



WWF

FACT SHEET

WHAT EFFECT IS GLOBAL WARMING HAVING ON OUR OCEANS?

Our oceans play a critical role in sustaining life on Earth. They hold approximately 97% of the planet's water, help to shape weather patterns, and support countless ecosystems and food chains. However, this immeasurably valuable resource is now under threat from the impacts of global warming, including rising ocean temperatures, rising sea levels and ocean acidification.

Causes

It is estimated that some 480 billion tonnes of carbon dioxide (CO₂) have been emitted into the atmosphere over the last two centuries as a result of humankind's use of fossil fuels and our destruction of forests. This CO₂ has contributed to a greenhouse effect, whereby certain gases trap heat in the atmosphere rather than allowing it to be released into space. As CO₂ emissions have increased, so too have temperatures across the planet. Globally, 2016 was the warmest year on record since 1880, and 16 of the 17 warmest recorded years have occurred since 2001.



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Impacts

Global warming threatens to profoundly change our oceans in ways that will have dire consequences. Warmer temperatures are leading to the melting of polar ice caps, resulting in the dumping of fresh water into the ocean and raised sea levels. Such rises threaten coastal communities, low-lying Pacific Islands and ecosystems such as estuaries and marshlands. The average global sea level rose by nearly 20 centimetres in the 20th century.

In Australia, storm surges have caused massive erosion events on our beaches. Approximately 70% of the world's beaches have been reduced during the last century. The potential implications for Australia's tourism industry and our quality of life are significant.



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Funafuti atoll, Tuvalu is in a battle against global warming

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Global warming also threatens to destroy the Great Barrier Reef and other coral ecosystems. Rising ocean temperatures cause coral bleaching, which has severely damaged the Reef three times in the past 19 years, with the summer of 2016 witnessing the worst coral bleaching event ever to hit the area. Australia's surrounding sea surface temperature – the main cause of coral bleaching – has increased by 1 °C since 1910.

Meanwhile, warmer ocean temperatures are also increasing the severity of damaging weather events, such as storms and floods, as well as ocean acidification, due to the sea water absorbing billions of tonnes of CO₂ out of the atmosphere.

What is WWF doing?

It is possible to restore the health of the Great Barrier Reef, but only if we reduce emissions of greenhouse gases and rapidly shift to renewable energy. Australia must speed up the transition to clean energy sources, like solar and wind, by setting a target of 100% renewable electricity by 2035.

WWF is working to achieve these outcomes by supporting conservation science, advocating for improved climate change policies, and raising public awareness. We're also helping companies to set science-based emissions reduction targets and working with government and industry to help restore, rehabilitate, and reforest areas across Australia.



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The summer of 2016 saw the worst coral bleaching event ever to hit the Great Barrier Reef



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