

Expert Reviewer: GRAY

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1	1	2	10	2	10	Add at end "some of which may be related to increased emissions of greenhouse gases"
2	1	2	12	2	12	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to" human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers" (page 3) but this leads to confusion as the public may not notice this and assume that you are referring only to the redistricted FCCC definition. You should therefore avoid using the term"climate change" altogether to avoid this confusion
3	1	3	6	3	6	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to" human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3) but this leads to confusion as the public may not notice this and assume that you are referring only to the redistricted definition. You should therefore avoid using the term"climate change" altogether to avoid this confusion
4	1	3	7	3	7	Delete "of the risk of" The study is to find out IF there is a risk at all. You should not assume that there IS a risk
5	1	3	14	3	14	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to" human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers" (page 3) but this leads to confusion as the public may not notice this and assume that you are referring only to the redistricted definition. You should therefore avoid using the term"climate change" altogether to avoid this confusion
6	1	3	14	3	15	Delete "at an increasingly rapid rate". This is doubtful. Leave it out
7	1	3	15	3	15	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to" human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers" (page 3) but this leads to confusion as the public may not notice this and assume that you are referring only to the redistricted definition. You should therefore avoid using the term"climate change" altogether to avoid this confusion
8	1	3	15	3	16	Delete the last sentence. It is a gross exaggeration
9	1	3	20	3	20	This is all very well, but there are several contemporary examples of published papers in climate science where the original data are not scrutinised or released
10	1	3	33	1	34	"ultimately do not survive testing against observations of nature" You are right there. It is about to happen with the theory that increases in greenhouse gases are harmful

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11	1	3	57	3	57	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to "human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3)" but this leads to confusion as the public may not notice this and assume that you are referring only to the restricted definition. You should therefore avoid using the term "climate change" altogether to avoid this confusion
12	1	4	3	4	4	"The IPCC assesses the scientific literature etc" but it suppresses any publications which challenge its major propositions. An example is its suppression of the paper by McKittrick and Michaels 2004 "Climate Research Vol 26 159-173 which shows that the surface temperature record is upwardly biased by a range of socioeconomic factors. The virginity of the surface record is essential to the IPCC argument that "global warming" is caused by greenhouse gas increases, so they refuse to mention this paper or discuss it. It was similarly omitted from the First Draft, and they took no notice of my demand that it should be included. You have confirmed this suppression, and you also try to conceal the fact that methane concentrations in the atmosphere have stabilised over the past seven years
13	1	4	6	4	6	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to "human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3)" but this leads to confusion as the public may not notice this and assume that you are referring only to the restricted definition. You should therefore avoid using the term "climate change" altogether to avoid this confusion
14	1	4	13	4	13	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to "human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3)" but this leads to confusion as the public may not notice this and assume that you are referring only to the restricted definition. You should therefore avoid using the term "climate change" altogether to avoid this confusion
15	1	4	19	4	19	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to "human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3)" but this leads to confusion as the public may not notice this and assume that you are referring only to the restricted definition. You should therefore avoid using the term "climate change" altogether to avoid this confusion
16	1	4	22	4	23	Replace "actual climate system" by "the upwardly biased surface record, enhanced by a large temperature peak in 1998 attributed to an unusually great El Niño ocean event"
17	1	4	45	4	45	Replace "accelerated dramatically" with "increased". Delete "important. Don't overdo it!"

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18	1	4	49	4	49	Figure 1-2 gives the false impression that the models can predict future behaviour of the sun, It should be omitted
19	1	4	53	4	53	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to "human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3) but this leads to confusion as the public may not notice this and assume that you are referring only to the restricted definition. You should therefore avoid using the term "climate change" altogether to avoid this confusion
20	1	4	55	4	55	Delete "change". The word has an unfortunate connotation, as it is defined legally by the Framework Convention on Climate Change as restricted to "human activity that alters the composition of the global atmosphere". The IPCC tries to alter this definition by a footnote to the "Summary for Policymakers (page 3) but this leads to confusion as the public may not notice this and assume that you are referring only to the restricted definition. You should therefore avoid using the term "climate change" altogether to avoid this confusion
21	1	5	6	5	6	Replace "fingerprint" by "influence on" Let's use proper scientific language
22	1	5	8	5	19	This whole paragraph is a public relations puff for Keeling. It fails to mention that Mauna Loa is not representative of the whole earth, and since carbon dioxide is not a "well-mixed" gas (as proved by the "rug" supplied by the NOAA, and by the difficulties of measurement over land) we do not have a fair average for the concentration of carbon dioxide in the earth's atmosphere. Almost all the measurements are over the ocean. Since the concern for the effects of carbon dioxide are by humans living on land, we simply do not know what the concentrations are over land. The same considerations apply to methane.
23	1	5	7	5	7	You fail to mention the main greenhouse gas, water vapour, and the possibilities that humans might influence it. And I do not want to hear the excuse that you ignore it because it is a "feedback" Feedback or not, it is still the most important greenhouse gas and you should discuss its influence on the climate
24	1	5	8	1	8	Delete "high accuracy". I deplore your theatrical style. This is supposed to be science, not public relations propaganda
25	1	5	9	5	10	Delete from "the master time series" on line 9 to "climate change science as" on line 10. We don't need this hyped style.
26	1	5	12	5	13	Delete from "the master time series" on line 9 to "climate change science as" on line 10. We don't need this hyped style.
27	1	5	12	5	15	Delete from "are unique" on line 12 to "clearly" on line 15. This is exaggeration. Keeling's measurements are not unique. There are many others. They do not measure fossil fuel burning. They measure carbon dioxide concentration.
28	1	5	18	5	18	Replace "uniquely identify" with "relate" Replave "with" with "to"1
29	1	5	21	5	21	Replace "Although" with "To place"

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30	1	5	21	5	21	Replace "may appear dramatic" by "in perspective"
31	1	5	22	5	22	Replace "perspective" by "record"
32	1	5	22	5	22	Add at end "supposed"
33	1	5	23	5	23	Replace ", The necessary data came" with "which has come"
34	1	5	25	5	25	Delete "significantly"
35	1	5	26	5	26	Delete "roughly exponentially". What, exactly, does that mean?
36	1	5	10	5	10	Is 1998 the last reference to CO2 concentrations? I thought we lived in 2006
37	1	5	28	5	28	Replace "not exceeded about 20 ppmv" by "varied only slightly" Let us not use the language of TV advertisements
38	1	5	32	5	32	Insert after "oxide)." were also taken from unrepresentative oevan locations and , at"
39	1	5	36	5	36	Insert after (2003) and, since 1999 the concentration has been constant, and likely to fall"
40	1	5	43	5	43	Add after "cycles" ,", but has now stabilised at 1750ppbv"
41	1	5	43	5	43	Add after "emissions", "but cannot explain why it has stabilised"
42	1	0		0		I cannot make out whether this Chapter is supposed to be "historic", and only deal with what happened up to 1998, or is it yet another "Summary", where you bring in the more recent material in the actual Report. For example Figure 1-2 gives a graph of temperature observations to 2006 and projecvtions to 2007 Figure 1-3 and Figure 1_4 also are more recent. Giure 1-4 has one from 2007! Such foresight!. What you say is supposed to be "historic", but you keep referring to the Chapters as if what you say is up-to-date. You never seem to admit that there have been any ddifferences from your "historic" account
43	1	6	1	6	1	Delete "well-mixed" This is a myth. They are not "well-mixed". Even the biased series at present only measured over the oceans shows a definite change with latitude (see NOAA website) but there would be much greater variability if measurements over land could be made
44	1	6	22	6	22	Replace "most" by "some" No need to exaggerate
45	1	6	22	6	22	Replace "near global" by "extensive". Here you go again! None of the networks of weathert stations past or present comes remotely near to a randomly distributed series. ALL averages are therefore automatically biased until such a network is available, or until a correction procedure can be found.. Satellitrt surveys, by contrast, can derive truly global averrasges
46	1	6	24	6	24	Insert before "global" Apparent"
47	1	6	31	6	31	"replace "global" with "near-global"
48	1	6	36	6	36	"replace "global" with "near-global"
49	1	6	46	6	46	"replace "global" with "near-global"
50	1	6	56	6	56	"replace "global" with "near-global"
51	1	7	2	7	2	"replace "global" with "near-global"

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52	1	7	22	7	22	Add at end "This procedure is only possible where there are large numbers of weather stations for comparison purposes. So far full "homogeneity adjusted" records have only been published for the continental USA, and for China. In both cases the "adjusted" records show little overall warming for the past century, suggesting that this might be true for the entire near-global set. It might also be mentioned that the wholesale closing down of weather stations worldwide since 1987 has probably biased the average, as they would have been predominantly rural"
53	1	7	28	7	28	Add at end. "This conclusion, though, only applies after "homogeneity adjustment" and was found only for the USA..."
54	1	7	37	7	37	Delete "significant". In science this is usually associated with statistical methods
55	1	7	45	7	45	Add at end "US workers have never accepted that this method is sufficiently reliable to incorporate such measurements in a global average.. Christy et al 2001 Geophysical Research Letters Vol 28 pages 183-186 have shown that the transition from measurements in buckets drawn from the sea to measurement in the engine intake introduces an upwards bias which, so far, has not been corrected"
56	1	7	51	7	51	Insert after " 1998)". "Christy et al
57	1	8	10	8	10	Add at end "But does not alter the fact that the average is greatly influenced by proximity to human habitation (see McKittrick and Michaels 2004 Climate Research Vol 26 pages 159-173)
58	1	6	26	8	26	Insert after "climate change" "(defined to include all forms of change)"
59	1	8	34	8	34	Add at end "(d) demonstration that the change could be the result of a combination of anthropogenic and natural changes. In practice alternative (d) is usually the most likely, but the exact contribution of the two components is difficult to determine."
60	1	8	38	8	38	Add at end "but not natural changes that are the result of evolution"
61	1	8	43	8	43	Delete "well-mixed" This is a myth. They are not "well-mixed". Even the biased series at present only measured over the oceans shows a definite change with latitude (see NOAA website) but there would be much greater variability if measurements over land could be made
62	1	8	53	8	53	Add at end "however, the changes can largely be explained by human socioeconomic factors (see (see McKittrick and Michaels 2004 Climate Research Vol 26 pages 159-173)
63	1	9	8	9	8	Replace "clearly statistically" by "sometimes claimed to be"
64	1	9	11	9	11	Add at end "but they can be explained by human influences which do not involve greenhouse gas emissions (see McKittrick and Michaels 2004 Climate Research Vol 26 pages 159-173)"
65	1	9	12	9	12	Insert after "influence" "such as the identified socioeconomic factors"
66	1	9	14	9	14	Add at end "such as these socioeconomic factors"
67	1	9	38	9	38	Add at end "He was the first to identify water vapour as the major greenhouse gas"
68	1	10	5	10	5	Replace "rather than" by "as well as"
69	1	10	6	10	6	Insert after "occur" , "fairly"

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70	1	10	15	10	15	Delete "anthropogenic". Methane is not entirely "anthropogenic" neither is water vapour
71	1	10	15	10	15	Delete "over"
72	1	10	20	10	20	Replace "led a long campaign to build a consensus" by "argued"
73	1	10	22	10	22	Delete "anthropogenic and"
74	1	10	23	10	23	Replace "driving climate change" with "contributing to changes in climate"
75	1	11	26	11	26	Insert after "variability" "and change"
76	1	12	31	12	31	Add at end "Proxy measurements are distributed even less representatively than weather stations, so it is doubtful whether they can provide a meaningful global average. Also mathematical errors have recently been found in Mann's work which overturn his conclusion that current temperatures are unusual on a historic scale. (See McIntyre and McKittrick 2003 Vol 14, pages 751-771)"
77	1	14	46	14	46	Delete "significant breakthroughs had occurred. The special report"
78						
79	1	26	44	27	3	Delete. It is a repetition
80	1	27	7	27	8	This Table is no more than guesswork, so it gives a spurious impression of accuracy. It is better to use qualitative terms such as "possible", "might" "could" etc
81	1	27	10	27	11	There should be no exceptions. Delete last sentence
82	1	34	2	34	2	Insert "McIntyre, S and McKittrick, R, 2003. Corrections to the Mann et al (1998) proxy data base and northern hemispheric average temperature series ." Energy and Environment" Vol 14, pages 751-771"
83	1	34	2	34	2	Insert "McKittrick, R and Michaels, P.J 2004, A test of corrections for extraneous signals in gridded surface temperature data . "Climate Research" Vol 26, pages 159-173"
84	1	34	52	34	52	Insert "Peterson, T.C., 2003, Assessment of Urban Versus Rural in Situ Surface Temperatures in the Contiguous United States. "Journal of Climate" Volume 16, pages 2941-2959"
85	1	38	1	39	24	Delete this whole paragraph. What , on earth, is this doing here? It does not belong to a Chapter dealing with history. I am not sure it ought to belong anywhere. It is not part of the purpose of the IPCC
86	1	43	5	43	5	This diagram is misleading. The main feature of the temperature record was the large El Niño event of 1998. Surely you are not arguing that the "projections" were intended to take this in?. Without it the fit is poor; but you do not present the satellite or radiosonde records for the same period, even though they are more appropriate, as they are for the region where the greenhouse effect is supposed to happen. The reason you do not do so is that they would show the "projections" to be completely wrong.
87	1	44	5	44	5	Figure 1-2 is also misleading. It gives the impression that the models include "projections" of solar activity and urban heating
88	1	45	5	45	5	1-3 is also misleading as it does not indicate the upwards bias due to proximity of the observations to human habitation.

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89	1	46	5	46	5	1-4 looks pretty but means little. You are now presenting what is going to happen in 2007. So much for "history"