SEA LEVEL RISE

Sea level could rise more than 1 metre by 2100 if global emission targets not met, say experts

The risk assessment is based on the increasing body of knowledge of the systems involved and the scientists say it is clear now that previous sea-level rise estimates have been too low.

The rise in global sea-level could exceed one metre by 2100 and five metres by 2300 if emissions are not

Written By:
Zee Media Bureau

Edited By:
Ananya Das

Updated:
May 09, 2020, 17:44 PM IST

checked as the rise is taking place at a much faster pace than expected, a new survey by more than 100 leading international experts.

The risk assessment is based on the increasing body of knowledge of the systems involved and the scientists say it is clear now that previous sea-level rise estimates have been too low.

The study led by scientists of Nanyang Technological University, Singapore (NTU Singapore), with support from UK's Durham University, US' Tufts University and Germany's Potsdam Institute for Climate Impact Research, said the Guardian.

"What we do today, within a few decades, will determine the rise of sea level for many centuries. The new analysis shows this more clearly than ever before," news agency ANI reported quoting co-author Stefan Rahmstorf from the Potsdam Institute for Climate Impact Research (PIK) in Germany.

"But this is also good news: when it comes to greenhouse gas emissions, we have it in our own hands how much we increase the risks for millions of people at the world`s coasts, from Hamburg to Shanghai and from Mumbai to New York," added Rahmstorf.

In a scenario where global warming is limited to 2 degree Celsius above pre-industrial levels (which would be in agreement with the international Paris climate accord), the experts estimated a rise of 0.5 metres by 2100 and 0.5 to 2 metres by 2300. In a high-emissions scenario with 4.5 degree Celsius of warming, the experts estimated a larger rise of 0.6 to 1.3 metres by 2100 and 1.7 to 5.6 metres by 2300.

Professor Benjamin Horton, Acting Chair of NTU`s Asian School of the Environment, who led the new survey, says that sea-level rise projections and knowledge of their uncertainties are vital to make informed mitigation and adaptation decisions. "The complexity of sea-level projections, and the sheer amount of relevant scientific publications, make it difficult for policy-makers to get an overview of the state of the science," ANI quoted him as saying.

"To obtain this overview, it is useful to survey leading experts on the expected sea-level rise, which provides a broader picture of future scenarios and informs policymakers so they can prepare necessary measures," he added.

The Greenland and Antarctic ice sheets have been identified by the surveyed experts as the greatest sources of uncertainty. These ice sheets are an important indicator of climate change and a driver

of sea-level rise. Satellite-based data and on-the-ground measurements show the ice sheets are melting at an accelerating rate. However, the surveyed experts also remarked that the magnitude and impacts of sea-level rise can be limited through a successful reduction of emissions.

Also Watch