This is the print version of the Skeptical Science article 'Scientists retracted claim that sea levels are rising', which can be found at http://sks.to/searetract.

Paper retracted for predicting too low sea level rise

What The Science Says:
The retracted paper actually predicts a low range of future sea level rise. The retraction removes a lower bound of sea level prediction. This increases confidence in other peer-reviewed research predicting sea level rise of 80cm to 2 metres by 2100.

Climate Myth: Scientists retracted claim that sea levels are rising
'Another global warming myth comes crashing down. No warming since at least 1995, no melting glaciers and now no rising sea levels. Basically this leaves the warmers with no credibility, along with the U.S. media, which is largely ignoring this massive scandal.' (JammieWearingFool)

In February 2010, scientists who published a 2009 paper on sea level rise retracted their prediction due to errors in their methodology. This has led some to claim sea levels are no longer predicted to rise. This interpretation was helped no doubt by the unfortunate Guardian headline "Climate scientists withdraw journal claims of rising sea levels". However, reading the article and perusing the peer-reviewed science on future sea level shows that the opposite is the case.

The IPCC 4th Assessment Report predicted sea level will rise between 18 to 59 cm by the year 2100. Many consider this a conservative estimate as observed sea level rise is tracking at the top range of IPCC estimates (Rahmstorf et al. 2007, Allison 2009). However, a study led by Mark Siddall examined how sea levels have changed over the past 22,000 years in response to temperature change (Siddall et al. 2009). This enabled them to predict how sea level would respond to future warming, estimating sea level rise between 7 to 82 cm by the year 2100. Siddall's paper concluded that this increased confidence in the IPCC projections.

However, a later study using similar methods to Siddall et al. 2009 came to dramatically different results, estimating sea level rise of 75 to 190 cm by 2100 (Vermeer & Rahmstorf 2009). Why the discrepancy? Judging by the acknowledgement in Siddall's retraction, one speculates that Vermeer and Rahmstorf discovered flaws in Siddall's methodology and notified the authors. Siddall saw that the errors undermined their results and retracted their paper. So we have two papers using similar methods - one predicting low sea level rise, the other predicting high sea level rise. The low sea level rise is found to be in error. While some are spinning this result to imply no sea level rise, in actuality it increases our confidence in high sea level rise.

Vermeer's results are confirmed by another study that approach the sea level question from a different angle, examining the dynamics of calving glaciers (Pfeffer et al. 2008). The conclusion was a predicted sea level rise of 80 cm to 2 metres by 2100. Further evidence of the ice sheets' high sensitivity to warmer temperature comes from paleoclimate studies of the last interglacial period 125,000 years ago. At that time, global temperatures were around 2 degrees warmer than now. This is the amount of warming expected for some of the lower emission scenarios. At that time of the last interglacial, sea levels were at least 6 metres higher than present levels. So while we expect sea levels to rise up to 2 metres by 2100, they will continue to rise afterwards to at least 6 metres.

Future sea level rise will be one of the most serious impacts of global warming on humanity,

with much of the world's population clustered around coastlines. Our children and grandchildren will see sea level rise of 1 to 2 metres in their lifetime. This scientific reality is a stark contrast to the 'Now You Can Forget About Those Rising Seas' attitude. Despite the serious picture painted by the peer-reviewed science, these kinds of misinterpretations turn the climate debate in an almost farcical direction. One could blame the Guardian for a carelessly worded headline. More blame should be apportioned to those who pontificate from their soapboxes without bothering to acquaint themselves with the science. That skeptics allow themselves to be tossed and turned by media headlines is the very antithesis of genuine skepticism.

This rebuttal was updated by Judith Matz on September 13, 2021 to replace broken links. The updates are a result of our call for help published in May 2021.

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Skeptical Science explains the science of global warming and examines climate misinformation through the lens of peer-reviewed research. The website won the Australian Museum 2011 Eureka Prize for the Advancement of Climate Change Knowledge. Members of the Skeptical Science team have authored peer-reviewed papers, a college textbook on climate change and the book Climate Change Denial: Heads in the Sand. Skeptical Science content has been used in university courses, textbooks, government reports on climate change, television documentaries and numerous books.

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