

DAILY NEWS to Members: 09/02/2007 by Vasco de Janeiro

IPCC PUBLISHES REPORT ON THE SCIENCE BEHIND CLIMATE CHANGE

Global warming is “very likely” caused by humans, and temperatures and sea-levels will increase by the end of the century, says the most comprehensive report yet on climate change from the UN *Intergovernmental Panel on Climate Change* (IPCC), unveiled on 2 February. This Fourth Assessment Report (AR4), entitled *Climate Change 2007: the Physical Science Basis*, warns that global temperatures are likely to rise by between 1.1 and 6.4°C by the end of this century relative to the last, with a probable 2 to 4.5 degree range if atmospheric CO₂ doubles from “pre-industrial” – ie pre-1750 - levels. The sea-level rise over the same period may range from 18 to 59 centimetres, says the IPCC report.

The report assesses current scientific knowledge of the natural and human drivers of climate change, observed changes in climate, the ability of science to attribute changes to various causes, and projections for future climate change. It was drawn up by some 600 authors from 40 countries. Over 620 expert reviewers and a large number of government reviewers also contributed. Representatives from 113 governments reviewed and revised the summary line-by-line before adopting it and accepting the primary report.

A key change in the report's language from that used in the Panel's 2001 report indicates greater certainty that human activity is causing global warming. The report puts the probability of the link at more than 90%, compared with the 66 – 90% likelihood signalled in 2001. “*This report puts a full stop behind the questioning of the science underlying the issue of whether humans are causing global warming*” said UN Environment Programme Director Achim Steiner, adding: “*This is critical because it allows us to now shift the attention to what kind of policy responses and international initiatives we need to achieve emissions reductions.*”

The global atmospheric concentration of CO₂ stood at 379 parts per million (ppm) in 2005, up from about 280 ppm in 1750, before the industrial revolution, says the report. Concentrations of CO₂ and methane (CH₄), another greenhouse gas, exceed “*by far*” the highest in an Antarctic ice-core record stretching back 650,000 years. These increases are primarily attributable to fossil fuel use and land-use change, said Susan Solomon from IPCC.

The February 2 report is the first part of a four-volume set. The other volumes, due out in April, May and November, will cover impacts, adaptation, vulnerability and mitigation.

The role of the IPCC is to assess on a comprehensive, objective and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis for the risk of human-induced climate change, its potential impact and options for adaptation and mitigation. The Panel neither actually carries out research nor monitors climate-related data or other relevant parameters. It bases its assessment mainly on peer-reviewed and published scientific and technical literature.