



Human dynamics of climate change

This map shows projections of climate change impacts and population change by the end of the 21st century in the context of the way we live today, without adaptation. The climate projections are taken from the latest generation of climate and impacts models, for the end of the century (2071–2100) relative to a 1981–2010 baseline, under a 'business as usual' greenhouse gas concentration scenario (RCP8.5). The population change follows a 'middle of the road' socio-economic scenario (SSP2). The future change icons show the median change across the model runs in climatologically averaged regions. These projections are shown together with information on present-day human dynamics.

Future change

Increase in warm day temperature (°C)	Decrease in wheat yield (%)	Increase in wheat yield (%)	Area of increased river flood hazard – only strongest signal shown (%)	Area of decreased river flood hazard – only strongest signal shown (%)
0.0-1.4 1.5-2.9 3-4.4 4.5-5.9 ≥6.0	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	30-39 40-49 50-59 60-69 ≥70	30-39 40-49 50-59 60-69 ≥70
Change in population (%)	Decrease in maize yield (%)	Increase in maize yield (%)	Increase in number of days in drought (%)	Decrease in number of days in drought (%)
<0 0-49 50-99 100-199 200-399 ≥400	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20
Average number of people flooded per year due to sea level rise (millions)	Decrease in rice yield (%)	Increase in rice yield (%)	Decrease in water run-off (%)	Increase in water run-off (%)
0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20
Increase in sea surface temperature (computed over fishing regions) (°C)	Decrease in soybean yield (%)	Increase in soybean yield (%)	Increase in water demand for irrigation (%)	Decrease in water demand for irrigation (%)
0.0-0.9 1.0-1.9 2.0-2.9 3.0-3.9 ≥4.0	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20	0-4 5-9 10-14 15-19 ≥20

Present-day human dynamics

- Present day population density (Persons per km²): 2 4 8 16 31 62 125 250 500 1,000
- Maritime choke points (millions of barrels of oil per day): <4 4-16 >16
- Present day fish catch (million tonnes): 0-1.24 1.25-2.4 2.5-4.9 5-9 ≥10
- Busiest airports: <4 4-16 >16
- Busiest ports
- Countries that have appeared in the top ten of the Fund For Peace's Fragile States Index
- Fishing regions
- Tropical cyclone region

For further information about this map go to www.metoffice.gov.uk/human-dynamics

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