

Unprecedented changes

Human activity is the dominant cause of global warming observed since the 1950s, and scientists predict temperatures will rise another 0.3°C to 4.8°C this century.

By TONY BARBOZA

THE world's leading climate scientists have for the first time established a limit on the amount of greenhouse gases that can be released before the Earth reaches a tipping point and predicted that it will be surpassed within decades unless swift action is taken to curb the current pace of emissions.

The warning was issued recently by a panel of United Nations-appointed climate change experts meeting in Stockholm, Sweden. The Intergovernmental Panel on Climate Change (IPCC) estimated that once a total of one trillion tonnes of carbon dioxide are emitted into the atmosphere, the planet will exceed 2°C of warming, the internationally agreed-upon threshold to the worst effects of climate change.

"We've burned through half that amount" since pre-industrial times, Michael Oppenheimer, a professor of geosciences and international affairs at Princeton University who reviewed the report and is a co-author of the panel's upcoming report on the effect of climate change, said.

"Because the rates of emissions are growing, it looks like we could burn through the other half in the next 25 years" under one of the more dire scenarios outlined in the report.

Other scenarios show that the threshold will be reached later this century. The finding constitutes a warning to governments to cut emissions of carbon dioxide, the main greenhouse gas, which is generated by the burning of fossil fuels, industrial activity and deforestation.

Calling climate change "the greatest challenge of our time," panel co-chair Thomas Stocker said

Act now: Activists protesting during the recent Intergovernmental Panel on Climate Change meeting in Stockholm, Sweden, demanding for immediate political action on global warming. — AFP



Floods hit Shantou in southern China's Guangdong province. Climate change is causing more extreme weather events such as heatwaves, storms and droughts. — AFP

humankind's fate in the next 100 years "depends crucially on how much carbon dioxide will be emitted in the future".

In the report, the panel said it is 95% certain that human activity is the dominant cause of the global warming observed since the 1950s. That is up from 90% six years ago.

"Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes," the report said.

The report is the panel's fifth major assessment since 1990. It reaffirms many of the conclusions

of past reports, but with greater confidence.

"The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen and the concentrations of greenhouse gases have increased," the panel wrote in a 36-page summary of its findings.

"Each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850."

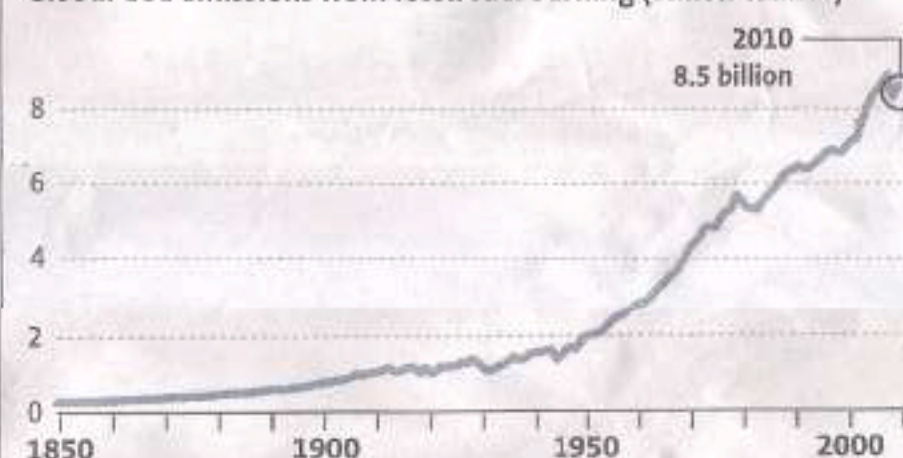
The report also addressed the so-called hiatus, a slowdown in the rise of surface temperature that has been observed over the last 15

THE DEBATE IS OVER

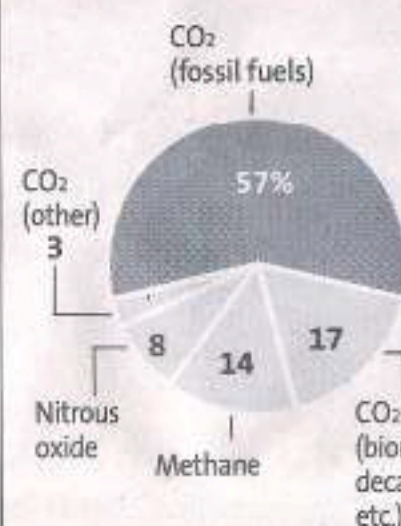
A landmark report

A new report by the United Nations' climate panel says that scientists are virtually certain that human activity is the "dominant cause" of global warming, which is due primarily to higher concentrations of greenhouse gases.

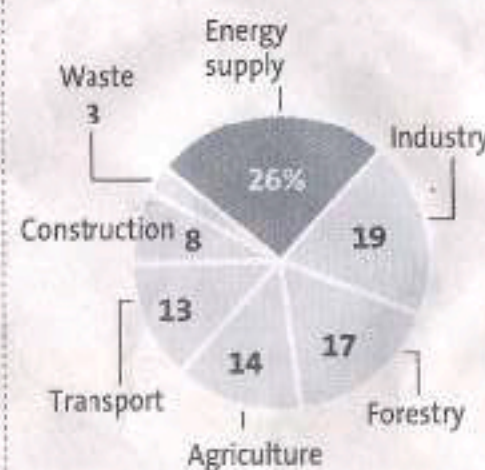
Global CO₂ emissions from fossil fuel burning (billion tonnes)



Global greenhouse gas emissions, by gas
Percent of total emissions



Global greenhouse gas emissions, by source
Percent of total emissions



Source: UN Intergovernmental Panel on Climate Change, US Environmental Protection Agency, International Energy Agency
Graphic: Pat Carr

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