

The causes Fossil fuel burning

Billions of tonnes of CO₂ are sent into the atmosphere every year from coal, oil and gas burning, in transport, industry and homes. There is little sign of this slowing, let alone sharply falling as needed.

Emissions from fossil fuel burning
CO₂ bn tonnes



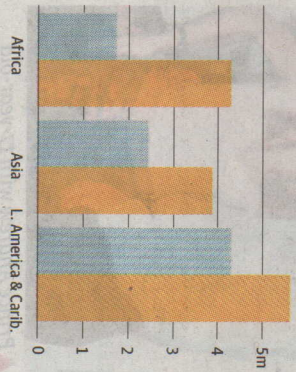
Global Carbon Project

Forest destruction

The felling of forests for timber, cattle, soy and palm oil is a big contributor to carbon emissions. It is also a major cause of the annihilation of wildlife on Earth.

Tropical forest destruction
Average annual loss in million hectares before and after the New York declaration on forests

● Before (2001-13) ● After (2014-18)

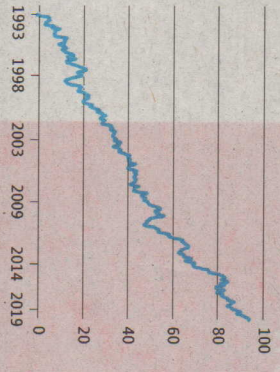


World Resources Institute analysis, Global Forest Watch

Rising sea levels

Sea levels are inexorably rising as ice on land melts and hotter oceans expand. Sea levels are slow to respond to global heating, so even if the temperature rise is restricted to 2C, one in five people in the world will eventually see their cities submerged, from New York to London to Shanghai.

Sea level rise
Millimetres

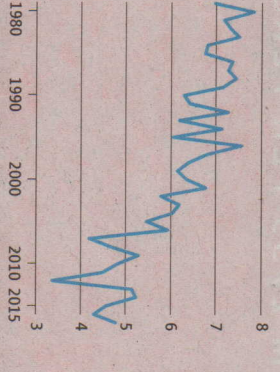


NASA Goddard Space Flight Center

Shrinking Arctic sea ice

As heating melts the sea ice, the darker water revealed absorbs more of the sun's heat, causing more heating - one example of the vicious circles in the climate system. Scientists think the changes in the Arctic may be responsible for worsening heatwaves and floods in Eurasia and North America.

Arctic sea ice
Million square km in September



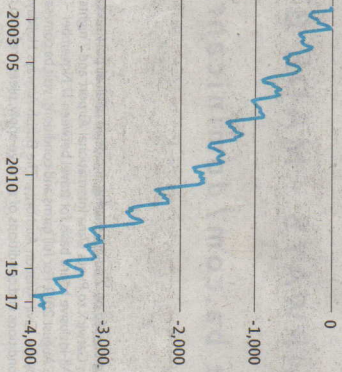
NSIDC/NASA



Ice melting in Greenland

Greenland has lost almost 4tn tonnes of ice since 2002. Mountain ranges from the Himalayas to the Andes to the Alps are also losing ice rapidly as glaciers shrink. A third of the Himalayan and Hindu Kush ice is already doomed.

Billions of tonnes

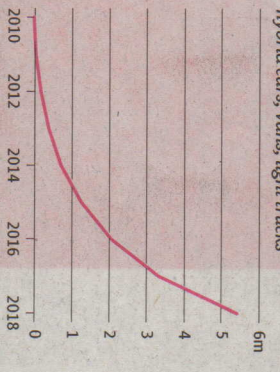


Wiese et al. NASA JPL GRACE

Electric cars and vans

The global fleet of electric cars and vans is still small compared with those running on fossil fuels. But sales are growing very fast. Electric cars are cheaper to run, suggesting they will become mainstream.

Electric vehicles
Cumulative sales of battery and plug-in hybrid cars, vans, light trucks

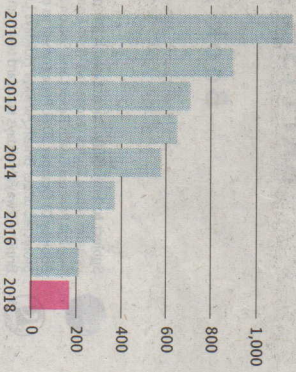


EV-Volumes.com

Battery prices

Renewable energy is intermittent, depending on when the sun shines or wind blows. So storage is vital and the cost of batteries is plummeting. But other technologies, such as generating hydrogen, will also be needed.

Lithium-ion battery cost
Real 2018 \$/kWh



BloombergNEF