

CO2 emissions up 2.7%, world 'off course' to curb warming: study

December 5 2018, by Marlowe Hood



Coal-fired power stations such as this one in China are contributing to CO2 pollution

Global emissions of carbon dioxide mainly from fossil fuel burning will rise 2.7 percent in 2018, scientists said Wednesday, signalling a world "completely off course" in the fight against climate change.

Last year, CO₂ pollution increased by 1.6 percent after a three-year hiatus that raised hopes manmade [greenhouse gas emissions](#) had finally peaked despite an expanding world economy.

"This growth in global CO₂ emissions puts the goals set out in the Paris Agreement in jeopardy," lead author Corinne Le Quere, director of the Tyndall Centre of Climate Change Research at the University of East Anglia, said in a statement.

"It is not enough to support renewables," she added. "Efforts to decarbonise need to be expanded throughout the economy."

The findings, co-authored by a team of nearly 80 scientists, were published in the journal Open Access *Earth System Science Data*.

Rapid deployment of solar and [wind power](#), along with gains in [energy efficiency](#), have been outpaced by growth in demand for freight, personal transport, shipping, and aviation, the research showed.

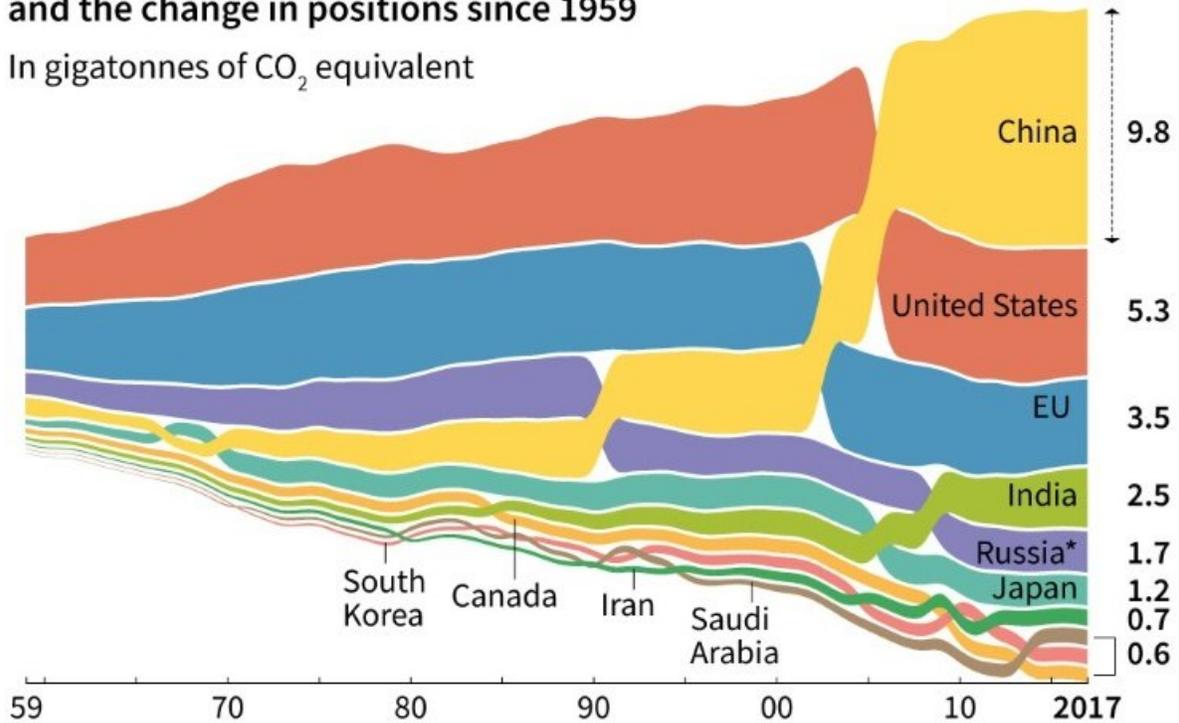
The 2015 Paris [climate](#) treaty calls for capping [global warming](#) at "well below" two degrees Celsius (3.6 degrees Fahrenheit), a goal that scientists say could soon slip out of our grasp if planet-warming continues to climb.

Even a 2C ceiling above pre-industrial levels may not be enough to avoid catastrophic impacts, the UN's climate science panel concluded in a landmark report in October.

China the world's largest carbon polluter

The world's top 10 carbon polluters in 2017 and the change in positions since 1959

In gigatonnes of CO₂ equivalent



Source: Global Carbon Budget

*USSR until 1991

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The world's top 10 carbon polluters in 2017 and how positions have changed since 1959.

Coal use in China

A single degree of warming to date has seen a rise in deadly heatwaves, droughts, floods, and superstorms made worse by rising seas.

"Emissions will continue to rise, rhetoric is increasing but ambition is

not—we are completely off course," said co-author Glen Peters, research director at the Centre for International Climate and Environmental Research in Oslo.

"While there has been positive progress on clean energy and electric vehicles, this is currently too small to impact the onward march of fossil fuels."

The UN Intergovernmental Panel on Climate Change (IPCC) has said that CO₂ emissions must drop 50 percent by 2030—and reach "net zero", with no additional leakage into the atmosphere—by 2050 if the rise in Earth's temperature is to be checked at the safer limit of 1.5C.

The uncertainty range for the 2.7 percent increase is 1.8 to 3.7 percent.

Fluctuations in global emissions over the last five or six years have tracked changes in coal consumption, the study revealed.

In particular, "the trends have a lot to do with the ups and downs of coal use in China," Le Quere told journalists in Paris.



Fluctuations in global emissions over the last five or six years have tracked changes in coal consumption

Globally, coal-fired power accounts for 40 percent of CO₂ emissions, and more than two-fifths of the world's electricity.

Oil and gas use have grown almost unabated over the last decade.

China's emissions accounted for 27 percent of the global total, and will likely show growth of 4.7 percent in 2018.

Smell the coffee

Coal is likely to dominate the Chinese energy system for decades, even

if the skyrocketing growth of the mid-2000s is unlikely to return, the researchers said.

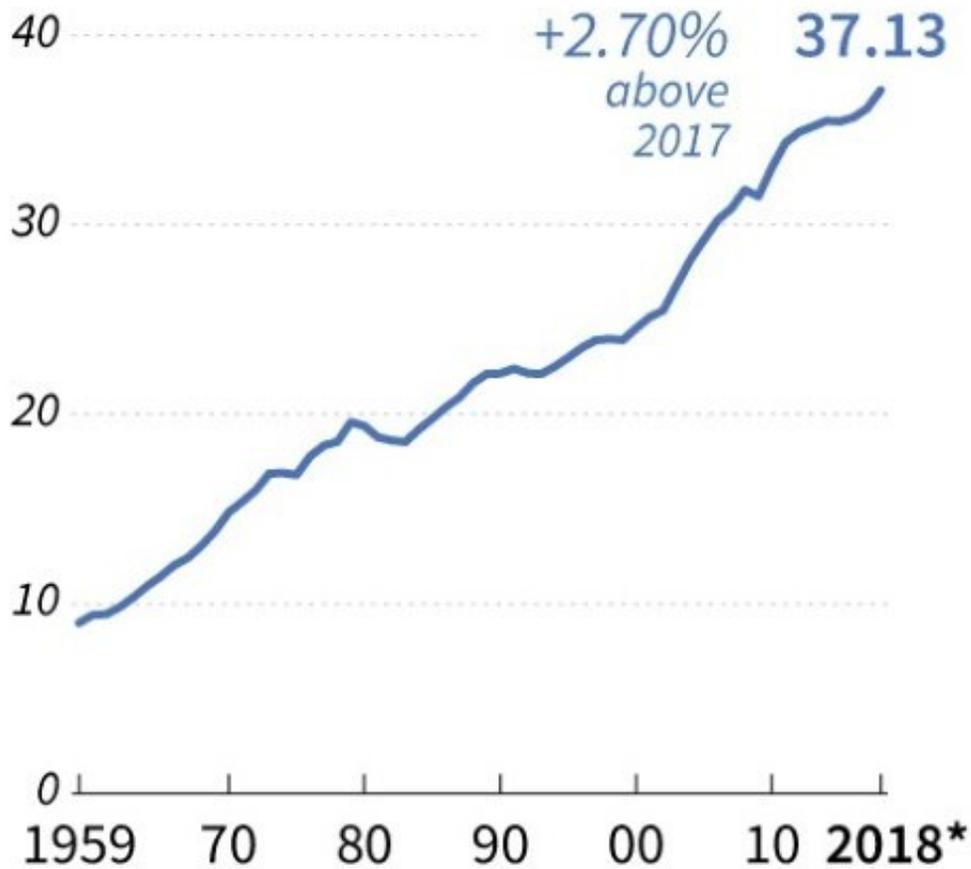
The United States will account for 15 percent of CO₂ pollution in 2018, an increase of about 2.5 percent. Most of that growth can be traced to an exceptionally hot summer and cold winter.

Despite attempts by Donald Trump to revive a moribund domestic coal industry, US emissions are expected to resume their downward trend in 2019 as cheap gas, wind and solar power continue to displace coal.

India's emissions, seven percent of the total, continued their upward spiral, increasing more than six percent, with growth across all three major fossil fuels.

World carbon emissions

Annual, in gigatonnes of CO₂ equivalent



*estimates

Source: Global Carbon Budget



Annual carbon emissions in gigatonnes of CO₂ equivalent

The European Union is set to see a small decline in 2018, and will account for about a tenth of the total.

Some scientists expressed frustration with the pace of change.

"Set against a background of collective delusions, partial accounting and just plain lies, emissions will continue to rise," said Kevin Anderson, a professor of energy and [climate change](#) at the University of Manchester.

"It's time to grow up and smell the coffee."

Mohamed Adow, international climate lead for Christian Aid, said poor people in developing countries most exposed to climate hazards simply cannot wait.

"If this is the most important issue of our time, as leaders repeatedly say, then why aren't they acting accordingly—and showing up for the climate talks?", he said.

Nearly 200 nations are huddled at UN climate talks in Katowice, Poland until December 14.

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