## Appendix C

## Reported Errors and Deficiencies in IPCC 2007 Reports

This Appendix provides additional details regarding reported errors raised in the IPCC 2007 report and supporting documents. This list, presented in alphabetical order, is not intended to be comprehensive. In addition, only representative references are cited.

Accelerated Warming Rate – The IPCC 2007 report includes the following graph (Figure C-1), which is used to argue that the rate of warming has been accelerating. Monckton (2009) reports that the graph relies on made-up data from the Climate Research Unit (CRU) at the University of East Anglia. It is also overlain by four separate trend lines, each with a start-date carefully selected to give the impression that the rate of warming over the past 150 years has itself been accelerating, especially between 1975 and 1998.

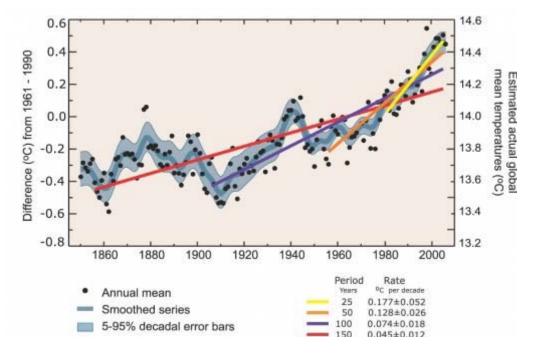
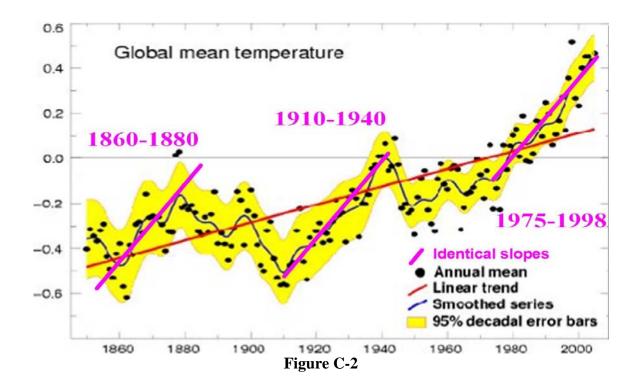


Figure C-1

The next diagram (Figure C-2) below represents actual warming trends. Monckton (2009) argues that the correct conclusion to be drawn from this data is that there is no discernible human influence on global temperature. The global temperature increase is merely a continuation of the recovery of global temperatures from the Little Ice Age (a recovery that began 300 years ago), overlaid by an apparent 60-year cycle in global temperatures. This does not in any way indicate anthropogenic global warming has occurred.



**Africa Food Shortages** – The IPCC 2007 report claims that by 2020 yields from rain-fed agriculture could be reduced by up to 50% in some African countries as a result of climate change. This would cause a North African food shortage. This claim is not supported scientifically and has been discredited (Davidson 2010, Pile 2010). A key author of the team behind this report has admitted that he could find no evidence to support his own group's claim (FoxNews 2010b).

Amazon Rainforest – The IPCC 2007 report claims that climate change will have a devastating effect on the Amazon rainforest. The IPCC scientists wrote that 40 percent of the Amazon rainforest in South America was endangered by global warming. These findings were based on numbers from a study by the World Wildlife Fund written by a freelance journalist and green activist which had nothing to do with global warming (Koporowski 2010). New research has contradicted this IPCC claim. A NASA-funded study has found that the most serious drought in the Amazon for more than a century had little impact on the rainforest's vegetation (Gray 2010). Differences in the greenness level of Amazon forests were not significant between drought and non-drought years.

<sup>&</sup>lt;sup>1</sup> The Africa food shortage claim is also repeated in the IPCC Synthesis Report. That report is the IPCC's most politically sensitive publication, distilling its most important science into a form accessible to politicians and policy makers. Its lead authors include IPCC chairman Rajendra Pachauri, who has quoted this claim in speeches, as has U.N. secretary-general Ban Ki-moon. Professor Chris Field, the new lead author of the IPCC's climate impacts team: "I was not an author on the 'Synthesis Report,' but on reading it I cannot find support for the statement about African crop yield declines."

Antarctic Sea Ice – The IPCC 2007 performed a brief analysis of Antarctic sea ice, concluding that while there has been an apparent increase in the sea ice extent around Antarctica from 1979 through 2005, that the increase has been slight and not statistically significant (Knappenberger 2010). Other assessments have found different results (World Climate Report 2010). Idso and Singer (2009) found the trend in Antarctic sea ice has been about 2 to 3 times as great as the IPCC 2007 reported and is statistically significant.

**Arctic Sea Ice** – Analysis of natural cycles challenge global warming claims that the North Pole will be free of ice in summer by 2013 (Rose 2010a). Arctic summer sea ice has increased by 409,000 square miles, or 26, percent since 2007. Some scientists argue that a global trend toward cooler weather is likely to last for 20 or 30 years.

**Disaster Costs** – The IPCC created its own graph in the IPCC 2007 WWGII Assessment Chapter 1 that did not exist in the peer-reviewed literature or the grey literature to suggest a relationship between increasing temperatures and rising disaster costs (Pielke 2010b).

**Forecasting Methods** – The forecasting procedures used by the IPCC to assess climate science and prepare the 2007 report violated 81% of 89 principles relevant to climate forecasting (Green and Armstrong 2007). Also see Appendix F.

Himalayan Glaciers – The IPCC 2007 report claims that Himalayan glaciers will have melted by 2035. Chapter 10 of the IPCC report says: "Glaciers in the Himalaya are receding faster than in any other part of the world." (Pearce 2010). In November 2009, V.K. Raina of the Geological Survey of India, a leading Indian glaciologist, issued a report summarizing the literature, as well as presenting some fresh analysis of the issue (Raina 2009). The Raina report findings include that while glaciers are the best barometers known to assess past climate, the same may not be true for glacier fluctuations being an accurate guide of future climatic changes. The report concluded: "It is premature to make a statement that glaciers in the Himalayas are retreating abnormally because of global warming. Himalayan glaciers have not in any way exhibited, especially in recent years, an abnormal annual retreat." When this report was issued, Raj Pachauri, IPCC chairman, denounced it as 'voodoo science.'

The IPCC claim that Himalayan glaciers are set to disappear by 2035 was essentially fabricated, and Pachauri eventually acknowledged the mistake. Dr. Murari Lai, the scientist behind the claim in the IPCC report that Himalayan glaciers will have melted by 2035, admitted that the claim was made to put political pressure on world leaders (Rose 2010b). In addition, Lai claims that the glacier error was known by the IPCC all along (Pielke 2010a). As a result, the Indian government has established its own body to monitor the effects of global warming because it "cannot rely" on the IPCC (Nelson 2010).

Senior scientists at the Wadia Institute of Himalayan Geology (WIHG) have rejected the global warming theory. Global warming has no role in controlling the conditions in the Himalayas, which are controlled by the winter snowfall rather than external factors (Maindola 2010).

Ice Core Data – Ice core records of  $CO_2$  have been widely used as proof that, due to man's activity, the current atmospheric level of  $CO_2$  is about 25% higher than in pre-industrial times.

German Biologist Ernst-Georg Beck (2007a, b) has put forth a peer-reviewed paper arguing that the IPCC reliance on ice core CO<sub>2</sub> figures is incorrect. Jaworowski (2004) testified that ice core samples do not represent atmospheric reality, presenting the scientific basis of his conclusion.

Akasofu (2008) has noted that even if ice core data are considered, a dramatic rise in Arctic temperature from 1920 to 1940 and the subsequent drastic fall in temperature from 1940 to the mid-1970s do not correlate with changes in CO<sub>2</sub> levels. A similar pattern occurs from 1920 to 1940. These fluctuations in Arctic temperature are considered to be natural change. It is not possible to conclude with confidence that the temperature rise after 1975 is mostly caused by the greenhouse effect (Akasofu 2008).

**Mountain Ice** – The IPCC based its findings of reductions in mountain ice in the Andes, Alps and in Africa on a feature story of climbers' anecdotes in a popular mountaineering magazine, and a dissertation by a Switzerland university student, quoting mountain guides. (See Appendix E).

**Netherlands Sea Levels** – The 2007 IPCC report claimed rising sea levels endanger the 55 percent of the Netherlands it says is below sea level. The portion of the Netherlands below sea level actually is 20 percent. The Dutch Environment Minister has indicated that climate researchers' errors will no longer be tolerated (FoxNews 2010a).

**Quality of Documentation** – The IPCC 2007 report cites non-peer reviewed documents written by environmental advocacy groups (e.g., World Wildlife Fund and Greenpeace), news articles, and unpublished university studies. (See Appendix E)

**Reef Degradation** – The 2007 IPCC report alleged a link between climate change and coral reef degradation. The IPCC cited non-peer-reviewed literature—advocacy articles by Greenpeace, an environmental advocacy group—as its sole source for this claim (Hoegh-Guldberg et al 1999, 2000).

Reliance on Unverifiable Climate Models – The IPCC places a great deal of confidence in General Circulation Models (GCMs) despite their severe limitations (Tennekes undated). These models solve equations of fluid dynamics to describe the fluid motions of the atmosphere and the oceans. All models used by the IPCC describe clouds, dust, chemistry, physics, thermodynamics, and the biology of fields, farms, and forests very poorly, if at all. The standard for an acceptable scientific hypothesis is that the hypothesis makes predictions that can be tested and are falsifiable (Tennekes 1992). GCMs have become simply too complex, with ensemble forecasting and multimodel forecasting, to be testable and falsifiable. Such models contain many free parameters that simply cannot be sufficiently adjusted for model calibration to forecast accurately the real world. Zichichi (2007) points out:

"[John] von Neumann—the great 20<sup>th</sup>-century mathematician was always warning his young collaborators about the use of free parameters by saying: If you allow me four free parameters I can build a mathematical model that describes exactly everything an elephant can do. If you allow me a fifth free parameter, the model I build will forecast that the elephant will fly." (Quote as presented in Solomon 2008).

Climate models must be tested and verified, either in toto or by component parts or subroutines, to demonstrate correspondence with the physical world. The underlying model code, to the degree possible, must be demonstrated to be a reasonable representation of the actual underlying chemistry and physics. Modelers failing to adequately demonstrate this "correspondence" to the physical world should be prepared for other scientists to not accept the model forecasts and predictions.

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