

OSU ecologist: Using oceans could help curb climate change

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Body

Sept. 29--The oceans could be more than just a victim of **climate change** -- they could be part of the solution, according to a paper co-authored by a Oregon State University scientist.

Jane Lubchenco, a distinguished professor at OSU, was one of three authors of a paper published in the journal *Science* this week outlining the ways the ocean could be used to tamp down on **climate change**, according to an OSU press release. Ove Hoegh-Guldberg of the University of Queensland and Eliza Northrop of the World Resources Institute also wrote the paper, the release stated.

They found by connecting information from two other international **climate** reports that the ocean can be used as a solution.

One report looked at five categories of ocean activities. It found that by focusing on ocean-based renewable energy, ocean transport, protecting and restoring marine ecosystems, and having a diet more reliant on seafood than land animals, we could make as much as 21% of the emission reductions needed to meet the Paris Agreement by 2050.

The agreement outlines the goal to keep the global temperature increase from reaching 1.5 degrees Celsius above pre-industrial levels -- or what the global temperature was before the Industrial Revolution in the mid-1700s.

Scientists say limiting the warming to this level would maintain ecosystems and benefit health and economies, the release said. The Earth already has warmed by 1 degree Celsius.

"The key takeaway of the reports and the paper is that we can now think of the ocean as a source of solutions, not just a victim of **climate change**," OSU spokesperson Steve Lundeberg said. "It is clear that the ocean has been bearing the brunt of **climate change** to date."

Sea levels have risen more than eight inches since 1880, and Arctic sea ice is shrinking at its fastest rate in 1,500 years.

But the paper co-authored by Lubchenco, and a call to action by the High Level Panel (14 heads of state who promote policy on ocean economy), hopes to bring the ocean back into the conversation as a tool to combat **climate change**.

The call includes actions such as harnessing renewable energy from the ocean, decarbonizing ocean industries, and expanding ocean observation and research.

In the paper, Lubchenco and her colleagues write, for "far too long, the ocean has been mostly absent from policy discussions about reducing carbon emissions and meeting the challenges of **climate change**. Ocean-based

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actions provide increased hope that reaching the Paris Agreement (target) might be possible, along with addressing other societal challenges."

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