

CLIMATE SCIENCE IN THE EYE OF THE HURRICANE OF POLITICS AND MEDIA

The ever growing imbrications of science with social and economical processes, and the complexity of the phenomena it explores, highlight with increasing strength the need to rebuild the bases of social trust. At the same time, the need stands out for the different social actors, including scientists, to defend their spaces with proven arguments in terrains made ever more controversial by relations of powerful and asymmetric forces. All of this in a context of lack of an available rhetoric ambiance to express research points of view that are autonomous from potential clients interests, and that also do not appear as a self defense by researchers' interest groups. There is a serious risk that, in the rising process of science secularization, at the end, the baby is thrown away with the tub water.

A recent example is what has been called "climategate", "climate mafia" and "swindlers", in relation to the detection of errors in the *Fourth Assessment Report of the Intergovernmental Panel on Climate Control*, particularly in the second of its three volumes. Such allegations, although superficial, are very strong and carry a destructive style. They go beyond criticism and the claim for the fast correction of punctual errors. It is worth knowing about two recent documents related to these themes: the *Open Letter by Netherlands Scientists on IPCC and Errors in 2007 Climate Change Report* (www.sense.nl/openbrief) and the *Statement of the International Council for Science (ICSU) on the Controversy Around the 4th IPCC Assessment* (www.icsu.org/Gestion/img/ICSU_DOC_DOWNLOAD/3031_DD_FILE_IPCCstatementICSUfin.pdf).

Let's see, first, the climate problem. Since 1990, knowledge about the climate change produced by human activities and the understanding of its urgency have increased rapidly. Since 1988, the IPCC, sponsored by the United Nations, has gathered thousands of well known scientists from around the world (currently 194 countries participate), mainly from universities and public research institutions. In a series of reports it has established, based on solid scientific findings, that the climate change is taking place, that it is significant and that it is clearly linked to human activities. The Copenhagen Agreement recognizes that the dangerous human interference with the climate must be avoided, and governments have agreed to limit global warming to a maximum of 2°C, compared to pre-industrial climate. Research has shown that this is economically and technically

feasible through emission reduction measures and changes in consumption patterns.

IPCC and Errors in 2007 Climate Change Report. "... given the scale of the enterprise not surprising, that some errors did occur in part of the report. However, in proportion to the sheer volume of the research reviewed and analyzed, these lapses of accuracy are minor and they in no way undermine the main conclusions. It should be noted that the errors were initially revealed and made public by scientists and the misinterpretations can now be corrected accordingly. Rather than compromising the integrity and credibility of the science of climate change, this series of events is in itself a demonstration of the vigour and rigour of the scientific process." (from *ICSU Statement*)

Quality control within IPCC. In any field of science the errors, or the postulates that change upon new evidences must be openly admitted and corrected. This is specially so for the IPCC reports, which have large and deep implications for social elections and policies. The impression that IPCC has no adequate quality control procedures is mistaken. The mechanisms to gather the reports and their quality control follow well documented guidelines (www.ipcc-wg2.gov/publications/AR4/ar4review.html). The procedures are transparent and exhaustive, although they are not infallible. "It is however essential to continuously evaluate the IPCC principles and procedures and to amend them where appropriate and learn from errors that occurred" (from the *Letter*).

What is next?, ask themselves the Dutch scientists. The disproportionate commotion produced by this matter is worrying because, precisely, the question of climate change is serious and urgent. The disheartening results of Copenhagen frustrated the possibility of reaching needed and urgent agreements to alleviate unavoidable changes, and to adapt the planet and its inhabitants to them. The most affected ones are the poor countries, usually located in tropical regions. The robust key conclusions of IPCC, despite the errors, continue to be valid. Climate research and the IPCC reports on the state of knowledge provide scientific bases to build policies for the climate. We should assure the critical reasoning, the exhaustive research and thinking beyond the short term, and continue constructing a knowledge base that is useful for the future, openly recognizing the strengths and weaknesses of the scientific process.

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