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West Antarctic ice threat revised down; still dire

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- * West Antarctic meltdown less severe than predicted
- * Would raise sea levels 3.3 metres, vs 5-6 in past studies
- * Impact still severe, U.S. coasts to suffer most

By Alister Doyle, Environment Correspondent

OSLO, May 14 (Reuters) - A meltdown of West Antarctica's ice sheet would raise sea levels by half as much as previously expected, but the impact would still be catastrophic, especially for U.S. coastal cities, a study showed.

A collapse of the ice sheet, viewed by scientists as more vulnerable than Greenland or East Antarctica because of global warming, would push up world sea levels by 3.3 metres (11 ft) over hundreds of years rather than 5-6 as long estimated.

"The long-term impact of West Antarctica is not be as serious as previously believed," said Jonathan Bamber, a professor at Bristol University in England who led the study in Friday's edition in the journal Science.

"But 17 million people in Bangladesh alone would be displaced by a sea level rise of 1.5 metres," he told Reuters. "The consequences for the planet and stability of society as a whole for even a 1-2 metres rise is very, very serious."

Sea levels off North America would rise more than anywhere else under the new projections, by Bamber and experts at University of Durham in England and Delft University of Technology in the Netherlands.

Antarctica's vast mass exerts a gravitational tug that raises water levels in the Southern Ocean. If that ice were to melt, computer models project that sea levels would rise fastest around North America, while falling in the Southern Ocean.

"Levels on the U.S. seaboard would rise 25 percent more than the global average and threaten cities like New York, Washington DC, and San Francisco," the University of Colorado at Boulder, where Bamber is now a visiting fellow, said in a statement.

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West Antarctica is believed to be vulnerable because much of its ice rests on bedrock below sea level. Global warming, blamed by the U.N. Climate Panel on human use of fossil fuels, could let water seep in under the ice and make giant chunks buoyant.

Any such collapse would probably last hundreds years, leaving West Antarctica as a series of islands. Bamber said there is evidence that West Antarctica has collapsed in the past, perhaps as recently as 400,000 years ago.

The vast East Antarctic sheet, equivalent to about 50 metres of sea level rise, and Greenland, equivalent to 7 metres, rest on bedrock above sea level.

About 10 ice shelves further north on the Antarctic Peninsula have broken up in recent years, most recently part of the Wilkins Ice Shelf shattered into icebergs last month.

The U.N. Climate Panel projected in a 2007 report that world sea levels would rise by between 18 and 59 cm (7-24 inches) this century because of global warming -- excluding any accelerating thaw of Antarctica or Greenland.

Bamber's study, which updated data from a 1978 report that estimated a 5-6 metre rise, looked solely at the risks of collapse of West Antarctica. The pattern of sea level rise would be different -- especially in the Atlantic -- if Greenland shrank simultaneously.

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