

World's Oceans Could Rise Higher, Sooner, Faster Than Most Thought Possible

 commondreams.org/news/2015/07/21/worlds-oceans-could-rise-higher-sooner-faster-most-thought-possible

Published on

Tuesday, July 21, 2015

by

[Common Dreams](#)

World's Oceans Could Rise Higher, Sooner, Faster Than Most Thought Possible

New research shows that consensus estimates of sea level increases may be underestimating threat; new predictions would see major coastal cities left uninhabitable by next century

by

[Jon Queally, staff writer](#)



'Roughly 10 feet of sea level rise—well beyond previous estimates—would render coastal cities such as New York, London, and Shanghai uninhabitable.' (Image: [Woodbine](#))

If a new scientific paper is proven accurate, the international target of limiting global temperatures to a 2°C rise this century will not be nearly enough to prevent catastrophic melting of ice sheets that would raise sea

levels much higher and much faster than previously thought possible.

"Parts of [our coastal cities] would still be sticking above the water, but you couldn't live there."

—Dr. James Hansen According to the new study—which has not yet been peer-reviewed, but was written by former NASA scientist James Hansen and 16 other prominent climate researchers—current predictions about the catastrophic impacts of global warming, the melting of vast ice sheets, and sea level rise do not take into account the feedback loop implications of what will occur if large sections of Greenland and the Antarctic are consumed by the world's oceans.

A summarized draft of the full report was released to journalists on Monday, with the shocking warning that such glacial melting will "likely" occur this century and could cause as much as a ten foot sea-level rise in as little as fifty years. Such a prediction is much more severe than current estimates contained in reports issued by the Intergovernmental Panel on Climate Change (IPCC)—the UN-sponsored body that represents the official global consensus of the scientific community.

"If the ocean continues to accumulate heat and increase melting of marine-terminating ice shelves of Antarctica and Greenland, a point will be reached at which it is impossible to avoid large scale ice sheet disintegration with sea level rise of at least several meters," the paper states.

Separately, the researchers conclude that "continued high emissions will make multi-meter sea level rise practically unavoidable and likely to occur this century. Social disruption and economic consequences of such large sea level rise could be devastating. It is not difficult to imagine that conflicts arising from forced migrations and economic collapse might make the planet ungovernable, threatening the fabric of civilization."

The Daily Beast's Mark Hertsgaard, who attended a press call with Dr. Hansen on Monday, [reports](#) that the work presented by the researchers is

warning that humanity could confront "sea level rise of several meters" before the end of the century unless greenhouse gas emissions are slashed much faster than currently contemplated.

This roughly 10 feet of sea level rise—well beyond previous estimates—would render coastal cities such as New York, London, and Shanghai uninhabitable. "Parts of [our coastal cities] would still be sticking above the water," Hansen said, "but you couldn't live there."

This apocalyptic scenario illustrates why the goal of limiting temperature rise to 2 degrees Celsius is not the safe "guardrail" most politicians and media coverage imply it is, argue Hansen and 16 colleagues in a blockbuster study they are publishing this week in the peer-reviewed journal [Atmospheric Physics and Chemistry](#). On the contrary, a 2C future would be "highly dangerous."

If Hansen is right—and he has been right, sooner, about the big issues in climate science longer than anyone—the implications are vast and profound.

In the call with reporters, Hansen explained that time is of the essence, given the upcoming [climate talks in Paris](#) this year and the grave consequences the world faces if bold, collective action is not taken immediately. "We have a global crisis that calls for international cooperation to reduce emissions as rapidly as practical," the paper states.

Hansen said he has long believed that many of the existing models were under-estimating the potential impacts of ice sheet melting, and told the *Daily Beast*: "Now we have evidence to make that statement based on much more than suspicion."

Though he acknowledged the publication of the paper was unorthodox, Hansen told reporters that the research itself is "substantially more persuasive than anything previously published."

For his part, Eric Holthaus, a meteorologist who writes about weather and climate for *Slate*, said the "bombshell" findings are both credible and terrifying. Holthaus [writes](#):

To come to their findings, the authors used a mixture of paleoclimate records, computer models, and observations of current rates of sea level rise, but "the real world is moving somewhat faster than the model," Hansen says.

[...] The implications are mindboggling: In the study's likely scenario, New York City—and every other coastal city on the planet—[may only have](#) a few more decades of habitability left. That dire prediction, in Hansen's view, requires "emergency cooperation among nations."

In response to the paper, climate scientist Michael Oppenheimer of Princeton University [affirmed](#): "If we cook the planet long enough at about two degrees warming, there is likely to be a staggering amount of sea level rise. Key questions are when would greenhouse-gas emissions lock in this sea level rise and how fast would it happen? The latter point is critical to understanding whether and how we would be able to deal with such a threat."

The new research, Oppenheimer added, "takes a stab at answering the 'how soon?' question but we remain largely in the dark. Giving the state of uncertainty and the high risk, humanity better get its collective foot off the accelerator."

And as the *Daily Beast*'s Hertsgaard notes, Hansen's track record on making climate predictions should command respect from people around the world. The larger question, however, is whether humanity has the capacity to act.

"The climate challenge has long amounted to a race between the imperatives of science and the contingencies of politics," Hertsgaard concludes. "With Hansen's paper, the science has gotten harsher, even as the [Nature Climate Change study](#) affirms that humanity can still choose life, if it will. The question now is how the politics will respond—now, at Paris in December, and beyond."

This work is licensed under a Creative Commons Attribution-Share Alike 3.0 License

Share This Article