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Climate Capital COP27

How each country's emissions and climate pledges compare



A searchable dashboard of 193 countries' historical emissions and future climate targets

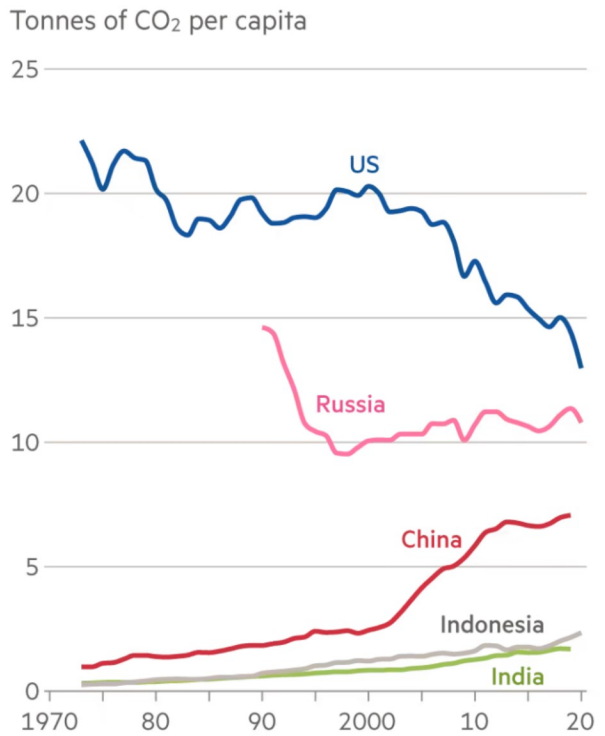
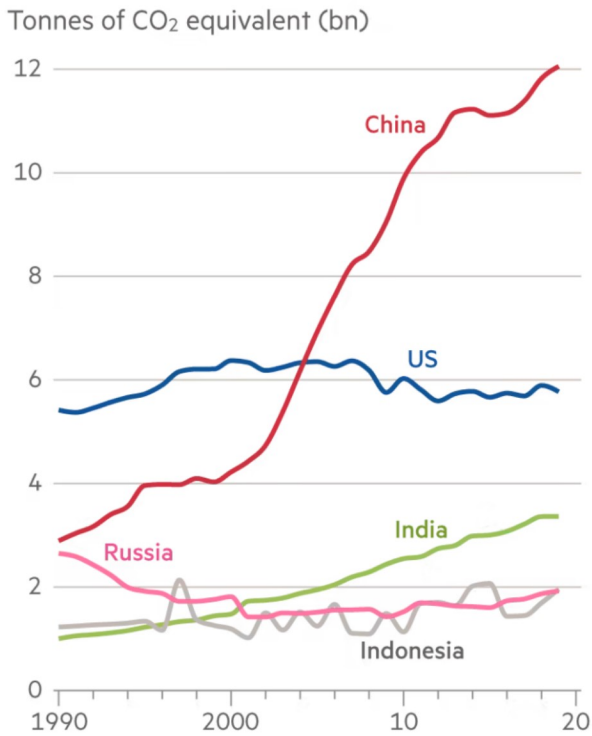
Dan Clark, Sam Joiner and Steven Bernard JANUARY 18 2023

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Carbon emissions compared



Sources: Climate Watch; IEA
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The Financial Times has created a searchable dashboard of 193 countries' historical emissions and future climate targets, as well as information on the energy mix that indicates their progress on renewable energy, using data from [Climate Watch](#), the International Energy Agency and the UN.

The legally binding country targets to reduce greenhouse gas emissions are called nationally determined contributions (NDCs) and are recorded on the UN global [registry](#).

Recent analysis by the UN Environment Programme described these targets collectively as being “woefully inadequate” and indicated “no credible pathway to 1.5C in place”, referring to the 2015 Paris Agreement goal to avoid potentially disastrous planetary changes for global warming.

Temperatures have already risen by [at least 1.1C since the pre-industrial era](#).

The [2022 year was the fifth warmest on record](#), according to the US National Oceanic and Atmospheric Administration and Nasa, concurring with the EU earth observation programme, Copernicus. The Geneva-based World Meteorological Organisation estimates that the average global temperature in 2022 was about 1.2C above pre-industrial levels.

China, the world's biggest annual emitter and heavily reliant on coal for power, last updated its target in October 2021, saying it would reach a “CO₂ emissions peak before 2030 and achieve carbon neutrality before 2060”.

The US, the second-biggest emitter on an annual basis but the biggest historically, also failed to update its target in the past 12 months, submitting its latest commitment in April 2021. It has set an economy-wide target of cutting net greenhouse gas emissions by 50 to 52 per cent below 2005 levels by 2030.

However, it has passed flagship \$369bn climate and tax legislation under the Biden administration that experts believe will help it get most of the way to its goal by stimulating green energy development.

The third biggest annual emitter, India, has more recently set a target. In August, it stated an intention to reduce its emissions intensity by 45 per cent by 2030 compared with 2005 levels.

Emissions intensity is a goal that is criticised by climate experts because it allows for a rise in absolute emissions, as it measures emissions as a proportion of output.

The choice of different baseline years by country is another of the complexities in setting targets, making direct comparisons difficult. Baseline years often coincide with historical peaks in national emissions.

The less stringent measure of carbon intensity is also used by developing countries to design targets that allow for growth. It is calculated per unit of gross domestic product, to take into account the rise of emissions through economic expansion. China and India use carbon intensity.

Global carbon dioxide concentrations were an annual average for 2022 of approximately 417 parts per million, up about 50 per cent from an estimated 277 ppm in 1750, according to the [Global Carbon Project](#).

In 2015, the year of the Paris accord, emissions from human activities were nearly 47bn metric tonnes of greenhouse gases, expressed as carbon dioxide equivalents. By 2022, this level was an [estimated 58bn metric tonnes](#).

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