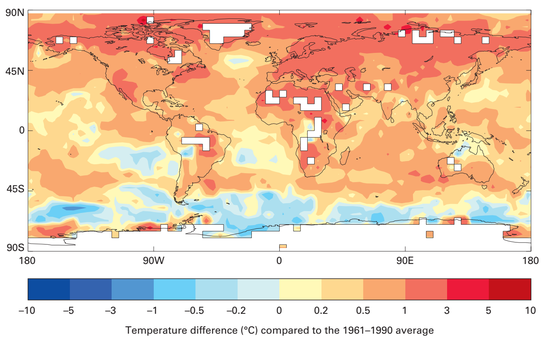
The Status of the Global Climate in 2011-2015

GLOBAL TEMPERATURE INCREASE CONTINUES

2015:
Warmest year,
over 1° higher than
pre-Industrial period

2011-2015:
Warmest
five-year period

2001-2010:
Warmest decade



Global five-year average temperature anomalies (relative to 1961–1990) for 2011– 2015. The analysis uses HadCRUT4 analysis produced by the Met Office Hadley Centre in collaboration with the Climatic Research Unit at the University of East Anglia, United Kindgdom.

CONCENTRATION OF LONG-LIVED GREENHOUSE GASES CONTINUES TO INCREASE

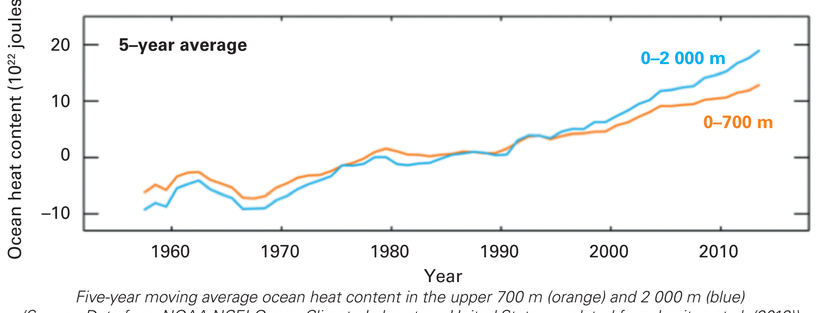
In 2015, the annual mean concentrations in the atmosphere of

CO_2	CH_4	N_2O
400 parts per million	**1 845 parts per billion**	**328 parts per billion**

These concentrations increased consistently throughout the period from 2011 onward.

RECORD WARMING AT OCEAN SURFACE AND SUBSURFACE

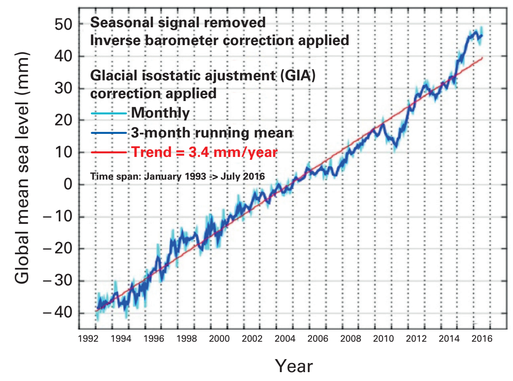
In 2015, global ocean heat content reached record levels through both the upper 700 m and 2 000 m of the oceans



Five-year moving average ocean heat content in the upper 700 m (orange) and 2 000 m (blue) (Source: Data from NOAA NCEI Ocean Climate Laboratory, United States, updated from Levitus et al. (2012))

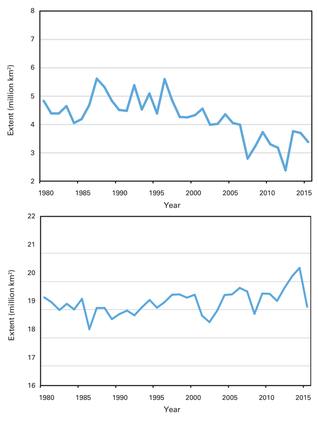
SEA LEVELS CONTINUE TO RISE

Global sea levels continued to rise over the period 2011–2015. The level of interannual variability in global sea level over the period was high by the standards of the satellite era.

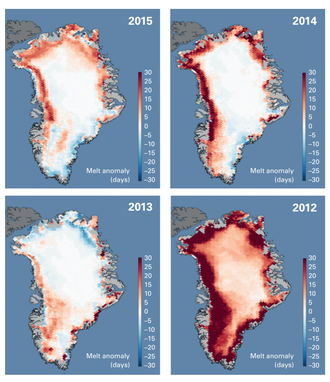


(Source: Commonwealth Scientific and Industrial Research Organization, Australia)

WIDESPREAD MELTING OF ICE EXCEPT IN THE SOUTHERN OCEAN

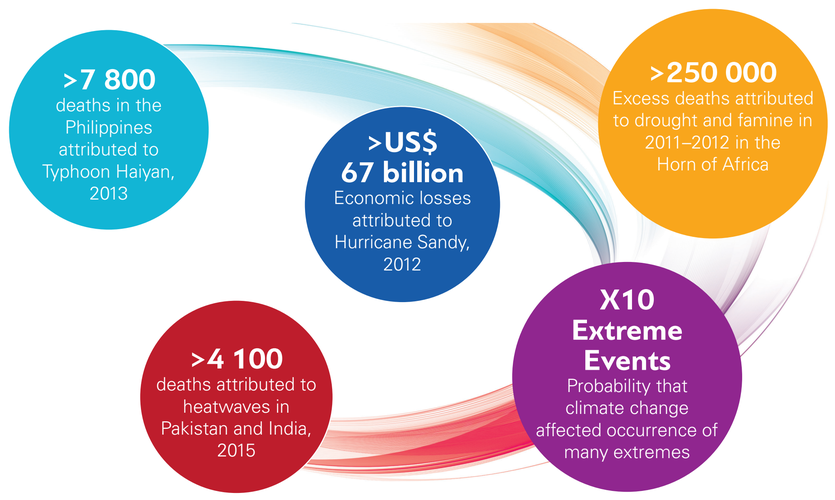


Arctic (left) and Antarctic (right) September 1979–2015 sea-ice extent measured in millions of square kilometres (Source: Data provided by the National Snow and Ice Data Center, United States)

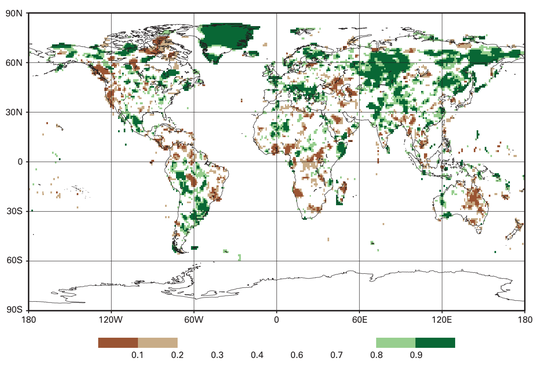


Summer surface melting of the Greenland ice sheet continued at above-average levels, with the summer melt extent exceeding the 1981–2010 average in all five years from 2011to 2015 (Source: National Snow and Ice Data Center/Thomas Mote, University of Georgia, United States)

HIGH IMPACT EXTREMES

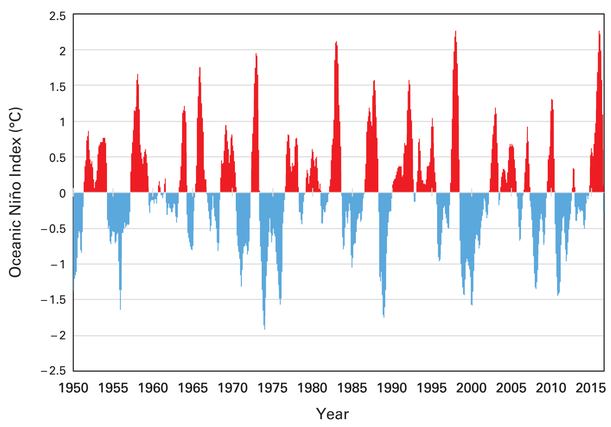


GLOBAL PRECIPITATION VERY DRY IN PLACES AND WET IN OTHERS



Total precipitation for the period October 2012–September 2015 expressed as a percentile of the 1951–2010 reference period for areas that would have been in the driest 20% (brown) and wettest 20% (green) of years during the reference period, with darker shades of brown and green indicating the driest and wettest 10%, respectively (Source: Global Precipitation Climatology Centre, Deutscher Wetterdienst, Germany)

MAJOR OSCILLATIONS SHAPED CLIMATE VARIABILITY



Three month running means of the sea-surface temperature anomaly in the Niño 3.4 region (the NOAA Oceanic Nino Index) (Source: Data provided by NOAA)

WEATHER CLIMATE WATER

WORLD METEOROLOGICAL ORGANIZATION

The Global Climate in 2011-2015 is the authoritative source of information on the state of the climate and impacts. It builds on operational monitoring systems at global, regional and national scales. Countries take a participative approach. Authored by Blair Terwin and Omar Baddour, with scientific coordination provided by the WMO Commission for Climatology, it is peer reviewed and published in English, French, Spanish and Arabic.

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