

REVIEW 1

I was able to review the Regional Climate chapter of the BAMS 2007 State of the Climate report through line 1495 (the end of the section on Turkey), and then to review Section g. 6 on the Middle East (although I would suggest this section be moved to Asia, section f.).

Response: Rejected. At this stage of the report, a move of this magnitude is not feasible and we do not believe this would improve the content or structure of the report.

I used the commenting tools in Adobe Acrobat to mark up the sections I reviewed with suggested changes and corrections, and have attached the marked-up version with this email. Some comments on specific items are included below:

1. In the East Africa section, in the paragraph between lines 17 and 24, it would be good to have a summary of the performance of the Long Rains overall. March was discussed in the text, but nothing was said about the rest of the season (April and May).

Response: Rejected. Although we agree that a summary of the performance of the Long Rains would be beneficial, it is not possible to include every aspect of the climate due to constraints on length of this document.

2. In the section on Southern Africa, it is stated on line 154 that tropical cyclone Fame brought heavy rainfall to Madagascar in late December, 2007. In fact, tropical cyclone Fame did not form until late January 2008.

Response: This sentence has been removed.

3. In the section on the United States, on line 410, the phrase "South region" seems ambiguous. Does this refer to the southern Plains?

Response: The states comprising the region were listed and the Karl and Kossin reference that describes these 'mega-regions' is included.

4. On page 18, should the footnote for line 479 be replaced with a citation?

Response: Rejected. It appears acceptable in original form.

5. In the section on Belize, is the end of the sentence on line 653 true for both maximum and minimum temperature? Were both the annual maximum and minimum temperatures for 2007 tied with 1997 and 2002, respectively as the second-highest on record?

Response: Yes. The sentence, despite discussing an unusual coincidence, is correct and the reviewer was able to surmise the correct interpretation. No changes were made.

6. Also in the section on Belize, I don't understand how the sentence beginning with "In contrast" on line 664 marks a contrast with the previous sentence, unless the next phrase should say

"January was 74 percent of normal." rather than "January was 74 percent above normal."

Response: This has been corrected.

7. In the first paragraph in the section on Cuba, from lines 671 to 678, is the precision to 2 decimal places justified for the mean temperatures and anomalies indicated in the paragraph?

Response: The precision has been changed to the tenths place.

8. In the section on Puerto Rico, there is a reference to a "Figure 1" on line 743, but I was not able to find the indicated figure at the end of the chapter.

Response: This reference has been removed.

9. In the section on Guyana, Surinam, and Venezuela, on lines 826 to 828, is the sentence referring to locations in northern Venezuela instead of northern Guyana? Guarico, Bolivar, and Anzoategui are states in Venezuela, and Maturin is a city in Venezuela.

Response: This has been corrected.

10. In the section on Colombia, I did not understand the sentence that begins on line 881 and ends on line 883 -- how the persistence of synoptic systems explains rainfall deficits.

Response: This sentence has been removed.

11. In the first paragraph on Russia, from lines 1133 to 1138, it is not clear what base line is being used for the indicated temperature anomalies.

Response: The 1961-1990 base period. Appropriate text was added.

12. For most of the figures, the source of the data for the analyses being shown is not indicated. It might be helpful to see the name of the data set or its appropriate reference.

Response: We included a sentence at the end of the Introduction to the chapter stating that omitted data sources generally imply that they are from the section author's agency. Some (but not all) data sources were added throughout the chapter.

I hope these comments and marked-up text will be helpful, and thank you for the opportunity to make a small contribution to this year's report.

REVIEW 2

Conc. My "homework": I've read the Europe-section (with emphasis on Fennoscandia, where I could check the details...!) and also scanned thru' Australia & South Pacific. Most of the text looks very good to me (but many local national details are difficult to grab for us who are not globetrotters!)

General comments:

It's confusing that some countries use 1961-90 as base period ("normal") others 1971-2000. But that's not possible to adjust for you now;- but maybe it should be mentioned in your introduction to the report?

Response: A 'warning' to readers is mentioned in the Introduction, which was not available for review. Meteorological services around the world use various time period for depicting 'normal' conditions.

For wind speed most countries use km/hr;- however Micronesia (line 2247-2248) and maybe other countries are using m/s. In this case it is possible to harmonize the manuscript, if you find it worth while....!

Response: Throughout the chapter, wind speeds have been converted into meters per second since this is the SI unit. In some cases, conversions were truncated instead of rounded to the nearest whole number, dictated by the accompanying text.

In my opinion meteorologists should not use the phrase ""warmest temperature" (e.g. line 1540). Temperatures could be high / low, but not warm / cold.....! But this is a minor detail (I have however occasionally commented it below).

Response: While we can surmise the reviewer's disdain for the apparent redundancy of phrases such as 'warmest temperature,' such terms are common in American English.

Specific comments:

Line 1515: maybe better to group countries according to region;- e.g. "...western coastal areas of Scotland and Ireland, and central parts of Norway and Sweden".

Response: This has been changed.

Line 1540: ...among the highest ever recorded...

Response: In this case, the change was made at the reviewer's request.

Line 1584: (3.3degC above average) , i.e. drop the + sign

Response: This has been changed.

Line 1585: (4.6degC above average) , i.e. drop the + sign

Response: This has been changed.

Lines 1685-1686: ...warmest year. In Norway the annual temperature was 1.3degC above normal, making 2007 the 10th warmest since 1900.

Response: This has been changed.

(Personal comment: It's misleading to write "since measurements began in 1900". Of course measurements started a long time before that;- the meaning is that the gridded countrywide series presently go back to year 1900. But it's too complicated to write that; that's why I suggest that you use the easiest solution stated above (which is in line with several other national texts in the report).

Response: We replaced this phrase with 'warmest year since 1900.'

Line 1714: Finnish (not Finish).

Response: This has been corrected.

Line 1715:"high temperatures"....

Response: This has been changed.

Line 1717-1721: The text for Norway is wrong (old text for 2006???). I propose the following new text: December 2007 was the warmest December in more than 70 years in the northernmost parts of Norway and Sweden. An extensive high over southern Scandinavia maintained strong and persistent westerly winds that transported warm and humid air masses into northern Fennoscandia.

Response: This has been addressed. The paragraph has been replaced with the following:

“December 2007 was the warmest December in more than 70 years locally in the northernmost parts of Norway and Sweden. An extensive high over southern Scandinavia maintained strong and persistent westerly winds that transported warm and humid air masses into northern Fennoscandia.”

Line 1957:...driven by high daytime temperatures.... The fifth highest....

Response: Rejected. We believe it is correctly stated as is.

Line 2130: was the annual rainfall really 8940 millimeters?

Response: The value is confirmed by the author as correct. Additional text describes the typical value for this location and explains why this location is so wet.

That's all;- i.e. looks like you've scrutinized the manuscript already!

REVIEW 3

I have concentrated only to the section, which I know well enough, i.e. Section g. EUROPE, and I do not have any comments. The text corresponds also my knowledge on the anomalies and trends here.

REVIEW 4

State of the Climate Report

Regional Climates Chapter

c. North America

1. Canada:

1. Page 10. Line 239. Is it still common to refer to the 1951-1980 base period? It seems logical to me to start to refer to a more recent base period especially because we know that the 1960s and 1970s were generally colder compared to the rest of the 20th century at many locations in the Northern Hemisphere.

[Response: Rejected. It is not common but it is not incorrect. There are arguments for and against using more recent reference periods.](#)

2. Page 11. Line 280. Be more specific about which winter (apparently 2006/2007).

[Response: Additional text added to clarify.](#)

2. United States:

3. Do you need to provide temperature also in F for this report? If so, why not for the rest of the report?

[Response: Temperatures are primarily reported in Celsius according to SI standards, but Fahrenheit is added as a courtesy since it is the most common temperature scale in the United States.](#)

4. Page 13. Line 338. This part of the report uses the entire 20th century as a reference (different from 1951-1980 in the Canadian part).

[Response: See previous comments.](#)

f. Asia

1. Russia:

3. Page 41. Line 1136. Degree C sign needs to be fixed.

[Response: This has been corrected.](#)

4. Page 41. Line 1134 and further. What reference time interval was used to calculate anomalies?

Response: This has been addressed.

5. Page 41. Line 1158. Not clear what is “Maritime Territory”?

Response: This was defined in further detail

6. Page 41. Line 1159. Replace “where” with “when”

Response: This has been changed.

7. Almost no discussion on precipitations and snow.

Response: This section is structured chronologically and sufficient discussion of precipitation is included.

8. Generally, the text needs some editing in language use.

Response: Re-wording was accomplished..

2. East Asia:

9. Page 43. Line 1210. 1971-2000 base period was used here. It is different than in Canada.

Response: See previous comments

10. Page 44. Lines 2040 and 2042. Not clear, if the reliable records started in 1946/47 (line 2042) how reliable is the reference to 1898 (line 2040)?

Response: Presumably this is referring to the East Asia section. It is common for references to be made to entire historical records and to specified ‘reliable’ periods, which are almost always the latter part of the entire historical record. By delineating between the entire record and the latter ‘reliable’ period, the reader can make a more informed judgment on how to interpret the results. It is not clear how the reviewer would like this to be addressed.

REVIEW 5

I have had an opportunity to read through the Canada and US sections of the chapter, and to skim the Mexico and Central America parts.

The section on Canada is brief and clear. Here are a few picky points -

Line 266: "region" should be plural.

Response: Rejected. When referring to the 'Atlantic Canada' region, the word region should not be plural.

Line 295: Either omit "of days" or insert "hot" before days.

Response: Modified text.

Line 296: Exchange the order of "only" and "received".

Response: Modified text.

The section on the US is well written and easy to follow.

Line 376: The maps in Figure 6c2 are in the wrong sequence. Map a) is really b). Map b) is really c). And map c) is really a).

Response: Modified text.

Line 389: As above.

Response: Modified text.

Line 425: As above.

Response: Modified text.

Lines 425 and 426 mix "drought" and "precipitation". In line 426 I suggest replacing "conditions" with "precipitation".

Response: This first part of this comment is unclear, but the suggested change was implemented.

Figure 6c2-fig.2 (b) which should be (c) needs to have "Annual" added above "Precipitation" in the legend.

Response: Modified text.

Belize Section

Lines 650 and 651: There's something wrong with Figure 6d-fig.1: The text and caption talk about temperature but the legend and ordinate axis refer to precipitation.

Response: Corrected figure caption.

Cuba Section

For the temperature values in the first paragraph, two decimal places probably aren't warranted (but I see this is also done in the Africa section).

Response: Modified text.

Jamaica Section

Line 711: "passage" may be a better word than "motion".

Response: Modified text.

Puerto Rico Section

Line 743: There is no Figure 1.

Response: Corrected.

The second file you attached presumably is a "sidebar" to be inserted in Chapter six? This is well written but clearly much more sophisticated than the other material I read in Chapter 6. My impression is that only part of the story is presented because relatively little attention is paid to the observation-model differences in the SE US (which admittedly are not as impressive as in the SW). However, the text did begin by identifying the anomalies in the two regions of the country.

Response: The reviewer is correct. This is a sidebar and it is indeed more sophisticated than the rest of the chapter. The crux of the sidebar is aimed at explaining whether the drought in the Southwest U.S. is attributable to ENSO.

REVIEW 6

I have reviewed the Canada and N. America climate summaries provided in your 2nd attachment to me.

I found its content to be accurate.

However, I have a few comments:

Line 239: Recommend using the 1971-2000 Climate Normals period vs. 1951-1980. By not doing so, it distorts the recent degree of normalcy.

Response: Rejected. It is not common but it is not incorrect. There are arguments for and against using more recent reference periods.

Line 302: Recommend referencing the EF5 tornado vs. F5 unless Canada has not adopted the EF-intensity-scale.

Response: This has been addressed.

Line 337: Recommend substituting the word "unprecedented" for "unparalleled" since 10 out of 25 is not a streak. A unlimited variety of statistics could result in a unique situation (but is it significant)? Unprecedented means not achieved but is it unprecedented if the period of record was 15 or 33 years? Unprecedented implies never happening before (over a very long period). Is a 100+ years long? It is in human lifetime but is unprecedented statistically applicable?

Response: Modified text to improve wording..

REVIEW 7

My review concerns Part g. Europe.

My impression from the text is very good; I have only a few minor comments.

However, the first of my comments relates to the division into geographical regions. I see some inconsistencies. For example, separate sub-sections of almost equal length are devoted to central America and Belize (which in my eyes is a rather small part of central America – why to take it out?; and why just Belize?). Turkey is included in Asia, but Syria and Lebanon, together with Cyprus, are included in the Middle East part of Europe (!), which comprises also Kazakhstan and Caucasian countries. The southeastern-to-eastern Europe seems quite diverse, ranging from Italy to Estonia; the Baltic countries might be better to add to Scandinavia, with which they share much more common weather and climate features than with the central Mediterranean.

Response: We appreciate this comment and strive to seek and acquire contributions that result in logical groupings of countries and regions. However, the reviewer must know that our report is completely dependent on the author contributions that we receive. In order to maintain the integrity of each contribution, we try to keep splintering of contributions to a minimum. The Middle East is such a region, at the crossroads of 3 major continents (arguably), where admittedly awkward groupings often result. At this stage, a major re-organization of the report is not feasible, but it would be feasible to plan for a unified Middle East section in the 2008 report.

Concerning the relative size of the Belize section compared to Central America and similar comparisons, this is also related to what we receive from authors. We make a concerted effort to obtain contributions from as many individual countries as possible. The Central American contribution we received did not address Belize; had it addressed Belize, we would have merged any overlapping treatment. We encourage as many nations as possible to contribute to the report; in fact, it is our goal to increase this number every year. We value every contribution and try to retain as much of the original contribution from the authors as we can, as long as the material is consistent with the scope of the report.

The text of the European part is generally very well written, is concise, well understandable, so I have only a few minor comments.

General comment: The description of climate covers either calendar months of 2007, or seasons, which extend from December 2006 to November 2007. This may lead to some confusion; I

suppose this is commented on somewhere in the introduction, but if it is not the case, a mention of it should be included.

Response: Additional explanatory text has been added to the overview of chapter 6 – Regional Climates.

l. 1576: ‘mild’ may not be appropriate for the whole first half of year, ‘warm’ would be better.

Response: Agreed. We replaced ‘mild’ with ‘warmer than normal’

Fig. 6g-6c – I have not found a reference to it in text.

Response: It is indeed referenced in the fifth paragraph of the Overview:

“In contrast, southeastern Europe was affected by two severe heat waves in the last weeks of June and July (Fig. 6g-fig6c) due to the stronger influence of warm, dry air masses from Africa.”

l. 1632-3: It is not clear whether the previous record of 35 days without rain refers to spring only, or to the whole year.

Response: It refers to the whole record all over the year. Also, a slight correction of the date due to an update of the report from Belgium is included:

“In Uccle, Belgium, no rainfall occurred during the 36 days from 31 March to the 5 May. It was the longest period without rainfall on the whole record (for all seasons) since 1833.”

l. 1638: May 2007 was the wettest May, or month?

Response: It was the wettest May. This has been addressed.

paragraph after l. 1638 mixes May, June, and summer; this may be made more clear.

Response: It is unclear what the reviewer is referring to. Different observations are indeed reported for various time intervals, including individual months and seasons, for additional perspective.

Part 2 – central Europe – perhaps the early start of winter 2007/8 in mid November may be stressed more; now it is only briefly mentioned at the end of the precipitation sub-section.

Response: The actual sentence reads “The beginning of winter 2007-2008 brought early snow cover to the Alps.” This does not necessarily imply an early start of winter 2007/8. Snow cover is not the only metric of winter.

Paragraph after line 1659: other countries were also severely affected by the Kyrill storm, e.g., the Czech Republic.

Response: This has been confirmed and addressed in text.

l. 1682, 1683, 1733: long-term changes in climate elements in Denmark are mentioned, but without saying how they are defined (linear trends, differences between some periods, etc.?).

Response: This refers to low-pass filtered time series. Therefore, it simply implies the differences between 2007 and the beginning of the reference range in the filtered time series. Indication that these were low-pass filtered time series has been noted in the text.

l. 1685, 1687, 1689 – incomplete sentences or incorrect grammar

Response: Sentence structure corrected.

l. 1725 and 1735 – phrase on ‘large deviations’ is repeated.

Response: Rejected. We do not find a problem with this.

l. 1741: ‘wettest season in Norway’ – in absolute terms, are relatively against normals?

Response: These were indeed relative to normal, and this has been noted in the text.

l. 1743: ‘only six years...’ – six years out of 18 is nothing exceptional, and certainly is not significant. This may be omitted.

Response: Agreed. This sentence was removed.

l. 1758-9: cyclonic ... flows occurred more frequently in summer; but this would lead to cool rather than warm weather; please re-word to avoid confusion.

Response: The confusing statement has been re-worded:

“The seasonal flow conditions were thus consistent with the warmer weather in winter and wetter conditions prevailing in summer in extended parts of Fennoscandia.”

Fig. 6g-8: negative contours (dashed) are hard to see

Response: We presume the reviewer is referring to the dotted (negative) and this was highlighted in the caption as it is too late to make changes to figures.

l. 1785-6: the negative anomaly mentioned is over the western Mediterranean, not over northern Africa, which is stated in text

Response: The reference is primarily focused on the precipitation anomaly. Note also that the text refers to the 500 hPa level, whereas the figure is surface pressure. Some re-wording has been done to address this issue.

l. 1804-5: spring precipitation over Iberia – I see an east-west contrast rather than precipitation ‘being above average’

Response: This has been addressed.

l. 1844: heat wave is mentioned without providing any definition of it; definitions of heat waves may differ widely!

Response: This has been addressed.

REVIEW 8

This review was performed on the manuscript itself, including numerous suggested changes. The vast majority of these recommended changes were implemented as requested.