

Need to save coral reefs

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Flood damage would double without coral reefs, proves study

Loss of coral reefs around the world would double the damage from coastal flooding, and triple the destruction caused by storm surges, researchers said today.

Coupled with projected sea level rise driven by global warming, reef decline could see flooding increase four-fold by century's end, they reported in the journal *Nature Communications*.

Without coral to help absorb the shock, a once-in-a-century cyclone would wreak twice the havoc, with the damage measured in the tens of billions of dollars, the team calculated.

"Coral reefs serve as natural, submerged breakwaters that reduce flooding by breaking waves and reducing wave energy," said Michael Beck, lead scientist at The Nature Conservancy research and environmental group, and a professor at the University of California in Santa Cruz.

"Unfortunately, we are already losing the height and complexity of shallow reefs

around the world, so we are likely already seeing increases in flood damages along many tropical coasts,” he told AFP.

Coral is also highly sensitive to spikes in water temperature, which have become sharper and more frequent with climate change.

Global coral reefs risk catastrophic die-off if Earth’s average surface temperature increases two degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels, earlier research has shown.

Combining coastal flooding and economic models, the new study calculated - country by country - the value of coral reefs as a barrier against storm-related wreckage.

Globally, seaside flooding is estimated to cause nearly USD 4 billion dollars (3.4 billion Euros) a year in damages.

With the erosion of the top metre (three feet) of coral reefs worldwide, that figure rises to USD 8 billion, Beck and his colleagues found.

“The topmost living corals will die and can break off very quickly,” said Beck. The countries most at risk from coral reef loss are Indonesia, the Philippines, Malaysia, Mexico and Cuba, each of which could avoid USD 400 million in damage per year if reefs are maintained.

Saudi Arabia, the United States, Taiwan and Vietnam would also become significantly more vulnerable to flooding with severe coral erosion. “When we consider the devastating impact of tropical storms in just the past few years - Hurricanes Irma and Maria, Typhoon Haiyan - the effects would be much worse without coral reefs,” Beck said.AFP

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