

UN climate report

What exceeding 1.5C means

By Jonathan Watts



A landmark report

on Monday from the United Nations Intergovernmental Panel on Climate Change said that urgent change is needed to keep global warming to a maximum of 1.5C. The Paris climate agreement had seen countries agree to keep a rise between 1.5C and 2C.



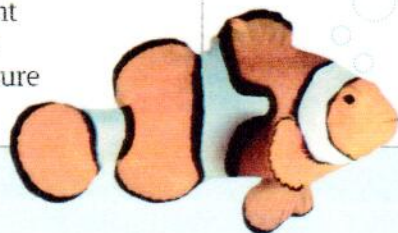
So, what would this half-degree difference mean?

● Insects, which are vital for pollination of crops and plants, are almost twice as likely to lose half their habitat at 2C than at 1.5C.

● 1.5C would likely be the difference between the survival of some Great Barrier Reef coral and its complete decline.

10m

More people would be affected by sea-level rise by 2100 if the half-degree extra warming brought a forecast 10cm additional pressure on coastlines.



Rising risks

'If we act decisively and innovate and invest wisely we could avoid the worst aspects of climate change'
Nicholas Stern
bit.ly/2NxakMV

Key to impacts and risks

Undetectable Moderate High Very high

○ ○ ○ ○

Global mean surface temperature change relative to pre-industrial levels

0C 0.5 1.0 1.5 2.0

Threatened ecosystems

Extreme weather events

Large-scale singular events

Coral die-off

Arctic region

Coastal flooding

River flooding

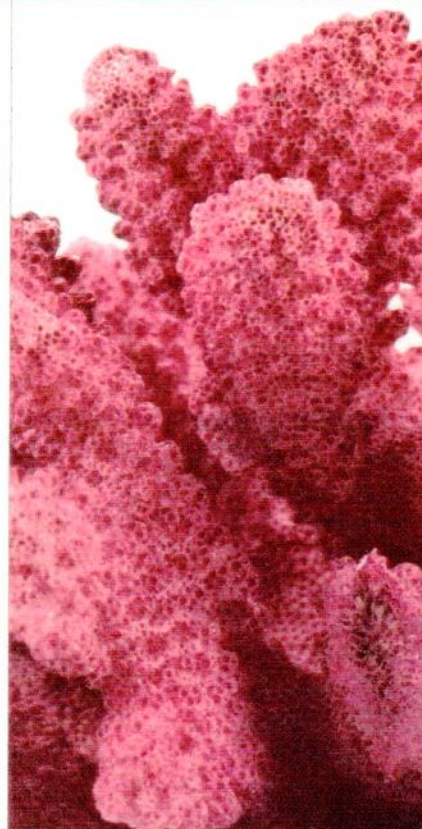
Crop yields

Heat-related morbidity and mortality

Impact on tourism

2006-2015 relative to pre-industrial levels

Source: IPCC Special Report on Global Warming of 1.5C



What can we do to hit the 1.5C limit?

Routes to 1.5C

The IPCC maps out four pathways to achieve 1.5C. Reforestation is essential to all of them, as are shifts to electric transport systems and greater adoption of carbon capture technology.

Emissions

Carbon pollution would have to be cut by 45% by 2030 - compared with a 20% cut under the 2C pathway - and come down to zero by 2050, compared with 2075 for 2C. This would require carbon prices that are three to four times higher than for a 2C target. But the costs of doing nothing would be far higher.

Where can I learn more?

For full coverage of the UN report, see theguardian.com/environment. For the full report visit ipcc.ch/report/sr15

