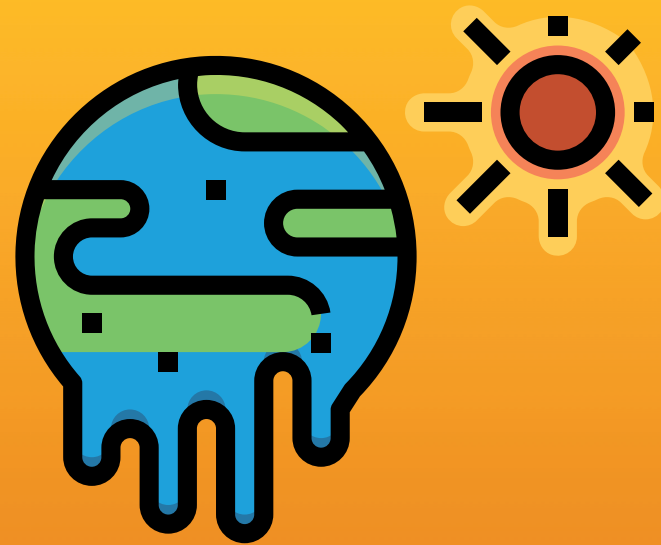
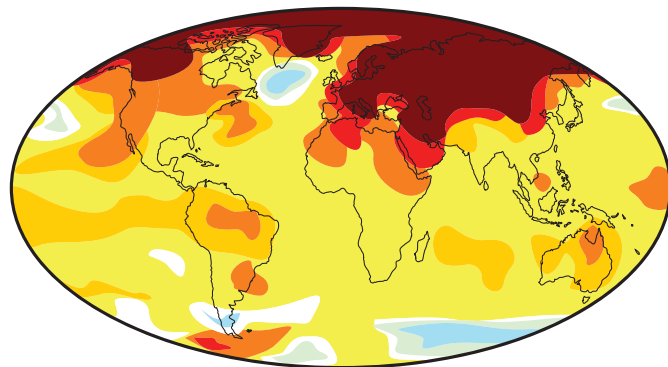


# 5 SIGNS OF CLIMATE CHANGE



## 1. A rise in global temperatures



This colour-coded map shows a progression of changing global surface temperatures since 1884. Blue indicates areas cooler than average. Dark red indicates areas warmer than average.

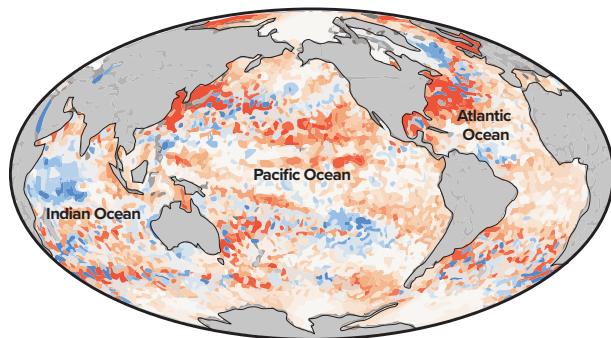
**0.9°C**

rise in the average surface temperature of the planet since the late 19th century.

**20**

of the warmest years on record have occurred in the last 22 years. The years 2015, 2016, 2017 and 2018 had the highest temperatures since 1880.

## 2. Warming oceans



Global map showing where 2017 heat content in the top 700 metres (2,300 feet) of the ocean was higher (orange) or lower (blue) than the 1993–2017 average.

**90%**

of the excess heat in the climate system has been absorbed by the ocean since 1955. Water closest to the surface has heated up the most.

**0.11°C**

average warming per decade of the ocean's top layer since 1970. Overall, the world's oceans are warmer now than in the last 50 years and the rate of ocean warming has more than doubled since 1993.

## 3. Shrinking ice sheets & glacier retreat

**286 billion tons**

of ice per year lost from the Greenland ice sheet between 1993 and 2016.

**127 billion tons**

of ice per year lost from Antarctica between 1993 and 2016. The rate of ice mass loss has tripled in the last decade.

**80%**

projected loss of the current ice mass of the smaller glaciers in Europe, Africa, the Andes and Indonesia by 2100.



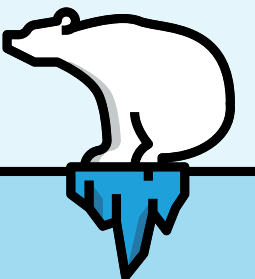
## 4. Declining Arctic Sea ice

**4.6 million km<sup>2</sup>**

minimum extent of Arctic Sea ice in 2018 down from 7.7 million km<sup>2</sup> in 1980.

**10%**

decline in the extent of Arctic Sea ice in the past 30 years, with significant thinning over the past half century.



## 5. Extreme events

**68%**

of all extreme weather events (heatwaves, droughts, heavy rainfall and flooding) studied in the last 20 years were made more likely or more severe by climate change.

**15 of the 20**

largest wild fires in California history have occurred since 2000. And since the 1970s, the amount of area burned in the state has increased by a factor of five. Around the world, wildfires are growing in intensity and frequency.

**330%**

rate of increase in the frequency of the most damaging hurricanes. The biggest and most damaging hurricanes are now 3x more frequent than they were 100 years ago.



"You are not mature enough to tell it like it is. Even that burden you leave to us children."

Greta Thunberg, 2018