works on Pew's project to conserve marine life in the United States.*

The Audubon Society of Lincoln City is working with local communities and other stakeholders to safeguard habitats where kelp and other marine vegetation thrive. Join us in supporting the Oregon Ocean Policy Advisory Council's efforts to conserve our rocky shores.



Kelp forests have long been an important part of the nearshore habitat. Photo: Feifei Cui-Pauluzzo



Red abalone, and other economically important marine species, feed on pieces of kelp that drift their way off the coasts of Northern California and Southern Oregon. Photo: Steve Lonhart/NOAA Monterey Bay National Marine Sanctuary



An iconic marine mammal of Monterey Bay, this Southern sea otter floats above a kelp canopy, where it forages for sea urchins and other invertebrates that thrive in these highly productive submerged forests. Photo: Chrissy Huffard

#### Audubon Society of Lincoln City

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