



ECONOMIC RESEARCH DEPARTMENT

COP 25: climate change is still a huge challenge

Certain gases in the atmosphere, such as carbon dioxide (CO_2) , are largely opaque to the Earth's infrared radiation and keep heat at the Earth's surface trapped, like a lid. This is the greenhouse effect, identified in 1824 by French mathematician Joseph Fourier. Its intensity has always varied, but human activity has caused it to disrupt. Since the preindustrial era – generally accepted as the period from 1850 to 1900 – human activity has caused 2,000 billion tonnes of CO_2 to be released into the atmosphere, increasing the Earth's temperature by 1°C. That increase is now accelerating. It will reach 3-5°C by 2100 if carbon emissions continue at their current trend. Few species can adapt to that rate of change, which is a hundred times faster than during interglacial periods of warming. COP 25, taking place in Madrid next week, will remind us all that urgent action is required to slow down this process.

The greenhouse effect (1880-2018) 1.0 0.5 0.5 300 320 340 360 380 400 420

Source: IPCC, NASA

Atmospheric CO2 level (parts per million)