

New paper by prominent scientists suggests ocean levels will rise much faster than predicted

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A group of 17 scientists with varied backgrounds, including noted climatologist James Hansen has written a paper describing a scenario where the world's oceans rise much faster than other models have predicted—they have uploaded it to *Atmospheric Chemistry and Physics*—an open access site created to allow for public peer review of researcher ideas.

At issue is the degree to which the world's ocean levels will rise if global atmospheric temperatures rise by 2 C, a standard that has been set as a seemingly acceptable level. The authors argue that such a rise will result in much faster ice melting than other models have suggested, resulting in a rise of the world's oceans to dangerous levels. They suggest it likely

will occur even if atmospheric levels are somehow kept below that benchmark.

To come to these conclusions, the team looked at what happened before—back during the Eemian period (prior to the last Ice Age), when atmospheric temperatures were approximately 1 C warmer than they are now. They found that [ocean levels](#) were higher than they should have been based on modern models. That finding sent them looking for an explanation—after much work they came up with the idea that a small amount of atmospheric warming led to a small amount of sheet ice melt, which led to a change in ocean current patterns, which created a feedback loop—the more the ice sheet melted the faster it began to melt due to trapped warm water below. They conclude that adhering to the 2 C rise will lead to a very dangerous situation, where coastal areas and island countries will face dire consequences.

The paper has already been met with some criticism by other climatologists, though most appear to agree that politicians voting on an acceptable degree of atmospheric rise is likely not in the world's best interest. Also, it appears, because the paper is addressed to policymakers, that the researchers are hoping their work will cause more than just a change in the standards that have been set—that it might also wake the human race to the cataclysmic changes that really are coming and cause us to change our ways before it is too late—if it is not already.

More information: *Atmos. Chem. Phys. Discuss.*, 15, 20059-20179, 2015 [DOI: 10.5194/acpd-15-20059-2015](https://doi.org/10.5194/acpd-15-20059-2015)

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