

Sea-level rise projections beyond 2100

Sea levels will continue to rise after 2100 even if we greatly reduce greenhouse gas emissions. The Met Office has projected how sea level will rise up to 2300 around the UK coastline. The amount of sea-level rise increases under higher emissions scenarios, however projecting further into the future introduces more uncertainty.

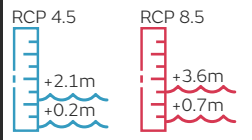
Why are future sea levels uncertain?

Sea-level projections to 2300 have a much larger degree of uncertainty associated with them as we do not know what emissions pathway we will follow. Even if global temperatures stop rising, there is a long-term commitment to sea-level rise because the ocean is slow to respond to changes in the atmosphere.

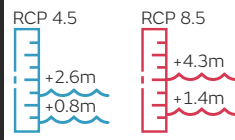
Sea levels could rise further. An additional source of uncertainty is whether ice sheets in Antarctica and Greenland will melt steadily, or rapidly collapse (after reaching a tipping point). In UK Climate Projections (UKCP18), projections of sea-level change out to 2300 were called “exploratory” projections.

Projected ranges of sea-level rise at UK capital cities (nearest class A tide gauge location) at 2300 under RCP4.5 and RCP8.5 relative to a baseline period of 1981-2000. The lower number in the range is at the 5th percentile, and the higher number in the range is at the 95th percentile.

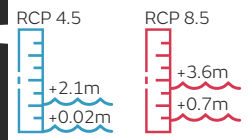
Belfast (Bangor)



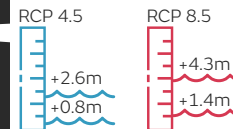
Cardiff (Newport)



Edinburgh (Leith)



London (Sheerness)



Scan the QR code to learn more about local and global drivers of sea-level change



Scan the QR code to learn more about IPCC's Sixth Assessment Report (AR6)



Scan the QR code to learn more about UKCP18 sea-level projections

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