

Expert Reviewer: GRAY

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						<p>** If you are cutting and pasting comments from another application into the review form, please DOUBLE-CLICK in the appropriate spreadsheet comment cell before pasting your comment. DOUBLE-CLICK Only ONE comment per row, please.</p>
1	0	0		0		There needs to be part of the "Introduction", or even a separate section, discussing the problems and ambiguities that have been caused by the definition of "Climate Change" in the Framework Convention on Climate Change 1992. The definition is "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over a comparable time period"
2	0	0		0		.This definition has the following unfortunate consequences. 1. It gives the impression that ALL "Changes of Climate" are caused by human emitted greenhouse gases, and encourages the use of climate models that are based on that assumption. In reality there are several other causes of changes of climate, some by humans, such as urban development, energy emissions, and land use change, and some natural, such as the sun, volcanoes, El Niño ocean changes and cosmic rays, not present in the models, which means that they are all of very limited use.
3	0	0		0		2. The FCCC definition suggests that "natural" changes in the climate are "variable" . Natural climate "change" is not mentioned, and therefore not properly investigated in this report
4	0	0		0		3. The FCCC definition ignores changes in the climate due to human activity which are not "attributed" to greenhouse gases, such as changes in land and water use, urban development, energy production, again leading to their relabie neglect by this Report.
5	0	0		0		The IPCC has tried to rectify this situation by redefining "Climate Change" as follows: "Climate Change in IPCC usage refers to any change in climate over time, whether due to natural vcariability or as the result of human activity"
6	0	0		0		This definition at least includes "natural variability and "human activity" in "Climate Change", but it still does not accept the existence of "natural climate change" as opposed to mere "variability. It also includes ALL forms of human activity which influence the climate instead of just those related to greenhouse gases, but in practice this point tends to be forgotten. For example the statement "a discernible human influence oin the climate" does not necessarily mean that such an influence derives from greenhouse gases, but it is frequently interpreted as if it does.
7	0	0		0		The I.PCC definition causes confusion as we now have two different definitions of "climate change" and the public cannot tell which is meant. Surely the only thing to do is to abandon the phrase altogether. This means changing your Title. I suggest "Climate Science" .You should avoid the use of the term throughout the report, and I have suggested changing it wherever it occurs
8	0	0				It is about time you had an INDEX. It is at present extremely difficult to find discussions of any topic, which are sometimes dispersed. The current length makes it worse.

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9	0	0				The "Summary for Policymakers" should be deleted. It is, in any case, a "Summary BY Policymakers", not FOR Policymakers, since it has to be agreed line-by-line by Government representatives. It serves no useful purpose, except to convince the public that the scientists are under the control of politicians..It puts the whole publication schedule into chaos as it is finally agreed AFTER agreement of a Final Draft of the rest of the Report, and any differences either cause confusion, or have to involve alteration of a "finally" agreed document. It is demeaning and professionally embarrassing for scientists to have to be subjected to a line-by-line agreement by Government Representatives. Scientists are grown-up enough to prepare their own "Summary" which is perfectly adequately done at present with the "Technical Summary". The same people are concerned with preparing both documents, so there is considerable duplication; eliminating one of them would conserve space.
10	0	0				You have refused to consider the evidence that the "Global Surface Temperature Record" which is so promoted in this Report is upwardly biased, and is, therefore, not a reliable record of global temperature change. McKittrick and Michaels 20-04 "Climate Research" Vol 20 pages 159-173 showed from a statistical study that the readings were influenced significantly by a large number of socio-economic factors resulting from changes in population and prosperity. They found the adjusted temperature trend 1979-to 2000 as 0.011°C per decade. I drew your attention to this paper in the previous draft, but you have ignored it. It surely casts doubt on the considerable emphasis placed on the biased Global Surface Temperature Record in this Report. You also ignore the fact that when this record is comprehensively corrected by the "homogeneity adjustment" procedure, the "warming" over the 20th century all but disappears. So far, this procedure has confirmed this for the contiguous USA and for China, but many other places do not have sufficient numbers of weather stations for the full process. You have ignored the US and Chinese corrected records throughout this report, apart from the illustration of the US record from 1930 in Figure 3.2.3
11	0	0				You continue to use Emissions Scenarios which are completely incredible. A2 expects world coal production to be nine times as high and fossil fuel emissions 4.4 times as high from 2000 to 2100, and A1F1 is six times as high for coal production and five times for emissions. Methane always increases despite the fact that it has stabilised.. A2 and A1F1 should be forgotten..
12	0	0				You need to clean up the "Glossary" Previous definitions of "Climate" (which can be almost anything), "Climate Change" only "refers to" a variation in the mean state of the climate or in its variability. You have an average of an average and a variation in a variability!.
13	0	0				There needs to be a firm statement on statistical policy. It should include an obligation, throughout the Report, to give 95% confidence limits as a measure of uncertainty. This means using TWO standard deviations, not ONE.. The Report should be scrutinised to make sure this is done. It is often unclear. One gets the impression that one standard deviation is used to give a spurious impression of accuracy

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14	0	0				The "Summary for Policymakers" is a better guide to a general reader than the "Technical Report" which is long-winded and endlessly repetitive. I therefore prefer that the "Summary for Policymakers" should be retained, but freed from the burden of having to be agreed line-by-line by Government representatives. You can then delete the "Technical Report and save a lot of space.
15	0	0				It is a disgrace that Chapter 2 has been allowed to get away with quoting its figures with only one standard deviation in contrast to some other chapters which quote the generally accepted two standard deviations representing 95% confidence limits. The figures in Chapter 2 give a dishonest impression that they possess a greater accuracy than they actually do.