Climate change could push flood damage to $3 billion a year in western US, study says

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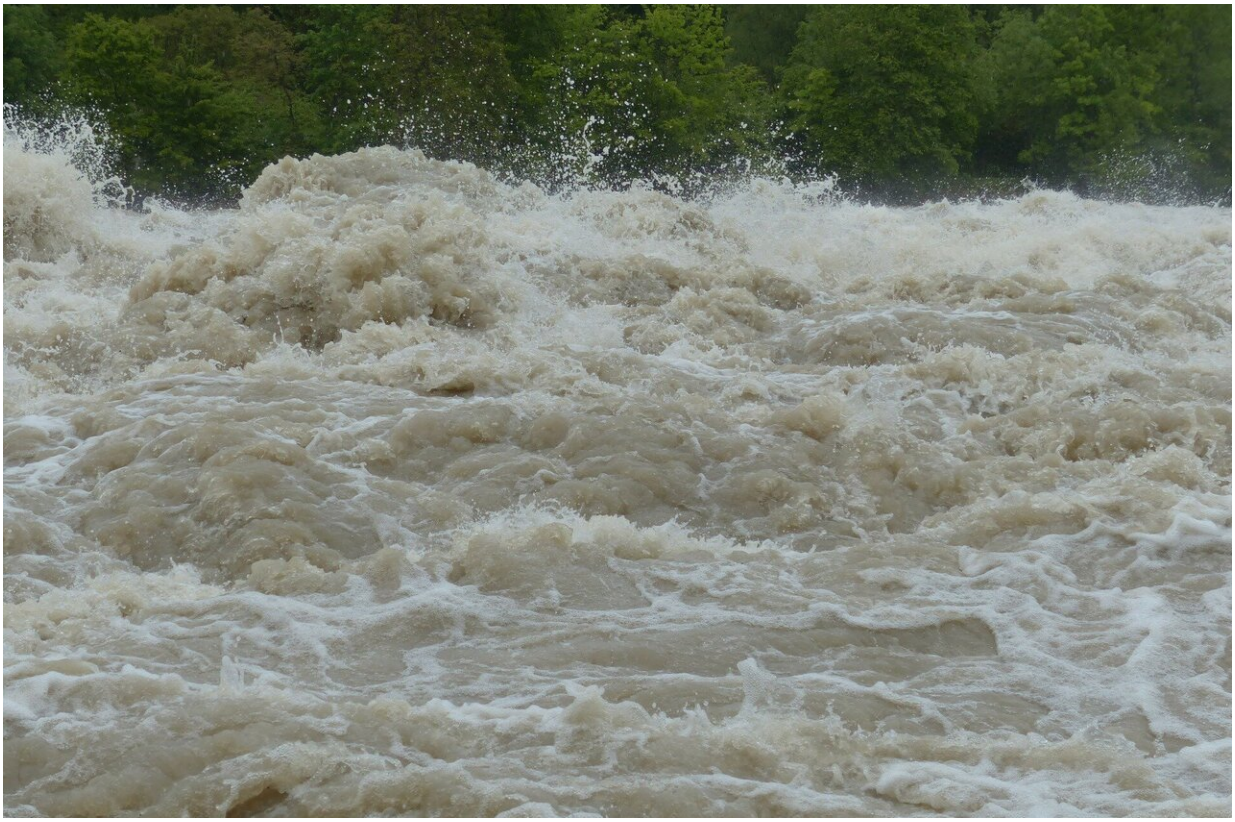

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The University of California, San Diego says the atmospheric river storms that periodically hit the western U.S. could cause as much as $3.2 billion a year in flood damage by the end of the century, a figure three

times higher than an estimate the university made in 2019.

Researchers also say the figure could be trimmed to about $2 billion a year if countries significantly reduce the amount of greenhouse gases released into the atmosphere.

The findings were made in a paper published in the journal *Scientific Reports* on Aug. 12. It was based on an updated look at differing climate models, one that put annual flood damage at $2.3 billion in the 2090s and another that put the figure at $3.2 billion heading into 2100.

"As atmospheric rivers become more intense, flood damages are on track to triple by the end of the century, but it's not too late to limit the risk," according to a statement by Tom Corringham, a climate economist at UCSD's Scripps Institution of Oceanography.

Atmospheric rivers, or ARs, are airborne plumes of moisture that flow from the tropics to the mid-latitudes, where they can greatly enhance storms that reach the western U.S., particularly California, Oregon and Washington.

At times, the ARs will hit the sides of mountains in places like San Diego County, causing them to unleash heavy rains that sometimes produce floods and mudslides. The phenomenon has become better known to the public in recent years because Scripps started to categorize ARs like hurricanes, ranking them on a scale of 1 to 5, with 5 being the most powerful.

The new UCSD study comes in the wake of a report from UCLA that says that climate change has roughly doubled the chances that California will experience a "megaflood" larger than the 30-day deluge that walloped the Sacramento area in 1862. The report claims that some spots could receive the equivalent of 100 inches of rain in a month.

Systems of this size have long been called 100-year storms. But many scientists believe that climate change will make megastorms occur on a more frequent basis.

More information: Thomas W. Corringham et al, Climate change contributions to future atmospheric river flood damages in the western United States, *Scientific Reports* (2022). DOI: 10.1038/s41598-022-15474-2