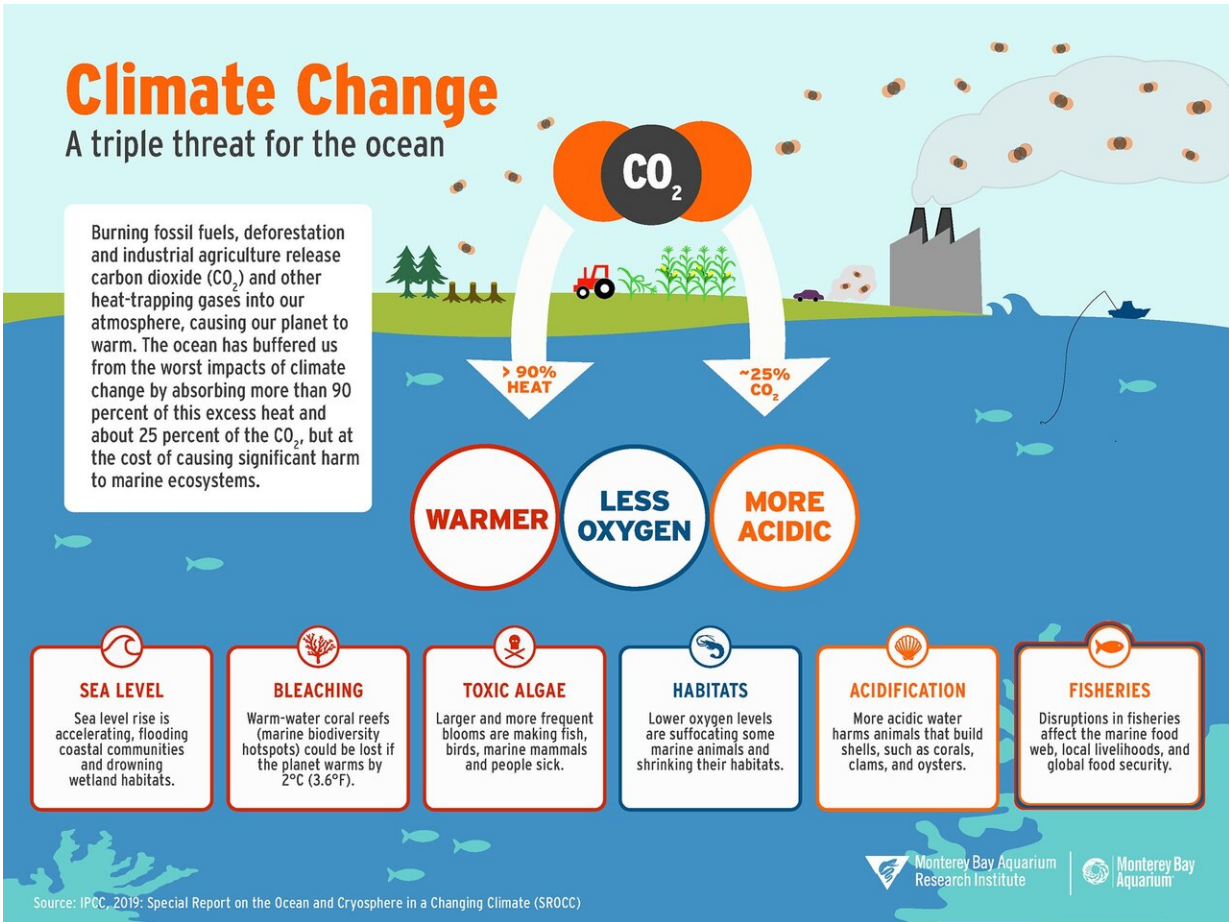


Climate change and the ocean

September 25 2019



Credit: Monterey Bay Aquarium Research Institute

Climate change has serious, long-term, and far-reaching negative consequences for our ocean.

Burning [fossil fuels](#), raising livestock, and clearing forests are just three examples of human activities that release billions of tons of CO₂ and other heat-trapping gases into our atmosphere every year, making our planet warmer. The ocean has buffered us from the worst impacts of [climate change](#)—absorbing about 25 percent of the excess CO₂ and more than 90 percent of the excess heat. But these climate services come at a significant cost for [marine ecosystems](#) and result in harmful impacts including:

- Increasing [ocean temperature](#): bleaches coral reefs, shifts where fish can live, and decreases ocean wildlife,
- Ocean acidification: causes a depletion of carbonate ions, which are critical for shell-forming animals like oysters, crabs, and shrimp,
- Decreasing oxygen: creates areas that suffocate marine animals, shrinks their habitats, and forces them to swim into places where they are more vulnerable to predators,
- More intense tropical storms and higher sea level: puts coastal communities in harm's way and destroys coastal wetland habitats which include mangroves and salt marshes.

These and other negative impacts will be documented and summarized in the forthcoming [Intergovernmental Panel on Climate Change \(IPCC\) Special Report on the Ocean and Cryosphere in a Changing Climate](#)—being released on September 25th 2019 in Monaco. It is the first IPCC report to focus specifically on the marine realm.

- In order to protect the ocean and slow the impacts of climate change, the science indicates we need to take action on two fronts:
- Cut net carbon dioxide emissions to zero by 2050;
- Increase ocean health—by reducing pollution, overfishing and safeguarding critical marine and coastal habitats.

Provided by Monterey Bay Aquarium Research Institute

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