

#	Ch	From Page	From Line	To Page	To Line	Comment
1	21	0	0	0	0	Please refer to a paper provided via supporting material: jcli-d-12-005602E1-early online release.pdf (ZHAO, ZONG-CI, National Climate Center)
2	21	0	0	0	0	General Comments on Chapter 21. Regional Context: This chapter is important because it presents the definition of the regional context, the synthesis of key regional issues as the vulnerabilities & impacts, adaptation and regional aspects of physical climate system as the atmosphere & land surface, oceans & sea levels, air quality and cryosphere. Also, the impressive part in this chapter is 21.5 for the critical analysis of approaches to regional impacts, adaptation and vulnerability studies & their uncertainties. Table 21-1 for the dimensions of the institutions and actors involved in climate change decision-making for different domains is impressive too. Table 21-4 (and its notes) for the dimensions of assessments of impacts & vulnerability and of adaptation drawn upon to serve different target audiences are impressive and important. Also, Figure 21-4 and Figure 21-5 for discussing the annual surface air temperature changes and annual precipitation are very impressive and updated. Figures 21-9, 21-11, 21-12 and 21-15 are prepared with high quality and presents the scientific aspects in an impressive way. Box 21-2 for the observed and simulated variations in past and projected future annual average precipitation and temperature over five African regions is impressive. Also, Box 21-3 which presents the observed and projected changes in annual average temperature and precipitation over Africa is impressive & updated too. Figure RC-1 and RC-2 illustrates the change in annual temperature and precipitations for the Climate Research Unit (RCU) observations from late-20th century through the late-21st century using different models is impressive. (Labib, Mounir Wahba , Third National Communication (TNC) Project)
3	21	0	0	0	0	Supplementary Material: National and International Groupings Referred to in Chapter 21: The important part in this chapter is the Table S21-2 for countries and territories of the world. These data and information were collected from different international sources. Really, it is impressive. (Labib, Mounir Wahba , Third National Communication (TNC) Project)
4	21	0	0	0	0	Check that "degrees Celsius" are always marked as "°C" (on several occasions the ° sign is missing) (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
5	21	0	0	0	0	As the Chapter 21 serves as an introduction to the regional analysis chapters and aims both to cover the climate science that served as input into the Regional Chapters, the chapter presents the methods used and outlines examples from the Regional work. The Chapter crosses between physical and social/economic science frequently. The Chapter contains much interesting material in the chapter but it is not an easy read in many places. In general the material could be shortened and focused in some places. The figures are not all well linked to text. Authors should critically consider which are necessary. The text-rich figures, tables and boxes are dense with information but detract from the conclusions in the chapter due to the absence of close linkage to the text and the poor captioning. We recommend: 1) a strong edit to improve the language 2) clarifying of the figure captions. The language in much of the document obscures the synthesis and information within the text. The style of putting technical information in parenthesis in the middle of sentences and in the middle of captions also obscures the message. This combined with the long sentences and complex sentence structure makes the document difficult to read. It will not be accessible to policymakers. The figure captions would be better if the figure captions linked better with the text and included an initial phrase that highlighted the purpose of the figure. (UNITED STATES OF AMERICA)
6	21	0	0	0	0	For section 21.5.1, Vulnerability and Impact analysis.... much of what is stated here is not strictly pertinent to a Regional Context - it's quite general. Is it covered elsewhere in the text? (UNITED STATES OF AMERICA)
7	21	0	0	0	0	hope that acronyms are defined on first occurrences in chapters so they better stand alone; otherwise the document becomes extremely burdensome to follow or digest in doable bits (UNITED STATES OF AMERICA)
8	21	0	0	0	0	Section 21.4 is quite readable. However there is a rather abrupt transition in writing style at the beginning of section 21.5 (the latter being more technical and dense). (UNITED STATES OF AMERICA)

#	Ch	From Page	From Line	To Page	To Line	Comment
9	21	0	0	0	0	The authors ought to better introduce "internal variability" in the chapter or refer to a fuller explanation of that term elsewhere (UNITED STATES OF AMERICA)
10	21	0	0	0	0	The executive summary contents only loosely reflect the topics within the chapter and are not in the same order. The organization of the chapter, and its flow, would be more logical if the executive summary, introduction, and contents, were in roughly the same sequence. (UNITED STATES OF AMERICA)
11	21	0	0	0	0	The Oceans/Sea level section (p. 27), Air Quality (p. 28) and Cryosphere sections (p. 29) are nicely written, easy to grasp. Other sections should emulate..... (UNITED STATES OF AMERICA)
12	21	0	0	0	0	This chapter is very difficult to read and won't be accessible to policy makers in its current form. It needs strong editing. Figures and their captions and linkage to text needs considerable improvement. The overall text needs to be shortened. (UNITED STATES OF AMERICA)
13	21	0	0	0	0	Why aren't the possible linkages as described in publications between changing weather patterns and retreating Arctic sea ice discussed? This is quite relevant to regional decision making. (UNITED STATES OF AMERICA)
14	21	0	0	0	0	This climate material of this chapter focuses heavily on temperature and precipitation. Why? WGI does it because that is what they have observations for and that is what they have always done. But in this WGII chapter I think it would be useful to ask why those are considered the relevant variables to discuss when considering regional aspects of the climate system. I think temperature is easy to explain (global *warming*). Precipitation is harder. A lot of daily weather forecast and essentially all of seasonal forecasting are centred around precipitation, and the climate variability that is the concern of infrastructure design is usually related to precipitation. But does this extrapolate to a warming future? Certainly in some, if not most, areas the dominant determinant of hydrological changes will be temperature. In areas with snow and ice it is obvious. In other areas, note that a simple back-of-the-envelope calculation suggests that a 4C increase in temperature will need a ~26% increase in rainfall to maintain the surface hydrological balance, which is beyond what any climate model is projecting. I am not saying you should dump the precipitation maps (necessarily), but only that the value of having this chapter in WGII will only be realised if such questions are posed. Otherwise presenting loads of maps of just temperature and precipitation simply indicates that this is either all that the physical climate community can offer or that someone the physical climate community knows better as to what climate information anyone actually needs. (Stone, Dáithí, University of Cape Town)
15	21	0	0	0	0	I am not sure how you are in terms of page limits, but either way it seems to me that a lot of the material could be condensed. (Stone, Dáithí, University of Cape Town)
16	21	0	0	0	0	This chapter has changed a lot since the FOD. It has now diverged markedly from the plenary approved outline. Most of the chapter is taken up discussing global and conceptual issues covered in WGI, Ch2, and Ch14-17, without the regional link expected from the title or the outline. I found the FOD direction more relevant to the opening chapter of Part B. (Stone, Dáithí, University of Cape Town)
17	21	0	0	0	0	This chapter is more focused on the physical climate system than I had expected it to be, given that it is intended to distill regional issues across the domains covered by the three Working Groups. (Stone, Dáithí, University of Cape Town)
18	21	0	0	0	0	Many figures and captions are highly technical and it will be very difficult to understand the information provided especially for non-expert readers. Some maps and charts are too small and too detailed to make effective use of the visual illustration of the data. The author team is strongly encouraged to consider using only the most important and effective figures and tables to present key and synthesized findings. (Estrada, Yuka, IPCC WGII TSU)
19	21	0	0	0	0	Robinson projection is the recommended projection for global maps. Please ensure this projection is used wherever possible to have a consistent presentation across the volume. (Estrada, Yuka, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
20	21	0	0	0	0	1) Overall -- The chapter team has developed a solid assessment in its 2nd-order draft. In the final draft, the chapter team is encouraged to continue its prioritization of compact and rigorous assessment, effective and comprehensive tables and figures, and high specificity in examples given. (Mach, Katharine, IPCC WGII TSU)
21	21	0	0	0	0	2) Coordination across Working Group II -- In developing the final draft of the chapter, the chapter team should continue to ensure coordinated assessment, both in the chapter text and at the level of key findings. As appropriate, cross-references to the sections of other chapters and/or their assessment findings should be used, reducing overlaps and harmonizing assessment. Generic references to entire chapters should be avoided if possible, in favor of specific chapter references. (Mach, Katharine, IPCC WGII TSU)
22	21	0	0	0	0	3) Harmonization with the Working Group I contribution to the AR5 -- In developing the final draft, the chapter team should also ensure all cross references to the Working Group I contribution are updated, with discussion of climate, climate change, and climate extremes referencing the assessment findings in that volume. (Mach, Katharine, IPCC WGII TSU)
23	21	0	0	0	0	4) Tightening and shortening the chapter's assessment -- As the author team prepares the next draft, it should continue to condense and tighten the assessment wherever possible. The chapter will be much more effective and widely read if it is substantially shorter. Ideally, the text of the chapter should be reduced by 50%, ensuring also each figure really adds value to the assessment. Across all sections, repetition should be reduced, and cross-references should be used more extensively, with overlap with other chapters reduced heavily (Mach, Katharine, IPCC WGII TSU)
24	21	0	0	0	0	5) Characterization of future risks -- In providing the regional context for the chapters that follow, the chapter team may wish to consider risks of climate change for what can be considered two eras. Some risks become relevant in the next few decades, during which time projected temperatures do not vary substantially across socioeconomic/climate scenarios. These coming decades can be considered an era of climate responsibility, and adaptation can be considered a primary means of reducing risks during this time. In contrast, mitigation choices made now and in the coming decades will be important in determining the level of climate change realized in the 2nd half of the 21st century and beyond. This longer-term period can be considered an era of climate options. Mitigation and adaptation are both relevant for risk reduction over this time frame. (Mach, Katharine, IPCC WGII TSU)
25	21	0	0	0	0	6) Informing the summary products -- To support robust and insightful summary products for the report, the chapter team is encouraged to maximize nuance and traceability in its key findings, continuing to use calibrated uncertainty language effectively. In addition to nuanced characterization of future risks (see the previous comment), the chapter team is encouraged to consider themes emerging across chapters, indicating for example how extreme events have demonstrated adaptation deficits and vulnerabilities to date and may relate to future risks, how limits to adaptation may be relevant in the context of this chapter, how multidimensional inequality is relevant in the context of climate change, how adaptation experience has been relevant to date, and how interactions among mitigation, adaptation, and sustainable development may occur. The chapter team is also encouraged to consider further informing box SPM.4 within the summary for policymakers, as well as table SPM.2. (Mach, Katharine, IPCC WGII TSU)
26	21	0	0	0	0	7) Report release -- The chapter team should be aware that the final drafts of the chapters will be posted publicly at the time of the SPM release, before final copyediting has occurred. Thus, the chapter team is encouraged to continue its careful attention to refined syntax and perfected referencing. (Mach, Katharine, IPCC WGII TSU)
27	21	0	0	0	0	GENERAL COMMENTS: I congratulate the author team for all their work on their SOD, recognizing that there is more work to be done. The chapter text is too long, and would greatly benefit from an edit aimed at tightening the discussions significantly. When considering the suite of review comments, please look for opportunities to refine and focus the text in revision. Please see my detailed comments for suggestions related to specificity of ES findings and traceable accounts, refining figures and tables, and various specific clarifications. (Mastrandrea, Michael, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
28	21	0	0	0	0	SUMMARY PRODUCTS: In preparing the final draft of your chapter and particularly your executive summary, please consider the ways in which your chapter material has been incorporated into the draft SPM and TS. Are there opportunities for presenting chapter findings and material in a way that further supports broad themes highlighted in the summary products and that facilitates additional cross-chapter synthesis in specific findings or figures/tables? Do the existing summary product drafts suggest additional coordination that should occur between Chapter 21 and other chapters at LAM4? (Mastrandrea, Michael, IPCC WGII TSU)
29	21	0	0	0	0	At last a Chapter worth reading. They have come to realise that climate is actually not only regional but even microregional. It is unfortunately burdened by the radiation theory of the climate which downplays the major climate influences which are air pressure, wind speed and direction, cyclones and anticyclones, air and ocean movements evaporation of water, cloud formation and precipitation. There is a refreshing admission of our current ignorance of many of the problems and much food for thought. The Supplement is also valuable (Gray Vincent Climate Consultant)
30	21	1	1	0	0	Chapter title needs to change from "regional context" as the current scope of the chapter is clearly beyond regional issues. Many important conclusions from this chapter seem to be global in nature as is evident from the set of statements in the executive summary. This chapter carries very important information for policy makers. If the chapter title remain "regional context", the important information will not reach the right audience. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
31	21	1	11	1	11	The text is missing country affiliation for Grace Redmond. (UNITED STATES OF AMERICA)
32	21	2	28	0	0	This ES is much more heavy on the physical aspects of climate change, and less on adaptation, vulnerability, mitigation, etc., than I was expecting. Vulnerability does make some appearances, but they are scattered about. (Stone, Dáithí, University of Cape Town)
33	21	2	28	0	0	Many busy readers read only sentences in bold in the executive summary. There are a number of statements (in bold) that do not have regional context. Many of them seem to be better placed in other chapters of WGII or WGI. The authors should carefully revise the messages carried in the executive summary. The messages should be consistent with the scope of the chapter which is regional context. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
34	21	2	28	0	0	Calibrated Uncertainty Language in the Executive Summary -- For all key findings in the executive summary, especially the bold statements at the start of each paragraph, the chapter team should indicate its degree of certainty in the conclusions through use of calibrated uncertainty language. Additionally, all calibrated uncertainty language use should be italicized for clarity. (Mach, Katharine, IPCC WGII TSU)
35	21	2	28	0	0	Tightening and Shortening the Executive Summary -- The executive summary will be most effective if it is short and nuanced. The chapter team should reduce the executive summary to 2.5 pages maximum, keeping the paragraphs that most richly communicate the core findings of the assessment. (Mach, Katharine, IPCC WGII TSU)
36	21	2	28	0	0	Harmonization with the Final Working Group I Contribution -- For any statements originating from the working group I contribution, the chapter team should ensure that the conclusions are updated to reflect the final draft of the report and its key findings. (Mach, Katharine, IPCC WGII TSU)
37	21	2	28	0	0	Topical Focus of the Executive Summary -- Given that the SSPs are hardly used in chapters 22-30, treatment of them within the executive summary could be reduced. (Mach, Katharine, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
38	21	2	28	0	0	Executive Summary: Calibrated uncertainty language is needed throughout the executive summary and must be added in the final draft of the chapter. I would also recommend further thought as to how the executive summary can most clearly communicate the findings of the chapter. The current draft contains good material, but I feel that the clarity of the presentation can be much improved, reducing redundancy and length. Please also carefully check the line of sight to underlying chapter sections throughout the executive summary, and ensure that indicated chapter sections provide clear traceable accounts and support for the presented findings. In this context, there are a few cases where support in the chapter text is not clear (see specific comments). (Mastrandrea, Michael, IPCC WGII TSU)
39	21	2	30	2	30	Exactly what is meant by "acutely" here may not be clear, and alternative wording should be considered. (Mach, Katharine, IPCC WGII TSU)
40	21	2	30	2	43	Lines 30-33 and 40-43 are overlapping, and it may be best to combine the paragraphs and reduce overlap accordingly. (Mach, Katharine, IPCC WGII TSU)
41	21	2	30	2	43	Please reduce this introductory material in the executive summary, as this is better placed in the introduction section of the chapter itself. (Mastrandrea, Michael, IPCC WGII TSU)
42	21	2	30	6	11	In the Executive Summary, there are many contents belongs to WGI and WGIII, should delete all contents which have no connection with regional impacts and vulnerability. (PAN, Jiahua, Chinese Academy of Social Sciences)
43	21	2	30	6	11	The Executive Summary is too lengthy, it should be shorten within 1.5 pages. (PAN, Jiahua, Chinese Academy of Social Sciences)
44	21	2	30	6	11	In the Executive Summary, the emphasis of uncertainties is commendable, however, the author should also cite the cases in literatures in which people successfully adapt to impacts. (PAN, Jiahua, Chinese Academy of Social Sciences)
45	21	2	36	0	0	What about sea level rise? (UNITED STATES OF AMERICA)
46	21	2	36	2	36	Exactly what is meant by "assuredly" here may not be clear, and alternative wording should be considered. (Mach, Katharine, IPCC WGII TSU)
47	21	2	37	2	37	The phrase "therefore an imperative" may be overly prescriptive, and alternative wording could be considered. (Mach, Katharine, IPCC WGII TSU)
48	21	2	37	2	38	You could even point out here that the UNFCCC says so. (Stone, Dáithí, University of Cape Town)
49	21	2	45	2	46	In the heading: " There is-----world", the terms adaptation, vulnerability and impacts should better follow the sequence, impacts, vulnerability and adaptation, as is usually the practice and followed also in this chapter. Paragraph under the heading should accordingly be modified. (Sheikh, Muhammad Munir, Global Change Impact Studies Centre (GCISC))
50	21	2	45	2	49	Is it possible to communicate more richly the core insights of this chapter here? (Mach, Katharine, IPCC WGII TSU)
51	21	2	45	2	49	This finding is fairly vague--please consider ways to focus the points being made. (Mastrandrea, Michael, IPCC WGII TSU)
52	21	2	47	2	49	This last sentence needs to be clarified. I could read it to say that attribution analyses find that it is *very likely* that humans have undergone physiological changes in response to past climate change. (Stone, Dáithí, University of Cape Town)
53	21	2	48	0	0	The term "autonomous" is not clear here. Please use an alternative term. (UNITED STATES OF AMERICA)
54	21	2	48	2	48	Casual usage of "very likely" should be avoided, as it is a reserved likelihood term. If the term here is a likelihood term, the chapter team should consider if a level of confidence would be more appropriate. (Mach, Katharine, IPCC WGII TSU)
55	21	2	48	2	49	Human adaptation is mainly as autonomous response. SUGGESTION: change "in some regions" as "in most regions". (PAN, Jiahua, Chinese Academy of Social Sciences)

#	Ch	From Page	From Line	To Page	To Line	Comment
56	21	2	51	2	51	It would be preferable to indicate more specifically what is meant by "need to be made"--"are made"? Additionally, decisions are made across scales, and it might be clearer to specifically indicate what scales are meant here. (Mach, Katharine, IPCC WGII TSU)
57	21	2	51	2	52	Given that there are an infinite number of possible definitions of regions and only a finite number of useful scales for political decisions, is this state not trivial? (Stone, Dáithí, University of Cape Town)
58	21	2	51	2	54	This material is not covered in section 21.3.2. Please provide appropriate line of sight, perhaps to parts of section 21.2. (Mastrandrea, Michael, IPCC WGII TSU)
59	21	2	51	3	2	It should consider the natural and geographical characteristics also. (ZHAO, ZONG-Cl, National Climate Center)
60	21	3	4	3	4	Casual usage of "very likely" should be avoided, as it is a reserved likelihood term. If the term here is a likelihood term, the chapter team should consider if a level of confidence would be more appropriate. Also, is it possible to indicate why, more substantively, these phenomena are crucial? (Mach, Katharine, IPCC WGII TSU)
61	21	3	12	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
62	21	3	15	3	16	low confidence and "medium confidence" as calibrated terms should be italicized. (Mach, Katharine, IPCC WGII TSU)
63	21	3	16	3	16	low to medium' should be in italics, for parity with other chapters. (Burt, Peter, University of Greenwich)
64	21	3	17	3	18	How does the second half of this sentence relate to the first half? (Stone, Dáithí, University of Cape Town)
65	21	3	20	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
66	21	3	20	3	22	This conclusion should be exactly the same as in WGI. This means skipping the latter part of this conclusion: "and that this warming is not due ...alone". It is redundant and does not lead to more information. \n\n (NETHERLANDS)
67	21	3	20	3	26	Are ALL statements in this paragraph supported by the material in WG I, Chapter 10??\n\n (NETHERLANDS)
68	21	3	20	3	26	Is this paragraph needed? It is partly redundant with the following paragraph (and thus could be integrated), while the statement on global changes seems out of place in this chapter. (Stone, Dáithí, University of Cape Town)
69	21	3	20	3	26	It may be preferable to weave key findings from working group 1 into presentation of conclusions originating from this chapter as well. (Mach, Katharine, IPCC WGII TSU)
70	21	3	20	3	26	It is odd to include a WGI finding in this chapter's executive summary. This material should be included in the chapter in appropriate context, but please delete from the ES. (Mastrandrea, Michael, IPCC WGII TSU)
71	21	3	22	3	24	These sentences seem not to be inline with conclusions from WGI. Please adopt to make the findings not contradicting. (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
72	21	3	23	3	24	Please change the sentence "It is also likely .... Circulations" to "It is also likely that the human influence has altered sea level pressure patterns globally". This sentence is consistent with WGI Chpt 10. The addition "related circulations" is too vague.\n\n (NETHERLANDS)
73	21	3	28	0	0	This section is cumbersome. Please tighten wording including the summary in bold. (UNITED STATES OF AMERICA)
74	21	3	28	3	45	Are ALL statements in this paragraph supported by the material in WG I, Chapter 3??\n\n (NETHERLANDS)
75	21	3	28	3	45	Please provide line of sight for this paragraph. (Mastrandrea, Michael, IPCC WGII TSU)
76	21	3	28	5	16	There are a number of paragraphs on pages 3 through 5 covering different elements climate model projections in a somewhat fragmented and overlapping way at present. Please consider ways to boil down and integrate this material into a clearer set of key messages about sources of uncertainty in future projections, what aspects of projections are viewed as robust, where there is variation in results across models. etc. (Mastrandrea, Michael, IPCC WGII TSU)



#	Ch	From Page	From Line	To Page	To Line	Comment
77	21	3	29	3	26	It is not possible to measure the average temperature of the earth's surface. The Mean Global Surface Anomaly Record is a very poor substitute as each point on the curve applies to a multiple average of a different set of non standard unrepresentative samples. It does seem to be affected by gross natural cahnges like solar changes, ocean oscillations and large volcanic eruptyions, but it is also influenced byh urban developement and land use change and each point shold be accompanied by plausible estimates of its accuracy. The supposed "warming" you refer to depends parthgly on which sequence you choose to select. You do not seem interseted in recent trends, which for the past 15 years have been negligible or the fact that the few decimals of a degree that you claim has a very low statistical significance. You are also oblivious to the recent very cold winter temperatures in the Northern Hemisphere (Gray, Vincent, Climate Consultant)
78	21	3	30	3	31	The extrapolation to flood risk is a bit shaky. Spring flood risk in central-to-northern North America and Eurasia, for instance, has little to do with precipitation intensity (unless you are thinking of intensity of winter totals). (Stone, Dáithí, University of Cape Town)
79	21	3	30	3	32	We cannot find the conclusion about summer drought on mid-continental areas in the relevant WGI chapters and sections about droughts, nor that the drought trends are robust. The conclusion should use the WGI wording about trends in droughts. \n\n (NETHERLANDS)
80	21	3	32	3	32	little confidence' should be in italics for parity with other chapters (Burt, Peter, University of Greenwich)
81	21	3	34	3	41	The relevant time frames for these observed changes should be specified. (Mach, Katharine, IPCC WGII TSU)
82	21	3	35	3	36	virtually certain' should be in italics for parity with other chapters. (Burt, Peter, University of Greenwich)
83	21	3	35	3	36	virtually certain as a likelihood term should be italicized for clarity. (Mach, Katharine, IPCC WGII TSU)
84	21	3	36	3	36	Subscript '2' required in 'CO2'. (Burt, Peter, University of Greenwich)
85	21	3	38	3	38	Please insert "sea" before ice; if glacial ice an snow included in thinking be explicit. (UNITED STATES OF AMERICA)
86	21	3	39	3	39	Please capitalize "Arctic"; insert "sea" before ice. (UNITED STATES OF AMERICA)
87	21	3	40	3	40	Please insert new sentence regarding increasing net loss of ice from ice sheets sheets. (UNITED STATES OF AMERICA)
88	21	3	41	3	41	The sentence: " Several hundred glaciers globally -----in the last 30 years" being a very important statement should better be supported with a reference. (Sheikh, Muhammad Munir, Global Change Imapct Studies Centre (GCISC))
89	21	3	42	3	42	Please insert "sea" before ice. (UNITED STATES OF AMERICA)
90	21	3	42	3	43	Presumably this is referring to the Arctic Ocean, rather than the Arctic generally (e.g. the ice on top of Greenland). (Stone, Dáithí, University of Cape Town)
91	21	3	42	3	43	Where 2°C is mentioned here, it would be helpful to specify more precisely what is meant--2°C global mean temperature increase above preindustrial? (Mach, Katharine, IPCC WGII TSU)
92	21	3	43	3	43	Degree symbol missing. (Burt, Peter, University of Greenwich)
93	21	3	45	3	45	It would be helpful to indicate more precisely what is meant by "fairly coherent." (Mach, Katharine, IPCC WGII TSU)
94	21	3	45	3	45	Please clarify what is meant by fairly coherent in this line. (Mastrandrea, Michael, IPCC WGII TSU)
95	21	3	47	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
96	21	3	47	3	52	You are mixing the problem of internal variability and multi-decadal near term prediction. Please separate. (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
97	21	3	47	3	52	Are ALL statements in this paragraph supported by the material in WG I, Chapter 11??\n\n (NETHERLANDS)

#	Ch	From Page	From Line	To Page	To Line	Comment
98	21	3	47	3	52	I am not clear on the relevance of this paragraph to this chapter. In any case, part of the reason that GHG forcing is not a major source of uncertainty is that uncertainty on the GHG response is low on that time scale (decades, as a decadal forecast needs a baseline) following from attribution analyses. (Stone, Dáithí, University of Cape Town)
99	21	3	47	3	52	This paragraph is overlapping with the statement on page 5 lines 4-7, and these statements do not appear to be completely consistent. In addition, section 21.3.3.1.3 states "medium evidence" where "some evidence" is used here. Please provide line of sight for this paragraph, and ensure clear traceability. (Mastrandrea, Michael, IPCC WGII TSU)
100	21	4	1	0	0	What is GMSL? Please add global mean sea level (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
101	21	4	1	0	0	GMSL? (Stone, Dáithí, University of Cape Town)
102	21	4	1	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
103	21	4	1	4	1	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
104	21	4	1	4	2	The abbreviation GMSL has not yet been defined (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
105	21	4	1	4	5	Is this also a working group 1 finding? If so, could treatment here be reduced? (Mach, Katharine, IPCC WGII TSU)
106	21	4	1	4	5	This is another paragraph that could be considered for deletion, given the WGI focus of this paragraph. Again, this should appear in the chapter, but not the ES on its own, unless integrated with statements within the WGII scope. (Mastrandrea, Michael, IPCC WGII TSU)
107	21	4	3	4	3	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
108	21	4	3	4	6	There is an inconsistent use of likelihood terms throughout. Sometimes they are used in the formal IPCC statistical sense; at other times, they are used in informal contexts (see TS, p. 4, lines 41-54) (UNITED STATES OF AMERICA)
109	21	4	5	0	0	Also the gravitational change from melting a glacier or ice sheet, which is the same magnitude as coastal uplift but influences a larger area. (Stone, Dáithí, University of Cape Town)
110	21	4	7	4	8	It is not clear. It means that CMIP5 compare with CMIP3? (ZHAO, ZONG-CI, National Climate Center)
111	21	4	7	4	8	Do you mean "the uncertainties reported"? I am not sure that we can say anything about "inherent" uncertainties. (Stone, Dáithí, University of Cape Town)
112	21	4	7	4	14	As the executive summary is reduced in length, deletion of these paragraphs could be considered. (Mach, Katharine, IPCC WGII TSU)
113	21	4	7	5	15	The overall flavour of the messages given here is relatively negative, weaknesses and uncertainties are strongly stressed. These messages should be in line with the messages given in the other chapters. (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
114	21	4	8	0	0	"addition of... topography". This is an odd example. First, CMIP3 models included in AR4 had topography already. Second, even if they had not, I can see how the addition might reduce error, but it is not so clear to me that it would reduce uncertainty. (Stone, Dáithí, University of Cape Town)
115	21	4	10	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
116	21	4	10	4	11	The text is very dense. What is a multiple scenario element? (UNITED STATES OF AMERICA)
117	21	4	10	4	11	More specificity would be helpful--what scenario elements and what issues? (Mach, Katharine, IPCC WGII TSU)
118	21	4	16	4	17	Is it possible to provide more information on the core discrepancies? (Mach, Katharine, IPCC WGII TSU)
119	21	4	16	4	19	some variables and locations should give the specific variables and locations. (ZHAO, ZONG-CI, National Climate Center)



#	Ch	From Page	From Line	To Page	To Line	Comment
120	21	4	17	4	18	Could this second sentence also be in bold? (Stone, Dáithí, University of Cape Town)
121	21	4	19	0	0	What is “model uncertainty”? Climate models themselves tend to be deterministic, and thus pretty certain. (Stone, Dáithí, University of Cape Town)
122	21	4	19	4	19	For the described open question, it would be preferable to indicate more specifically what the greatest challenges are. (Mach, Katharine, IPCC WGII TSU)
123	21	4	21	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
124	21	4	23	0	0	You realise this is an evaluation of the likelihood of political decisions, right? (Stone, Dáithí, University of Cape Town)
125	21	4	24	4	24	Bad English: 'uncertainty in the ....uncertainty.!' (Burt, Peter, University of Greenwich)
126	21	4	24	4	24	Skip the second word 'uncertainty'.\n\n (NETHERLANDS)
127	21	4	24	4	26	It would be helpful to clarify this statement further. (Mach, Katharine, IPCC WGII TSU)
128	21	4	25	4	26	Is the last point not redundant with the second last? (Stone, Dáithí, University of Cape Town)
129	21	4	28	4	30	Please simplify this sentence/summary. E.g. Downscaling of coarse resolution global climate models is more compatible with the spatial and temporal scales for understanding regional impacts. (UNITED STATES OF AMERICA)
130	21	4	30	4	30	For the mentioned coordination, it would be helpful to specify further what is meant--coordination among whom? (Mach, Katharine, IPCC WGII TSU)
131	21	4	36	4	52	The chapter team should further coordinate the material on hotspots, especially on lines 36-37 and 47-52, with the assessment in chapter 19. For example, it would be best not to imply that the chapter 19 hotspots approach is setting priorities for policy action, given that the assessment is policy neutral. (Mach, Katharine, IPCC WGII TSU)
132	21	4	46	4	46	Insert colon after 'include' (Burt, Peter, University of Greenwich)
133	21	4	47	4	47	Change 'indexes' to 'indices'. (Burt, Peter, University of Greenwich)
134	21	5	1	5	1	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
135	21	5	1	5	3	What is ment with 'generally in line with'? There are differences between AR4 and AR5 concerning projected precipitation extremes (from very likely in AR4 to likely in AR5, consistent with SREX). \n\n (NETHERLANDS)
136	21	5	1	5	14	For these findings, it would be preferable to make them stand alone, not requiring the reader to be aware of the conclusions of the 4th assessment report. (Mach, Katharine, IPCC WGII TSU)
137	21	5	4	5	7	Consistency of these statements with page 3, lines 49-52, should be ensured. (Mach, Katharine, IPCC WGII TSU)
138	21	5	4	5	7	Please compare this statement with that on page 3 lines 47-52. These statements to not appear to be completely consistent. (Mastrandrea, Michael, IPCC WGII TSU)
139	21	5	10	5	10	What is 'IAV'? (Burt, Peter, University of Greenwich)
140	21	5	15	5	16	We suggest to substantiate mentioning the US and Europe, the regions where the majority of the sudies on air quality have taken place\n\n (NETHERLANDS)
141	21	5	15	5	16	This seems out of place under the existing heading, which relates to climate and not air quality/health. (UNITED STATES OF AMERICA)
142	21	5	18	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
143	21	5	18	5	19	Is it possible to provide more insight into this new information here? For example, it would be great if the chapter team could build on the finding of chapter 25 on non-climatic information. (Mach, Katharine, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
144	21	5	18	5	41	This material could be shortened and combined, for example, with the paragraph on page 4, lines 10-14. Focus on SSPs could also be reduced. (Mach, Katharine, IPCC WGII TSU)
145	21	5	19	5	19	What are RCPs? (Burt, Peter, University of Greenwich)
146	21	5	20	5	20	Change 'general' to 'generally'. (Burt, Peter, University of Greenwich)
147	21	5	20	5	25	The chapter team should ensure this finding is coordinated with the assessment findings of chapter 14. (Mach, Katharine, IPCC WGII TSU)
148	21	5	27	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
149	21	5	27	5	27	Change 'RCP's' to 'RCPs' (plural not possessive). (Burt, Peter, University of Greenwich)
150	21	5	27	5	32	Please define your acronyms, as not all readers will start from Chapter 1. IAM and RCP are not defined 'up front'. Some explanations are found further in the text but one has to hunt to find them. (UNITED STATES OF AMERICA)
151	21	5	30	5	31	It would be helpful to clarify the point being raised in this statement, perhaps by using a formulation that avoids "not." (Mach, Katharine, IPCC WGII TSU)
152	21	5	31	5	31	What are 'IAM's' (or 'IAMs')? [In the UK this is a brand of cat food, but I doubt that here!]. (Burt, Peter, University of Greenwich)
153	21	5	32	5	32	Change 'RCP's' to 'RCPs' (plural not possessive). (Burt, Peter, University of Greenwich)
154	21	5	34	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
155	21	5	34	5	38	Sentence is obtuse and incomprehensible. (UNITED STATES OF AMERICA)
156	21	5	34	5	41	This statement does not make sense. "Land-use" must be replaced by "land-use-change". A price on terrestrial carbon must be discussed in a timeframe relevant for stabilization of the GHG concentration in the atmosphere. Please cite text in AR IV, WG III, (NORWAY)
157	21	5	38	5	38	Change 'SSP's' to 'SSPs' (plural not possessive). (Burt, Peter, University of Greenwich)
158	21	5	43	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
159	21	5	43	5	44	The term "products" is not clear in this context. Replace by merchandises (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
160	21	5	43	5	46	The assessment of working group 3 could broadly be considered here. Additionally, instead of the phrase "highly likely" it would be preferable to assign calibrated uncertainty language, especially a level of confidence, for this statement to indicate the chapter team's degree of certainty for the conclusion. (Mach, Katharine, IPCC WGII TSU)
161	21	5	43	5	46	This finding is solely in the WGIII realm. Please consider inclusion in the context of a finding related to WGII material. (Mastrandrea, Michael, IPCC WGII TSU)
162	21	5	44	0	0	P5L44 "non-trivial" It would be better to use a positive description rather than a negative descriptor. (UNITED STATES OF AMERICA)
163	21	5	45	5	45	'via' should be in italics. (Burt, Peter, University of Greenwich)
164	21	5	48	0	0	This conclusion does not seem to have regional context. It should be discussed in other chapters of WGII or WGI. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
165	21	5	48	5	53	This paragraph could be further coordinated with the findings of chapters 14 and 15. (Mach, Katharine, IPCC WGII TSU)
166	21	5	49	5	49	The word "ndicators" be corrected as "indicators". (Sheikh, Muhammad Munir, Global Change Imapct Studies Centre (GCISC))
167	21	5	49	5	49	The word "indicator" is misspelled (i.e., missing the "i") (CANADA)

#	Ch	From Page	From Line	To Page	To Line	Comment
168	21	6	0	0	0	The introduction provides an outline of how the chapter will be developed. Specifically, there is a section on decision-making context, and then different levels of synthesis, then trans-regional and cross-regional differences. However, the ensuing text doesn't follow this organization (some sections bear the right titles, but the overall flow of text makes it very difficult to follow the organization). (UNITED STATES OF AMERICA)
169	21	6	4	6	5	It does seem that general statements have been made regarding factors influencing vulnerability and changes in vulnerability, and clear interpretation of this finding with respect to related conclusions in the special report and the current report should be ensured. (Mach, Katharine, IPCC WGII TSU)
170	21	6	4	6	11	Overlap with page 3, lines 4-10 should be reduced. (Mach, Katharine, IPCC WGII TSU)
171	21	6	4	6	11	This finding is overlapping with page 3 lines 4-10. Please reduce overlap, and specify line of sight for this paragraph if it is retained. (Mastrandrea, Michael, IPCC WGII TSU)
172	21	6	16	0	0	Many important conclusions from this chapter seem to be global in nature as is evident from the set of statements in the executive summary. If the sentence "the framing of this chapter..." is indeed the true scope of this chapter, the title of the chapter should change. This chapter carries very important information for policy makers. If the chapter title remain "regional context", the important information will not reach the right audience. (Yao, Xiangjun, Food and Agriculture Organization of the United Nations (FAO))
173	21	6	40	6	40	Exactly what is meant by "assuredly" could be further clarified. (Mach, Katharine, IPCC WGII TSU)
174	21	6	41	6	41	The phrase "therefore an imperative" may be overly prescriptive, and alternative wording could be considered. (Mach, Katharine, IPCC WGII TSU)
175	21	6	50	7	4	This paragraph is hard to understand and adds little value. It can be removed. (UNITED STATES OF AMERICA)
176	21	6	52	6	52	For the unfamiliar reader, it would be preferable to be more specific than "naturally," which assumes prior knowledge. (Mach, Katharine, IPCC WGII TSU)
177	21	7	0	0	0	The paragraphs under decision-making context go into far greater detail than needed. The first paragraph of section 21.2.2, Defining Regions, states the case nicely. The authors will lose the reader with such dense and nuanced prose. (UNITED STATES OF AMERICA)
178	21	7	1	7	2	The type of geographical comprehensiveness meant here could be clarified--comprehensiveness at the local level? (Mach, Katharine, IPCC WGII TSU)
179	21	7	14	7	14	Context of 'decision making' not clear. (Burt, Peter, University of Greenwich)
180	21	7	40	7	50	It would be preferable to provide citations in support of these statements. (Mach, Katharine, IPCC WGII TSU)
181	21	7	40	8	10	These paragraphs can be shortened and condensed. (UNITED STATES OF AMERICA)
182	21	7	54	7	54	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
183	21	8	0	0	0	Section 21.3.1.2.2. Is still quite weak and my need to add further references and/or associated challenges in regard to future vulnerability assessments. A vulnerability assessment and risk assessment are not only variantes (line 20), but are also related to a certain extent. (Kienberger, Stefan, University of Salzburg)
184	21	8	6	8	6	Insert space after ')'. (Burt, Peter, University of Greenwich)
185	21	8	16	8	16	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
186	21	8	20	8	20	Order of references wrong: Kirtman et al. should come at the end of the list. However, why use 'in prep.' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
187	21	8	37	8	37	Insert comma after 'options'. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
188	21	9	0	0	0	Figure 21-9: Requires a label on the y-axis. (Estrada, Yuka, IPCC WGII TSU)
189	21	9	9	9	9	In place of "demanding" would "benefiting from" be more appropriate? (Mach, Katharine, IPCC WGII TSU)
190	21	9	10	9	11	Where the chapter team describes relatively robust observations, are both temperature and precipitation being referred to? Or other variables of interest? (Mach, Katharine, IPCC WGII TSU)
191	21	9	10	9	12	The second part of this sentence about signal: noise its no clear. Rephrase as: "... projections from global models still offer some confidence." (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
192	21	9	10	9	18	It is curious to see climate as the first in the list here. What happens when "trends in observations" are not "robust" due to the lack of monitoring, such as over Central Africa, the Antarctic Ocean, or the polar areas? Also, the heading "climate" seems to be at odds with the entry, which seems to be about climate change (trends). These are very different. (Stone, Dáithí, University of Cape Town)
193	21	9	15	9	15	It could be helpful to clarify what is meant by "excerpts from maps"--regional map-based projections are reproduced? How about the regional climate plots produced uniquely for this report as a further entry point to the same information? (Mach, Katharine, IPCC WGII TSU)
194	21	9	19	9	23	How are these not part of the "climate" entry above? I also found it very hard to parse this pseudo-sentence. (Stone, Dáithí, University of Cape Town)
195	21	9	28	9	28	Bad English: replace 'like' with 'such as'. (Burt, Peter, University of Greenwich)
196	21	9	30	9	30	Delete one comma after the reference. (Burt, Peter, University of Greenwich)
197	21	9	34	9	34	Delete apostrophe. (Burt, Peter, University of Greenwich)
198	21	9	46	9	46	Define SRES. (UNITED STATES OF AMERICA)
199	21	9	51	9	51	Use of "demand" here could be considered to ensure a formulation that would not be interpreted as prescriptive. (Mach, Katharine, IPCC WGII TSU)
200	21	9	52	9	52	Define UNFCCC. (UNITED STATES OF AMERICA)
201	21	10	0	0	0	Box 21-1 and the associated text (approximately one page) are extremely dense and jargon-filled. Please simplify. (UNITED STATES OF AMERICA)
202	21	10	0	0	0	The text under Box 21-1 is nearly incomprehensible. (UNITED STATES OF AMERICA)
203	21	10	11	11	6	Illustrates the uselessness of the "radiative forcong" concept when applied to regional climate. It ignores the most important factors which are chasnges in air pressure, convection, latent heat exchange, wind speed and direction. Levels of urbanisation and influence of deserts, ice, and fore3sts. (Gray, Vincent, Climate Consultant)
204	21	10	13	10	14	Are these per year or over 5 years? (Ingram, William, Met Office)
205	21	10	13	10	18	Please define acronyms. (UNITED STATES OF AMERICA)
206	21	10	27	10	27	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
207	21	10	32	10	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
208	21	10	33	10	34	Chapter 20 includes such a figure as well. (Mastrandrea, Michael, IPCC WGII TSU)
209	21	10	34	10	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
210	21	10	35	10	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
211	21	10	38	10	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
212	21	10	40	10	41	'et al.' should be in italics. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
213	21	10	41	10	41	Order of references wrong: non-published material should come at the end of the list. However, why use 'submitted' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
214	21	10	42	10	43	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
215	21	10	42	10	43	Order of references wrong: non-published material should come at the end of the list. However, why use 'submitted' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
216	21	10	45	10	45	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
217	21	10	45	10	45	Why use 'in prep.' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
218	21	10	49	10	49	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
219	21	10	49	10	49	Why use 'submitted.' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
220	21	10	51	10	51	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
221	21	10	51	10	51	Order of references wrong: non-published material should come at the end of the list. However, why use 'submitted' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
222	21	10	52	10	52	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
223	21	11	0	0	0	The explanation under Introduction to Methods and Information is very clear. The chapter would benefit from having more writing like that. (UNITED STATES OF AMERICA)
224	21	11	1	11	2	The E1 scenario was developed via the EU ENSEMBLES project so is not strictly SRES. (Caesar, John, Met Office Hadley Centre)
225	21	11	2	11	2	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
226	21	11	14	11	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
227	21	11	15	11	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
228	21	11	16	11	16	Comma missing after 'Hinkel'. (Burt, Peter, University of Greenwich)
229	21	11	17	11	0	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
230	21	11	17	11	0	Why use 'submitted.' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
231	21	11	22	11	22	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
232	21	11	29	11	29	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
233	21	11	29	11	31	Where "middle" is referred to on line 9 and "right" is referred to on line 31, is the opposite labeling actually meant? (Mach, Katharine, IPCC WGII TSU)
234	21	11	35	11	35	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
235	21	11	38	11	38	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
236	21	11	49	11	50	Suggestion is to add a paragraph to mention about "from global to regional scale dynamic models" (ZHAO, ZONG-Cl, National Climate Center)
237	21	11	51	30	8	Could this section be condensed considerably? The climate material in particular seems much more detailed than would be expected for a synthesis. (Stone, Dáithí, University of Cape Town)
238	21	12	10	12	10	In addition to "spillover" the chapter team might consider use of the word "transboundary" as used in chapter 19. (Mach, Katharine, IPCC WGII TSU)
239	21	12	25	12	25	'versus' should be in italics. (Burt, Peter, University of Greenwich)
240	21	12	28	12	31	Revise text to read "When regional chapters have excluded these issues, the assumption is ..... " (UNITED STATES OF AMERICA)
241	21	12	49	12	49	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
242	21	12	53	12	53	The word "organsing" may be replaced by the word "organising" (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
243	21	13	1	13	1	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
244	21	13	9	0	0	This section is cumbersome. Please rewrite it for clarity. (UNITED STATES OF AMERICA)
245	21	13	9	13	54	For cross-references made to other chapters throughout these paragraphs, it'd be preferable to specify the relevant subsections wherever possible. (Mach, Katharine, IPCC WGII TSU)
246	21	13	12	0	0	Dedicated to part (the long-term part, but not the short-term) of this topic. (Stone, Dáithí, University of Cape Town)
247	21	13	12	13	12	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
248	21	13	15	13	15	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
249	21	13	24	13	24	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
250	21	13	27	13	28	To paraphrase this, because of shorter-term variability it can be hard to notice longer-term variability. That does not make sense. A trend is a trend. Whether it is statistically significant (whatever that means) or externally driven is a different story, which depends on all sources of variability, not just charismatic modes. (Stone, Dáithí, University of Cape Town)
251	21	13	29	0	0	chapter 26' should be 'chapter 25' (Whetton, Penny, Commonwealth Scientific and Industrial Research Organization - Marine and Atmospheric Research)
252	21	13	29	13	29	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
253	21	13	32	13	33	And where the ice is melting. (Stone, Dáithí, University of Cape Town)
254	21	13	35	13	0	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
255	21	13	37	13	0	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
256	21	13	37	13	37	Please replace "most rapid" with "largest". (UNITED STATES OF AMERICA)
257	21	13	40	0	0	"human adaptation" to "adaptation by humans"? (Stone, Dáithí, University of Cape Town)



#	Ch	From Page	From Line	To Page	To Line	Comment
258	21	13	43	13	0	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
259	21	13	54	13	0	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
260	21	14	1	14	1	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
261	21	14	5	14	5	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
262	21	14	10	14	10	delete comma. (Burt, Peter, University of Greenwich)
263	21	14	12	14	12	Correct double hyphen. (Burt, Peter, University of Greenwich)
264	21	14	17	0	0	The review of Kienberger et al 2012 can be added here. They reviewed 20 Vulnerability assessments in regarf to spital, temporal and thematic characteristics and propose a consolidated scale approach: Kienberger, S., Blaschke, T., Zaidi. R.Z., (2012). A framework for spatio-temporal scales and concepts from different disciplines: the 'vulnerability cube'. Natural Hazards (online). <a href="http://dx.doi.org/10.1007/s11069-012-0513-x">http://dx.doi.org/10.1007/s11069-012-0513-x</a> (Kienberger, Stefan, University of Salzburg)
265	21	14	20	14	22	Citations in support of these statements should be provided. (Mach, Katharine, IPCC WGII TSU)
266	21	14	28	14	30	Ocean experiments are also conducted, using similar methodologies such as chambers, mesocosms, etc... (UNITED STATES OF AMERICA)
267	21	14	35	0	0	The reference of Kienberger et al 2012 may add to the discussion scale issues. Kienberger, S., Blaschke, T., Zaidi. R.Z., (2012). A framework for spatio-temporal scales and concepts from different disciplines: the 'vulnerability cube'. Natural Hazards (online). <a href="http://dx.doi.org/10.1007/s11069-012-0513-x">http://dx.doi.org/10.1007/s11069-012-0513-x</a> (Kienberger, Stefan, University of Salzburg)
268	21	14	50	14	50	'versus' should be in italics. (Burt, Peter, University of Greenwich)
269	21	15	6	15	6	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
270	21	15	10	0	0	I am surprised by the lack of references to earlier chapters, covering adaptation, agriculture, decision making, and other topics discussed here. (Stone, Dáithí, University of Cape Town)
271	21	15	10	0	0	Section 21.3.2. For all statements, citations must be provided, or alternatively, clear line-of-sight references to specific supporting chapter sections can be provided. (Mach, Katharine, IPCC WGII TSU)
272	21	15	10	0	0	Section 21.3.2: This section must include clear line of sight to the specific sections of other chapters, as well as relevant citations that support the statements being made here. (Mastrandrea, Michael, IPCC WGII TSU)
273	21	15	12	0	0	The adaptation discussion in the first paragraph omits any work of the adaptation in the Americas. (UNITED STATES OF AMERICA)
274	21	15	22	15	23	Given the statement on line 30, should this statement be further qualified at all? (Mach, Katharine, IPCC WGII TSU)
275	21	15	43	15	44	How is this an example of “maladaptive behaviour”? Faced with an increased risk of starvation, the hunter exposes himself to new risks in order to reduce the risk of starvation, in such a way as to reduce the overall risk or to change the balance of risk (say between catastrophic and chronic categories). This sounds like (potentially) sensible behaviour. (Stone, Dáithí, University of Cape Town)
276	21	15	46	15	46	Change 'Small Island States' to 'small island states'. (Burt, Peter, University of Greenwich)
277	21	15	48	15	50	Note however that much of this experience is with very different climate hazards (e.g. dry periods) than might be presented by anthropogenic climate change (warming). (Stone, Dáithí, University of Cape Town)

#	Ch	From Page	From Line	To Page	To Line	Comment
278	21	16	1	29	0	This section touches on tipping points in a few places, e.g.sections on sea level and cryosphere. However, other sections omit reference to tipping points or critical thresholds e.g. ENSO, monsoon system, Amazon forest dieback. Lenton et al. (2008) Table 1 lists a range of policy relevant tipping points which could be used as a basis for enhancing this section. (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
279	21	16	7	0	0	Section 21.3.3. This section should be shortened as much as possible, as it is substantially over length now. (Mach, Katharine, IPCC WGII TSU)
280	21	16	7	30	8	Section 21.3.3: The section on "Regional Aspects of the Physical Climate System" has improved a lot. WGI AR5 appears to be well-referenced. Please make sure to maintain consistency with the latest WGI AR5 assessment relevant to this section and the cross-chapter Box including figures. (Plattner, Gian-Kasper, IPCC WGI TSU)
281	21	16	13	16	14	Sure, but the rub is in determining which "such regions" are the "many" relevant ones, as against the many irrelevant ones. (Stone, Dáithí, University of Cape Town)
282	21	16	21	0	0	Box 21-2: Please consider adding a map of the different regions shown. The names are obscure to non-specialists. (UNITED STATES OF AMERICA)
283	21	16	30	16	30	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
284	21	16	32	0	0	Is the "GHA" abbreviation needed? (Stone, Dáithí, University of Cape Town)
285	21	16	45	16	45	Change 'observed7' to 'observed'. (Burt, Peter, University of Greenwich)
286	21	16	48	16	48	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
287	21	16	53	16	53	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
288	21	17	0	0	0	Box 21-2 Figure. Could HadCRUT4 be used here for consistency with WG1? (Caesar, John, Met Office Hadley Centre)
289	21	17	0	0	0	Table 21.5: Is this table necessary? Most of the categories suggest a dependence on availability of observations - can't that be noted in the text instead? (UNITED STATES OF AMERICA)
290	21	17	3	17	3	Change '80s' to '1980s'. (Burt, Peter, University of Greenwich)
291	21	17	3	17	3	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
292	21	17	11	17	20	Because there is a big difference between COMESA and the northern half of COMESA, this distinction should be mentioned at the top of the caption. (Stone, Dáithí, University of Cape Town)
293	21	17	15	17	15	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
294	21	17	19	17	19	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
295	21	17	22	17	24	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
296	21	17	23	17	24	Comma missing after author surname in references. (Burt, Peter, University of Greenwich)
297	21	17	35	17	36	Because of the shorter time period (i.e. "smaller sample size"), there is more natural variability in seasonal than annual precipitation. Therefore, in most regions, seasonal changes in precipitation will likely be weaker compared with natural variability than the annual mean changes. This suggest that the sentence on lines 33-34 also generally applies on seasonal and shorter time scales. (Räisänen, Jouni, University of Helsinki)

#	Ch	From Page	From Line	To Page	To Line	Comment
298	21	17	35	17	39	A recent paper in Nature of Climate Change provides a nice example of these two points of attention, which is worth emphasizing here. You already have Deser et al. in your reference list, though listed as in press. In the mean time it appeared. The findings of Buishand et al. (which is not in the reference list of this chapter) fits well in this discussion. Buishand A., G. de Martino, J. Spreeuw en T. Brandsma (2012). Homogeneity of precipitation series in the Netherlands and their trends in the past century. International Journal of Climatology. \n\n (NETHERLANDS)
299	21	17	36	17	36	Delete space after 'scales' (Burt, Peter, University of Greenwich)
300	21	17	36	17	39	Is it possible to provide relevant key findings from working group 1 here? (Mach, Katharine, IPCC WGII TSU)
301	21	17	50	17	50	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
302	21	18	2	18	2	Insert comma after 'temperature'. (Burt, Peter, University of Greenwich)
303	21	18	31	23	17	Much of these subsections have been describing global features, which could probably be dropped for this chapter. (Stone, Dáithí, University of Cape Town)
304	21	18	33	18	34	In place of "about," is it possible to specify the relevant ranges? (Mach, Katharine, IPCC WGII TSU)
305	21	18	33	18	35	Awkwardly structured sentence. Please revise. (UNITED STATES OF AMERICA)
306	21	18	33	18	52	It would be preferable to specify the relevant chapter subsections in Working Group I for all statements here. (Mach, Katharine, IPCC WGII TSU)
307	21	18	34	18	34	(There may be many omissions which needs to be corrected. Some examples are given below:) Insert the degree symbol ' ° ' after 0.8 and 0.5 (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
308	21	18	34	18	34	Degree symbols required. (Burt, Peter, University of Greenwich)
309	21	18	35	0	0	Please define a proper reference period (NOT 1986-2005). A reference period should include 30 year (WMO-standard) and should be fixed for following IPCC-ARs. A common reference period is 1971-2000. (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
310	21	18	35	18	35	Insert the temperature unit after 0.66 +/-0.06 (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
311	21	18	40	0	0	"global *land* precipitation"? We do not have any observations for the other 70% (save barely calibrated satellite data for the last decade or so). (Stone, Dáithí, University of Cape Town)
312	21	18	40	18	40	low and "medium confidence" should be italicized for clarity. (Mach, Katharine, IPCC WGII TSU)
313	21	18	41	18	42	I do not understand this. Does this mean that new precipitation products indicate that the AR4 estimate was wrong? If so then please provide references. (Stone, Dáithí, University of Cape Town)
314	21	18	42	18	42	For consistency elsewhere, replace 'NH' with 'Northern Hemisphere'. (Burt, Peter, University of Greenwich)
315	21	18	43	18	43	low confidence should be italicized for clarity. (Mach, Katharine, IPCC WGII TSU)
316	21	18	49	18	50	We raise a similar remark as for page 3, lines 20 - 22.\n\n (NETHERLANDS)
317	21	18	50	0	0	As well as an expected lower signal/noise ratio. (Stone, Dáithí, University of Cape Town)
318	21	19	5	19	5	Units of change are not mentioned with the values " 0.9 for temperature " and " 0.8 for precipitation " (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
319	21	19	5	19	5	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
320	21	19	10	19	10	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
321	21	19	11	19	11	It would be preferable to specify the relevant chapter subsections from Working Group I. (Mach, Katharine, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
322	21	19	15	19	18	Would be useful to state how the CMIP5 ranges for 2081-2100 temperature projections relate to CMIP3 (SRES) based assessments. Are the ranges similar? (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
323	21	19	17	0	0	please use 30 year periods for comparisons (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
324	21	19	17	0	0	This is an example of a sentence laden parenthesis that obscures the science. (UNITED STATES OF AMERICA)
325	21	19	17	19	18	Specific line-of-sight references in support of this statement should be provided. (Mach, Katharine, IPCC WGII TSU)
326	21	19	17	19	30	in those 11 lines you are using 20 and 30 year periods and two reference periods 1986-2005 and 1961-90 and and two different target periods 2081-2100 and 2070-2100. Please change to 30 year periods and a standard climate reference period (1971-2000) and target periods starting with a year xxx1. (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
327	21	19	22	19	22	For consistency elsewhere, replace 'NH' with 'Northern Hemisphere'. (Burt, Peter, University of Greenwich)
328	21	19	23	19	23	For clarity, spell out months. (Burt, Peter, University of Greenwich)
329	21	19	35	19	38	It would be preferable to provide cross-reference to the specific relevant chapter sections from working group 1. (Mach, Katharine, IPCC WGII TSU)
330	21	19	40	19	40	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
331	21	19	45	0	0	Box 21-3: Some section could benefit from more details regarding tipping points. These are mentioned for the sea level and cryosphere sections, but perhaps could also be discussed in ENSO, monsoon and Amazon forest sections. (Caesar, John, Met Office Hadley Centre)
332	21	20	5	20	32	Please consider ways to refine the clarity of this caption as the figure itself is updated, particularly the descriptions of categories of results displayed. The TSU can assist with this process if desired. (Mastrandrea, Michael, IPCC WGII TSU)
333	21	20	6	20	6	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
334	21	20	7	20	7	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
335	21	20	7	20	7	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
336	21	20	8	20	8	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
337	21	20	9	20	9	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
338	21	20	13	20	29	These descriptors should be clarified to indicate that data are also presented for temperature. (Mach, Katharine, IPCC WGII TSU)
339	21	20	13	20	29	This description of the categories of results in the figure focus on precipitation, but these categories also apply to the temperature maps as well. Please clarify this. (Mastrandrea, Michael, IPCC WGII TSU)
340	21	20	22	20	25	Where 66% and 2/3 are mentioned, presumably the upper relevant bound (less than 90%) should also be specified? (Mach, Katharine, IPCC WGII TSU)
341	21	20	34	20	36	Useful to highlight here that shorter timescales could encompass extreme events. (Caesar, John, Met Office Hadley Centre)
342	21	20	43	20	43	Comma missing after author surname in references. (Burt, Peter, University of Greenwich)
343	21	20	46	20	48	In Box 21-3, Figs. 21-2 to 21-4, a 30-year baseline later than 1961-1990 would make the results better comparable with the 1986-2005 baseline used elsewhere in the report. (Räisänen, Jouni, University of Helsinki)
344	21	21	2	0	0	Really 2070-2100 or do you mean 2071-2100? (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)

#	Ch	From Page	From Line	To Page	To Line	Comment
345	21	21	4	21	4	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
346	21	21	13	21	13	Change to 'et al.' and italicise (Burt, Peter, University of Greenwich)
347	21	21	18	21	18	Change 'N' to 'North' (Burt, Peter, University of Greenwich)
348	21	21	22	21	28	Box 21-3 Figure 3 Caption: If the 90th percentile temperature index described here is consistent with the standard ETCCDI index TX90 it is commonly referred to as 'warm days' as opposed to 'hot days'. (Caesar, John, Met Office Hadley Centre)
349	21	21	24	0	0	Really 2070-2100 or do you mean 2071-2100? (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
350	21	21	27	21	27	Why capitalize "Hot"? (UNITED STATES OF AMERICA)
351	21	21	31	21	37	Box 21-3 Figure 4 Caption: It appears that the standard ETCCDI extremes indices used in WG1 may not be employed here, as 'very wet days' refers to days above the 95th percentile in the ETCCDI definition, whereas here it is the 90th percentile. Perhaps consider making it consistent, or making it clearer that the definitions are different and use a label other than 'very wet days'. (Caesar, John, Met Office Hadley Centre)
352	21	21	42	21	43	The two following article about pattern scaling approach assumtuion of normalized spatial patterns\nby global mean surface air temperatures (scaling patterns) are cited in Chapter 10 in AR5 WG I.. \n1. Ishizaki, Y., H. Shiogama, S. Emori, T. Yokohata, T. Nozawa, T. Ogura, M. Abe M. Yoshimori, and K. Takahashi 2012: Dependencies of temperature scaling pattern on emission scenarios. Climatic Change Letter, Vol. 111 doi:10.1007/s10584-012-0430-8\n2. Ishizaki, Y., H. Shiogama, S. Emori, T. Yokohata, T. Nozawa, K. Takahash, T. Ogura, M. Yoshimor, and T. Nagashima 2013 . Dependence of precipitation scaling pattern on emission scenarios for Representative concentration pathways.?Journal of Climate, in press.\nAnother article may be useful in this paragraph, althoug they may be not cited in AR5 WG I due to acceptance deadline\n3. Ishizaki, Y., T. Yokohata, S. Emori, H. Shiogama, K. Takahashi, T. Nozawa, T. Nakaegawa, N. Hanasaki, T. Ogura and M. Yoshimori. Validation of a pattern scaling approach for determining the maximum available renewable freshwater resource. Journal of hydrometeorology. In second review. (Nakaegawa, Toshiyuki, Meteorological Research Institute)
353	21	21	43	21	44	Delete 'in a recent' at italicise 'et al.' (Burt, Peter, University of Greenwich)
354	21	21	47	21	47	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
355	21	21	52	21	52	Delete comma after '('. (Burt, Peter, University of Greenwich)
356	21	22	4	22	6	Now you are comparing a 30 year period with a 20 year period.... (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
357	21	22	6	22	6	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
358	21	22	9	22	22	This section notes that in the near-term (e.g. out to 2030s), the climate response to differing emissions levels (as represented by the RCPs) is relatively small. Important to note that the emissions profiles over this near-term period will affect the climate response in the medium and long terms. (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
359	21	22	13	22	14	Well of course not GHG forcing because we have already emitted most of what will be there over the next ten years. (Stone, Dáithí, University of Cape Town)
360	21	22	15	22	15	Comma missing after author surname in references. (Burt, Peter, University of Greenwich)
361	21	22	16	22	17	Bad English: change to 'Global warming of 0.4-1.0 'deg' C for the period...' and delete 'of ..C' in line 17 (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
362	21	22	18	22	18	(There may be many omissions which needs to be corrected. Some examples are given below:) Insert the degree symbol ' ° ' after 0.4 (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
363	21	22	18	22	30	It would be preferable to provide the specific relevant chapter subsections from the working group 1 contribution. (Mach, Katharine, IPCC WGII TSU)
364	21	22	20	22	20	Don't italicise 'that'. (Burt, Peter, University of Greenwich)
365	21	22	20	22	22	Supposedly this is a projection rather than a likelihood forecast, which would depend on the probability of an explosive volcanic eruption, changes in aerosol emissions, etc. (Stone, Dáithí, University of Cape Town)
366	21	22	26	22	29	On lines 26 and 29, "medium evidence" should be italicized for clarity. (Mach, Katharine, IPCC WGII TSU)
367	21	22	33	22	37	Please also mention where the predictability comes from when it is not associated with model initialization: it reflects the forced (mainly greenhouse gas induced) climate change in the models and the real world. On a decadal time scale, this is already the most important source of predictability in most areas (e.g. WG1 SOD Figs. 11.4 and 11.7). (Räisänen, Jouni, University of Helsinki)
368	21	22	35	22	35	Add WGI in the section reference.\n\n (NETHERLANDS)
369	21	22	44	22	44	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
370	21	22	47	22	47	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
371	21	22	48	22	50	Please add more specific references of this conclusion, in particular from the WGI report. See the comment for page 3, lines 30-32.\n\n (NETHERLANDS)
372	21	22	50	22	50	Comma missing after author surname in references. (Burt, Peter, University of Greenwich)
373	21	23	1	23	1	Beyond the overall references provided here, it would be preferable to specify further the relevant chapter subsections from these reports. (Mach, Katharine, IPCC WGII TSU)
374	21	23	6	23	6	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
375	21	23	7	23	7	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
376	21	23	9	23	9	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
377	21	23	11	23	11	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
378	21	23	11	23	17	It may be considered to summarize the monsoon changes per region in a table. The summary does not address all regional key information given in chapter 14 of the WGI report.\n\n (NETHERLANDS)
379	21	23	11	23	17	The statement assumed is not appropriate in the whole paragraph without specifying its appropriate confidence level, which is either high, medium or low confidence, as justified and reported in the cited literature/ literatures. (MALAYSIA)
380	21	23	12	23	12	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
381	21	23	22	23	23	Replace the web link by a publication, which is more permanent than a link. (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
382	21	23	26	23	26	'enye' required over Ns of Nino and Nina. (Burt, Peter, University of Greenwich)
383	21	23	31	23	31	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
384	21	23	35	23	35	'model' should be 'mode' (Burt, Peter, University of Greenwich)
385	21	23	35	23	35	Change to 'Northern Hemisphere' (cf page 22, line 37). (Burt, Peter, University of Greenwich)



#	Ch	From Page	From Line	To Page	To Line	Comment
386	21	23	35	23	35	Presumably "mode" not "model" is meant here? (Mach, Katharine, IPCC WGII TSU)
387	21	23	38	23	38	'model' should be 'mode'. (Burt, Peter, University of Greenwich)
388	21	23	39	23	39	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
389	21	23	42	0	0	Model discussion beginning on P23 L42. This section is in sharp contrast with the preceding section where the information is direct and concise. This section needs to be shorter. It is over 3 pages long much more detailed than accompanying sections. (UNITED STATES OF AMERICA)
390	21	23	42	0	0	Section 21.3.3.1.6. In revision, this section should be substantially shortened. The chapter team should provide cross-reference, as well, to specific relevant key findings from working group 1 where possible. (Mach, Katharine, IPCC WGII TSU)
391	21	23	42	23	42	We find this section out of balance compared to the other sections. This section tries to summarize the huge amount of regional projections, with overlap with WGI chapter 11 in some parts and with complementary information in other parts. The difference between dynamical and statistical downscaling is not clear. Also the attention given to different regions is not clear and out of balance too. One suggestion might be to focus on the downscaling techniques and move the results to the different regional chapters. We also suggest to better tune this information with chapter 11 of WGI. \n\n (NETHERLANDS)
392	21	23	46	23	46	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
393	21	23	53	24	36	It seems as though this paragraph has several times as many citations as the twenty preceding pages combined. (Stone, Dáithí, University of Cape Town)
394	21	23	54	23	54	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
395	21	23	54	23	54	Comma missing after author surname in references. (Burt, Peter, University of Greenwich)
396	21	24	0	0	0	The very long section on the European downscaling experiment should be shortened, assuming the regional chapter will provide a fuller account. The other regions examined in this section on (results from downscaling experiments) are given considerably less detail and the treatment across regions should be consistent in this 'overview' document. (UNITED STATES OF AMERICA)
397	21	24	1	24	1	Comma missing after author surname in references. (Burt, Peter, University of Greenwich)
398	21	24	1	24	1	Delete space after 'scenarios' (Burt, Peter, University of Greenwich)
399	21	24	5	24	5	Change 'Northern' to 'northern'. (Burt, Peter, University of Greenwich)
400	21	24	7	24	7	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
401	21	24	10	24	10	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
402	21	24	10	24	10	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
403	21	24	11	24	12	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
404	21	24	11	24	12	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
405	21	24	14	24	14	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
406	21	24	14	24	14	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
407	21	24	15	24	15	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
408	21	24	16	24	16	Lower case 'C' and 'S' required. (Burt, Peter, University of Greenwich)
409	21	24	17	24	17	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
410	21	24	18	24	18	Lower case 'C' and 'W' and 'N' required. (Burt, Peter, University of Greenwich)
411	21	24	18	24	18	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
412	21	24	19	24	19	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
413	21	24	19	24	19	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
414	21	24	20	24	20	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
415	21	24	20	24	20	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
416	21	24	23	24	23	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
417	21	24	24	24	24	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
418	21	24	24	24	24	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
419	21	24	25	24	25	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
420	21	24	25	24	25	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
421	21	24	26	24	26	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
422	21	24	27	24	27	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
423	21	24	27	24	27	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
424	21	24	27	24	28	There are some relevant studies for Greece. See for example: Zanis et al. (2009); Tolika et al., 2012\nZanis P., I. Kapsomenakis, C. Philandras, K. Douvis, D. Nikolakis, E. Kanelopoulou, C. Zerefos, and C. Repapis, Analysis of an ensemble of present-day and future Regional Climate Simulations for Greece, International Journal of Climatology, 29, 1614-1633,DOI: 10.1002/joc.1809, 2009.\nTolika K., P. Zanis, C. Anagnostopoulou, Regional climate change scenarios for Greece: Future temperature and precipitation projections from ensembles of RCMs, Global Nest Journal, 14(4), 407-421, 2012. (Prodromos Zanis, Department of Meteorology and Climatology, School of Geology, Aristotle University of Thessaloniki, Greece) (GREECE)
425	21	24	29	24	29	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
426	21	24	29	24	29	Delete space after 'projections'. (Burt, Peter, University of Greenwich)
427	21	24	31	24	31	Lower case 'N' for 'Northern'. (Burt, Peter, University of Greenwich)
428	21	24	31	24	32	'et al' should be in italics, with a full stop after the 'I' and a comma after the full stop. (Burt, Peter, University of Greenwich)
429	21	24	31	24	32	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
430	21	24	34	0	0	Jacob et al, 2013 is mentioned in this line, but is missing in the references p70, l16 (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
431	21	24	34	24	34	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
432	21	24	38	24	51	Studies about the added value of dynamical downscaling over southern Africa are missing. Eg Haensler, A., Hagemann, S., & Jacob, D. (2011). Dynamical downscaling of ERA40 reanalysis data over southern Africa: added value in the simulation of the seasonal rainfall characteristics. International Journal of Climatology, 31(15), 2338-2349. (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
433	21	24	41	24	41	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
434	21	24	45	24	45	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
435	21	24	46	24	46	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
436	21	24	49	24	49	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
437	21	24	53	24	53	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
438	21	24	54	24	54	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
439	21	25	1	25	1	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
440	21	25	2	25	2	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
441	21	25	3	25	6	Please also cite Görden, Klaus: Assessment of climate change impacts on discharge in the Rhine River Basin: Results of the RheinBlick2050 project. Lelystad : CHR, 2010. - ISBN 978-90-70980-35-1 " for the use of a weather generator to optimize inputs for hydrological models. (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
442	21	25	5	25	5	Capital 'W' for 'west'. (Burt, Peter, University of Greenwich)
443	21	25	17	25	17	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
444	21	25	20	25	20	Delete full stop before 'l'. (Burt, Peter, University of Greenwich)
445	21	25	20	25	20	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
446	21	25	22	25	22	Delete first 'the' and 'continent'. (Burt, Peter, University of Greenwich)
447	21	25	23	25	23	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
448	21	25	23	25	23	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
449	21	25	24	25	24	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
450	21	25	25	25	25	Small 's' for 'Southern'. (Burt, Peter, University of Greenwich)
451	21	25	25	25	25	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
452	21	25	32	25	32	Insert commas either side of 'however'. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
453	21	25	32	25	32	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
454	21	25	34	25	34	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
455	21	25	35	25	35	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
456	21	25	39	25	39	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
457	21	25	44	25	44	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
458	21	25	48	25	48	Change 'shown' to 'showed'. (Burt, Peter, University of Greenwich)
459	21	26	1	26	1	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
460	21	26	5	26	5	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
461	21	26	5	26	5	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
462	21	26	5	26	6	Are small scale dynamics (like convection) not also relevant at this level, and can only be resolved by higher resolved models? Please discuss. (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
463	21	26	9	26	9	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
464	21	26	9	26	9	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
465	21	26	9	26	10	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
466	21	26	10	26	10	Insert full stop after first ')'. (Burt, Peter, University of Greenwich)
467	21	26	10	26	10	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
468	21	26	15	26	19	Please explain what CCSM, MM5 etc. stand for. (Rock, Joachim, Johann Heinrich von Thuenen-Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries)
469	21	26	16	26	19	Please indicate the emissions scenario used. (Räisänen, Jouni, University of Helsinki)
470	21	26	19	26	19	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
471	21	26	21	26	21	Why use 'in prep.' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
472	21	26	22	26	22	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
473	21	26	22	26	22	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
474	21	26	23	26	23	Why use 'in prep.'/'submitted' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
475	21	26	24	26	24	Which techniques are referred to? The wording is not clear. (CANADA)
476	21	26	24	26	25	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
477	21	26	27	26	27	Change 'underway' to 'under way' and insert comma after 'way'. (Burt, Peter, University of Greenwich)
478	21	26	28	26	28	'et al.' should be in italics. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
479	21	26	30	26	47	Recommend the following sentences may be added in this paragraph as an example of successful projection of heavy rains and so on in Japan with 5-km grid spacing regional model; its resolution is higher than the ones already mentioned about other East Asian countries:\n"Even a few-km mesh model is necessary to simulate intense daily or hourly rainfall in this region. Using a 5-km mesh non-hydrostatic RCM nested within a 20-km mesh AGCM, Kitoh et al. (2009) and Kanada et al. (2012) projected a significant increase in intense daily precipitation around western Japan during the late Baiu season."Source: Kitoh, A., T. Ose, K Kurihara, S. Kusunoki, M. Sugi, and KAKUSHIN Team-3 Modeling Group, 2009: Projection of changes in future weather extremes using super-high-resolution global and regional atmospheric models in the KAKUSHIN Program: Results of preliminary experiments. Hydro Res. Lett., 3, 49-53.\nKanada, S., M. Nakano and T. Kato, 2012: Projections of future changes in precipitation and the vertical structure of the frontal zone during the Baiu season in the vicinity of Japan using a 5-km mesh regional climate model. J. Meteor. Soc. Japan, 90A, 65-86.\n\n(JAPAN)
480	21	26	31	26	31	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
481	21	26	31	26	34	For example, Ashfaq et al (2009)... (WGI Chapter 14). - I find it somewhat problematic only to refer to the study by Ashfaq et al. (2009) when discussing the projected changes in the Indian summer monsoon. This is because this paper is a kind of outlier, giving a future decrease of the monsoon rainfall over India, when compared to results from global climate models. But also some other RCM simulations give a future increase of the monsoon rainfall over India. See, for instance, the recent paper by P. Kumar et al. (2013) Downscaled climate change projections with uncertainty assessment over India using a high resolution multi-model approach, Science of the Total Environment, <a href="http://dx.doi.org/10.1016/j.scitotenv.2013.01.051">http://dx.doi.org/10.1016/j.scitotenv.2013.01.051</a> . (May, Wilhelm, Danish Meteorological Institute)
482	21	26	33	26	33	Remove the letter "a" between the word "and" & "an" (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
483	21	26	36	26	36	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
484	21	26	40	26	40	Insert comma after 'Similarly'. (Burt, Peter, University of Greenwich)
485	21	26	41	26	41	Change 'Korea' to 'Korean'. (Burt, Peter, University of Greenwich)
486	21	26	41	26	41	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
487	21	26	44	26	44	Change 'establish clearly' to 'clearly establish'. (Burt, Peter, University of Greenwich)
488	21	26	49	27	5	Similar to comment I made on the FOD, I think discussion misses probably the most significant regional application of dynamic downscaling in Australia: the large "Climate Futures Tasmania project". Various references follow here: \nGrose MR, Corney SP, Katzfey JJ, Bennett JC, Holz GK, White CJ, Bindoff NL 2012, A regional response in mean westerly circulation and rainfall to projected climate warming over Tasmania, Australia. Climate Dynamics, DOI 10.1007/s00382-012-1405-1\nGrose MR, Pook MJ, McIntosh PC, Risbey JS, Bindoff NL 2012, The simulation of cutoff lows in regional climate models: reliability and projected trends. Climate Dynamics, 39: 445-459\nBennett JC, Ling FLN, Post DA, Grose MR, Corney SP, Graham B, Holz GK, Katzfey JJ, Bindoff NL 2012, High-resolution projections of surface water availability for Tasmania, Australia. Hydrol. Earth Syst. Sci., 16:1287-1303\n\n(Whetton, Penny, Commonwealth Scientific and Industrial Research Organization - Marine and Atmospheric Research)
489	21	26	50	26	50	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
490	21	26	50	26	50	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
491	21	26	52	26	52	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
492	21	27	2	27	2	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
493	21	27	10	28	2	Where the working group I contribution is referenced in these paragraphs, it would be preferable to provide specific line-of-sight references to relevant chapter sections wherever possible. (Mach, Katharine, IPCC WGII TSU)
494	21	27	16	27	16	(There may be many omissions which needs to be corrected. Some examples are given below:) Insert the degree symbol ' ° ' after 2 - 3 (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
495	21	27	16	27	16	Degree symbol required. (Burt, Peter, University of Greenwich)
496	21	27	17	27	17	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
497	21	27	20	27	22	Isn't it especially the combination between in situ (GPS) and satellite data (GRACE) that has led to an improved set of observations? \n\n (NETHERLANDS)
498	21	27	31	27	31	Subscript '2' in '02/N2' required (Burt, Peter, University of Greenwich)
499	21	27	33	27	33	Add: (+0.35 and +0.54% proton H+ concentration yr-1) (Pecheux, Martin, Institut des Foraminifères Symbiotiques)
500	21	27	35	0	0	Paragraph jumps time frames in that by the last sentence it is unclear what is the time interval for the 1.0m projected change??? (UNITED STATES OF AMERICA)
501	21	27	36	27	36	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
502	21	27	47	27	47	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
503	21	27	49	27	49	21.3.3.2. what is GLSL? (Menzel, Lena, Alfred Wegener Institute for Polar and Marine Research)
504	21	27	51	0	0	We only now encounter regional aspects in this subsection? Why not delete the above and cite the relevant WGI section(s)? (Stone, Dáithí, University of Cape Town)
505	21	27	52	27	52	If a likelihood term, "likely" should be italicized. Casual usage should be avoided. (Mach, Katharine, IPCC WGII TSU)
506	21	27	52	27	53	This depends on what you mean by dominated. Within 40 degrees of the Equator, probably. But not in polar regions where the location of the melting ice, and thus its effect on local crustal uplift and gravity, will be huge. (Stone, Dáithí, University of Cape Town)
507	21	28	5	28	6	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
508	21	28	5	28	6	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
509	21	28	6	28	7	Split infinitive: move 'significantly' to after 'levels'. (Burt, Peter, University of Greenwich)
510	21	28	7	28	7	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
511	21	28	8	28	8	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
512	21	28	9	28	9	Subsidence of what?\n\n (NETHERLANDS)
513	21	28	10	28	10	Capital 'P' for 'Pacific and capital 'O' for 'Ocean' required. (Burt, Peter, University of Greenwich)
514	21	28	13	28	13	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
515	21	28	13	28	13	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
516	21	28	13	28	13	Insert comma after 'however'. (Burt, Peter, University of Greenwich)
517	21	28	14	28	14	If a likelihood term, "likely" should be italicized. Casual usage should be avoided. (Mach, Katharine, IPCC WGII TSU)



#	Ch	From Page	From Line	To Page	To Line	Comment
518	21	28	17	28	20	The authors should be aware of the comment we gave in the SOD review of WGI regarding this conclusion. We suggested low confidence in the magnitude of the weakening. Drijfhout et al. (2012) evaluated a larger subset of models, showing a multi-model mean ensemble error is roughly 50% of the signal (which affects the level of agreement). Hence, the SPM and Chapter 12 make statements about the long-term projection of the AMOC that seem too strong, given the fact that the statements are based on analyzing only a subset of the models. We therefore made suggestions to adjust the text in chapter 12 and in the SPM of WGI and we recommend the authors of this section to follow the potential adjustments made by WGI. Reference: Drijfhout, SS, GJ van Oldenborgh and A Cimatoribus, 2012. Is a decline of AMOC causing the warming hole above the North Atlantic in observed and modeled warming patterns? JC, doi:10.1175/JCLI-D-12-00490.1, in press.\n\n (NETHERLANDS)
519	21	28	17	28	20	Why do we need to know this here? Are you just summarising WGI? (Stone, Dáithí, University of Cape Town)
520	21	28	18	28	18	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
521	21	28	27	28	27	Insert comma after 'Therefore'. (Burt, Peter, University of Greenwich)
522	21	28	28	28	28	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
523	21	28	28	28	28	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
524	21	28	28	28	28	Reference date missing. (Burt, Peter, University of Greenwich)
525	21	28	30	28	47	While it is mentioned that there exist many studies focusing on the effects of both climate and emission changes on air quality, the discussion in the remaining subsection is restricted only in the effects of climate change.\n\nThe following review paper includes interesting material about future emissions:\n\nUherek, ?, T. Halenka, J. Borken-Kleefeld, Y. Balkanski, T. Berntsen, C. Borrego, M. Gauss, P. Hoor, K. Juda-Rezler, J. Lelieveld, D. Melas, K. Rypdal and S. Schmid (2010): Transport Impacts on Atmosphere and Climate: Land Transport. Atmospheric Environment Volume 44, Issue 37, Pages 4772-4816.\n\n (Dimitrios Melas, Department of Physics, Aristotle University of Thessaloniki, Greece)\n\n (GREECE)
526	21	28	34	28	36	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
527	21	28	34	28	36	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
528	21	28	43	28	45	There is a number of other recent regional studies on the climate change impacts on air quality over Europe from the EU-project CECILIA which are missing. These studies used both coarse (Katragkou et al., 2010; 2011; Zanis et al., 2011) and high resolution regional climate - air quality simulations (Huszar et al., 2011; Juda-Rezler et al., 2012) . \nKatragkou E., P. Zanis, I. Tegoulis, D. Melas, I. Kioutsioukis, B.C. Krüger, P. Huszar, T. Halenka, S. Rauscher, Decadal regional air quality simulations over Europe in present climate: near surface ozone sensitivity to external meteorological forcing, Atmospheric Chemistry and Physics, 10, 11805–11821, doi:10.5194/acp-10-11805-2010, 2010.\n Zanis P., E. Katragkou, I. Tegoulis, A. Poupkou, D. Melas, P. Huszar, F. Giorgi, Evaluation of near surface ozone in air quality simulations forced by a regional climate model over Europe for the period 1991-2000, Atmospheric Environment, 45, 6489-6500, doi:10.1016/j.atmosenv.2011.09, 2011. \nKatragkou E., P. Zanis, I. Kioutsioukis, I. Tegoulis, D. Melas, B.C. Krüger, E. Coppola, Future climate change impacts on surface ozone from regional climate-air quality simulations over Europe, Journal of Geophysical Research, 116, D22307, doi:10.1029/2011JD015899, 2011.\nHuszar P., K. Juda-Rezler, T. Halenka, H. Chervenkov, D. Syrakov, B. C. Krueger, P. Zanis, D. Melas, E. Katragkou, M. Reizer, W. Trapp and M. Belda, Potential climate change impacts on ozone and PM levels over Central and Eastern Europe from high resolution simulations, Climate Research, 50, 51–68, doi: 10.3354/cr01036, 2011.\n(Prodromos Zanis, Department of Meteorology and Climatology, School of Geology, Aristotle University of Thessaloniki, Greece)\nJuda-Rezler K., M. Reizer, P. Huszar, B.C. Krüger, P. Zanis, D. Syrakov, E. Katragkou, W. Trapp, D. Melas, H. Chervenkov, I. Tegoulis, T. Halenka, On the effect of climate change on regional air quality over central-eastern Europe: concept, evaluation and future projections, Climate Research, 53, 179–203, doi: 10.3354/cr01072, 2012. (GREECE)
529	21	28	43	28	45	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
530	21	28	43	28	45	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
531	21	28	51	0	0	Please explain what "MDA8" stands for. (Rock, Joachim, Johann Heinrich von Thuenen-Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries)
532	21	28	53	28	53	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
533	21	29	8	29	8	Casual usage of "likely" should be avoided, as it is a reserved likelihood term. (Mach, Katharine, IPCC WGII TSU)
534	21	29	12	0	0	Section 21.3.3.4. Where the Working Group I contribution is referenced in this section, it would be preferable to provide specific line-of-sight references to relevant chapter sections wherever possible. (Mach, Katharine, IPCC WGII TSU)
535	21	29	15	29	15	It should be important to add to sea level rise and atmospheric circulation (not circulations), a reference to changing ocean currents and the thermohaline circulation. (Silva Mora, Carla Andreia, University of Lisbon)
536	21	29	18	0	0	Section on the cryosphere, especially P29L18, suffers from confusion about land ice and s sea ice. It must be clarified when sea ice is being discussed and when land ice or ice sheets are being discussed. (UNITED STATES OF AMERICA)
537	21	29	21	29	21	'per' should be in italics. (Burt, Peter, University of Greenwich)
538	21	29	22	29	22	Capital 'A' required for 'arctic'. (Burt, Peter, University of Greenwich)
539	21	29	32	29	32	where "Antarctica" should read "Antarctic" (Silva Mora, Carla Andreia, University of Lisbon)
540	21	29	34	29	34	Explain SLE. It is the first time in this document that the abbreviation is used.\n\n (NETHERLANDS)
541	21	29	37	0	0	Ice Shelves are thinning is probably the correct terminology P29L37. (UNITED STATES OF AMERICA)
542	21	29	38	29	39	We do not understand why only these relatively short periods are emphasized. Either try to focus on regional differences (which is the main purpose of this chapter) or mention the long-term trends in perspective consistent with chapter 3 and 4 of WGI in which one could mention the acceleration since 1993.\n\n (NETHERLANDS)
543	21	29	41	29	41	'in situ' should be in italics (cf page 30, line 13) (Burt, Peter, University of Greenwich)
544	21	29	43	29	43	Change 'northern hemisphere' to 'Northern Hemisphere'. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
545	21	29	43	29	43	'per' should be in italics. (Burt, Peter, University of Greenwich)
546	21	29	43	29	43	Add 'since the winter 1972-1973' consistent with chapter 4 WGI.\n\n (NETHERLANDS)
547	21	29	46	29	46	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
548	21	29	50	29	50	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
549	21	29	50	29	50	Please add what is ment with 'long-term'.\n\n (NETHERLANDS)
550	21	29	53	29	53	insert "sea" before ice (UNITED STATES OF AMERICA)
551	21	30	1	30	8	The supporting subsections from working group I should be specified for these statements. (Mach, Katharine, IPCC WGII TSU)
552	21	30	4	30	4	insert "sea" before ice (UNITED STATES OF AMERICA)
553	21	30	11	0	0	Section 21.4. For this section, the chapter team should carefully consider chapter 19's sections and assessment of indirect, long-distance, and transboundary effects. With further cross-referencing, this section could be substantially tightened and shortened. (Mach, Katharine, IPCC WGII TSU)
554	21	30	25	30	29	Literature confirming these statements should be added. Otherwise it looks arbitrarily. (GERMANY)
555	21	30	28	0	0	Predisposing factor for regional vulnerability --- there must be a clearer way to state this. (UNITED STATES OF AMERICA)
556	21	30	52	0	0	non-trivial It would be better to use a positive description rather than a negative descriptor. (UNITED STATES OF AMERICA)
557	21	31	12	31	12	Chapter 19 is also relevant. (Mach, Katharine, IPCC WGII TSU)
558	21	31	38	31	38	Using the concept of a "prospective impact" seems confusing. (CANADA)
559	21	31	40	31	40	It would be preferable to specify the relevant subsections from chapter 28. (Mach, Katharine, IPCC WGII TSU)
560	21	31	54	31	54	Reference does not make sense. (Burt, Peter, University of Greenwich)
561	21	32	2	32	2	Change 21-11b to 21-10b or better yet condense sentence so only one citation necessary. (UNITED STATES OF AMERICA)
562	21	32	14	32	14	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
563	21	32	29	32	29	Insert comma after '9' (Burt, Peter, University of Greenwich)
564	21	32	29	32	29	Delete comma after 'poverty'. (Burt, Peter, University of Greenwich)
565	21	32	34	32	34	It would be preferable to specify the relevant subsections from chapter 25. (Mach, Katharine, IPCC WGII TSU)
566	21	32	41	32	41	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
567	21	32	44	32	54	We suggest to add insights on the more recent developments of the EU ETS.\n\n (NETHERLANDS)
568	21	32	46	32	54	Delete, as covered in Ch. 14 of WG III. (Michaelowa, Axel, University of Zurich)
569	21	32	47	32	47	It would be preferable to specify the relevant subsections from chapters 14-17. (Mach, Katharine, IPCC WGII TSU)
570	21	33	3	0	0	Section 21.4.2. The chapter team should ensure consistency of material here with assessment occurring in chapters 12 and 19 especially. Cross-referencing should be used as much as possible to reduce overlap. (Mach, Katharine, IPCC WGII TSU)
571	21	33	3	0	0	Section 21.4.2: Please consider and cross-reference the discussions and findings of Chapters 12 and 19 on these topics. (Mastrandrea, Michael, IPCC WGII TSU)
572	21	33	11	33	11	Either the brackets around Martin, 2009 need to be removed or the word "by" be removed if brackets are to be kept around Martin, 2009 (Sheikh, Muhammad Munir, Global Change Imapct Studies Centre (GCISC))

#	Ch	From Page	From Line	To Page	To Line	Comment
573	21	33	11	33	11	Delete comma and move '(' to before '2009). (Burt, Peter, University of Greenwich)
574	21	34	1	34	1	Reference does not make sense. (Burt, Peter, University of Greenwich)
575	21	34	6	0	0	Section 21.4.3. For this section, the chapter team should carefully consider the assessment of chapters 4 and 6 and make more specific cross-reference to the key findings of those chapters, in reducing overlap and tightening this treatment. (Mach, Katharine, IPCC WGII TSU)
576	21	34	6	0	0	Section 21.4.3: Please consider and cross-reference the discussions and findings of Chapters 4 and 6 on these topics. (Mastrandrea, Michael, IPCC WGII TSU)
577	21	34	12	34	12	'per' should be in italics. (Burt, Peter, University of Greenwich)
578	21	34	16	34	16	Delete comma after 'variables' (Burt, Peter, University of Greenwich)
579	21	34	17	34	18	In line 17, the words "novel estimates" are placed within brackets and in line 18, "disappearing climates - Williams et al;2007" are put in brackets as reference. Actually both pertain to the same reference in lines 41 and 42 on page 78 and may be quoted accordingly. (Sheikh, Muhammad Munir, Global Change Impact Studies Centre (GCISC))
580	21	34	40	34	40	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
581	21	34	54	34	54	It would be preferable to specify the specific relevance of sections from these chapters, as part of further consideration of the key findings from the chapters and potential cross-referencing here. (Mach, Katharine, IPCC WGII TSU)
582	21	35	3	0	0	Section 21.4.4. For this subsection, the chapter team should carefully consider assessment in chapter 19, coordinating treatment and ensuring cross-referencing of relevant key findings from the chapter. (Mach, Katharine, IPCC WGII TSU)
583	21	35	3	0	0	Section 21.4.4: Hotspots are also treated in Chapter 19, and it would be very useful to coordinate and cross-reference the discussions and findings there. (Mastrandrea, Michael, IPCC WGII TSU)
584	21	35	11	35	11	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
585	21	35	13	35	13	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
586	21	35	21	35	30	I find it strange not including the Antarctic Peninsula as a hot spot, since it qualifies with the definition provided and several studies present it has a hot spot of changes in climate and the cryosphere. Please check this. (Vieira, Goncalo, University of Lisbon)
587	21	35	23	35	23	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
588	21	35	25	35	25	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
589	21	35	27	35	27	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
590	21	35	29	35	29	Lower case 'N' for 'Northern'. (Burt, Peter, University of Greenwich)
591	21	35	31	35	31	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
592	21	35	34	35	34	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
593	21	35	40	35	41	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
594	21	35	42	35	42	'there is disconnect in timescales' does not make sense. (Burt, Peter, University of Greenwich)
595	21	36	3	36	3	Casual usage of "likely" should be avoided as it is a reserved likelihood term. (Mach, Katharine, IPCC WGII TSU)
596	21	36	5	36	5	Casual usage of "likely" should be avoided as it is a reserved likelihood term. (Mach, Katharine, IPCC WGII TSU)
597	21	36	6	36	6	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
598	21	36	10	36	10	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
599	21	36	14	36	14	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
600	21	36	19	36	19	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
601	21	36	21	38	40	Discussion of Vulnerability and Adaptation Analyses is too long and should be shortened the wandering discussion of indicators, hotspots vulnerability and adaptation should be tightened. (UNITED STATES OF AMERICA)
602	21	36	23	54	14	I am not quite seeing the “regional context” in most of this section. (Stone, Dáithí, University of Cape Town)
603	21	36	38	0	0	Section 21.5.1. In further developing this section, the chapter team should further consider the assessment and findings of chapter 14, cross-referencing them wherever appropriate. (Mach, Katharine, IPCC WGII TSU)
604	21	36	40	36	40	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
605	21	36	40	36	40	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
606	21	36	41	0	0	Right not clear why necessary to state some are well established. Please delete phrase. (UNITED STATES OF AMERICA)
607	21	36	49	36	49	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
608	21	37	1	36	3	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
609	21	37	1	36	3	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
610	21	37	1	37	17	Patterns analysis has evolved as a new approach to analyse vulnerability quantitatively. It reveals similarities in the vulnerability of socio-ecological systems as shown for the example of drylands and smallholder systems (Sietz et al. 2011, Sietz et al. 2012). The resulting typologies differentiate vulnerability causes and serve to develop adaptation strategies following the hypothesis that such strategies are transferable among similar dryland systems. An example is given in Sietz et al. (2011) that confirms this hypothesis. The zai technique, a land rehabilitation approach applied in Burkina Faso, was transferred to several villages in Southwest Niger which belong to the same vulnerability pattern identified in the dryland typology. The application of zai technique ensured that the soil's quality began to recover, food supply increased and livelihoods improved. Thus, the dryland typology may be indicative for the transfer of this and other adaptation strategies. Five steps to identify typical vulnerability patterns that serve to enhance our understanding of climate vulnerability and support the transfer of adaptation strategies are presented at EGU Conference on 8 April 2013 (for details see below). The conditions necessary to identify typical vulnerability patterns were summarised in five methodological steps (Sietz 2011). They aim to motivate and to facilitate the application of the selected pattern recognition approach in future vulnerability analyses. The five steps outline the elicitation of relevant cause-effect hypotheses and the quantitative indication of mechanisms as well as an evaluation of robustness, a validation and a ranking of the identified patterns. REFERENCES: Sietz, D., Lüdeke, MKB. and Walther, C. (2011) Categorisation of typical vulnerability patterns in global drylands. Global Environmental Change 21(2): 431-440. ; Sietz, D., Mamani Choque, SE. and Lüdeke, MKB. (2012) Typical patterns of smallholder vulnerability to weather extremes with regard to food security in the Peruvian Altiplano. Regional Environmental Change 12(3): 489 - 505. ; Sietz, D. (2011) Dryland vulnerability - Typical patterns and dynamics in support of vulnerability reduction efforts. PhD Thesis, Faculty of Science, University of Potsdam, Germany, 135pp., Available at: <a href="http://opus.kobv.de/ubp/volltexte/2012/5809/pdf/sietz_diss.pdf">http://opus.kobv.de/ubp/volltexte/2012/5809/pdf/sietz_diss.pdf</a> (sietz, diana, Wageningen University)

#	Ch	From Page	From Line	To Page	To Line	Comment
611	21	37	6	36	6	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
612	21	37	6	37	8	Is this a conclusion or an implicit assumption of the technique? (Stone, Dáithí, University of Cape Town)
613	21	37	10	36	10	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
614	21	37	13	36	13	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
615	21	37	19	36	19	'et al' should be in italics, with a full stop after the 'l' and a comma before the date. (Burt, Peter, University of Greenwich)
616	21	37	25	36	25	'ex-ante' should be in italics. (Burt, Peter, University of Greenwich)
617	21	37	42	36	42	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
618	21	37	42	36	42	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
619	21	37	45	36	45	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
620	21	37	47	36	47	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
621	21	37	49	36	49	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
622	21	37	51	36	51	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
623	21	38	1	38	1	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
624	21	38	1	38	2	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
625	21	38	16	38	40	This seems redundant with 21.4.4. (Stone, Dáithí, University of Cape Town)
626	21	38	16	38	40	Given section 21.4.4, this material should be reduced as much as possible. (Mach, Katharine, IPCC WGII TSU)
627	21	38	16	38	40	Please reduce overlap between this material and section 21.4.4. (Mastrandrea, Michael, IPCC WGII TSU)
628	21	38	17	38	17	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
629	21	38	18	38	18	Delete 'above'. (Burt, Peter, University of Greenwich)
630	21	38	26	38	26	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
631	21	38	37	38	37	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
632	21	38	38	38	38	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
633	21	38	40	38	40	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
634	21	38	47	38	54	In place of the generic references to other chapters, it would be preferable to specify the relevant subsections from those chapters. (Mach, Katharine, IPCC WGII TSU)
635	21	38	54	0	0	How widely used is the term cryological is? Please consider an alternate term. (UNITED STATES OF AMERICA)
636	21	38	54	38	54	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
637	21	39	7	39	7	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)



#	Ch	From Page	From Line	To Page	To Line	Comment
638	21	39	15	39	15	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
639	21	39	18	39	18	Why use 'in prep.' as a citation here? Most journals would not publish this, what happens if the paper is rejected? Much more robust to keep to papers already published (or which are known to be 'accepted/in press'). (Burt, Peter, University of Greenwich)
640	21	39	20	39	20	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
641	21	39	26	39	26	The scope of this section given in the title does not coincide with it's content. It does not contain an assessment of uncertainty of future climate projections. For instance, we would expect an evaluation of following up studies like e.g. Hawkins and Sutton, BAMS, 2009. This section only contains a very brief summary of some scenario projects. We don't see how this sections really contributes to uncertainty assessment.\n\n(NETHERLANDS)
642	21	39	29	39	29	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
643	21	39	30	39	31	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
644	21	39	30	39	32	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
645	21	39	34	39	34	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
646	21	39	38	39	38	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
647	21	39	39	39	39	In addition to Olsson et al. you may also consider the following document (based on EU-ENSEMBLES data and additional climate mode runs projections):\nGörge, K., Beersma, J., Brahmer, G., Buiteveld, H., Carambia, M., de Keizer, O., Krahe, P., Nilson, E., Lammersen, R., Perrin, C. and Volken, D. (2010) Assessment of Climate Change Impacts on Discharge in the Rhine River Basin: Results of the RheinBlick2050 Project, CHR report, I-23, 229 pp., Lelystad, ISBN 978-90-70980-35-1.\nAvailable online: <a href="http://www.chr-khr.org/files/CHR_I-23.pdf">http://www.chr-khr.org/files/CHR_I-23.pdf</a> (GERMANY)
648	21	39	39	39	39	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
649	21	39	44	39	44	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
650	21	39	46	39	46	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
651	21	39	47	39	47	Change '6' to 'six' for consistency. (Burt, Peter, University of Greenwich)
652	21	39	49	39	49	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
653	21	39	51	39	51	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
654	21	40	5	40	5	It could be helpful to explicitly indicate the type of "models" meant here--the impact models? Not the climate models that may also be involved in analyses? (Mach, Katharine, IPCC WGII TSU)
655	21	40	10	40	10	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
656	21	40	22	40	22	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
657	21	40	24	40	24	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
658	21	40	27	40	27	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
659	21	40	30	40	30	This is an odd section. One needs to specify what combined uncertainties mean. If it means combining impacts with climate models, there is a large number of studies dealing with combining climate scenario modelling with impact/sectoral modelling applying different downscaling techniques. See also chapter 10 of WGI. There is a very brief summary of the existence of some studies and the section does not make clear the insight these studies delivered with respect to combined uncertainties. \n\n(NETHERLANDS)

#	Ch	From Page	From Line	To Page	To Line	Comment
660	21	40	32	40	36	Most of the noted sources are not contained in the references. (Backus, George, Sandia National Laboratories)
661	21	41	0	0	0	It's not clear why the section on Baseline information and context is a 'regional context' issue. No specific mention of regions, or variability among regions, or problems associated with a regional context, occur. (UNITED STATES OF AMERICA)
662	21	41	2	0	0	Section 21.5.3. In further revision, this section should be shortened as much as possible, ideally by more than 50%. (Mach, Katharine, IPCC WGII TSU)
663	21	41	2	41	2	The title of this section (Scenario development and application) is confusing, since it does not cover what is in this section. This section deals with baseline or reference states and not scenario development. We're very worried about the whole section and its scope. The first three subsections seem to describe something different and apply confusing terms, such as baselines. Secondly, the applied language needs to be improved considerably. The fourth subsection is titled "Development of scenarios", which is quite odd within the main section titled "Scenario development". We suggest to reorganise the whole section and to redefine its scope. See remarks below for examples. Another observation in many subsections is a plain inventarisation of studies without a description of the main findings. We also believe there is a bias in the references towards European studies.\n\n (NETHERLANDS)
664	21	41	4	0	0	For this introductory section, more citations should be provided for any material retained, and overlap with the text that follows should be substantially reduced. (Mach, Katharine, IPCC WGII TSU)
665	21	41	24	41	26	There is no reference for the statement that often 30 years worth of data is required to establish a reference state. Kendon et al. (2008) only provides one example for 30+ years of data.\n\n (NETHERLANDS)
666	21	41	26	41	26	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
667	21	41	42	42	42	The term climate baselines is confusing. This section deals with impacts or impact baselines.\n\n (NETHERLANDS)
668	21	41	47	41	47	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
669	21	41	50	41	50	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
670	21	41	52	41	52	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
671	21	41	52	43	2	We do not understand these two sentences. Please explain more clearly what has been done. Please define what you mean with baselines.\n\n (NETHERLANDS)
672	21	42	2	42	2	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
673	21	42	6	42	6	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
674	21	42	14	42	14	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
675	21	42	22	42	23	This sentence illustrates the confusion of the scope of this section. First the term baseline refers to a reference state of the climate (page 41, line 10). Now it is related to variability on days to decades. Then it is stated that this baseline is important for developing a reference state (which is the baseline defined earlier in the same section!). Then there is a sentence that starts with" this has motivated significant errors...". What has motivated significant errors? This development? It goes on and on in this section in the same way. A little further in this section (line 38) there is a description about REANs, which has nothing to do with scenario development. All together, we really get lost about the message of this section and we suggest a critical check on the content, the scope, and especially the way it is written.\n\n (NETHERLANDS)
676	21	42	27	42	27	Insert comma after 'APHRODITE and delte '('. (Burt, Peter, University of Greenwich)
677	21	42	28	42	28	Insert '(' before 'Yatagai'. (Burt, Peter, University of Greenwich)
678	21	42	28	42	28	'et al.' should be in italics. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
679	21	42	29	42	29	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
680	21	42	30	42	30	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
681	21	42	30	42	30	This should be Allan et al. (Caesar, John, Met Office Hadley Centre)
682	21	42	31	42	34	Specifically the HadCRUT4 version of the dataset. (Caesar, John, Met Office Hadley Centre)
683	21	42	32	42	32	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
684	21	42	34	42	34	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
685	21	42	34	42	34	Text and reference style needs correcting. (Burt, Peter, University of Greenwich)
686	21	42	38	43	23	Not clear why this is in the regional section, as this paragraph is about global reanalysis. (UNITED STATES OF AMERICA)
687	21	42	41	42	41	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
688	21	42	48	42	48	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
689	21	42	49	42	49	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
690	21	42	50	42	50	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
691	21	42	51	42	51	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
692	21	43	4	43	4	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
693	21	43	7	43	7	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
694	21	43	21	43	21	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
695	21	43	28	43	28	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
696	21	43	28	43	28	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
697	21	43	33	0	0	The following article reinforces the merit of the dynamical downscaling in reproducing the small-scale atmospheric phenomena: Ishizaki, Y., T. Nakaegawa and I. Takayabu 2012: Validation of precipitation over Japan during 1985-2004 simulated by three regional climate models and two multi-model ensemble means. Climate Dynamics, doi:10.1007/s00382-012-1304-5 (Nakaegawa, Toshiyuki, Meteorological Research Institute)
698	21	43	33	43	33	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
699	21	43	38	43	38	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
700	21	43	43	43	43	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
701	21	43	48	43	48	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
702	21	43	50	43	50	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
703	21	44	1	44	1	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
704	21	44	5	44	5	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
705	21	44	8	44	8	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
706	21	44	9	44	9	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
707	21	44	11	44	23	This paragraph could be shortened or removed. The information is redundant with material presented already. (UNITED STATES OF AMERICA)
708	21	44	21	44	21	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
709	21	44	26	0	0	Section 21.5.3.1.2. More robust referencing should be provided in all paragraphs of this section in support of statements made. (Mach, Katharine, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
710	21	44	47	44	47	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
711	21	44	48	44	48	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
712	21	44	49	44	49	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
713	21	44	51	44	51	'via' should be in italics. (Burt, Peter, University of Greenwich)
714	21	44	52	44	52	Bad English: replace 'much like' with 'as with'. (Burt, Peter, University of Greenwich)
715	21	45	5	45	7	Useful to include a reference to the SSPs here. (Caesar, John, Met Office Hadley Centre)
716	21	45	21	45	37	Do these examples really demonstrate anything about baselines? My reading is that they say if one wants to look at something relative to today then you should use today as a reference. (Stone, Dáithí, University of Cape Town)
717	21	45	24	45	24	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
718	21	45	24	45	24	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
719	21	45	25	45	25	Capital 'C' required for 'chapter' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
720	21	45	25	45	25	Insert commas either side of 'respectively'. (Burt, Peter, University of Greenwich)
721	21	45	33	45	33	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
722	21	45	34	45	34	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
723	21	45	40	45	40	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
724	21	46	3	0	0	Section 21.5.3.2.1. The material provided in this subsection could be included in box 21-1 only and not given here. (Mach, Katharine, IPCC WGII TSU)
725	21	46	6	46	6	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
726	21	46	11	46	11	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
727	21	46	28	46	28	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
728	21	46	30	46	30	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
729	21	46	31	46	31	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
730	21	46	33	46	33	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
731	21	46	36	46	36	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
732	21	46	37	46	37	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
733	21	46	40	46	40	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
734	21	46	41	46	41	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
735	21	46	44	46	44	'et al.' should be in italics. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
736	21	46	48	47	32	Climate futures Tasmania (see comment on Page 26 would also be a good example here. See <a href="http://www.dpac.tas.gov.au/divisions/climatechange/adapting/climate_futures">http://www.dpac.tas.gov.au/divisions/climatechange/adapting/climate_futures</a> . Grose MR, Corney SP, Katzfey JJ, Bennett JC, Holz GK, White CJ, Bindoff NL 2012, A regional response in mean westerly circulation and rainfall to projected climate warming over Tasmania, Australia. Climate Dynamics, DOI 10.1007/s00382-012-1405-1\nGrose MR, Pook MJ, McIntosh PC, Risbey JS, Bindoff NL 2012, The simulation of cutoff lows in regional climate models: reliability and projected trends. Climate Dynamics, 39: 445-459\nBennett JC, Ling FLN, Post DA, Grose MR, Corney SP, Graham B, Holz GK, Katzfey JJ, Bindoff NL 2012, High-resolution projections of surface water availability for Tasmania, Australia. Hydrol. Earth Syst. Sci., 16:1287-1303 (Whetton, Penny, Commonwealth Scientific and Industrial Research Organization - Marine and Atmospheric Research)
737	21	46	52	46	52	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
738	21	47	1	47	1	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
739	21	47	3	47	3	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
740	21	47	4	47	4	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
741	21	47	8	47	8	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
742	21	47	10	47	11	Text 'property damage...Poland' does not make sense. (Burt, Peter, University of Greenwich)
743	21	47	11	47	11	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
744	21	47	14	47	14	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
745	21	47	17	47	17	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
746	21	47	21	47	22	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
747	21	47	24	47	24	Delete comma after 'al.' and change 'et al.' to italics. (Burt, Peter, University of Greenwich)
748	21	47	30	47	32	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
749	21	47	40	47	40	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
750	21	47	44	47	44	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
751	21	47	46	47	46	Is this the PESETA program referred to on line 4? (Caesar, John, Met Office Hadley Centre)
752	21	47	54	47	54	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
753	21	48	3	48	3	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
754	21	48	12	48	12	Reference style wrong. (Burt, Peter, University of Greenwich)
755	21	48	14	48	14	Reference style wrong. (Burt, Peter, University of Greenwich)
756	21	48	14	48	15	For this statement, cross-reference to chapter 30 could also be considered. (Mach, Katharine, IPCC WGII TSU)
757	21	48	16	48	16	Reference style wrong. (Burt, Peter, University of Greenwich)
758	21	48	17	48	17	Casual usage of "likely" should be avoided, as it is a reserved likelihood term. (Mach, Katharine, IPCC WGII TSU)
759	21	48	19	48	19	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
760	21	48	20	48	20	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
761	21	48	27	48	27	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
762	21	48	28	48	28	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
763	21	48	31	48	31	'et al.' should be in italics. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
764	21	48	47	48	47	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
765	21	48	50	48	50	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
766	21	48	50	48	50	Date missing from second reference. (Burt, Peter, University of Greenwich)
767	21	48	51	48	51	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
768	21	48	53	48	53	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
769	21	49	2	49	2	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
770	21	49	3	49	3	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
771	21	49	8	49	8	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
772	21	49	12	49	12	Replace 'growing' with 'increasing' in this context, to avoid confusion. (Burt, Peter, University of Greenwich)
773	21	49	12	49	13	We suggest to cite the reference to the literature that proves the statement reported in the paragraph. \n\n (NETHERLANDS)
774	21	49	16	49	16	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
775	21	49	20	0	0	Section 21.5.3.3. This subsection should be shortened as much as possible, ideally by at least 50%. (Mach, Katharine, IPCC WGII TSU)
776	21	49	24	49	27	For completeness, please also mention the sources of uncertainty, that are not dealt with in this chapter (e.g. uncertainty in observations like precipitation undercatch). (GERMANY)
777	21	49	30	49	46	Could be useful to discuss question of limits to accessible fossil fuel reserves and whether these might or might not have implications for the emissions projections under the RCPs. (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
778	21	49	30	49	46	Could be interesting to include discussion on potential limits to fossil fuel availability in this section. The following references are among those which discuss this issue: Meinshausen, M., Meinshausen, N., Hare, W., Raper, S.C.B., Frieler, K., Knutti, R., Frame, D.J. & Allen, M.R. (2009) Greenhouse-gas emission targets for limiting global warming to 2°C, Nature, 458, 1158-1162, doi:10.1038/nature08017; Vernon, C., Thompson, E., and Cornell, S. (2011) Carbon dioxide emission scenarios: limitations of the fossil fuel resource, Procedia Environmental Sciences 6, 206–215. (Caesar, John, Met Office Hadley Centre)
779	21	49	37	49	39	Also, the trajectory that will occur is dependent on the prediction, or else this AR5 is all just a hobby. (Stone, Dáithí, University of Cape Town)
780	21	49	43	49	43	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
781	21	49	44	49	45	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
782	21	49	45	49	45	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
783	21	49	45	49	45	Delete 'below'. (Burt, Peter, University of Greenwich)



#	Ch	From Page	From Line	To Page	To Line	Comment
784	21	49	54	49	2	Parametrisations are amongst the various ways that subsystems are modelled. Differences in parametrisations are not an uncertainty, but rather a sampling of possible implementations of a climate modelling component that reflect uncertainties in our scientific understanding or resulting from limitations of our data/hardware/software/personnel resources. (Stone, Dáithí, University of Cape Town)
785	21	50	8	50	8	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
786	21	50	11	0	0	The addition of these components may have reduced errors, but whether they have reduced uncertainty is not immediately obvious to me. (Stone, Dáithí, University of Cape Town)
787	21	50	15	50	15	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
788	21	50	18	50	21	Perhaps clarify by saying that global climate models are 'generally' still limited in terms of resolution, since there are examples of hi-res GCMs. (Caesar, John, Met Office Hadley Centre)
789	21	50	21	50	21	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
790	21	50	33	50	33	Casual usage of "likely" should be avoided, as it is a reserved likelihood term. (Mach, Katharine, IPCC WGII TSU)
791	21	50	35	0	0	"was derived" when? (Stone, Dáithí, University of Cape Town)
792	21	50	42	50	42	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
793	21	50	45	50	46	Just because "the IPCC said so" should not lend credibility, rather the credibility should come from the evidence and agreement. (Stone, Dáithí, University of Cape Town)
794	21	50	45	51	48	Some of the text here replicates concepts provided earlier in the chapter - it could be condensed.... (UNITED STATES OF AMERICA)
795	21	50	53	50	53	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
796	21	51	3	51	3	Delete comma after 'al.' and change 'et al.' to italics. (Burt, Peter, University of Greenwich)
797	21	51	3	51	8	When referring to the McSweeney paper, it states no information on observed trends were available. Observational datasets were used in the study, and others are available for the region, including climate extremes indices. (Caesar, John, Met Office Hadley Centre)
798	21	51	10	51	29	At a global level though, in any statistical sample there has to be an outlier that is, by definition, a significant outlier. So do we see more discrepancies than expected by chance? (Stone, Dáithí, University of Cape Town)
799	21	51	15	0	0	Whether internal variability is a source of uncertainty depends on what you want to project. If you are trying to project the future trajectory of the climate system's state, then yes. However, if you think of climate as a statistical expectation of weather, then no. (Stone, Dáithí, University of Cape Town)
800	21	51	17	51	17	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
801	21	51	19	51	19	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
802	21	51	37	51	39	Three Bayesian probabilistic frameworks for projections of surface airtemperature changes over Japan region may support this section in the following article: \nIshizaki, Y., T. Nakaegawa and I. Takayabu 2012: Comparison of three Bayesian approaches to project surface air temperature changes over Japan due to global warming. SOLA, Vol6, 021-024. (Nakaegawa, Toshiyuki, Meteorological Research Institute)
803	21	51	39	51	39	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
804	21	51	41	51	41	'et al.' should be in italics. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
805	21	52	4	0	0	And why have volcanoes not been mentioned. Do we know exactly how volcanic and solar forcing are going to vary over the next hundred years? (Stone, Dáithí, University of Cape Town)
806	21	52	4	52	4	Change 'phenomenon' to 'phenomena' (Burt, Peter, University of Greenwich)
807	21	52	8	52	8	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
808	21	52	11	52	11	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
809	21	52	12	0	0	Variability that considers the increased frequency, intensity, and duration of extreme events, as climate change becomes more extensive, does reflect the potential for those conditions and the physical and economic impact they may have. (Backus, George, Sandia National Laboratories)
810	21	52	12	52	12	Capital 'S' required for 'section' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
811	21	52	23	52	23	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
812	21	52	26	52	26	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
813	21	52	30	52	30	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
814	21	52	30	52	30	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
815	21	52	32	52	43	Overlap with box 21-1 should be reduced as much as possible. (Mach, Katharine, IPCC WGII TSU)
816	21	52	34	52	34	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
817	21	52	35	52	35	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
818	21	52	36	52	36	'at al.' should be 'et al.' (in italics) although the reliance of this chapter for references which are not actually 'real' is becoming quite alarming. (Burt, Peter, University of Greenwich)
819	21	52	39	52	39	et al.' should be in italics, but again we have quasi-mythical references. (Burt, Peter, University of Greenwich)
820	21	52	42	52	53	The explanations of credibility, salience and legitimacy are helpful; however, their relationship to climate scenarios brings up terms that are defined here, that should have been defined earlier (RCP's, SSP's). The point is that the text looks as though it was written by different people, and not well integrated/smoothed. (UNITED STATES OF AMERICA)
821	21	52	43	52	43	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
822	21	52	45	52	45	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
823	21	52	45	52	53	Is this analysis supported by available literature? If not, treatment here should be reduced. (Mach, Katharine, IPCC WGII TSU)
824	21	52	48	52	48	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
825	21	52	48	52	48	et al.' should be in italics, but again we have quasi-mythical references. (Burt, Peter, University of Greenwich)
826	21	53	3	53	3	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
827	21	53	11	53	11	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
828	21	53	13	53	13	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
829	21	53	18	53	18	'versus' should be in italics. (Burt, Peter, University of Greenwich)
830	21	53	24	53	24	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
831	21	53	29	53	29	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
832	21	53	40	0	0	To my understanding it is not possible to assign probabilities to scenarios (assumptions about GHG emissions/concentrations). Thus, I am confused to read about probabilistic assessments in different chapters of the report. This issue is discussed in chapter 21 on page 53 lines 40ff., but what is the consequence for this report? (GERMANY)
833	21	53	44	53	44	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
834	21	53	46	53	46	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
835	21	53	47	53	47	'et al.' should be in italics. (Burt, Peter, University of Greenwich)
836	21	53	51	53	52	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
837	21	53	52	53	52	References should be in chronological order (and alphabetical order in the years). (Burt, Peter, University of Greenwich)
838	21	54	1	54	1	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
839	21	54	22	54	22	The sentence repeats twice the word 'advance' and it does not read correctly. We suggest to remove the word 'advance' after the word 'knowledge'. The sentence would become "where a solid advance of knowledge would contribute to"\n\n (NETHERLANDS)
840	21	54	29	0	0	Frequently Asked Questions. Given that the goal here is short answers, the chapter team should build from the shorter versions of responses in subsequent revisions. (Mach, Katharine, IPCC WGII TSU)
841	21	54	31	0	0	FAQ 21.1 is very technical to be at the front of this chapter. If it shows up elsewhere in the report it would be best to remove from this Chapter. (UNITED STATES OF AMERICA)
842	21	54	31	0	0	FAQ 21-1 Short answer does not answer the question. The key messages from long answer will have to be consolidated in to a strong and clear answer. (Chatterjee, Monalisa, IPCC WGII TSU)
843	21	54	31	54	34	The framing of "in other parts of the world" could be reconsidered as it makes it sound like the authors of this chapter have only one geographic origin. (Mach, Katharine, IPCC WGII TSU)
844	21	54	35	54	37	Concerns' should have a small 'c'. (Burt, Peter, University of Greenwich)
845	21	55	22	55	22	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
846	21	55	51	55	51	Complete cross reference or not? (UNITED STATES OF AMERICA)
847	21	55	51	55	52	The sentence cites 'Cross reference', as a reference. It should be replaced with the correct one.\n\n (NETHERLANDS)
848	21	56	1	0	0	FAQ 21.2: This section discusses downscaling, but does not mentioned benefits attached to higher-resolution models (global or regional) as a result of improved representation of smaller scale process such as precipitation, or storms. (Caesar, John, Met Office Hadley Centre)
849	21	56	1	0	0	FAQ 21-2 Members of wide audience may not understand 'highest resolution projection', the answer is also very technical. FAQ should be revised to make the language more accessible. (Chatterjee, Monalisa, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
850	21	56	1	56	14	The answer to this question does not reflect the scientific findings related to added value through regional downscaling eg higher resolution. It is unclear if the higher resolution mentioned is in relation to RCMs or to higher resolved GCMs. For sure added value comes with higher resolution being able to account for orographic details. The answer to the FAQ is a bit misleading although I agree that higher resolution does not equate to more information. Furthermore there is no easy way to judge on the added value in CC signals . Here are a few examples of paper regarding added value:Déqué, M., Somot, S. (2008) Extreme precipitation and high resolution with Aladin. Időjárás Quarterly Journal of the Hungarian Meteorological Service, 112(3-4):179-190\nAdded-value of 12km RCM wrt 50km RCM for extreme precipitations over France \nHerrmann M., Somot S., Calmanti S., Dubois C., Sevault F. (2011) "Representation of daily wind speed spatial and temporal variability and intense wind events over the Mediterranean Sea using dynamical downscaling : impact of the regional climate model configuration", Nat. Hazards Earth Syst. Sci., 11, 1983-2001, doi:10.5194/nhess-11-1983-2011\nAdded-value of 50km and 12km RCMs wrt reanalysis and to 125km RCM concerning the wind speed over the sea (quikscat as reference)\nKostopoulou E., K. Tolika, I. Tegoulis, C. Giannakopoulos, S. Somot, C. Anagnostopoulou and P. Maheras (2009) Evaluation of a regional climate model using in-situ temperature observations over the Balkan Peninsula. Tellus A, 61(3): 357-370, doi: 10.1111/j.1600-0870.2009.00389.x\nRCM evaluation concerning cold and warm spells in Greece (not really an added-value study).\nAznar R., M.G. Sotillo, M.L. Martín, S. Somot, F. Valero (2010) "Comparison of model and satellite-derived long-term precipitation databases over the Mediterranean basin: a general overview" Atmospheric Research, doi:10.1016/j.atmosres.2010.03.026\nAdded-value of 50km RCMs for precipitation over the sea wrt reanalysis (here the low quality of the observed sea precipitation reference is an issue)\nElguindi N., Somot S., Déqué M., Ludwig W. (2011) "Climate change evolution of the hydrological balance of the Mediterranean, Black and Caspian Seas: impact of climate model resolution" Clim. Dyn., 36 (1-2), 205-228, doi: 10.1007/s00382-009-0715-4\nAdded-value of 50km models wrt 125km and 250km models to represent the water budget of the Southern European Seas (demonstrated for the Med Sea)\nWalther, A., J.-H., Jeong, G., Nikulin, D., Chen, and C., Jones (2013), Evaluation of the warm season diurnal cycle of precipitation over Sweden simulated by the Rossby Centre regional climate model RCA3. Atmos. Res., 119, 131–139. http://dx.doi.org/10.1016/j.atmosres.2011.10.012\nPryor, S. C., G. Nikulin, and C. Jones (2012), Influence of spatial resolution on regional climate model derived wind climates, J. Geophys. Res., 117, D03117, doi:10.1029/2011JD016822\n\n(Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
851	21	56	1	56	14	You are mixing the problem of a higher resolution and the use of more than one model. Please separate. Have a look at the results of ESEMBLES and EURO-CORDEX. Ask the question: Can a higher resolution change the signal and why? Add the Question: what is the added value in the use of RCMs and the use of fine and coarse scaled RCMs (EURO-CORDEX)? (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
852	21	56	10	56	10	Casual usage of "unlikely" should be avoided as it is a reserved likelihood term. (Mach, Katharine, IPCC WGII TSU)
853	21	56	17	58	26	Missing text elements (long and/or short answers). (UNITED STATES OF AMERICA)
854	21	56	20	0	0	FAQ 21-3 The question is confusing. Are assessment results in AR5 drastically different from previous assessments? (Chatterjee, Monalisa, IPCC WGII TSU)
855	21	56	20	56	20	In reducing the number of frequently asked questions in the final draft, this question could be deleted. (Mach, Katharine, IPCC WGII TSU)
856	21	56	36	56	36	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
857	21	56	38	56	38	I don't know what 'adumbrated' means. (Burt, Peter, University of Greenwich)
858	21	56	51	56	51	Comma missing after author surname in reference. (Burt, Peter, University of Greenwich)
859	21	56	51	56	51	Change 'chapter' to 'chapters'. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
860	21	57	7	0	0	FAQ 21-4 The FAQ is too broad and the answer is too scientific. The authors may wish to reconsider. (Chatterjee, Monalisa, IPCC WGII TSU)
861	21	57	7	57	7	Bad English: replace 'for the 20-year time horizon' with 'in 20 years time'. (Burt, Peter, University of Greenwich)
862	21	57	7	57	7	It could be helpful to specify within the answer for the question why the 20-year time frame is particularly relevant (that is, why does the one chosen for the question). (Mach, Katharine, IPCC WGII TSU)
863	21	57	14	57	15	See previous comment. (Burt, Peter, University of Greenwich)
864	21	57	36	57	40	Although this section is about risk management over a 20-year timeframe it touches on trends in climate projections being small over the next 20 years relative to natural variability. It could be mentioned that it also follows that differences in climate response between emissions scenarios is also difficult to detect over this timeframe, but the emissions strategies adopted during this period will have impacts beyond the timeframe. (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
865	21	57	48	57	48	Split infinitive: move 'properly' to after 'variability'. (Burt, Peter, University of Greenwich)
866	21	58	3	58	3	Delete 'a'. (Burt, Peter, University of Greenwich)
867	21	58	4	58	4	Mismatch of singular and plural tenses: change 'is' to 'are'. (Burt, Peter, University of Greenwich)
868	21	58	4	58	4	Split infinitive: move 'confidently' to after 'trend'. (Burt, Peter, University of Greenwich)
869	21	58	4	58	4	Insert comma after 'extrapolate'. (Burt, Peter, University of Greenwich)
870	21	58	45	58	45	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
871	21	58	46	58	46	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
872	21	58	46	58	46	Delete hyphen after 21st (Burt, Peter, University of Greenwich)
873	21	58	47	58	47	Different parts of the report use different reference periods. Here 1986-2005 is mentioned, on page 89 of this chapter it is 1961-1990, in chapter 23, page 81 it is 1971-2000. I could imagine that the change signals between these different periods are of significant magnitude as compared to the future changes signals (e.g. up to 2050). If the reference periods can not be adjusted, the uncertainty arising from choosing different reference periods should be displayed somehow. (GERMANY)
874	21	58	48	58	48	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
875	21	58	48	58	48	Delete hyphen after 21st (Burt, Peter, University of Greenwich)
876	21	58	50	58	50	Delete hyphen after 21st (Burt, Peter, University of Greenwich)
877	21	58	50	58	51	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
878	21	58	51	58	51	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
879	21	59	3	59	4	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
880	21	59	7	59	7	Mismatch of singular and plural tenses: change 'are' to 'is'. (Burt, Peter, University of Greenwich)
881	21	59	7	59	7	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)

#	Ch	From Page	From Line	To Page	To Line	Comment
882	21	59	10	59	10	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
883	21	59	13	59	13	'et al' should be in italics, with a full stop after the 'l' and a comma after the full stop. (Burt, Peter, University of Greenwich)
884	21	59	35	59	35	The meaning of "model-mean mean" may be unclear to some readers. Please consider explaining what the concept means or refer to the appropriate section of the glossary that does. (UNITED STATES OF AMERICA)
885	21	59	50	59	50	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
886	21	59	53	59	53	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
887	21	59	53	59	53	Delete hyphen after 20th. (Burt, Peter, University of Greenwich)
888	21	59	54	59	54	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
889	21	59	54	59	54	Delete hyphen after 20th. (Burt, Peter, University of Greenwich)
890	21	60	1	60	1	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
891	21	60	1	60	1	Delete hyphen after 20th. (Burt, Peter, University of Greenwich)
892	21	60	18	60	18	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
893	21	60	18	60	18	Delete hyphen after 20th. (Burt, Peter, University of Greenwich)
894	21	60	34	60	34	Capital 'C' required for 'century' (in this context it is a proper noun and is also in keeping with other usage in the document). (Burt, Peter, University of Greenwich)
895	21	60	34	60	34	Delete hyphen after 20th. (Burt, Peter, University of Greenwich)
896	21	61	9	79	11	Some references start with "bold font" whereas in most cases "regular font" is used. Please make it symmetrical for whole part of References which starts from page 61 and ends at page 79 (Manzoor, Naeem, Global Change Impact Studies Centre (GCISC))
897	21	61	9	79	30	Why are some author names in bold? (Burt, Peter, University of Greenwich)
898	21	61	47	61	47	Details missing (Burt, Peter, University of Greenwich)
899	21	62	24	62	24	Details missing (Burt, Peter, University of Greenwich)
900	21	65	32	65	32	Details missing (Burt, Peter, University of Greenwich)
901	21	68	25	68	25	Details missing (Burt, Peter, University of Greenwich)
902	21	72	35	72	38	References out of alphabetical order (in Scottish surnames 'Mac' and 'Mc' are treated the same, therefore this should appear on line 1). (Burt, Peter, University of Greenwich)
903	21	77	8	77	8	Details missing. (Burt, Peter, University of Greenwich)
904	21	77	48	0	48	Details missing. (Burt, Peter, University of Greenwich)
905	21	78	22	78	22	Details missing. (Burt, Peter, University of Greenwich)
906	21	80	0	0	0	Table 21-1: The text across the table "Integrated decision-making and governance" does not seem to be really necessary in this context. Either delete or put above table. (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)



#	Ch	From Page	From Line	To Page	To Line	Comment
907	21	80	0	0	0	Table 21-1: Bilateral Finance Institutions (BFI) are missing and should be included as they finance a great part of climate finance (source CPI: <a href="http://climatepolicyinitiative.org/wp-content/uploads/2011/10/The-Landscape-of-Climate-Finance-120120.pdf">http://climatepolicyinitiative.org/wp-content/uploads/2011/10/The-Landscape-of-Climate-Finance-120120.pdf</a> - figure ES-1, page ii) - \npage iii: Bilateral institutions distribute a greater share of finance than multilateral agencies. While\nthere has been a lot of attention recently on the development of a global 'green fund' to catalyze\ninternational climate finance, the reality is that most of public climate finance (USD 24 billion)\nis currently provided by bilateral institutions (those sponsored by one nation) rather than\nmultilateral institutions (like World Bank / IFC, EIB, EBRD, AfDB, AsDB, IDB), which distribute\nUSD 15 billion a year. The remainder of climate finance either flows directly through the capital\nmarkets, or is provided directly by governments. (GERMANY)
908	21	80	0	0	0	Table 21-1, Trans-national, Technology: What is meant by "Union" (Stone, Dáithí, University of Cape Town)
909	21	83	0	0	0	Table 21-3: Please specify in caption that this is an example, not a general statement (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
910	21	83	1	0	0	Please avoid the use of the imprecise term "stimuli" - what are we talking about specifically? (Harnisch, Jochen , KfW)
911	21	84	0	0	0	Table 21-4, last column on the right, states 'target audience', but perhaps the label 'target field' would be more appropriate, given the issues which are mentioned in this column. \n\n (NETHERLANDS)
912	21	86	0	0	0	Table 21-5: In the caption add "... a temperature observation at a given location is generally more representative ..." (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
913	21	86	0	0	0	Table 21-5: The difference between MH + H are not very clear. Please be more specific what the abbreviations represent (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
914	21	86	0	0	0	Table 21-5: In the second line of the table (Global, Future change) are the fact that the stations are not available over the oceans are taken into account in the assessment of reliability? (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
915	21	86	0	0	0	Table 21-5, caption: Can you use a different word than "reliability" here? Reliability has a very specific meaning in meteorology and given that you are discussing meteorology that definition is implied. But clearly you are not talking about reliability or else everything that is being stated here does not make sense. (Stone, Dáithí, University of Cape Town)
916	21	86	0	0	0	Table 21-5, caption: Is this table concerning "information on temperature and precipitation" as stated, or information on (anomalous) variability in temperature and precipitation? If it is about the former, then your assessments for temperature are wrong, as the temperature during a year or day at any particular location may be very different from a neighbouring location. Thermometers have a habit of being in the shade in grassy fields in the middle of valleys, and so their measurements may have little to do with the temperature in the open sun, in nearby forests, or on the hilltops. (Stone, Dáithí, University of Cape Town)
917	21	86	0	0	0	Table 21-5, Village/site/field, Temp: VH-H only works if you are considering information on anomalous *variability*. (Stone, Dáithí, University of Cape Town)
918	21	86	0	0	0	Table 21-5. In place of "reliability," could the author team assign levels of confidence within this table? (Mach, Katharine, IPCC WGII TSU)
919	21	86	0	0	0	Table 21-5: It appears that the IPCC confidence scale would be an alternative to the categories of reliability used in this table and could be appropriate to use in this context with the discussion contained in the caption describing its specific application here. (Mastrandrea, Michael, IPCC WGII TSU)

#	Ch	From Page	From Line	To Page	To Line	Comment
920	21	86	0	86	0	Table 21-5 is very useful, but some of the reliability ratings might be too optimistic. In particular, do projections on the *amount* of temperature change really have high (H) reliability down to national and seasonal scales? Considering the intermodel variation for the subcontinental regions as documented in WG1 Table 14.7, MH would seem more appropriate for the amount of temperature change on all sub-global scales. Naturally, this also depends on where you put your reliability thresholds and whether you count in the emissions uncertainty or only consider the projection for known emissions. Perhaps these issues should also be discussed. (Räisänen, Jouni, University of Helsinki)
921	21	87	0	0	0	Table 21-3, row 3, Knowledge gap: The “intensity, ..., and frequency” of what? (Stone, Dáithí, University of Cape Town)
922	21	87	0	0	0	Table 21-3, row 2, Research need: These two sentences, especially the first, need to be written more clearly. (Stone, Dáithí, University of Cape Town)
923	21	87	0	0	0	Table 21-3, row 3, Research need: What is the verb for the second half of the last sentence? (Stone, Dáithí, University of Cape Town)
924	21	87	0	0	0	Table 21-7. As a few small points, it would be preferable to clarify more precisely the challenges to understanding how to integrate data products, at the start of the 1st example. Within the 2nd example, casual usage of "likely" should be avoided. (Mach, Katharine, IPCC WGII TSU)
925	21	88	0	0	0	Figure 21-1: The national boundaries on Africa seem not to be visible (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
926	21	88	0	0	0	Figure 21-1 contains a world map with national borders. It is suggested to use a map without borders to avoid unnecessary disputes. (CHINA)
927	21	88	0	0	0	Figure 21.1 adds nothing that is not already stated in the text. We recommend that it be deleted. (UNITED STATES OF AMERICA)
928	21	88	0	0	0	Figure 21-1: I struggled to find any other figures in this chapter that used the regions labeled here, especially for South America. (Stone, Dáithí, University of Cape Town)
929	21	88	0	0	0	Figure 21-2: It is not clear if the visual presentation of this information has an added value to the section, or could be effectively said in words in the text. (Estrada, Yuka, IPCC WGII TSU)
930	21	88	0	0	0	Figure 21-1. The chapter team could consider a variety of aspects of presentation in revising this figure. 1st, the open oceans chapter does not consider the Arctic and Southern Ocean, which should be clarified. Additionally, is there a cleaner way of indicating the open oceans, as compared to the repeated labeling? 2nd, instead of the hashing over the polar regions, could a dotted line across the map at the appropriate latitude be used instead? 3rd, the chapter team should consider providing a "halo effect" around islands, rather than the yellow boxes used. The effect could be labeled clearly in just one location. Finally, it would seem most preferable to use polygons that match the regions characterized in the working group I Atlas. (Mach, Katharine, IPCC WGII TSU)
931	21	88	1	88	20	Fig 21.1 shows the inadequacy of the current gross divisions into regions. There is increasing realisation that climate variability occurs over quite small areas within supposedly uniform states. The extreme error here is to place both the North and the South Pole into a single region . Since the North Pole is an ocean its climate is doimated by ocean currents, very different from Antarctica. In the end you have to concern yairself with microclimates (Gray, Vincent, Climate Consultant)
932	21	88	1	108	0	A figure related to Europe is missing (Kentarchos, Anastasios, European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)
933	21	89	0	0	0	Figure 21-3 contains a world map with national borders. It is suggested to use a map without borders to avoid unnecessary disputes. (CHINA)

#	Ch	From Page	From Line	To Page	To Line	Comment
934	21	90	0	0	0	Figure 21-4: Do you need to show SRES A1B plots when RCP X plots appear elsewhere? (Stone, Dáithí, University of Cape Town)
935	21	90	0	0	0	Figure 21-4: Inlaid plot scales are essentially impossible to read/interpret. Some more detailed explanation in the figure caption of what is being communicated is required. (Estrada, Yuka, IPCC WGII TSU)
936	21	91	0	0	0	Figure 21-5: In the legend the significance should either be at the 95% level or write $p=0,05$ . (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
937	21	91	0	0	0	Figure 21-5. Where black dots are used, it is somewhat hard to see the color underneath. Could more discreet dotting be used instead? (Mach, Katharine, IPCC WGII TSU)
938	21	92	0	0	0	Figure 21-6: In the upper right figure the national and state borders are missing (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
939	21	93	0	0	0	Figure 21-7: Specific which emissions have been used (even if they are kept constant) (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
940	21	93	0	0	0	Figure 21-8: Specific which emissions have been used (even if they are kept constant) (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
941	21	95	0	0	0	Figure 21-10 contains a world map with national borders. It is suggested to use a map without borders to avoid unnecessary disputes. (CHINA)
942	21	95	0	0	0	Figure 21-10: Where is Panel a)? (Stone, Dáithí, University of Cape Town)
943	21	97	0	0	0	Figure 21-12 caption. I think it would be good if this included some more plain language explanation of what we are seeing here - what is there is difficult to follow by itself. (Whetton, Penny, Commonwealth Scientific and Industrial Research Organization - Marine and Atmospheric Research)
944	21	97	0	0	0	Figure 21-12 contains a world map with national borders. It is suggested to use a map without borders to avoid unnecessary disputes. (CHINA)
945	21	97	0	0	0	Figure 21.12 is not well linked to the text and probably could be removed with out losing the meaning of the section. (UNITED STATES OF AMERICA)
946	21	99	0	0	0	Figure 21-14, caption: "The dark-grey dashed line" -- would that be the solid line? (Stone, Dáithí, University of Cape Town)
947	21	100	0	0	0	Figure 21-15, caption: Are these "errors" or biases against GPCC, which itself must include some errors. (Stone, Dáithí, University of Cape Town)
948	21	101	0	0	0	Box 21-2 figure. It would be preferable to adjust the Y axes of the plots so that the plumes fit within the rectangles used. Additionally, is the relevant timeframe 1986-2005, rather than 1986-2006? (Mach, Katharine, IPCC WGII TSU)
949	21	102	0	0	0	Box 21-3 fig 1: There is a inconsistency between the colour scale and the caption. In the caption you are writing that all areas with a change smaller then 2 times the standard deviation will be left white. But your colour scale is providing colours starting with 0. Is 2 times the standard deviation close to 0? (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)
950	21	102	0	0	0	In box 21-3 fig 1 you are using 20 year periods, In box 21-3 fig 2 you are using 30 year periods. Please unify the usage to 30 year periods! (Kreienkamp, Frank, Climate & Environment Consulting Potsdam GmbH)

#	Ch	From Page	From Line	To Page	To Line	Comment
951	21	104	0	0	0	Box 21-3 Figure 2: Provide the reader with some information which SRES and RCP scenarios are comparable. This allows to appreciate differences in scenarios and models. (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
952	21	105	0	0	0	Box 21-3 figure 3. For the top map, it would be helpful to clarify what is being plotted--the percent of hottest 10% of days above the 1961-90 threshold?? (Mach, Katharine, IPCC WGII TSU)
953	21	106	0	0	0	Box 21-3 Figure 4: The caption in the upper figure should read "very wet days" to be inline with the caption of the complete figure (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
954	21	106	0	0	0	Box 21-3 Figure 4: Indicate the boxes (NAS, WAS etc.) in the upper figure, as done in Figure 3 (Ferrone, Andrew, Public Research Centre - Gabriel Lippmann)
955	21	106	0	0	0	Box 21-3 Figure 4 contains a world map with national borders. It is suggested to use a map without borders to avoid unnecessary disputes. (CHINA)