

Ocean Acidification: Introduction, Causes, Effects, and Solutions

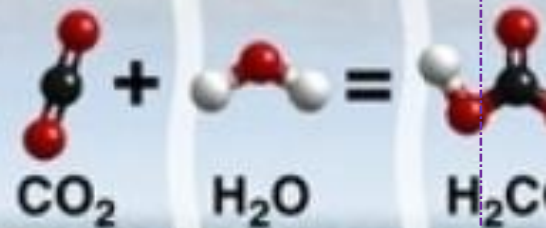
Introduction

- The consistent decrease of PH level of ocean water is called **ocean acidification**.
- Carbon dioxide released from the burning of fossil fuels dissolves in seawater and produces carbonic acid, and this lowers the pH of the ocean water. Finally leads to ocean acidification.
- According to the recent research reports, Ocean acidification is progressing rapidly around the oceans of the world.
- The Pre-Industrialization pH of the ocean water was 8.179, which came down to 8.1074 in the 20th At present, the pH of the Ocean water is 8.069.



Carbon dioxide dissolves in the ocean to make carbonic acid. The amount of acid has increased over the past 150 years.

These changes in ocean chemistry can disrupt the entire marine food web.



1950 average pH 8.2

current average pH 8.1

future

extra acid blocks growth of corals and shellfish

some species in the food web benefit while others decline



Source: Climate Central

Causes of Ocean Acidification

- The burning of fossil fuels
- Increase in the concentration of carbon dioxide in the oceans
- Industrial revolution leading to an increase in pollution
- Increase in atmospheric carbon dioxide concentration
- The loss of biodiversity
- Increase in the concentration of hydrogen ions due to the chemical reaction
- Lack of eco-friendly laws and regulations
- A decrease in carbonate ions

Effects of Ocean Acidification

- Loss of coral reefs
- Loss of marine plants
- Loss of marine animals
- Loss of marine biodiversity
- Disturbance in the food chain
- A decrease in the local economy due to lack of fish and other marine products
- Decline in tourism

Solutions of Ocean Acidification

- Reducing the use of fossil fuels
- Increasing the use of eco-friendly fuels
- Use of technology for reducing pollution
- Making strict regulations
- Spreading the awareness to the masses
- Promotion of environmentally friendly initiatives
- Use of Geo-engineering

