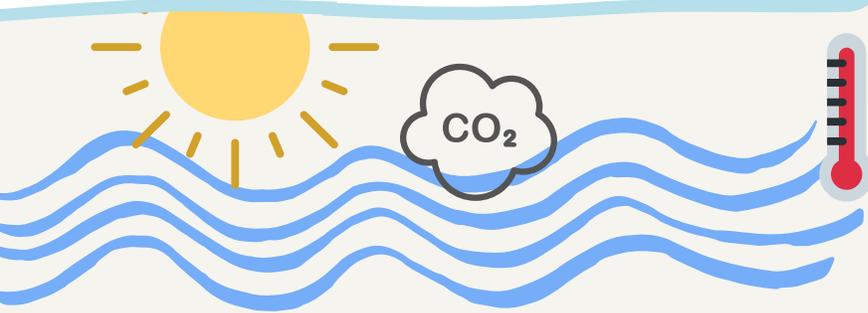


OCEANS, US, AND CLIMATE CHANGE

Ocean health is core to our very survival. Humans have an important role and obligation to conserve and sustainably use Oceans, including through climate-based strategies aimed at stabilizing an atmosphere responsible for some of the main threats facing the global Ocean.



ISSUES

Ocean acidification is the decrease in the Ocean's pH due to the Ocean's role as a carbon sink and absorbing carbon dioxide. **Ocean deoxygenation** results in less oxygen content in the Oceans and impacts nutrient cycling and primary production. As the Ocean absorbs more heat, **sea surface temperatures increase** and transport warmer water across the globe, impacting Ocean resources.



THREAT TO FOOD SECURITY

Climate change threatens ocean-based food security for many vulnerable nations. The disruption of Ocean conditions due to increased carbon dioxide emissions and other GHG emissions continues to threaten essential Ocean resources, such as fish and seafood. Because many coastal and small island developing nations depend heavily on these resources for protein, they are more vulnerable to changing Ocean conditions that could create food insecurity. While a loss in fish and seafood security may affect many nations, the least developed nations that rely more heavily on and consume greater quantities of these resources may suffer more devastating hardships because they are unable to secure a food supply comparable to what is lost from the Ocean.

OCEANS SEQUESTER CARBON

Oceans sequester carbon both chemically and biologically. Chemical sequestration transfers gaseous carbon dioxide to dissolved carbon dioxide. Biological sequestration generally occurs through coastal wetlands.

IMPACTS ON SENSITIVE ECOSYSTEMS

Marine ecosystems are vulnerable to changes in pH, oxygen levels, and temperature. For example, these changes can decrease fishery production and cause coral bleaching.



TRANSFERRABLE LESSONS FROM LAND-USE FOREST SECTOR

1. More exploration and data collection from the start, rather than waiting for the effects of nations' commitments and actions
2. Provide greater resources to nations to assist them in exploring integrated Ocean policies
3. Promote nations' setting of more specific Ocean sector targets for mangroves, sea grass, and salt marshes



Priority Areas for Inclusivity: Indigenous Knowledge and Gender

In facing climate change, indigenous people use their in-depth knowledge of their land, which is the main source of their livelihoods for generations. Indigenous knowledge has more spatial and temporal nuances and operates more skillfully than science, while understanding how to adapt to variables in the environment. Because of this, indigenous knowledge can contribute to climate change policies, and Sustainable Development Goal 13 on climate action.



GENDER BIASES INFLUENCE OUR INTERACTIONS WITH OCEANS

With respect to challenges such as overfishing, pollution, protecting marine ecosystems, and climate change, women and men are treated differently—often excluding women from much of the decision-making. Because women are rarely involved in local, regional, national, or international deliberations on oceans, or even laws and standards that affect oceans, our innovation, productivity, and creativity to conserve our oceans could be stifled. Women should be involved in sharing experiences, voices, and perspectives to find solutions to these challenges.

Women have the potential to “actively contribute to sustainable ocean management as traditional leaders, researchers or science-based managers and in accordance with traditional customs, cultures and processes.” Women hold “knowledge, skills and traditions relevant for ocean resource management,” and thus integrating the knowledge of women in marine management may lead to positive impacts.



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