

Wind and waves growing across globe: study

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Photo by Todd Binger

(PhysOrg.com) -- Oceanic wind speeds and wave heights have increased significantly over the last quarter of a century according to a major new study undertaken by ANU Vice-Chancellor Professor Ian Young.

Published in *Science*, the study is the most comprehensive of its kind ever undertaken.

Other authors include Swinburne University [oceanographers](#) Professor Alex Babanin and Dr Stefan Zieger.

“Careful analysis of satellite data shows that extreme oceanic [wind speeds](#) and ocean wave heights have increased dramatically over the last 23 years,” Professor Young said.

“Off the southern coast of Australia, the highest one per cent of [waves](#) have increased in height from approximately five metres to almost six metres over the last 20 years”

“Extreme conditions are where we are seeing the largest increases, but mean conditions are also going up.

“Extreme wind speeds have increased over most of the globe by approximately 10 per cent over the last 20 years, or 0.5 per cent every year.

“Extreme wave heights have increased by an average of seven per cent over the last 20 years, or 0.25 per cent a year in equatorial regions and 0.5 per cent a year in higher latitudes.

“The results have potential impact on the design of coastal buildings and other structures as well as shipping. They could also have a profound effect on the transfer of energy (heat) between the sea and the atmosphere – one of the great unknowns of climate change.

“Using recently developed satellite data allowed us to investigate trends on a global scale for the first time. This has really given us a much clearer picture of what is happening in the world’s oceans.”

The study looked at satellite data over 23 years from 1985 to 2008, and was funded under an Australian Research Council Linkage Grant, with sponsorship from MetOcean Engineers.

Provided by Australian National University

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