

Oceans cover over 70% of the Earth's surface. They not only serve as the planet's largest habitat, but also help to regulate the global climate. The ocean is a continuous body of salt water that surrounds the continents. It is divided into four major regions: the Pacific, Atlantic, Indian and Arctic. The ocean contains traces of all chemical elements found on earth. But it tastes salty because of sodium and chloride ions in rainwater runoff, and minerals from geothermal vents on the sea floor. Climate change is altering the ocean in three major ways. First, the ocean is getting warmer. The greenhouse effect not only warms the planet but, also raises the temperature of the world's oceans. Over the past century, the ocean's surface temperature rose at an average rate of about point 13 degrees Fahrenheit per decade. And during the past 30 years, sea surface temperature has been consistently higher than at any other time on record. This warmer water vaporizes quickly, fueling stronger and more frequent storms. Higher temperatures also threaten delicate ocean life, like coral reefs. And disrupt the food chain. From krill, to penguins, to seals. Second, since 1993, the seas have been rising at a rate that's twice as fast as the long-term trend. Sea levels rise not only because water expands when it heats up, but also due to melting glaciers and ice sheets. Rising seas contribute to flooding on once dry land in coastal regions. A third consequence of climate change is ocean acidification. Sea water absorbs CO₂ from the atmosphere, which lowers its pH and results in higher acid content. This reduces the concentration of calcium carbonate which makes it difficult for species like oysters, clams, and corals to form shells or skeletons. The only way to stop the damage to our oceans is to dramatically reduce greenhouse gas emissions. But even if emissions stop tomorrow, the gas currently in the atmosphere would take decades to dissipate.