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The proposal was put to the World Meteorological Organisation by the Met Office at a meeting in Antalya, Turkey, earlier this week, and accepted by 150 delegates from around the world. Its detailed terms will be agreed at a conference to be held in Britain later this year.

The plan is for the entire global record of land-based air temperatures from 5,000 weather stations, which began before 1860, to be made freely available to anyone. It will then be reanalysed by at least three and possibly five groups of experts, whose different methods will be made transparent and open to scrutiny, and whose conclusions will be peer-reviewed.

The task is expected to take three years, and it is likely that its findings will form a core part of the next IPCC report, provisionally due in 2013 or 2014.

The Met Office stresses that it does not foresee that the new analyses will reveal any "substantial changes" from the basic conclusion in the last IPCC report, published in 2007, that the recent warming of the earth's climate is "unequivocal." Rather, it explains in its proposal document: "This effort will ensure that the datasets are completely robust and that all methods are transparent."

This makes it clear that although the Met Office feels a more detailed temperature record is needed, in particular so that new extremes can be detected by daily records (which might be smoothed out in current monthly averages), a principal impetus behind the whole exercise is confidence-building.

Trust in the current global temperature record and its potential demonstration of a changing climate was shaken by the release in November of the emails from University of East Anglia's Climatic Research Unit (CRU), which is the guardian of one of the temperature record's main data sets. The emails appeared to show the director of the unit, Professor Phil Jones, obstructing efforts by climate sceptics to obtain information on the way the record was put together; some sceptics have challenged the suggestion that the earth is warmer now than at any time in the last 1,000 years.

Professor Jones has stood down as head of the CRU while an independent inquiry is carried out into the emails controversy by Sir Muir Russell, which is due to report in the spring.

http://www.independent.co.uk/environment/climate-change/worlds-temperature-record-to-be-reanalysed-1909909.html