

IPCC Working Group I Fourth Assessment Report

Expert and Government Review Comments on the Second-Order Draft

Chapter 11

Batch AB (15 June 2006)

Notes

The following table of expert and government review comments are for consideration by the chapter author teams. They require a formal response to each comment from the team, and those responses will be archived.

Responding to review comments and record keeping

The chapter writing teams must consider all review comments and record an agreed response in the following table. This may be done by discussing the more general and substantive comments among the whole author team and then allocating responsibilities for responding to specific comments to the relevant authors. Note that responses should be understandable by someone scrutinizing the archived comments file after the report has been finalized.

Responses should generally be brief but clear. The following, or similar, styles of responses are suggested:

- Where the authors agree with the comment and have made a corresponding change:
Accepted - without comment (e.g., in case of minor modifications) or with brief comments (e.g., where partially accepted)
- Where the authors agree with the comment and changes are not necessary or changes are made in a different section:
Taken into account - with brief explanation (e.g. “see section X.Y”)
- Where the comment does not require a specific change, or the issue is already dealt with in the draft:
No change necessary – with brief explanation where appropriate (e.g. “covered in next paragraph”, “covered in section X.Y”)
- Where the authors do not agree with a suggested change:
Rejected – always with a brief explanation (e.g. “insufficient literature to support this”, “outside scope of section”, “outside purview and competence of WG1”, etc)
- Where dealing with very similar comments or a common thread of comments from one reviewer and a response has been given to the corresponding earlier comment(s):
See comment X-Y.
- Only where it is clear that the reviewer is not suggesting a specific revision to the chapter.
Noted - with or without comments.

It is recommended that you do not use names of individual members of the author team in the final responses to comments. I.e., responses should represent the entire chapter team. Where a comment involves another chapter please liaise with the authors of that chapter as appropriate but retain the comment and response in the comment file that you were sent. I.e., do not transfer comments.

Please provide the Technical Support Unit with the completed version of this document as a single electronic file by August 4, 2006.

No.	Batch	Page:line		Comment	Notes
		From	To		
11-480	A	15:35	15:35	In connection to this first description of the time periods it should be argued why you have chosen 20-year periods instead of the more traditional 30-year periods used in climate research. Compare also with the statement on p50, 130-31. [Erik Kjellström (Reviewer's comment ID #: 131-17)]	Following lead of Chapter 10
11-481	A	15:35	15:35	Refer to where "20C3M" is defined. [Erik Kjellström (Reviewer's comment ID #: 131-18)]	Will be clarified
11-482	A	15:37	15:38	"by the median, the 25% and 75%, or quartile, values (half of the models lie between these two values) and the maximum and minimum" -> "by the median, the 25% and 75% (the quartiles; half of the models lie between the 25% and 75% values), the maximum and the minimum". [Daniel Caya (Reviewer's comment ID #: 38-35)]	noted
11-483	A	15:37	15:37	"fractional precipitation" is also a chemistry term, although, granted, the risk of misunderstanding is nil. Here, but also elsewhere in the Chapter, relative precipitation changes or just precipitation changes might still be better. Also, the Chapter uses also "percent precipitation". Many terms for the same is confusing in a scientific text. [Markku Rummukainen (Reviewer's comment ID #: 223-43)]	noted
11-484	A	15:40	15:42	This sentence is not clear. I do not understand to which time-series plots the text refers or where they are. [Daniel Caya (Reviewer's comment ID #: 38-36)]	To be clarified
11-485	A	15:44	15:44	Most of the discussion for all of the regions or only in 11.3.1? [Daniel Caya (Reviewer's comment ID #: 38-37)]	To be clarified
11-486	A	15:46		These ratios follow from Table 10.3.1 (almost). [Govt. of Australia (Reviewer's comment ID #: 2001-455)]	Text to be revised
11-487	A	15:49	15:49	of the A1B scenario for the other cases." -> "of the A1B for the other scenarios." [Daniel Caya (Reviewer's comment ID #: 38-38)]	noted
11-488	A	15:49	15:49	Replace "cases" by "scenarios" for clarity. [Dave Rowell (Reviewer's comment ID #: 222-7)]	noted
11-489	A	15:49	15:49	"scaling" instead of "caling". [Markku Rummukainen (Reviewer's comment ID #: 223-44)]	noted
11-490	A	15:49	15:49	replace "caling" by "scaling" [Bart Van den Hurk (Reviewer's comment ID #: 274-79)]	noted
11-491	A	15:49	15:49	rephrase end of sentence as "...discussion for the other scenarios." [Bart Van den Hurk (Reviewer's comment ID #: 274-80)]	noted
11-492	A	15:49	15:49	Replace "caling" with "scaling". [Francis Zwiers (Reviewer's comment ID #: 305-133)]no	noted

No.	Batch	Page:line		Comment	Notes
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11-493	A	15:49		typo [Rasmus E. Benestad (Reviewer's comment ID #: 18-16)]	noted
11-494	A	15:51	15:51	"although not as precisely as the temperature itself." -> "although not as precisely as for the temperature." [Daniel Caya (Reviewer's comment ID #: 38-39)]	noted
11-495	A	16:1	16:2	Would quasi-linear be better than very linear ? The results seem to show some departures from linearity, especially in the upper and lower extremes of the plumes of uncertainty. [James Murphy (Reviewer's comment ID #: 184-43)]	To be clarified
11-496	A	16:1	16:2	Non-linearity wrt to time between the 20th and 21st centuries seems significant to me. Could this be stated instead in terms of linearity wrt radiative forcing or GHG concentrations? [Dave Rowell (Reviewer's comment ID #: 222-8)]	To be clarified
11-497	A	16:1	16:9	While we don't see much evidence of non-linear or non-additive response on large scales, this might be more of an issue on regional scales (e.g., as the snow or ice line advances across a region, one can at least imagine a local response associated with snow-ice albedo feedback that is non-linear). [Francis Zwiers (Reviewer's comment ID #: 305-134)]	To be clarified
11-498	A	16:3	16:3	Rephrase as "In the ensemble mean GCM projections there is no indication of ..." [Bart Van den Hurk (Reviewer's comment ID #: 274-81)]	noted
11-499	A	16:7	16:7	replace "having" by "there is" [Bart Van den Hurk (Reviewer's comment ID #: 274-82)]	noted
11-500	A	16:8	16:8	Insert ". Therefore" after "Chapter 10" [Bart Van den Hurk (Reviewer's comment ID #: 274-83)]	noted
11-501	A	16:11	16:21	Please state what significance level the value of 2.88 used in Table 11.2 corresponds to. [Dave Rowell (Reviewer's comment ID #: 222-9)]	To be clarified
11-502	A	16:11	16:11	Although I appreciate the effort to include a signal/noise measure here, the definition of the variability in Table 11.2 is not fully clear. Is it the variance of an ensemble of 20yrs simulations from a range of models, or is it variance of the collection of years (the interannual variability) of the full set of results? And for either choice, what is the reason for taking this measure of variability as a reference in this analysis? [Bart Van den Hurk (Reviewer's comment ID #: 274-84)]	To be clarified
11-503	A	16:11	16:21	I have a few concerns about this particular calculation. First, I suspect that many readers will implicitly interpret this waiting time as a time for the signal to emerge above INTERANNUAL variability (even though I think the caption for Table 11.2 is clear about what standard deviation is being used). Quoting waiting times of less than the averaging interval invites such an interpretation, particularly for those who are tempted to skim over	To be rewritten

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				the details. [Francis Zwiers (Reviewer's comment ID #: 305-135)]	
11-504	A	16:11	16:21	A second minor concern is that it would be useful to describe the details of the calculation a bit more completely. In particular, it would be useful to explain to readers why one uses the threshold of 2.88 standard deviations. [Francis Zwiers (Reviewer's comment ID #: 305-136)]	Calculators will be described more fully
11-505	A	16:11	16:21	A third comment with respect to the calculation of the waiting time T is that this simply calculation probably over-estimates the time to detection. The optimal detection techniques described in Chapter 9 should allow earlier detection. [Francis Zwiers (Reviewer's comment ID #: 305-137)]	Will be clarified i revised text
11-506	A	16:11	16:21	A fourth (also minor) concern with respect to the calculation of the waiting time T is that this calculation does assume a linear response over time. While there is not much evidence, non-linearity might be an issue in some regions for some variables, as suggested above. This assumption also implicitly assumes a certain class of forcing scenarios (e.g. instantaneous stabilization, as characterized by the climate change commitment simulations performed by many groups, would not fall within this group of scenarios, because instantaneous stabilization results in a relatively quick change in the derivative of the global mean transient warming response). [Francis Zwiers (Reviewer's comment ID #: 305-138)]	noted
11-507	A	16:14	16:14	"signal is clearly discernable" - What does this mean in practise? It needs defined. [Ronald J Stouffer (Reviewer's comment ID #: 258-47)]	Reference to definition will be made more prominently
11-508	A	16:23	16:37	20 years is really too short for analysing extremes, which are very sensitive to inter-annual and inter-decadal fluctuations. Using a multi-model ensemble does improve this, but if the GCMs have different biases (different distributions in different GCMs), then there is a need for correction, which can be tricky. The final statistics from each GCM may be aggregated, but it's not really clear that a simple mean over models is the correct way to do this. Perhaps there should be some references on this - after all, IPCC AR4 should not conduct new research? [Rasmus E. Benestad (Reviewer's comment ID #: 18-17)]	We believe that the number of models is sufficeint to make the muti-model ensemble results meaningful. We are careful to compare results within each model separately, so that different biases do not confound the results.
11-509	A	16:23	16:23	Table 11.2 - Some measure of the present day error needs included in the table. In my opinion, the chapter suffers from a lack of a critical appraisal of the performance of models in the present day climate. This seems to lead to over confidence in their projections of future changes. [Ronald J Stouffer (Reviewer's comment ID #: 258-48)]	A table of biases is included in supplementary material and we have tired to take these into account in the assesment
11-510	A	16:23	16:30	I think some caveats need to be added here concerning uncertainties associated with these estimated probabilities. Uncertainty arises from a number of sources, including sampling, model sensitivity, whether processes leading to extreme seasons are well represented in	We will describe these uncertainties more fully in the revisions

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				models, etc. While probably not the largest uncertainty, sampling uncertainty in the estimated threshold would also be a factor, particularly for models where there is only one 20th century simulation. [Francis Zwiers (Reviewer's comment ID #: 305-139)]	
11-511	A	16:28	16:29	How "100" should be interpreted in the column Extreme seasons Warm of Table 11.2? Does 100 means that all simulated summers in the period 2080-2099 exceed the warmest summer of the period 1980-1999? [Daniel Caya (Reviewer's comment ID #: 38-40)]	100 means that all seasons in the latter period are warmer than any season in the earlier period – this will be explained more carefully
11-512	A	16:32	16:37	This paragraph seems unnecessary. [Dave Rowell (Reviewer's comment ID #: 222-10)]	Revision to be considered
11-513	A	16:32	16:32	Swap "reference" and "in the following" [Bart Van den Hurk (Reviewer's comment ID #: 274-85)]	noted
11-514	A	16:39	17:50	I find the sub-section "11.3.1.2 Some unifying themes" very useful in the economy of the section. [Roxana Bojariu (Reviewer's comment ID #: 24-22)]	noted
11-515	A	16:39	17:50	The section on unifying themes is very welcome, and helps to provide some context for the detailed discussions that follow. [James Murphy (Reviewer's comment ID #: 184-44)]	noted
11-516	A	16:41	16:46	There's a lot of repetition between these 2 sentences. [Dave Rowell (Reviewer's comment ID #: 222-12)]	Revisor to be considered
11-517	A	16:42	16:43	Rephrase as "...projections, with models being most sensitive in terms of globally averaged quantities often also being locally sensitive." [Bart Van den Hurk (Reviewer's comment ID #: 274-86)]	Suggestion to be considered
11-518	A	16:43	16:46	It is not only the different treatment of regional processes that cause the spread on regional level, it is also the different dynamical forcing on a given region that generates spread (e.g. the study by Van Ulden and Van Oldenborgh, 2005). [Bart Van den Hurk (Reviewer's comment ID #: 274-88)]	noted
11-519	A	16:45	16:45	delete "also" [Bart Van den Hurk (Reviewer's comment ID #: 274-87)]	accepted
11-520	A	16:49	16:49	Replace "continually" by "continuously" [Bart Van den Hurk (Reviewer's comment ID #: 274-89)]	accepted
11-521	A	17:1	17:1	Change "the extent that" to "the extent to which" [James Renwick (Reviewer's comment ID #: 211-14)]	accepted
11-522	A	17:1	17:2	See also Chapter 9, Section 9.5.4 and Figure 9.5.4. [Francis Zwiers (Reviewer's comment ID #: 305-140)]	accepted