



**IPCC Synthesis Report  
Fourth Assessment Report**

***Comments on the Final Government Draft***

**GOVERNMENT and ORGANIZATION COMMENTS**

**– TOPIC 3 (all batches to 7 November 2007) –**

**November 7, 2007**



WMO

# INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



UNEP

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3-A-1	0	0			The decision to revert to a bulleted summary of the major impacts on systems and sectors and regions is not, in our opinion, a good one. Not only is such a format less readable, especially for people not overly familiar with the underlying reports, but such a format is also vulnerable to accusations of cherry-picking findings since space limitations prevent the duplication of all bullets in the underlying WGII SPM. That said, a strength of this Topic is its inclusion of the discussion of "especially affected" systems, sectors and regions, although we preferred the original phrasing of 'particularly vulnerable'. Vulnerability is by now a well-accepted concept in climate change discussions and there seems no reason to avoid using it. (Government of Canada)
3-A-2	1	1	1	1	We urge the authors to re-name this topic "Topic 3 - Projected climate change and its impacts". It does not deal with the whole subject of climate change, only projected climate change. The addition of "in the near and long term under different scenarios" to the title makes it verbose, and would be more appropriately included in a brief introductory sentence, before section 3.1, e.g.: "In this topic, we consider different scenarios describing what the future emissions of greenhouse gases might be, the projected changes in climate these could lead to, and the impacts of these climate changes in the near and long term." (Government of New Zealand)
3-A-3	1	1	16	32	Generally impacts on infrastructure are mentioned several times; page 8, line 26, page 13, lines 6, 16, Tab. 3.2, page 15, line 23 whitout specification. Is it possible to clarify which specific part of infrastructure is concerned? (Government of Germany)
3-A-4	1	1	1	2	Change the title to "Scenarios of climate change and its impacts in the near and long term". (World Meteorological Organization)
3-A-5	1	6	2	23	Section 3.1 could be shortened dramatically, since the message is essentially that post-SRES scenarios do not change appreciably from SRES. (Government of United States of America)
3-A-6	1	6			Section 3.1 comment: This section is an excellent and clear description of recent scenario development, and will be very useful. We ask the authors to be careful to avoid the tone of the section becoming defensive. While there will be some policymakers familiar with the challenges to the SRES scenarios over recent years there will be many more who will not and who will not appreciate the reasons for a defensive approach. Thus it is important that Section 3.1 is seen to be reporting dispassionately on current science. This will be helped if the second sentence in the chapeau text is removed so that just the first, a statement about the current general assessment of the issue, remains. We are otherwise very happy with the text as it stands but ask the authors to bear our concerns in mind when making any revisions. (Government of New Zealand)
3-A-7	1	10	1	12	We urge the removal of the sentence "Baseline emissions scenarios published since the IPCC Special Report on Emissions Scenarios (SRES) are comparable in range to those presented in SRES (Figure 3.1)." At this point the reader of the Synthesis Report has not been introduced to the SRES scenarios, much less the scenarios which have followed. The preceding sentence makes a clear statement as the chapeau text. This sentence that we wish to see removed adds unnecessary complexity and confusion at this point in Topic 3. It could also be see as re-litigating an issue that is no longer relevant to today's policymakers. The issue introduced by the sentence is discussed well, extensively and at the appropriate point in the Topic, on p1 line 42 to p2 line16.

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					(Government of New Zealand)
3-A-8	1	12			footnote 8. The text is obscure, because it is not clear where the UNFCCC and Kyoto should be included into. This point was raised in the previous review. (Government of Argentina)
3-A-9	1	12	1	12	About footnote #8: The distinction between "current climate policy" and UNFCCC and Kyoto is unclear. Does "current" mean "pre-1990"? If so, please revise. (Government of Sweden)
3-A-10	1	14	1	34	Explain what is meant by a "post-SRES" scenario and why these are relevant to this report. Similarly, explain what a SRES marker scenario is. (Government of United States of America)
3-A-11	1	14	1	34	Box "SRES Scenarios": The previous SYR draft had very important information (in footnote 2 on p. 1) on the approximate CO <sub>2</sub> -equivalent concentrations of all SRES marker scenarios, which is no longer available in this draft. This important information needs to be put back, either by adding the corresponding text from that footnote at the end of this box, equally it would be good to have this information in a panel of CO <sub>2</sub> -equivalent concentrations to be added to Figure 3.1 (Government of European Community)
3-A-12	1	16	1	16	The concept of emissions scenarios has not previously been introduced in the Synthesis Report. We suggest that, instead of "SRES refers to the scenarios described in ..." the sentence starts "Possible future rates of GHG emissions are described in ..." (Government of New Zealand)
3-A-13	1	17	1	20	We are concerned about the confusion caused by the description "... in the absence of climate policies, ...". The scenarios stand on their own, as does the associated emissions trajectory, whether or not that particular emissions trajectory arises in the presence or absence of climate policies. We suggest it would be better to drop the phrase here (and write "... explore alternative development pathways, covering a wide range of demographic ...") and instead insert a new sentence, immediately following, along the lines: "The scenarios do not explicitly allow for climate change mitigation policies". (Government of New Zealand)
3-A-14	1	22	1	22	Change "serve as inputs to" to "underlie" or "are the foundation of" to emphasize the importance of the assumptions. (Government of United States of America)
3-A-15	1	25	1	25	Replace "A1 storyline describes" with "A1 scenario assumes" since most non-technical readers will not be able to guess how a storyline is connected to a scenario in a report of scientific findings. (Government of United States of America)
3-A-16	1	36	1	36	The expression 'non-mitigation' in "The SRES (non-mitigation) scenarios..." is confusing to policymakers. They are unfamiliar with the fine and subtle details of SRES and many see the lower-emissions scenarios as unlikely to represent the future unless governments take deliberate steps to

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					limit emissions, i.e. to mitigate. In our experience they have been unsure whether this paragraph refers only to the higher SRES scenarios or not. But 'non-mitigation' is not needed here anyway, as the SRES scenarios are described at some length in the text box immediately above. If it is felt by the authors that the text box is not adequately explicit on the issue then it should be clarified in the text box, not here. (Government of New Zealand)
3-A-17	1	37	1	37	Delete “GtCO2eq” after “9.7” (Government of United States of America)
3-A-18	1	39	1	40	Revise sentence to: “CO2 emissions from energy use between 2000 and 2030 are projected to grow by between 40 and 110%.” (Government of United States of America)
3-A-19	1	43	1	43	Again just for clarity could amend to: ..... for those post-SRES studies..... (International Energy Agency)
3-A-20	2	1	2	11	The comparable paragraph in the previous version contained a sentence highlighting the strong agreement and ample evidence for changes in post-SRES scenarios having very little effect on projections of GHG emissions. We would like to see such a sentence reinstated and suggest the most appropriate place would be at the end of this paragraph. The sentence is: "There is high agreement and much evidence from recent studies that these changes have only a minor effect on the ranges of global greenhouse gas emissions." (Government of Canada)
3-A-21	2	1	2	1	Insert “offsetting” before “changes” (Government of United States of America)
3-A-22	2	4	2	7	Suggest adding to the end of the sentence on lines 4-6 the phrase "in post-SRES scenarios". Also suggest replacing 'they' in the next sentence with the word "emissions" (i.e. it is emissions that are projected to be lower than reported in SRES). (Government of Canada)
3-A-23	2	4	2	7	Begin a new paragraph with "Aerosols have a net..." (Government of Australia)
3-A-24	2	6	2	6	What is the antecedent of “they”? What are projected to be lower? Aerosol forcing, emissions, concentrations? (Government of United States of America)
3-A-25	2	6	2	7	Be more specific about the source for this statement. Generally, where reported? The literature? WG1 report? (Government of United States of America)
3-A-26	2	7	2	11	Begin a new paragraph with "Available studies indicate..." (Government of Australia)
3-A-27	2	8	2	8	Define MER and PPP in a footnote.

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					(Government of United States of America)
3-A-28	2	9	2	10	Replace “caused by assumptions on” with “associated with”. (Government of United States of America)
3-A-29	2	12	2	11	Should some comment be made on energy/oil price assumptions used? Maybe too detailed and complex though. (International Energy Agency)
3-A-30	2	13	2	16	This material is not of relevance to policymakers. This statement is vague and cannot be understood without additional explanation. Since the statement is not important enough to be included in the WG3 SPM, delete it. (Government of United States of America)
3-A-31	2	18			Figure 3.1: We welcome the addition of this figure in the current draft. This figure should be complemented by a new panel showing the CO2-equivalent CONCENTRATIONS. These two panels should then be combined with Figure 3.2 into a single figure with four panels. (Government of European Community)
3-A-32	2	18	2	19	Figure 3.1: It will be helpful if a figure/table could be added with information about the CO2-eq concentrations related to the global GHG emissions (in CO2-eq) to facilitate the comparison between concentrations and emissions (Government of Spain)
3-A-33	2	26	3	3	The rearrangement of this section 3.2 has decidedly not improved the flow of the text or the communication of key messages. The ability to provide probabilistic projections of climate change is a major advance since the TAR. The bolded header from the previous draft said just this and we would like to see this paragraph reinstated, if not as a bolded header, then as introductory text to this section 3.2 on Projections of Future Changes in Climate. We would favour the latter since the information is not a finding from the assessment per se. (Government of Canada)
3-A-34	2	26	3	3	The existing bolded header has no underlying text with it, therefore some rearrangement of text is required here. We suggest that the text beginning on page 2 line 31 ("For the next two decades.....) and ending on page 3 line 3 be used as the bolded header, while the front end of the existing header could be supporting text in normal font. This rearrangement puts the major result about near-term warming right up in the header which complements the next header about longer term warming over the 21st century. It should also be considered to merge the text here with that in Section 3.2.1 since whether near-term or longer term, all this material speaks to the coming changes over the 21st century. (Government of Canada)
3-A-35	3	5			Section 3.2.1 comment: The clarity of this section would be improved if there was a sub-heading "Temperature" at page 3 line 11, and "Sea level" at page 4 line 1. Despite the care taken by the authors in their text (and which we appreciate) there still seems to be a tendency for policymakers seeking information on sea level rise to skim down the section to Table 3.1, see column 3, and then think they have the answers. A clear sub-heading over the following paragraph would help to draw them on. (Government of New Zealand)

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3-A-36	3	14	3	14	Insert the qualifier “some” before “climate-carbon cycle feedbacks.” Current models are weak in their representations of climate change feedbacks on the carbon cycle. This statement needs to reflect that the analysis is preliminary or includes only certain primary feedbacks, consistent with the next paragraph. (Government of United States of America)
3-A-37	3	16	3	17	Footnote 9: This footnote wrongly suggests that the TEMPERATURE projections in the TAR and AR4 would have similar ranges, if the two reports had treated uncertainties in the same way. This statement is incorrect! Footnote 9 has obviously evolved from footnote 4 in the previous draft. That footnote, however, referred to the SEA-LEVEL RISE column of Table 3.1 NOT the temperature column. Hence, footnote 9 must be linked to the text on sea-level rise (on p. 10, ll. 1-14). In addition, text should be added that compares the AR4 temperature projections with the TAR projections, considering any changes that might have been made to the treatment of temperature uncertainties. (Government of European Community)
3-A-38	3	17	3	17	Change “ranges” to “values” (Government of United States of America)
3-A-39	3	19	3	21	These lines about the additional 20-220 ppm CO2 from carbon cycle feedbacks are not clear at all and could be interpreted incorrectly. Is this additional CO2 and the resulting temperature increase to be added to the ranges given in Table 3.1 or are they already included? Also, is this range from a range of models or a range of emission scenarios? The underlying reports (e.g. Ch. 7 Section 7.3.5) say that this result is for scenario A2 only. Please clarify text. (Government of Canada)
3-A-40	3	20	3	21	As the additional CO2 and temperature rise mentioned are included in the numbers quoted in Table 3.1 (referred to in the text above), suggest finishing the sentence with: "... to temperature rise, compared to projections without an account of these feedbacks." (Government of Sweden)
3-A-41	3	21	3	22	Delete sentence beginning “Carbon feedbacks...” It’s vague and not needed. (Government of United States of America)
3-A-42	3	32	3	32	See coment 14th. There should be given a number (0.5° ) instead of "half a degree C" due to we are giving decimal accuracy in the table (Government of Spain)
3-A-43	3	32	3	32	Change “temperature ranges” to “temperatures”. As written, the range would broaden, not shift to the more positive values. (Government of United States of America)
3-A-44	3	33	3	33	Table 3.1. A note "e" should be added to highlight that the increase of temperature over land, where most of the population lives is significantly higher than the global average values in all regions North of 30°S and South of 50°South. (see WGI Figure 10.6). Text proposed: "The temperature change over land areas located North of 30°S is up to two times larger than the global average values (see WGI Figure 10.6 and WGI Section 10.3.2.1)." This information is highly relevant for policy-makers and adaptation planners, and consistent with the equivalent information given about past trends in Fig SPM.4.

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					(Government of Belgium)
3-A-45	4	1	4	4	Table 3.1 does show a range for projected SLR and readers may think the upper ranges are 'upper bounds' and may therefore be confused by the text in these lines that says upper bounds are not provided. Suggest for clarification that the following phrase be added to the sentence ending on line 4: Upper ranges in Table 3.1 are not to be considered upper bounds for SLR." Alternatively, a footnote could be added to Table SPM-3 regarding the SLR ranges. (Government of Canada)
3-A-46	4	6	4	5	Replace "about some uncertainties" with "that reduces some uncertainties." (Government of United States of America)
3-A-47	4	18	4	21	This paragraph misses important information on regional temperature changes. Add the following headline statement from the WG 1 TS.5.3 after the first sentence: "For each continent, projected warming over 2000 to 2050 is greater than global average warming and greater than the observed warming over the past century." (Government of European Community)
3-A-48	4	18	4	18	Delete first sentence of the chapeau. Statement is not necessary; patterns by definition are not uniform. (Government of United States of America)
3-A-49	4	28			Figure 3.2: The fluctuations in global warming projections (in the left panel) are not related to fluctuations in forcing nor do they indicate the range of natural variability. Suggest to "smooth" them by applying a moving average filter since they do not contain useful information for policy makers. (Government of European Community)
3-A-50	4	28			Figure 3.2: Right panels: Please correct the legend! Regarding the dark red colour in the bottom right corner, this must be A2. B1 must be the first row of figures. (compare first draft of the SYR, where it was correct.) (Government of Germany)
3-A-51	4	28	4	29	Figure 3.2: Please include curve for A1FI results WITHIN the diagram, analogue to the other SRES-curves, because it is highly policy relevant with respect to recent global emission trends. (Government of Germany)
3-A-52	4	28	4	29	Concerning Figure 3.2: The right panels need to be revised. The top row refers to A2, but the projections shown on the row are for B1. The bottom row refers to B1, but the projections shown on the row are for A2. (Government of Sweden)
3-A-53	4	38	4	39	The position of A2 and B1 need to be reversed both in the graphic itself (B1 should be the top image and A2 the bottom one) and in the Figure caption. (Government of Canada)

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3-A-54	5	3	5	26	This section is inconsistent regarding confidence expressions (likely, very likely ...). Please add confidence expressions to all statements. (Government of Canada)
3-A-55	5	13	5	13	Omit "ongoing" as unnecessary (and possibly confusing, the statement is about future projection) (Government of Sweden)
3-A-56	5	18	5	20	The term "extra-tropical storm tracks" may not be understood by a policy audience. Further explain in the text or elaborate in the Glossary. (Government of Australia)
3-A-57	5	22	5	26	Please add, information on the precipitation for the different regions. In particular insert some wording on the decreases (very likely) expected in the Mediterranean countries (Southern Europe and Northern Africa) (Government of Spain)
3-A-58	5	22	5	25	Given the importance of precipitation, it would be helpful to include more information on regions where specific changes are assessed as very likely in the WG1 TS.6.4.5. Change text to "Increases in the amount of precipitation are very likely in many high-latitude regions, including most of northern Europe, Canada, the northeast USA and the Arctic; decreases are very likely in many subtropical regions, including the European and African regions bordering the Mediterranean." (Government of European Community)
3-A-59	5	22	5	22	Change "improving" to "improved". (Government of United States of America)
3-A-60	5	24			Given the uncertainty in the sea level rise figures, in particular, in Table 3.1 we suggest that the word 'Projected' in the caption might be better replaced by 'Modelled', thus: "Table 3.1. Modelled global average ..." (Government of New Zealand)
3-A-61	5	24	5	25	Figure 3.3 shows changes by 2090-2099, not 2100. Suggest changing "in 2100" on line 24 to "by the end of the 21st Century". (Government of Sweden)
3-A-62	5	28	5	33	The figure descriptors are confusing. Move "multimodel" to the title so it reads "Multimodel projected patterns of precipitation changes". Move DJF and JJA to upper left above each figure (where multi model is in draft). Define DJF and JJA in caption. (Government of United States of America)
3-A-63	5	36			Section 3.2.3 comment: This section lacks any likelihood statements. The guidance from such statements is valuable to policymakers and we ask that they be included where possible. (Government of New Zealand)
3-A-64	5	36	5	36	In English, the current heading to this section could be read not only as [beyond 21st century][changes] but (and more likely) as [beyond][21st century changes]. In the later case it would not be talking about changes at all, but about something beyond them. We suggest the meaning would be unambiguous if the title of the section was: "Changes beyond the 21st century".

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					(Government of New Zealand)
3-A-65	6	2	6	4	The time reference is unclear. Change "by 2200" to "during the 22th century". (Government of European Community)
3-A-66	6	3	6	4	Delete "that" and "would still be expected" (Government of United States of America)
3-A-67	6	9	6	18	The statements made are correct as such. However, the discussion back and forth on local and global temperatures in the past and according to the future projections leads to a risk of misinterpretation. One might get the impression that the last interglacial global mean conditions would resemble the projected future global means. This is not the case, as is clear from WGI, chapter 6.4.1.6. Easiest fix would be to omit lines 15-18, starting from "The corresponding...". (Government of Sweden)
3-A-68	6	10	6	13	Replace sentence with "Current models suggest ice mass losses due to rising temperature outpace gains due to increased precipitation, resulting in net ice loss when global average warming (relative to the pre-industrial period) exceeds 1.9 to 4.6°C." (Government of United States of America)
3-A-69	6	13	6	15	We continue to have trouble with the statement "If a negative surface mass balance were sustained for millennia, that would lead to virtually complete elimination of the Greenland ice sheet ...." It seems to be saying that if you continue to take material away from a finite resource, the resource will eventually run out. (We avoid commenting on 'virtually'.) What is the point of including the statement in the Synthesis Report? Is it to indicate that the elimination of the ice sheet is expected to take millenia? In that case, the rate of mass loss is critical. To say "If a negative surface mass balance were sustained for millennia..." implies that the following statement is true for ANY rate of mass loss provided it is sustained for millennia, which is clearly false. There are suggestions in the literature of much faster mass loss, and slower mass loss is conceivable. The authors have rejected our earlier suggestion, along the lines of: " If the negative surface mass balance were sustained for millennia at the rates projected by current models, that would lead to virtually complete elimination of the Greenland ice sheet over this time and a resulting contribution to sea level rise of about 7 m. ". While we still strongly prefer this formulation we would accept as a compromise the insertion of the word 'such', so that the rate of mass loss is referenced to the preceding discussion of the modelling, thus: "If such a negative surface mass balance ..." (Government of New Zealand)
3-A-70	6	13	6	13	Replace "negative surface mass balance" with "ice loss" (Government of United States of America)
3-A-71	6	13	6	15	Modify sentence to read: "If the current rate of ice loss were sustained for millennia, that would lead to near total loss of the Greenland ice sheet and about a 7-m rise in sea level." (Government of United States of America)
3-A-72	6	15	6	15	Are the "corresponding future temperatures" also for after 2100. Clarify timing.

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					(Government of Australia)
3-A-73	6	26	6	26	Delete “is expected to” (Government of United States of America)
3-A-74	6	27	3	27	Delete first “mass” on this line. (Government of United States of America)
3-A-75	6	34	6	34	Add the word ‘projected’ before impacts (Government of United States of America)
3-A-76	6	36	6	36	Delete Footnote 10 as it is not apparent that all the chapters in systems/sectors and regions used the Chapter 19 criteria in determining their key findings. This implies more systematic application of criteria than is warranted. Also, why select only some of the Chapter 19 criteria. Lastly, if confidence in the assessment is a criterion, why are medium confidence findings included? (Government of United States of America)
3-A-77	7	1	7	5	The term "in the absence of adaptation" is, in this generality, not correct and therefore misleading. For instance, the range shifts reported below constitute a form of adaptation by natural systems, and most crop model simulations include seasonal changes in crop management as well as switching crop varieties. Suggest to change to "in the absence of explicit policies aimed at planned adaptation to climate change." (Government of European Community)
3-A-78	7	1	7	2	Delete the first sentence of this paragraph. (Government of United States of America)
3-A-79	7	2	7	2	The text "... are judged to be relevant for people and the environment ..." appears to be superfluous - if they were not relevant for people and the environment they would not be included. We suggest writing: "In the selected examples below, quantitative information is available and impacts are assessed in the absence of adaptation." (OR "In the selected examples below, quantitative information is available and impacts are judged to be relevant in the absence of adaptation.") (Government of New Zealand)
3-A-80	7	7	8	27	This material on Impacts on systems and sectors is no longer a synthesis of findings but a cut and paste from the WGII report. Worse, it is a selective cut and paste with no apparent rationale for why certain bullets were selected over others. (No rationale is given, and the obvious one, of selecting bullets with the highest confidence levels, did not apply.) We would prefer to have this section written in paragraph style. At a minimum, a short discussion of the criteria for inclusion should be given. (Government of Canada)
3-A-81	7	7	9	28	Section 3.3.1 Impacts on Systems and Sectors. Good summary of impacts from the AR4 reports. (World Meteorological Organization)

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3-A-82	7	9	7	27	Impacts of climate change on biodiversity needs to be mentioned here as an additional bullet, since biodiversity is known to be related to the functioning of ecosystems. The text from WGII Figure SPM.2 text could be used similar to this: "Up to 30% of species are at increasingly high risk of extinction as global warming exceeds 2°C over present temperatures" (high confidence). [SYR Figure 3.5; WGII 4.ES, 4.4, Figure TS.6, SPM] (Government of Switzerland)
3-A-83	7	12	7	12	We suggest replacing 'insects' with 'invasive species'. Insects are an important part of many ecosystems and are not per se a 'bad thing' for all. (Government of New Zealand)
3-A-84	7	12	7	12	Add "outbreaks" after insect as it is done in the SPM WGII table SPM1. The wording in SPM WGII page 11 can be clarified with the table SPM1 but in this case the wording could be misunderstood. Insect plagues are the problem not insects by themselves. (Government of Spain)
3-A-85	7	15	7	15	Should "likely" be italicized? (Government of United States of America)
3-A-86	7	15	7	15	Is the word 'likely' a calibrated likelihood statement (in which case it should be in italics) or not (in which case another word such as 'expected' would be better). (Government of New Zealand)
3-A-87	7	17	7	17	Could also refer to WG III agriculture chapter here perhaps (International Energy Agency)
3-A-88	7	19	7	21	Editorial: Change "...atmospheric CO2 concentrations, there are projected to be major changes in ecosystem structure and function, species'ecological interactions, and shifts in species'geographical ranges, with predominantly...." to "...atmospheric CO2 concentrations, major changes in ecosystem structure and function, species'ecological interactions and shifts in species'geographical ranges are projected to occur, with predominantly....." (Government of Brazil)
3-A-89	7	20	7	20	Possessive phrasing "species' ecological interactions,..." is poor English. Rephrase (eg.) "ecological interactions between species,". (Government of Australia)
3-A-90	7	21	7	21	A cross-reference is needed to sections 3.4 and 5.2 of the SYR after the word "biodiversity" so that it reads "...negative consequences for biodiversity (see also SYR 3.4, 5.2) and ecosystem goods and services..." (Government of Switzerland)
3-A-91	7	22	7	22	Replace in sources "Box TS.6" by "Figure TS.6" (Government of Switzerland)
3-A-92	7	22	7	23	Make sure sequence of sources is consistent. From other similar sources as given in Topic 5 the source "Figure TS.6, " should be moved towards the end before "SPM" so that complete new sources read "{WGII 4.ES, 4.4, Figure 4.4, Figure TS.6, SPM}"

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					(Government of Switzerland)
3-A-93	7	22	7	22	insert in sources "Figure 4.4, " after "4.4, " (Government of Switzerland)
3-A-94	7	22	7	23	insert in sources "4.ES" before "4.4, " (Government of Switzerland)
3-A-95	7	24	7	27	The confidence level seems too low. The corresponding statement in the WG 2 TS.4.1 reads : "Ocean acidification is likely to impair aragonite-based shell formation in a wide range of planktonic and shallow benthic marine organisms." This "likely" statement (66-90% probability) corresponds best to "high confidence" (~80%) not "medium confidence" (~50%). (Government of European Community)
3-A-96	7	37	7	37	over a range: this should be in the range of 1-3°C. If not there is a contradiction with the following sentence. (Government of Argentina)
3-A-97	7	40	8	3	Storm surges in La Plata basin should be included. (WGII 13) (Government of Argentina)
3-A-98	7	45	7	45	The text "due to the sea level rise" should be deleted. In Section 6.4 of the report we find: " impacts ... result from atmospheric CO2 enrichment and related changes in air and water temperature, the rate of global sea-level rise, precipitation patterns and runoff, water quality, and storm intensity". So, impacts are not related to the sea level rise only. (Government of Brazil)
3-A-99	8	14	8	19	Skin cancer in southern South America (WGII 13) is a relevant example that should be added. (Government of Argentina)
3-A-100	8	18			Comment (Add): "increase burden of allergic morbidity due to increase of the allergenic pollen season, " (Government of Egypt)
3-A-101	8	19			Comment (Add more details): "mainly vector-borne diseases." (Government of Egypt)
3-A-102	8	25	8	25	Economic development is not necessarily a more direct factor for human health than climate. For clarity of expression, change "Critically important will be factors that directly shape the health of populations such as..." to "Health impacts of climate change are moderated by various socioeconomic factors, such as..." (Government of European Community)
3-A-103	8	26			Comment (Add after public health initiatives.): "public awareness". (Government of Egypt)

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3-A-104	8	32	9	27	The Water box creates an imbalance with treatment of other sectoral impacts and should be deleted—in the interest of adhering to page limitations, and the fact that there is a forthcoming Technical Paper on this topic. Authors should extract two highlights from the page-long text, and add them as bullets starting on line 32 to preserve balance with other sectoral descriptions. (Government of United States of America)
3-A-105	8	33	9	27	The Box "Climate Change and Water" is very relevant for policy makers. In fact is one important Cross cutting issue in AR4. In this SYR draft there are important lack of information. Please add information on water quality, droughts, as well as how different increases in temperature could affect to the population exposed at risk of water stress. Again this issue is crucial especially for developing countries. (Government of Spain)
3-A-106	8	33	9	27	Not clear why a box is needed here for "Climate change and water". Would seem to flow better to me if the text on Water just continues without a box to interrupt it. But probably was a good reason (International Energy Agency)
3-A-107	8	33	9	27	Box "Climate change and water": This box misses an important statement on droughts from the underlying report. Please add the following sentence, based on WG 2 Chapter 3.4.3: "Projections based on one climate model and one baseline emissions scenario suggest that the proportion of the global land surface in extreme drought is predicted to increase from 1-3 % for the present-day to 30 % by 2090s." (Government of European Community)
3-A-108	8	33	9	27	Box "Climate change and water": The previous draft had a paragraph on the expected effects of climate change on water quality (p. 8, ll. 6-10), which is missing from the current draft. Please reconstitute this text, which contains important information for policy makers. (Government of European Community)
3-A-109	8	33	9	27	Box "Climate change and water": Suggest to add the following sentence from WG 2 Chapter 9 Executive Summary: "A 3°C temperature increase is expected to lead to 0.4 – 1.8 billion more people at risk of water stress." (Government of European Community)
3-A-110	8	41			after "...scenarios". insert "This projection is much higher than the observed linear warming trend over the last 50 years of 0.13 [0.10 to 0.16] C per decade." (WWF International)
3-A-111	8	47	8	48	Related to the figure 3-4 the text "(Mediterranean Basin, western USA, southern Africa, north-eastern Brazil, southern and eastern Australia)" (text of the Technical Summary WG II pg 36) could be inserted after tropics instead of "(Figure 3.3)" because as far it is understood the runoff is given by figure 3.4 instead of figure 3.3. Therefore the text should be amended as follows:" ..... mid-latitudes and dry tropics, in particular in the Mediterranean Basin, western USA, southern Africa, north-eastern Brazil, southern and eastern Australia, due to....." (Government of Spain)
3-A-112	9	5	9	7	This text is not a balanced summary of the underlying report. This sentence has been taken from the Executive Summary of the WG II Chapter 3 (p. 175), where it is preceded by the following text: "The negative impacts of climate change on freshwater systems outweigh its benefits (high

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					confidence). All IPCC regions show an overall net negative impact of climate change on water resources and freshwater ecosystems (high confidence). Areas in which runoff is projected to decline are likely to face a reduction in the value of the services provided by water resources (very high confidence)." It is not appropriate that the SYR cites beneficial effects only. Suggest to replace the current text by the first two sentences from the above quote. Alternatively, the current text may be preceded by the full quote. (Government of European Community)
3-A-113	9	16	9	27	This figure was not included in the WG2 SPM. Why is it now appropriate for the Synthesis Report? What adjustments were made as noted in the figure caption? Does this imply new analysis? Consider deleting the entire text box. (Government of United States of America)
3-A-114	9	16	9	17	The pale yellow color for -2 to -5 is extraordinarily difficult to discern. (Government of United States of America)
3-A-115	9	16			Fig.3.4. Please change this figure to be the same one for the period of 2050 shown in WGII AR4 reports, instead of the current one for the period of 2090-2099. (Government of China)
3-A-116	9	16			Fig 3.4 colorscale: the pale yellow for -2 to -5% looks almost the same as white meaning lack of agreement; Is it possible to have the seasonal changes of changes in runoff (e.g DJF and JJA plots) to show the seasonal effects of these changes that are mentioned in caption (Government of Belgium)
3-A-117	9	20	9	20	The expression "...12 considered models ..." is not good English. We suggest writing just "12 models" since the ensemble has just been mentioned on the line above. Otherwise, replace with: "... 12 models in the ensemble ..." (Government of New Zealand)
3-A-118	9	25			after "...{3.2.1}" insert "Still, increased sea level rise from in particular accelerated melting of the Greenland Ice Sheet is very likely. Average Arctic temperatures increased at almost twice the global average rate in the past 100 years. Satellite data since 1978 show that annual average Arctic sea ice extend has shrunk by 2.7 [2.1 to 3.3]% per edcade, with larger decreases in summer of 7.4 [5.0 to 9.8]% per decade. Temperatures at the top of the permafrost layer have generally increased since the 1980s in the Arctic (by up to 3 C). (Last three sentences from text from SPM WG 1, page 6). (WWF International)
3-A-119	10	1	10	1	Revert to the title on WG2 Figure SPM-2: "Key impacts as a function of increasing global average temperature change." And include the statement: "(Impacts will vary by extent of adaptation, rate of temperature change, and socio-economic pathway.)" The emissions and warming scenarios depicted in the top and bottom panels of Figure 3.5 are not fully consistent with the key impacts listed in the middle panel. (Government of United States of America)
3-A-120	10	1			Figure 3.5: The lower panel indicating equilibrium temperatures for AR4 stabilisation categories is welcomed. However, the following is missing a) a second temperature axis relative to pre-industrial levels and b) the subheading should state "Estimated EQUILIBRIUM warming relative for AR4 stabilization categories".

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					(Government of Germany)
3-A-121	10	1			Figure 3.5: Please delete "Examples" and insert "key impacts" in the headline (Government of Germany)
3-A-122	10	1			Figure 3.5: Include information on impacts even if they are not expected before 2100, but which could be triggered at certain levels of warming, such as triggering of Greenland ice sheet melting, risk of disintegration of West-Antarctic Ice Sheet, - should be given separately). In particular, add more rows including key vulnerabilities and risks for biophysical systems, because of the large scale of potential impacts implied, such as given in Table 19.1 in chapter 19 of WG II of the underlying report, as this is important for the Synthesis of information from a risk management perspective (see topic 5). Otherwise this table can be misleading and does not give the full picture in terms of risks linked to global warming at different levels, and in terms of which risks can be avoided by certain lower levels of temperature. If this information is not included, there is a mismatch between this section and the assessment in topic 5 on what the necessary information for policymakers is. (Government of Germany)
3-A-123	10	1			Figure 3.5: important Figure but it would be much more useful if the following information was included: in upper part: include curves for warming over the course of the 21st century. to also give some information on the timing of expected levels of warming for different scenarios. In general, information in Figure 3.5 should not be limited to high-confidence-statements, as this can be misleading for policymakers and contradicts the approach described later in topic 5 (decision making involves an iterative risk management process. Information on impacts with large or large-scale or irreversible damages are relevant even if it is only given with medium or even low confidence.). Therefore, include more information e.g. on impacts for freshwater ecosystems, geophysical systems, extreme events - see table 19.2 in WG II, chapter 19 of the underlying report. (Government of Germany)
3-A-124	10	1	10		Figure 3.5: The caption for this figure needs some work as it should do a better job of walking the reader through the figure and its main messages. 1)Suggest the sentence on lines 6-7 be revised to: "Together, the upper and middle parts of this figure demonstrate the severity of impacts associated with different SRES emission scenarios, while together the middle and bottom parts of the figure demonstrate the severity of impacts associated with various stabilization categories". This sentence should also then be moved to the second sentence or last sentence of the caption. 2) Sentence on line 10, Revise to state "... indicate impacts continuing to increase with increasing temperature." 3)It is not possible to reconcile the values plotted in the bottom panel and that appear in Table SPM.3 with "multi-century" warming. Table SPM.3 only provides estimates of global temperature increase at stabilization, which elsewhere is stated will generally occur between 2100 and 2150. (Government of Canada)
3-A-125	10	1	10		Figure 3.5: It would be useful to include the stabilization concentrations in the bottom box which would provide a useful synthesis between WG2 and WG3. Alternately, the corresponding concentrations could be added to the caption. (Government of Canada)
3-A-126	10	1			Figure 3.5. The line extending to the left of the sentence "Ecosystem) "up to 30% of species at increasing risk of extinction"" seems to have been overlooked during editing. Deletion of this line is suggested.

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					(Government of Japan)
3-A-127	10	1	10	2	Figure 3.5 Excellent use of graphic combined with temperature ranges from non-mitigation scenarios and AR4 Stabilization categories. Figure summaries the various impacts concisely. (World Meteorological Organization)
3-A-128	10	1			Fig.3.5. Please delete the upper and the lower panels and only keep the middle one. Reason: the upper panel is the projection by the end of the 21st century; the middle one shows different impacts which would occur in different periods of 21st century; the lower one provides the corresponding temperatures of six stabilized GHG concentrations, which will take several centuries to reach. Therefore, the three figures are incomparable and it is not scientific to put them together here. (Government of China)
3-A-129	10	1	10	16	Excellent figure 3.5 summarizing well key findings by WGII. (Government of Switzerland)
3-A-130	10	1	10	3	Delete top and bottom panels depicting emissions and warming scenarios as well as associated text in the caption. The scenarios depicted in the top and bottom panels of Figure 3.5 are not sufficiently consistent with the impacts listed in the middle panel to justify associating the occurrence of impacts with particular scenarios. The SPM does not define or explain “stabilization categories” prior to introducing these into Figure 3.5, making the lower panel in the graphic particularly difficult to interpret. Further, the temporal relationships between the top and bottom panels are unclear. Finally, the top and bottom panels (depicting warming scenarios) are redundant with Figure 3.2 and Table 3.1 (projections of surface temperatures under the SRES marker scenarios) and with Table 5.1 and Figure 5.1 (emissions and warming under stabilization categories). (Government of United States of America)
3-A-131	10	4	11	3	Revert verbatim to relevant text from the caption for WG2 Figure SPM-2: “Illustrative examples of global impacts projected for climate changes (and sea level and atmospheric carbon dioxide where relevant) associated with different amounts of increase in global average surface temperature in the 21st century. The black lines link impacts; dotted arrows indicate impacts continuing with increasing temperature. Entries are placed so that the left-hand side of the text indicates the approximate onset of a given impact. Quantitative entries for water stress and flooding represent the additional impacts of climate change relative to the conditions projected across the range of Special Report on Emissions Scenarios (SRES) scenarios A1FI, A2, B1, and B2. Adaptation to climate change is not included in these estimations. Confidence levels for all statements are high.” The authors should consider whether they would like to make mention of the other related figures [Figure 3.2 and Table 3.1 (projections of surface temperatures under the SRES marker scenarios) and with Table 5.1 and Figure 5.1 (emissions and warming under stabilization categories)] in the caption of this figure. (Government of United States of America)
3-A-132	10	4			Fig 3.5 : same comments as for fig SPM6 in SPM on page 12 additionally, in the caption, request to the authors to add the specific mean/ranges for CS in the upper and lower panels (presuming these are slightly different) (Government of Belgium)

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3-A-133	10	12	10	12	"higher confidence" than when? The TAR (only my guess)? (Government of Switzerland)
3-A-134	10	15	10	15	Footnote 13. I found this confusing initially as had not initially realised that all references relate to WG II ( inspite of the lone "WGII" at top of right panel in the figure). Suggest for clarity remove "WGII" from top of right hand panel and then add to footnote "..... and F= Figure from WGII." (International Energy Agency)
3-A-135	10	21	10	21	"hot extremes" not so serious: "temperature extremes" or "hot days". (Government of Switzerland)
3-A-136	11	6	11	7	WG2 Figure SPM-2 is an illustrative table and cannot be used to support the statement that some future impacts are unavoidable. The entries in the table were not meant to indicate precise levels of warming at which impacts occur and therefore cannot be interpreted as demonstrating unavoidable impacts. Delete reference to WG2 Figure SPM-2. (Government of United States of America)
3-A-137	11	6	11	7	For clarity of expression, replace "appear unavoidable" by "can no longer be avoided". (Government of European Community)
3-A-138	11	9	11	9	Strike "had been" and insert in its place "were". (Government of United States of America)
3-A-139	11	9	11	13	I would say where such increases are expected, I think it is important for policy makers. (Government of Switzerland)
3-A-140	11	12	3	12	Insert "until at least the middle of the 21st century" after "... project further increases in GHG concentrations" as the statement is otherwise not correct. For example the Azar et al. And IMAGE 2.6 scenarios lead to decreasing concentrations in the second half of the century. (Government of Germany)
3-A-141	11	13	11	13	Typo? Presumably, "climate changes" should be changed to "climate impacts". (Government of European Community)
3-A-142	11	24	13	23	This material on Impacts on regions is no longer a synthesis of findings but a cut and paste from the WGII report. Worse, it is a selective cut and paste with no apparent rationale for why certain bullets were selected over others. For the North America bullets, there is no obvious reason for why the bullet about agriculture was selected for inclusion when there were two other bullets in the SPM that had very high confidence attached to them that were not included. Interestingly, a new bullet is presented for the Polar Regions that was not in the SPM at all that is actually a valuable addition to the text, but it does beg the question how decisions were made about what to include here in these regional summaries. We would prefer to have this section written in paragraph style. At a minimum, a short discussion of the criteria for inclusion should be given. (Government of Canada)

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3-A-143	11	24			Section 3.3.2: Include reference to global mean temperature levels throughout this section for each statement, if appropriate. (Government of Germany)
3-A-144	11	24	13	23	re. 3.3.2 Impacts on regions: This section is now very well balanced and covers many important topics. Leaving this section as currently intact as possible in the final publication is desirable. (Government of Japan)
3-A-145	11	25	11	15	Are the dot points in this section (3.3.2) "high confidence" unless otherwise stated (as per page 7 lines 1-5). If this is the case it may be useful to repeat that "Unless otherwise stated, the confidence level in the projections in this section are high". (Government of Australia)
3-A-146	11	30	11	33	The statement on African agriculture is much less precise than in the previous draft. Suggest to reconstitue by the following text from the previous draft: "Agricultural production, including access to food, in many African countries and regions is projected to be severely compromised by climate variability and change. In some countries, yields from rain-fed agriculture could be reduced by up to 50% by 2020." (Government of European Community)
3-A-147	11	30	11	30	Add "The land area....." (International Energy Agency)
3-A-148	11	31	11	31	Suggest add to end of sentence: "... to decrease using current gene stocks." The counter-argument is that genetic modification or even traditional plant breeding could increase crop yields in Africa and elsewhere. To avoid getting into this debate, I think the suggested amendment would avoid this - though I haven't gone back to the original text. (International Energy Agency)
3-A-149	11	33	11	33	Could add to end of sentence "... and encourage deforestation." Then also add a reference to WGIII chapter on forestry. I realise this relates less to Africa than elsewhere but there is little commentary in the SYR on deforestation even though it accounts for a fair chunk of CO2-eq emissions ( as in Fig SPM 3) (International Energy Agency)
3-A-150	11	34	11	35	Replace this medium confidence finding NOT included in the WG2 SPM or in the Chapter 9 Executive Summary with one from the SPM that was agreed upon. (Government of United States of America)
3-A-151	11	34	11	34	Insert into sources Figure TS.6, " (albeit confidence for the statement made in this braod manner is not merely medium, but high with respect to the evidence on which Figure TS.6, Figure 4.4, Table 4.1 are based) (Government of Switzerland)
3-A-152	11	37	11	49	Suggest to add the following important sentence from the WG 2 Chapter 10 Executive Summary: "Climate change will impinge on sustainable development of most developing countries of Asia as it compounds the pressures on natural resources and the environment associated with rapid

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					urbanization, industrialization, and economic development." (Government of European Community)
3-A-153	11	37	11	49	For the section on Asia, although there is reference to water, society, habitats, coastal, and food security issues, there is no reference to health and ecosystem issues. It is suggested that health and ecosystems issues are included in this section. (Government of Japan)
3-A-154	12	1	12	11	This text contains no information on expected climate impacts beyond 2030. Suggest to add the following sentence from WG 2 Chapter 11 Executive Summary: "The climate of the 21st century is virtually certain to be warmer with changes in extreme events: Heat waves and fires are virtually certain to increase in intensity and frequency; floods, landslides, droughts and storm surges are very likely to become more frequent and intense; and snow and frost are likely to become less frequent." (Government of European Community)
3-A-155	12	1	12	2	This is really a splendid schematic representation of the likely impacts under different IPCC scenarios. One additional point: it would be worth putting where 3 deg C lies - 3 deg C being the likely average temperature rise this century under current policies and trends, according to the 4th Assessment report. (Government of United Kingdom)
3-A-156	12	2	12	2	It is not clear what the axis 0 to 6 is: we assume it refers to degree Celcius but this needs to be clarified. (Government of United Kingdom)
3-A-157	12	7	12	7	Insert into sources "Figure TS.6, " as well as "Box 4.4, " (Government of Switzerland)
3-A-158	12	10	12	10	Please insert the word 'other' before 'regions, thus: "... but initial benefits are projected in some other regions of New Zealand." (Government of New Zealand)
3-A-159	12	13	12	21	This text does not specifically mention the substantial risks anticipated for Southern Europe. Suggest to add the following text based on WG 2 SPM.C: "In Southern Europe, climate change is projected to worsen conditions in a region already vulnerable to climate variability by reducing water availability, hydropower potential, summer tourism, and in general, crop productivity, and by increasing health risks due to heat waves and the frequency of wildfires." (Government of European Community)
3-A-160	12	13	12	21	The previous version had a very important statement on impacts from extreme climate events, which is no longer contained in the current draft. Please reconstitute the following text from the previous draft (p. 9, ll. 15-17): "Negative impacts [of climate change] include with high confidence increased risk of inland flash floods, more frequent coastal flooding and increased erosion, and in Southern, Eastern, and Central Europe, increase water stress, drought risk and heat waves." (Government of European Community)

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3-A-161	12	13	12	21	For Spain is crucial to include the complete sentence that appears in WG2 SPM.C referring to the substantial risks anticipated for Southern Europe. " " In Sourthern Europe climate change projected ..... frequency of Wildfires". (Government of Spain)
3-A-162	12	13	12	21	Europe. Please add to the text that appears in the previous draft in page 9 II, lines 15-17. This text is very relevant, as far as related to extreme events and risk, and there is high confidence. (Government of Spain)
3-A-163	12	16	12	18	Replace this finding not found in the WG2 SPM or in the Chapter 12 Executive Summary with one from the SPM that was agreed upon. (Government of United States of America)
3-A-164	12	16	13	18	Although the hydropower example is interesting, the overarching and far more important impact is water scarcity in the Mediterranean region in general. Hydropower is one of many consequences thereof. Revise appropriately. (Government of Germany)
3-A-165	12	30	12	32	The issue of the loss of biodiversity should be added (SPM WGII) (Government of Argentina)
3-A-166	12	34	12	34	We suggest to add in parenthesis, after "North America", "(The US and Canada)". This, for consistency purposes, since in previous sections Nort America included Mexico, but not here since this country is included as part of Latin America. (Government of Mexico)
3-A-167	12	34	12	44	The previous draft had an important statement on threats to forests, which is no longer contained in the current draft. Please reconstitute the following text from the previous draft (p. 9, ll. 37-38): "Disturbances from pests, disease, and fire are projected to have increasing impacts on forests." (Government of European Community)
3-A-168	12	34	12	44	Include reference to WG1 finding on a likely "more intense tropical cyclone activity" trend for the 21st century under non-mitigation SRES scenarios (WG1 SPM Table SPM.2 - crossreference to Table 3.2 in SYR GRD, page 14). (Government of Germany)
3-A-169	13	2	13	5	Revert to the language in the WG2 SPM. Changes to this paragraph changed the treatment of ecosystems in the sentence. (Government of United States of America)
3-A-170	13	4	13	4	Insert into sources "Box 4.5, " (Government of Switzerland)
3-A-171	13	5	13	9	The corresponding statement in the previous draft was more clear. Please reconstitute the following text from the previous draft (p. 9, l. 48 to p. 10, l. 1): "Already Arctic human communities are adapting to climate change, but some traditional ways of life are being threatened and substantial investments are needed to adapt or re-locate physical structures and communities." (Government of European Community)

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3-A-172	13	5	13	5	Change first sentence to "Projected effects on human communities in the Arctic are mixed." (Government of United States of America)
3-A-173	13	10	13	12	Replace this finding not found in the WG2 SPM or in the Chapter 15 Executive Summary with one from the SPM that was agreed upon. (Government of United States of America)
3-A-174	13	10	13	10	Include specification "global" or "local" before "warming greater than 4°C", whatever appropriate. (Government of Germany)
3-A-175	13	14	13	23	This paragraph does not mention the projected impacts of climate change on agriculture and tourism. Suggest to add the following text based on WG 2 Chapter 16 Executive Summary: "Climate change will very likely have adverse effects on subsistence and commercial agriculture, will likely have negative impacts on tourism, and will likely have adverse impacts on human health." (Government of European Community)
3-A-176	13	14	13	23	The text in the previous draft was more clear. Please reconstitute the following text from the previous draft (p. 10, l. 8-10): "Deterioration in coastal conditions, for example through erosion of beaches and coral bleaching, is expected with high confidence to affect local resources, e.g., fisheries, and reduce the value of these destinations for tourism." (Government of European Community)
3-A-177	13	19	13	20	While this language accurately reflects the WG2 SPM, it would benefit from some clarification as to what this has to do with climate change. (Government of United States of America)
3-A-178	13	27	13	29	Add the following text, which is also contained in the SYR SPM, p. 13, ll. 5-6: "The projected changes in extremes are expected to have mostly adverse effects on natural and human systems." (Government of European Community)
3-A-179	13	38			Start with "Climate-carbon cycle coupling is expected to add carbon dioxide to the atmosphere as the climate system warms, but the magnitude of this feedback is uncertain. Based on current understanding of climate carbon cycle feedback, model studies suggest thatt stabilise at 450 ppm CO2, could require that cumulative emissions over the 21st century be reduced from an average of approximately 670 [630 to 710] GtC to approximately 490 [375 to 600] GtC. (Text from SPM WG 1 page 12/13) (WWF International)
3-A-180	14	1			Table 3.2: The "Human Health" column, second row "warm spells...": Leave out part starting with ", especially for the elderly, chronically sick, very young and socially isolated" or alternatively include as well after "decreased cold exposure" in the row above. (Government of Germany)
3-A-181	14	1			Table 3.2: The "Human Health" column, first row "over most land areas..." needs to be balanced, as more frequent hot days and nights will affect human health. (Government of Germany)

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3-A-182	14	1			Table 3.2: Reverse the row order so that the potentially high-impact phenomenons are sorted at the top of the table. (Government of Germany)
3-A-183	14	1			Table 3.2.: This table is well done and covers a lot of vital information. Maintaining this table as is in the final publication is strongly recommended. (Government of Japan)
3-A-184	14	1			Table 3.2. Row "Heavy precipitation", Column "Agriculture...", suggested addition: "constraints on irrigation infrastructure". (Government of Sweden)
3-A-185	14	1			Table 3.2 is very land centric. What about the impact of climate change and ocean acidification on marine ecosystems and the services they provided - need to broaden it to include disruption to marine ecosystems. (Government of United Kingdom)
3-A-186	15	1	15	29	Section 3.3.4: The current draft is much less clear than the previous draft: Changing "particularly vulnerable" to "especially affected" hides that all impacts mentioned here are negative. Please change l. 1 to "Particularly vulnerable systems, sectors, and regions"; reverse l. 3 to "Some systems, sectors, and regions can now be identified as particularly vulnerable to climate change."; reverse l. 6 to "Particularly vulnerable systems and sectors are"; and reverse l. 18 to "Particularly vulnerable regions are". (Government of European Community)
3-A-187	15	1	15	29	Recommend deleting or adding necessary explanatory notes. What does it mean to be 'especially' affected by climate change? If this is to be included, some explanation or description of criteria is needed to make it clear to the reader why this subset of systems, sectors, and regions is being included. The authors should ask themselves how much value-added is gained by having this in addition to similar statements in other parts of the synthesis. This could be a likely candidate to recoup valuable word count. (Government of United States of America)
3-A-188	15	3	15	29	This is an important section to carry WG2's message, and its continuous inclusion in the final draft is fully welcomed. (Government of Japan)
3-A-189	15	3	15	18	The construction "Regarding [systems and sectors]" is clumsy and does not read well. We suggest replacing the chapeau text ("Some systems, sectors and regions are likely to be especially affected by climate change. {WGII TS 4.5}" with "Impacts of climate change will not be uniform. {WGII TS 4.5}" and then replacing line 6 "Regarding systems and sectors, these are: {WGII TS 4.5}" with "Systems and sectors likely to be especially affected by climate change are: {WGII TS 4.5}" and line 18 "Regarding regions, these are: {WGII TS 4.5}" with "Regions likely to be especially affected by climate change are: {WGII TS 4.5}" (Government of New Zealand)
3-A-190	15	3	15	29	re. the terms used for systems and sectors, regions: In the first draft, the term 'particularly vulnerable' has been used, whereas in the final draft weaker terms 'to be especially affected/particular ecosystems, regions,' are used. Maintaining the term 'vulnerable' is suggested.

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<b>Topic - Batch - Comment</b>	<b>Page</b>	<b>Line</b>	<b>To Page</b>	<b>To Line</b>	<b>Comment</b>
					(Government of Japan)
3-A-191	15	8	15	8	The tropical forest should be added as a particular terrestrial ecosystem. (Government of Argentina)
3-A-192	15	11	15	12	The second part of this sentence, "and increased risk from extreme weather events", is not included in this text in the WGII TS. Suggest you include other reference. (Government of Australia)
3-A-193	15	11	15	12	...and storm surges. (Government of Argentina)
3-A-194	15	13	15	14	...and retreat of glaciers. (Government of Argentina)
3-A-195	15	18	15	26	See aboved comments 18th and 19th. Add a table and add another region: Southern Europe and northern Africa (Government of Spain)
3-A-196	15	18	15	26	Latin America should be added because of retreat of glaciers and Amazonia issues. (Government of Argentina)
3-A-197	15	21	15	22	Restructure to be the same as WGII TS. " Africa, especially the sub-Saharan region, because of low adaptive capacity as well as climate change". (Government of Australia)
3-A-198	15	23	15	24	projected warming on natural systems should be included in this paragraph as it also relates to Small Islands (Government of Trinidad and Tobago)
3-A-199	15	28	15	29	This is an important section to carry WG2's message, and its new inclusion in the final draft is fully welcomed. (Government of Japan)
3-A-200	15	31	16	15	This section on abrupt change is almost identical to that in the SPM (excepting the first paragraph, which only appears here in the underlying Synthesis Report). Therefore, there is an opportunity to expand the discussion of this critical subject especially regarding the future of the ice sheets. At a minimum, we suggest two things: 1) adding to line 8 after the words "to be sustained", the phrase "causing a contribution to SLR of 4-6 m or more", and 2) adding after the previous addition a sentence taken from the WGI TS-47 lines 55-57 (which are also supported by section 10.7 as the current text is): "Dynamical processes not included in current models but suggested by recent observations could increase the vulnerability of the ice sheets to warming, increasing future sea level rise. Understanding of these processes is limited and there is no consensus on their likely magnitude, but rapid sea level rise on century timescales cannot be excluded." (The last phrase in italics is already in the existing text as a final sentence of the paragraph.) (Government of Canada)

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3-A-201	15	33	15	34	This text lacks a statement on the direction of the relationship between climate change and (irreversible) impacts. For clarity, change "are related to" to "increase with". (Government of European Community)
3-A-202	15	33	15	34	Delete the bolded chapeau and replace with WG2 language: "Some large-scale climate events have the potential to cause very large impacts, especially after the 21st century." WG2 Section 19.4 refers to 'Assessment of Response Strategies to Avoid Key Vulnerabilities' which is quite a different matter than assessing the "Risk of abrupt or irreversible change." The current bolded statement could not be found in the WG2 SPM, and there is no Section 19.5 in the WG2 report. (Government of United States of America)
3-A-203	15	36	15	36	We note that the WGI 8.7 reference lists methane hydrate instability along with MOC and ice sheet changes as a mechanism for abrupt or irreversible change, but it is not mentioned in the SYR text. We suggest that perhaps it should be. (Government of New Zealand)
3-A-204	15	36	15	39	This paragraph contains little useful information for policy makers, and the last sentence is a clear understatement. Suggest either to delete or to replace by the following opening sentence from the WG II TS4.6 (p. 64): "Some large-scale climate events have the potential to cause very large impacts, especially after the 21st century." (Government of European Community)
3-A-205	15	41	15	45	Replace this paragraph with the exact approved language from the WG2 SPM (page 17 of the final layout), which is much clearer and lends the proper emphasis and balance. Delete the last sentence, as it is ambiguous. The statement that changes 'may' do something does not reflect a confidence or likelihood. (Government of United States of America)
3-A-206	15	41	15	45	It is essential that the following sentence be added, to put these projections in perspective, as it was better done in the WGII SPM: "Temperatures over the Atlantic and Europe are projected to increase even if the MOC slows down, due to global warming". (Government of Belgium)
3-A-207	15	43	15	44	The statement that Longer-term changes in the MOC cannot be assessed with confidence should be qualified by adding "However, there is high confidence that the likelihood of large-scale and persistent MOC responses increases with the extent and rate of anthropogenic forcing.". Otherwise, this paragraph does not give the whole picture of the assessment in the WG II report (see section 19.3.5.3 WG II). Please also add reference to WG II Chapter 19.3 to the brackets with references in line 44. (Government of Germany)
3-A-208	16	8	16	9	The statement of a temporal reference ("millennial/century time scales") without a statement of the magnitude of the effect is not very helpful. Suggest to add "of several meters" before "on century time scales". (Government of European Community)

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3-A-209	16	10	16	10	Include information from WG II (in particular Chapter 19, see e.g. table 19.1 in WG II, chapter 19, for a summary) on the following risks, including relationship to global mean temperature, as this is highly policy relevant from the point of view of risk assessment and risk management under uncertainty: risks from positive feedbacks leading to accelerated release of GHG (Methane release from wetlands and permafrost melt and methane release of marine hydrates, CO2 from biosphere), risk of ice-sheet desintegration (separate information for Greenland and Antarctica), risk . Information should be given even if not included in SPMs of WG reports, as highly relevant for the purpose of this Synthesis report. (Government of Germany)
3-A-210	16	11	16	14	Medium confidence that 20-30% of spp assessed would be at increasing risk of extinction contradicts the entry in Fig 3.5 where high confidence is claimed to be a criteria for inclusion ( figure legend, p10, line14). See comment for topic 1 above. (Government of United Kingdom)
3-A-211	16	11	16	15	Delete paragraph and move exact WG2 SPM language to ecosystems section [3.3.1] as in WG2 SPM. (Government of United States of America)
3-A-212	16	13	16	14	Please clarify what is the reference temperature or period used here. (Government of Belgium)