

# IMPACTS OF CLIMATE CHANGE AT +4°C WARMING

EVENT	IMPACT	REFERENCE
22) Extreme temperature	Hottest days of the year across Europe could be as much as 8°C warmer	<a href="https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final">https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final</a>  <a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217592">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217592</a>
23) Proportion of species losing >50% of their climatic range (Calculated for +4.5°C)	Invertebrates: 68%	Warren, R. et al. (2018) The projected effect on insects, vertebrates, and plants of limiting global warming to 1.5C rather than 2C, Science
	Vertebrates: 44%	
	Plants: 67%	
	Insects: 67%	
	Mammals: 41%	
	Birds: 40%	
	Butterflies and moths: 58%	
24) Glacier mass loss in the high mountains of Asia	74%	Kraaijenbrink, P. D. A. et al. (2018) Impact of a global temperature rise of 1.5 degrees Celsius on Asia's glaciers, Nature
25) Glaciers	Complete disappearance of glaciers from many regions in South America= Peru's Cordillera Blanca's area falls by 75%	<a href="https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final">https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final</a>
26) Sea level rise	Greenland Ice Sheet has a 60% likelihood of irreversible decline, resulting in a long-term sea level rise of up to 7 meters globally.	<a href="https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final">https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final</a>
	In 2075, a mean sea-level rise of 53 cm means that up to an additional 150 million people per year would be flooded due to extreme sea levels. ¾ of that population live in Asia	<a href="https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final">https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final</a>
Economic damages from river flooding in the UK	Increase by 1234%	Alfieri, L. et al. (2016) Global projections of river flood risk in a warmer world, Earth's Future
Heat waves	Peak temperature will reach 55°C in Eastern US and China on a two-year basis. Peak temperature will reach 40°C every year across Africa, Australia, South Asia and South Europe and Eastern US.	Russo, S., Sillmann, J., & Sterl, A. (2017). Humid heat waves at different warming levels. Scientific reports, 7(1), 7477. <a href="https://doi.org/10.1038/s41598-017-07536-7">https://doi.org/10.1038/s41598-017-07536-7</a>
Excess deaths due to heat in the UK	Increase BY 1.6%	Vicedo-Cabrera, A. M. et al. (2018) Temperature-related mortality impacts under and beyond Paris Agreement climate change scenarios, Climatic Change Letters. Data provided by Ana Maria Vicedo-Cabrera of the London School of Hygiene & Tropical Medicine

<p><b>Annual cases of dengue fever in Latin America in year 2050</b></p>	<p>Increases by 7.5 million</p>	<p>Colón-González, F. J. et al. (2018) Limiting global-mean temperature increase to 1.5–2C could reduce the incidence and spatial spread of dengue fever in Latin America, PNAS</p>
<p><b>Population affected by river flooding in Bangladesh</b></p>	<p>Increase by 3214%</p>	<p>Alfieri, L. et al. (2016) Global projections of river flood risk in a warmer world, Earth's Future</p>
<p><b>Maize and wheat yields</b></p>	<p>Reduced by up to 40% at low latitudes</p>	<p><a href="https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final">https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final</a></p>
<p><b>Water availability</b></p>	<p>Water resources affected by up to 70% reduction in run-off around the Mediterranean, southern Africa and large areas of South America</p>	<p><a href="https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final">https://webarchive.nationalarchives.gov.uk/20100512172809/http://www.actoncopenhag.en.decc.gov.uk/content/en/embeds/flash/4-degrees-large-map-final</a></p>