

Our fragile planet

Insights Brief

India emerges as most vulnerable to climate change

Key Takeaways

- The world is warming up and risks are mounting
- Transitioning to lower-carbon economies has costs
- We've ranked the countries that will be hit hardest

All countries are being impacted by climate change but some face much more acute challenges than others. Analysis by HSBC finds that India, followed by Pakistan and the Philippines, are the most vulnerable countries to changes in climate, with Finland, Sweden and Norway, then Estonia and New Zealand, the least exposed.

Climate change causes rising temperatures, altered water cycles and extreme weather events that raise risks to energy, food and water systems, people and the global economy. Between 2030 and 2050, the World Health Organisation expects 250,000 additional deaths a year due to climate change.

Our new analysis covers 67 countries accounting for 80% of the world's population and 94% of global GDP. Besides the physical impacts of climate change and sensitivity to extreme weather, we have examined each country's potential to respond to change, plus transition risks, the challenges faced in trying to mitigate climate-change risks and move towards a lower-carbon economy.

The country most exposed to physical impacts overall is Qatar, followed by Israel, then Bahrain. Indeed, the seven most vulnerable are all in the Middle East or North Africa. The least exposed is Canada, followed by Russia and Finland.

Qatar and Bahrain also have the highest average annual temperatures, 28.2°C, just ahead of Singapore.

Hotter regions are more exposed than colder countries because the tropics experience a lower seasonal temperature variation than temperate regions. Warm and wet conditions can drive the spread of diseases, including malaria and climate change could halve crop yields in tropical countries in the next 30-35 years whereas warmer conditions in cold countries could extend growing seasons.

And while heating needs should decline as temperate regions get hotter, extreme heat closer to the equator could see energy demand for cooling soar.

Of our 67 countries, the Czech Republic had the highest change in temperature between 2006 and 2015, 1.4°C, while Ireland fell 0.2°C.

Kuwait has the lowest water availability, just 5 cubic metres per person a year when consumption is 170m³: it relies on desalination. The UN defines 500 (m³) as 'absolute scarcity'. The average decline in per person water availability across the 67 countries was 10% between 2006 and 2016 but eight of the 10 greatest falls are in the Middle East.

Mauritius suffers the most extreme weather events, droughts, floods, extreme temperatures, storms or wildfires, followed by the Philippines. However, large parts of Europe, Asia and Australia are experiencing more heat waves, partly because of greenhouse-gas emissions.

Analysing the cost of damage, and number of people affected, including deaths, the eight most vulnerable countries are in South and South-East Asia, headed by the Philippines, then Thailand and Pakistan, where costs averaged 1% of GDP. Russia has most deaths from disaster events.

Bahrain emerges as most vulnerable on energy transition, followed by other fossil fuel-producing states including Colombia, the UAE, Kazakhstan and Malaysia, while developed economies Australia and the Netherlands are in 9th and 11th places.

The countries weakest on potential to respond to climate change are Kenya, then Lebanon and Pakistan. Best-placed are Norway, New Zealand and Australia.

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Disclosure Appendix

Analyst Certification

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Additional disclosures

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All market data included in this report are dated as at close 15^h March 2018 unless a different date and/or a specific time of day is indicated in the report.

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