

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
1	58154	1	0	0	0	0	General Comments on Chapter 1. Point of Departure: Impressive report with excellent graphs especially graph 1-1, 1-2 , 1-3, 1-5 and 1-7. Also, the part of the Communication of the Uncertainty of the Working Group II and the part Scenarios as Inputs to Working Group II assessments. There are no other comments. (Mounir Wahba Labib, Third National Communication (TNC) Project)	Thank you for the positive comment.
2	60867	1	0	0	0	0	Perhaps the concept of maladaptation should be introduced more prominently given its significance in later chapters. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	The concept of 'maladaptation' has been added to 1.1.4 with references
3	63474	1	0	0	0	0	WGII introduces the conceptual framework of an era of responsibility and an era of climate options. However, this concept seems to be very promising and policy relevant, but is not clear enough. Please include a box explaining the elements and actions of the two eras and the time dependency. In this box, the link between the concept of an "opportunity space" and the two eras should be clarified. Figure 1-7 is a good starting point to explain this concept and should be added to the box. (GERMANY)	The figure and caption have been revised. The language of the two "eras" is used in a different way (era of committed change and era of climate options) . However this new definition is only used in section 1.1.4 and does not frame the argument for this chapter, the issue of the eras is taken up more prominently in the SPM. We thus think it is not necessary to include a box explaining it in this chapter.
4	68071	1	0	0	0	0	Being the opening of the WG II report, this chapter should provide a brief description of the progress made by WG II in related research since the IPCC AR4 and the relationship between the IPCC AR5 WG II and WG I and III reports. References to other reports should focus on their relevance to the assessment by WG II. The chapter, as it stands now, is too lengthy, hence suggested to be shortened. For example, the information on SRREN in Section1.3.2 should be reduced by a big margin. (CHINA)	The chapter text has been shortened and two figures eliminated. We also added information to 1.1 as suggested about the relationships of the three working group reports. The information related to SRREN, now in section 1.3.1, has been reduced.
5	68072	1	0	0	0	0	'extremely likely (95-100% probability) ', a term that is somewhat different from 'likelihood' as formulated in the Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties (6-7 July 2010), is heavily used in this chapter (see P7,L46-53), hence suggested to be reformulated. (CHINA)	This language is exactly as used in the WGI SPM and is also used in Table 1-2 and Figure 1-6. No need to change.
6	68774	1	0	0	0	0	There is a lot of repetition and mixture of findings throughout the SPM, TS and Chapter - particularly the Chapter (25). This is due in large part to the interconnected nature of the subject matter. But it can be confusing, lead to inconsistencies and wasteful of space. (NETHERLANDS)	By design, the SPM and TS are extracted from the chapters, often word for word. Chapter references, generally in parentheses, in the summary documents where each main point in the summary can be traced back to the chapters.
7	78002	1	0	0	0	0	In general - the authors dismiss one of the added values which was present in AR4, but not in TAR, that a cross sectorail analysis was present much more accurately e.g. For health, which lead to both a sectorial table as well as inclusion of health into all regional tables (SYR); for some of the issues - the stronger dominance of vulnerability factors, and other determinants of health - the attribution of impacts to CC - is weakened, and not necessarily adds to the debate. Unless that the aim of adaptation to climate change becomes to strnegthn general developments - as a mean of adaptation. Thus as a fight on climate change action would be focusing on reducing the health determinants (social, environment and economic). This might in the world development be highly welcome, however would be interesting to see how the adaptation financing community could be targetting this - through its current or future funds,. (Bettina Menne, WHO)	Thank you for the suggestion. We inserted the following sentence in 1.1.2.1: "AR4 included several cross-chapter themes with case studies (such as impacts on deltas) as a unifying construct."
8	78593	1	0	0	0	0	a good setting of the context. (richard arthur fleming, canadian forest service)	Thank you for the positive comment.

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9	80158	1	0	0	0	0	There is welcome reference to the notion of environmental stressors in the report, with climate change discussed as one of multiple stressors. The phrasing is sometimes a bit confusing as in chapt, p6, l 15-20, p10, l 1, with both stresses and stressors seeming used synonymously. What does not seem to be acknowledged in the report is that the ongoing environmental stressor status of climate change includes the threat of climate change, particularly as disseminated and communicated by multi-media coverage, with this continuous background threat having appreciable psychological and social impacts (e.g., Evans, 1984; Evans & Stecker, 2004; Reser & Swim, 2011). The threat of climate change is of course, and understandably absent in Figure 1-3, but it is arguable that one of the greatest current human impacts of climate change is that of the psychological and social impacts, and therefore also health impacts of the threat of climate change. Yet these threat-related impacts are not being systematically measured or monitored or factored into the climate change research discourse, or research initiatives or programs. These matters also have important relevance with respect to perceived or subjective exposure and vulnerability, and climate change concern and motivational responses to the ongoing threat, as well as when considering and addressing the psychological impacts of the threat. It is also not clear that the IPCC report includes psychological impacts under the rubric of social impacts (e.g., p 9, l 50), and perhaps the glossary should clarify this matter. Alternatively the term psychosocial impacts could be used and this has considerable precedence (e.g., Reser & Bentrupperbaumer, 2001, 2008; Doherty & Clayton, 2011). It is noteworthy that the definition of 'impacts' found in the AR5 glossary would seem to exclude the psychosocial impacts of the threat of climate change. These matters also have direct implications for the meaning and use of vulnerability, e.g., p10, lines 4-10, 25, 35, 48 etc. [Also relevant to discussion of AR4 coverage on p 13, lines 5-8. (Joseph Reser, Griffith University)]	Thank you for the positive comment. We have added "psychological" to the list of stressors in the introduction to section 1.1. We have numerous references to social stressors and impacts in section 1.1.4.
10	80159	1	0	0	0	0	The incorporation of "actual or expected climate and its effects" in the definition of adaptation in the AR5 glossary is commendable, but this still does not capture or address the 'risk domain' of climate change, or the myriad ways in which the environmental threat of climate change is 'constructed' through social construction and social representation processes, and disseminated through multi-media channels, in effect constituting many different kinds and forms of risk communications about climate change which the public must make sense of and possibly respond to. There are cogent psychological arguments to the effect that an important aspect of adaptation to climate change is psychological adaptation to the threat of climate change in terms of psychological processes such as protection motivation, and multiple other motivational and psychological coping responses. It is extraordinary that these fundamental processes of psychological adaptation are given such minimal acknowledgment or consideration (e.g., Folkman, 2011; Reser, Bradley & Ellul, 2012; Reser & Swim, 2011) (Joseph Reser, Griffith University)	Point 1) Section 1.2.2 (Key Vulnerabilities, Risks, and Reasons for Concern) addresses the risk domain of climate change, and lays a foundation for a greater discussion of risks in Chapters 19 and 20 of the report. Point 2) We have added language to section 1.1 to convey the psychological impacts of climate.
11	81031	1	0	0	0	0	There are some missing/ incorrect citations in the chapter. These discrepancies have been highlighted in the ref check document for chapter 1 and is available in the supporting material web page. Chapter team may wish to rectify these errors before starting to work on SOD revisions and FGD preparation. (Monalisa Chatterjee, IPCC WGII TSU)	References have been corrected and cross-checked.
12	81460	1	0	0	0	0	1) Overall -- The chapter team has developed a strong second-order draft that effectively launches the report. In the final draft, the chapter team is encouraged to continue prioritizing concise, accessible assessment accompanied by compelling tables and figures. (Katharine Mach, IPCC WGII TSU)	Thank you for the positive comment. We have prioritized material as we reduced text and figures to meet our page limits for Chapter 1.
13	81461	1	0	0	0	0	2) Coordination across Working Group II -- Given the role of chapter 1 in the report, careful coordination with other chapters will continue to be of paramount importance, especially for section 1.1 and the executive summary. Such introduction to the report should ensure coordination at the level of chapter text and key findings within the other chapters, with cross-references to other chapter sections and assessment findings wherever appropriate. (Katharine Mach, IPCC WGII TSU)	Accepted. We have added many new cross-chapter and cross working group references in our Final draft.
14	81462	1	0	0	0	0	3) Harmonization with the Working Group I contribution to the AR5 -- Also of paramount importance will be ensuring fully updated cross-references to Working Group I in discussion of climate, climate change, and climate extremes, and in the introduction of the major conclusions of that report. (Katharine Mach, IPCC WGII TSU)	Yes, this has been done. The WGI section is now based on the final SPM and the FD June 7 copies of the chapters.
15	81463	1	0	0	0	0	4) 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. (Katharine Mach, IPCC WGII TSU)	We are aware of this release of the final draft with the SPM and we have paid careful attention to our syntax and references.

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16	81464	1	0	0	0	0	5) 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. The assessment findings of chapter 1 serve as a point of departure in the summary products as well, and the chapter team is encouraged to maximize attention to effective communication of changes in the literature available, in the major themes of this literature, in treatment of uncertainties, and in scenarios used as the basis of assessment. As part of this, the introduction within the chapter of the eras of climate responsibility and climate options is effective, and the chapter team may wish to consider how framing of risks and options for risk reduction continue to emerge across chapters and in the summary products. (Katharine Mach, IPCC WGII TSU)	Good suggestion. We have worked closely with Chapters 18, 19 and 20 to frame the risks and the options for risk reduction in a clear and consistent manner.
17	84953	1	0	0	0	0	GENERAL COMMENTS: I congratulate the author team for all their work on an interesting and informative SOD. Please see my detailed comments for suggestions related to specifying ES findings and traceable accounts, refining figures and tables, making additional cross-chapter linkages, and specific clarifications. (Michael Mastrandrea, IPCC WGII TSU)	Thank you for the comment. We have added additional cross-chapter linkages, such as with Chapter 14 in section 1.1.2.1.
18	84954	1	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 1 and other chapters at LAM4? (Michael Mastrandrea, IPCC WGII TSU)	We have worked with the TSU and other Chapter leads in the development of two of our final figures that are most important to other chapters, and two will appear in the the TS.
19	80620	1	1	0	0	0	One of IPCC's important contribution is that it has strengthened the connection between nature sciences and social sciences, therefore, in order to let the nature scientists understand the knowledge of social sciences, AR5 should make the knowledge of social sciences clear and easy to comprehend. (Jiahua PAN, Chinese Academy of Social Sciences)	We agree and we feel that our chapter gives the reader a good foundation for understanding the advancements in connecting the natural and social sciences and we have placed the following as the first key message in our Executive Summary: "The evolution of the IPCC assessments of impacts, adaptation, and vulnerability indicates an increasing emphasis on human beings, their role in managing resources and natural systems, and the societal impacts of climate change. "
20	56991	1	1	1	1	1	The title of this chapter is not appealing since the knowledge we are talking about is that of climate change meaning that there is no significant departure as the title indicates. A better title for the chapter is therefore required. (KENYA)	Titles to AR5 WGII chapters were established at the IPCC 31st plenary session in October 2009; the title is appropriate in our opinion.
21	80281	1	1	32	0	0	"Comparision RCP and SRES Scenarios". At this stage it is appropriate to keep full form of RCP (Representative Concentration Pathways) and SRES (Special Report on Emissions Scenario). (Tek Gurung, Freelance consultant)	Where these terms are first used, we have now spelled them out.
22	61975	1	2	6	2	7	After the section 1.3 of FAQ , there should be a section 1.4 to summarize the whole WGII report, what is the structure of the whole report, what are the relations with WGI and WGIII reports, and what are the highlights of AR5 WGII report this time. (Yinlong Xu, Institute of Environment and Sustainable Development in Agriculture (IEDA), Chinese Academy of Agricultural Sciences (CAAS))	In our first order draft we had such a summary of the WGII AR5 major themes in section 1.4 at the end of chapter 1, but the reviewers suggested that the organization of the chapter did not make sense. So we moved the most important points to section 1.1.2, Framing and Outlines of WGII assessment Reports.
23	80621	1	2	6	2	7	After the section 1.3, there should be a section 1.4 to have a summarizing introduction for the whole WGII report, what is the structure of the whole report, what are the relations with WGI and WGIII reports, what are the highlights of AR5 WGII report this time. (Jiahua PAN, Chinese Academy of Social Sciences)	In our first order draft we had such a summary of the WGII AR5 major themes in section 1.4 at the end of chapter 1, but the reviewers suggested that the organization of the chapter did not make sense. So we moved the most important points to section 1.1.2, Framing and Outlines of WGII assessment Reports.
24	68775	1	2	13	2	14	It states 'literature has more than doubled'. Strictly seen the figure 1.1-a in Chapter 1 shows a near doubling for the climate change literature when comparing 2005 and 2010. Extrapolating this trend towards the current year 2013, we indeed expect that the claim that 'literature has more than doubled' is supported. Please spend some attention to this in the body text of chapter 1, to substantiate the claim. (NETHERLANDS)	The data is plotted in figure1-1, panel c. We have inserted a sentence with the data that supports the claim that the literature doubled between 2005 and 2010.

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25	71584	1	2	14	2	14	The use of terms like "very high confidence" to qualify 'facts' (vs genuine findings from the literature) such as the one in this paragraph seems unnecessary. (UNITED STATES OF AMERICA)	Accepted, we have eliminated confidence terms for 3 of the bold-faced statements in the Executive Summary.
26	84955	1	2	17	2	17	Access to literature is not really covered in the chapter text. Please ensure support for this element of the statement in the chapter text, if retained. (Michael Mastrandrea, IPCC WGII TSU)	Accepted, we have revised the sentence and deleted the phrase about "access to" literature. The final sentence reads as follows: "Authorship of literature from developing countries has increased, although still representing a small fraction of the total. This unequal distribution of literature presents a challenge to the production of a comprehensive and balanced global assessment."
27	71585	1	2	18	2	20	The authors are cautioned here not to make the implicit assumption the develop-ed-country authors cannot effectively discuss developing-country CCIIV. (UNITED STATES OF AMERICA)	Agreed and we have not suggested that developed country authors should not discuss developing country impacts. The sentences in question now read as follows: "Authorship of literature from developing countries has increased, although still representing a small fraction of the total. This unequal distribution of literature presents a challenge to the production of a comprehensive and balanced global assessment."
28	62296	1	2	21	2	0	"recent" sold be take out (Dan F. Orcherton, PACE-Pacific Centre for Envionment and Sustainable Development)	Wrong chapter, we do not mention "recent sold" on page 2 or in any other section of Chapter 1.
29	71586	1	2	22	2	24	Increasing emphasis on... As opposed to what? (UNITED STATES OF AMERICA)	The emphasis on "IPCC assessments of impacts, adaptation, and vulnerability" is stated at the beginning of the sentence. We provide the following statement to explain the increasing emphasis: "Characteristics in the evolution of the Working Group II assessment reports are an increasing attention to: (i) adaptation limits and transformation in social and natural systems; (ii) synergies between multiple variables and factors that affect sustainable development, (iii) risk management, and (iv) institutional, social, cultural, and value-related issues."
30	59721	1	2	22	2	29	These impacts are regional and time-dependent, and are also dependent on the aging population (fabrizio sassi, Naval Research Laboratory)	If we mention this variable (aging population), we would need to mention many others that are even more regional and time-dependent. This is not the level of detail needed to support this key finding.
31	61976	1	2	27	2	28	It is easy to have the misunderstanding on the statement of 'Synergies between multiple variables and factors that affect sustainable development', as multiple variables and factors could not contain the adaptation, so I suggest to change the sentence of '(ii) Synergies between multiple variables and factors that affect sustainable development , including risk management' as '(ii) Synergies of climate change adaptation with other variables and factors that affect sustainable development , including risk management.'. (Yinlong Xu, Institute of Environment and Sustainable Development in Agriculture (IEDA), Chinese Academy of Agricultural Sciences (CAAS))	Thanks for the comment, the language in this section has been changed to convey it more clearly: Characteristics in the evolution of the Working Group II assessment reports are an increasing attention to: (i) adaptation limits and transformation in social and natural systems; (ii) synergies between multiple variables and factors that affect sustainable development, (iii) risk management, and (iv) institutional, social, cultural, and value-related issues.

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32	80622	1	2	27	2	28	In the statement “(ii) Synergies between multiple variables and factors that affect sustainable development , including risk management,” it is inappropriate to say that "synergies between multiple variables and factors.....", it should be "synergies between climate change adaptation and other variables and factors.....". SUGGESTION: “(ii) Synergies between multiple variables and factors that affect sustainable development , including risk management,” be altered as "(ii) Synergies of climate change adaptation with other variables and factors that affect sustainable development , including risk management" (Jiahua PAN, Chinese Academy of Social Sciences)	Thanks for the comment, the language in this section has been changed. Characteristics in the evolution of the Working Group II assessment reports are an increasing attention to: (i) adaptation limits and transformation in social and natural systems; (ii) synergies between multiple variables and factors that affect sustainable development, (iii) risk management, and (iv) institutional, social, cultural, and value-related issues. [1.1, 1.2]
33	84956	1	2	27	2	29	The mention of risk management in the context here could be better clarified, as risk management is generally introduced in the report as encompassing responses to climate change and the risks it poses, including adaptation and mitigation. (Michael Mastrandrea, IPCC WGII TSU)	We agree. We elevated risk management to its own category in the Exec Summary, but the concept is explained in the text.
34	81465	1	2	28	2	28	Risk management is important to highlight, but I wonder whether the framing here, in which it is implied that risk management is a variable or factor, is the most effective. Is it possible to make a separate entry in this list on managing risks? (Katharine Mach, IPCC WGII TSU)	Accepted, we made "risk management" a separate entry.
35	63475	1	2	30	2	30	Please include in the executive summary as finding three the general ideas given in chapt.1 p.12, l.14-30 as they link the conceptual framework of Rockström and Raworth with the IPCC AR5 concept of "era of responsibility and era of climate options", explain better the "opportunity space" given in Figure 1-7 and give reasons for including Figure 1-7 into TS. Text proposal for a finding: "Rapidly advancing climate science provides an “opportunity space” for policy relevant information to support policy decisions leading to high resilience, low risk and low vulnerability and climate change is just one of many stressors that influence resilience. The conceptual framework of the AR5 WGII report of existing stressors and the boundaries they create, of actions to reduce climate change impacts can entail both an era of responsibility and an era of climate options. The last is an opportunity space and the decisions and pathways that societies choose within this space, informed by science, observation and experience, will affect the degree of resilience in human and natural systems. Please add confidence level [1.1.4, Figure 1-7]" . (GERMANY)	Excellent suggestion. We added a new key finding to our executive summary along the lines suggested and a confidence level of "robust evidence, medium confidence"
36	71587	1	2	31	2	32	It seems strange to attach confidence rating to a statement about the research process (UNITED STATES OF AMERICA)	Accepted, confidence level deleted
37	81466	1	2	31	2	36	The author team should coordinate this paragraph with chapters 14-17 and 20 so that it communicates the core findings of their assessment as clearly and rigorously as possible. (Katharine Mach, IPCC WGII TSU)	Accepted, this key finding has been coordinated with the adaptation chapters and the figure developed in collaboration with the Chapter 20 author team.
38	65596	1	2	38	2	0	"evolved over time" - better to say 'improved since the last IPCC report' if that is meant. (David Flint, Cass Business School)	We disagree, "improved" is a value judgement. However, we removed the words "evolved over time" and the final sentence reads as follows: "As a core feature and innovation of IPCC assessment, major findings are presented with defined, calibrated language that communicates the strength of scientific understanding, including uncertainties and areas of disagreement."
39	80282	1	2	41	0	0	Full form of SAR would help the readers. I assume that this means Second Assessment Report. But 'S' might mean 'Seventh' or subsequent number as well. Therefore, it would be better to avoid such possible confusion. Moreover, I'm making such comments because different readers may enter to read/review such reports at different point of time and may assume different meaning. (Tek Gurung, Freelance consultant)	Accepted, we have revised the text for a more consistent introduction and use of acronyms. We used the nomenclature and acronyms in WGII AR4 as a guide.
40	56992	1	2	48	2	48	Define CMIP3 (KENYA)	This section has been changed and the point no longer applies. The CMIP's have been defined more carefully in a footnote where first used.
41	57098	1	2	51	2	51	«...but they have a narrow range...». What «range» is that? Please, explain. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	It says now a narrower range in emissions of aerosol and ozone precursors. For more details see the later chapter and the WGI report.
42	71588	1	2	52	2	52	It is unclear how this statement can have only "high confidence" when it appears to be a statement of fact. Suggest the authors reconsider this confidence assignment. (UNITED STATES OF AMERICA)	Accepted, we have eliminated confidence terms for 3 of the bold-faced statements in our Executive Summary.

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43	80283	1	2	53	0	0	Full forms of FAR and TAR. Here as well FAR may mean First or Fourth Annual Report and in the near future may mean Fifth Annual Report as all words start with 'F'. Similarly, 'T' may represent 'Third' or 'Tenth' or so forth. Therefore, consistency in using acronyms might be an area of improvement in general. (Tek Gurung, Freelance consultant)	Accepted, we have revised the text for a more consistent introduction and use of acronyms.
44	81467	1	3	1	3	1	Is "assume" the clearest word that could be used here, given that the RCPs ultimately can reflect a variety of permutations in terms of emissions, sinks, mitigation strategies, etc.? In the SPM, the word "reflect" is currently used, which could be an option for the chapter team to consider. (Katharine Mach, IPCC WGII TSU)	Good suggestion. We changed "reflect" to "described".
45	61977	1	3	1	3	5	It is not necessary to explain what are the 4 RCPs here, it is necessary to explain how these 4 RCPs scenarios would be employed in the impacts and vulnerability assessments and what is the difference of RCPs scenarios with SRES scenarios. (Yinlong Xu, Institute of Environment and Sustainable Development in Agriculture (IEDA), Chinese Academy of Agricultural Sciences (CAAS))	This is too much detail to present in the exec summary.
46	80623	1	3	1	3	5	Here the author should not explain the meaning of RCPs, rather the author should tell what and how will these four RCPs will affect the impacts of climate change, and illustrate the differences with SRES. SUGGESTION: It is suggested to delete the explanation for the 4 RCPs from line 1 to line 5. (Jiahua PAN, Chinese Academy of Social Sciences)	Rejected, see above response to nearly identical comment
47	71589	1	3	3	3	3	The sentence beginning on this line is unclear. Was "rapid decline" intended to apply to both pollutants AND land-use change? (UNITED STATES OF AMERICA)	Yes, the RCPs assume a decline in land use change, but we have dropped this sentence, as being too detailed for here.
48	76527	1	3	4	3	4	Add "previously" after "other". (Claudio Cassardo, University of Torino)	This clause has been dropped.
49	59722	1	3	26	3	32	No mention of an aging population which is exposed to greater risks. (fabrizio sassi, Naval Research Laboratory)	Agreed, but we do not feel that this level of detail is needed in the introduction to the chapter. And age is not the only factor that would need to be mentioned.
50	57099	1	3	28	3	28	Editorial: «...has more focused more heavily...»; delete the «more» before «focused». (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, we deleted the word "more"
51	71590	1	3	28	3	28	focused more heavily on.. As opposed to what? (UNITED STATES OF AMERICA)	Accepted, we deleted the word "more"
52	76528	1	3	28	3	28	Remove "more" (Claudio Cassardo, University of Torino)	Accepted, we deleted the word "more"
53	57100	1	3	29	3	29	Editorial: insert «an» before «analysis» (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, we deleted the word "more"
54	84957	1	3	29	3	30	Is the word "aggregate" necessary here to make the intended point? The statement would make more sense in my view if it were made about impacts in general. (Michael Mastrandrea, IPCC WGII TSU)	Accepted, change has been made.
55	57101	1	3	30	3	30	Editorial: «...and the rapid emergence...vulnerability» This piece of text looks solitary, because it seems not connected to either «analysis» (at the beginning of the sentence, in line 29) or any other preceding term. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	The paragraph was shortened to emphasize the expanded multidisciplinary approach that was required to assess impacts associated with coupled socio-ecological systems.
56	57102	1	3	34	3	34	Editorial: insert «a» before «point» (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, the sentence now begins as follows: "The point of departure..."
57	71041	1	3	34	3	35	When the phrase "planetary boundaries" was introduced by Rockstrom and colleagues in their 2009 paper (Rockstrom et al., 2009) it was presented primarily as a 'proof-of-concept' idea, with only very tentative, notional quantitative boundaries proposed. While the planetary boundaries language has been adopted and used by various communities in recent years, the concept has not yet gained wide acceptance in the physical science community, nor has there been much progress in defining the boundaries. The ICSU Future Earth Project, under its just-forming Science Committee, will be trying to advance the concept and its definition. Therefore, it is suggested that at this stage, given that the planetary boundaries concept is an emerging concept, the IPCC avoid endorsing the concept but point to where work is in place to further develop it. Here then, it is suggested to avoid reference to the planetary boundaries concept here and use more general language to indicate how this WGII assessment extends the work of earlier WGII assessment. Related comments were also submitted on Figure 1-7 and page 12 lines 14-30 (Section 1.1.4). (CANADA)	We have changed the language and framing of this section and no longer use the terminology of planetary boundaries
58	59816	1	3	34	3	38	Social boundaries should provide a reference to political, institutional and governance considerations as per chapter 14. (AUSTRALIA)	Accepted, changed to "societal", which encompasses a broader range of drivers (political, governance etc)

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59	71591	1	3	35	3	35	What does "status of the biophysical planetary boundaries" mean? (UNITED STATES OF AMERICA)	phrase deleted, including use of planetary boundaries concept
60	81468	1	3	36	3	37	In this statement, "by a large part" does not seem to fully get at the degree to which these factors are variable across space and time, with high context dependency in terms of how they play out. Could the statement be revised to reflect variability, intersectionality, and context dependency, for example as discussed in Chapter 13 as well as the adaptation chapters? (Katharine Mach, IPCC WGII TSU)	language corrected to reflect suggestion
61	57103	1	3	37	3	37	«...population interacting creating and reaction to...» Obscure piece of text. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, this sentence has been deleted.
62	71592	1	3	37	3	37	The phrase beginning with "interacting creating and reaction..." does not make sense. (UNITED STATES OF AMERICA)	Accepted, this sentence has been deleted.
63	56344	1	3	38	3	38	sentence structure incorrect (Thomas Reuter, University of Melbourne)	Accepted, but this sentence has been deleted.
64	71593	1	3	42	3	42	Referring here to "two volumes" is potentially confusing, since each of the WG reports is often referred to as a volume. (UNITED STATES OF AMERICA)	Disagree, the Working Group II "Contribution" to AR5 will literally be published in two volumes, which is how the working group has accomodated such an expanded outline.
65	81469	1	3	44	3	44	Where "such as adaptation" is called out, it seems to me that the expanded coverage of human dimensions has also very much applied to assessment of impacts and vulnerability, for example as seen in chapters 8-13. (Katharine Mach, IPCC WGII TSU)	Agreed but we do not feel further explanation is needed. Adaptation is mentioned here as one example of the human dimensions of climate change.
66	79358	1	3	50	0	0	Development of the science base for assessment: surprisingly little mention here of approaches to impact assessments - both empirical and simulated. Have you assessed the evolution in and strength of the empirical data on impacts? Have you assessed the evolution in down-stream impact models (crops, hydrology, ...) and of the use of complex systems models and approaches? I would have expected some discussion of these important components of the scientific method of enquiry on impacts in this section. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	We conducted a bibliographic search with key words; we did not analyze the content of the literature further, so we cannot assess the strength of the empirical data on impacts.
67	79359	1	3	50	0	0	Development of the science base for assessment: I am surprised you didn't mention the evolving balance between primary and secondary sources of information, between quantitative and qualitative approaches, and between empirical research and think pieces, and how you have used these in setting out the scientific arguments in this and other chapters under WGII. It is very hard, in going through the chapters I looked at, to take a judgement on the strength of the evidence considered without reference to the type of evidence that was used. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	We conducted a bibliographic search with key words; we did not analyze the content of the literature further, so we cannot assess the strength of the empirical data on impacts.
68	71594	1	3	54	3	54	The Figure caption and content do not show input from ISI Web of Knowledge. (UNITED STATES OF AMERICA)	Correct. This figure only presents the Scopus bibliometric analysis and this is staed in the first line of the figure caption. The Web of Knowledge analysis is summarized in the text only.
69	84958	1	4	2	4	3	It would be useful to give the 1990-2000 and 2000-2010 breakdowns here to illustrate the point. (Michael Mastrandrea, IPCC WGII TSU)	We have used Figure 1-1 to convey these breakdowns and trends (to save space) but we also inserted a sentence with the number of total publication in English in 2005 and 2010 to illustrate the point as suggested.
70	64262	1	4	9	4	0	I propose to delete these lines because will come confusing and doubts, taking into account the importance for each geographical region to know how much is treated in the literature their capacity for adaptation or the assessment of impacts and vulnerabilities (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	Accepted, lines 9-10 have been deleted
71	56993	1	4	13	4	13	Figure 1-1 referred to here is far towards the end of the last pages of the document. This location is really inconvenient for a reader to keep on turning pages of a document to refer the thefigure. It is noted that virtually all tables, figures and boxes are not within the same subject which they refer to and the reader has to keep seraching where they are located which is very inconvenient indeed. (KENYA)	Accepted but no change required in the text file. In the final report the figure will be placed in the text where it is discussed.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
72	59723	1	4	13	4	23	The continental/regional color are confusing and make it harder to see the colors of the columns. Also, why not showing these results as pubs per capita? That way the disparity would be even greater between the developed and the underdeveloped regions. (fabrizio sassi, Naval Research Laboratory)	We agree with the need to change colors of the continents but we do not agree that the data should be manipulated to "per capita".
73	81470	1	4	16	4	16	For part B of this figure, it would be helpful to clarify the variable being plotted. For example, if one author has published 5 papers, does this author count once or 5 times? Are all authors on publications counted? Are the relevant publications considered for this part of the figure those under "climate change" in part a? (Katharine Mach, IPCC WGII TSU)	The count is by publication and we have clarified this the figure caption. If an individual author published more than one article his or her name would be counted twice.
74	84959	1	4	16	4	16	Human health no longer appears to be included in the analysis. (Michael Mastrandrea, IPCC WGII TSU)	Accepted. Human health also has now been deleted from the text describing the results in the table.
75	81471	1	4	18	4	18	It would be helpful to be more explicit by what is meant by "results of literature searches"--number of publications? (Katharine Mach, IPCC WGII TSU)	Agreed, "numbers of publications" has replaced the words "results of literature searches".
76	62297	1	4	25	26	0	points of departure (rather than "points") refer to... (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	We are not sure what this comment is about, the words "point" or "points" are not used in this section.
77	71595	1	4	29	4	29	Does the phrase "unequal distribution" here mean unequal geographical distribution? (UNITED STATES OF AMERICA)	Yes, unequal refers to "geographic" and we inserted a reference to Figure 1-1b which depicts the regional distribution of the literature to make that clear.
78	62298	1	4	29	9	0	should be "This unequal distribution" (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	Reference to specific panels in Figure 1-1 was inserted in this sentence so the reader can see the regional distribution of the literature and the authors of that literature.
79	62299	1	4	37	37	0	Scopus database should have a reference to where this is from and whom the author is (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	Accepted, footnotes have been added for each database.
80	76529	1	4	41	4	41	Why only in "engineering" journals and not other journals (like Earth sciences, environmental physics, etc.)? (Claudio Cassardo, University of Torino)	Two lines later we also discuss agricultural and biological science literature - just as examples of trends. There is not enough space to present an analysis of all types of literature and we do not feel that this is necessary.
81	71596	1	4	41	4	42	It would be interesting to explain why the engineering journals are not increasing the publication of papers on climate change in the last four decades. Is this an indicator of a lack of actual implementation of adaptation projects? (UNITED STATES OF AMERICA)	Agreed, but we cannot speculate on why the engineering literature has not increased like the others.
82	62300	1	4	43	44	0	some reference to the current literature here. (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	Accepted, we added a sentence with the total number of publications through 2012.
83	81472	1	5	13	5	14	Where interactions between the natural climate system and human society are mentioned, it may be most accurate to also include ecosystems or ecological/biological systems in the list of interacting systems. (Katharine Mach, IPCC WGII TSU)	Accepted, the word "ecosystems" has been inserted.
84	62301	1	5	13	13	0	WGII (what year?) (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	The word "now" in line 13 refers to the "current" WGII effort.
85	84960	1	5	15	5	16	The use of "likelihood" here makes it sound as if probabilities are being assigned to different development paths, which is not the case. This text could also make clear the fact that society has some control over the development path, depending on policy decisions, etc. (Michael Mastrandrea, IPCC WGII TSU)	Agreed. This sentence with the likelihood term has been deleted.
86	59726	1	5	19	5	24	Fonts are wholly unreadable without a magnifying glass. (fabrizio sassi, Naval Research Laboratory)	Legibility is not a problem on this line in the file distributed that was distributed for review by the TSU; the fonts do not change in this section of text. The figure fonts in the final draft all meet IPCC specifications.
87	76530	1	5	27	5	27	Why "anticipated" climate changes? Anticipated with respect to what? (Claudio Cassardo, University of Torino)	Anticipated with respect to changes in the climate changes associated with a doubling of CO ₂ .

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
88	80284	1	5	28	0	0	Since, this is 1st time use of SPM in this report, I think, it is appropriate to provide fullform of SPM - Summary for Policy Makers (SPM). (Tek Gurung, Freelance consultant)	Accepted, change has been made as suggested.
89	62302	1	5	28	28	0	ambiguous term " doubling of CO2" This should be clarified in more concrete terms (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	This is not ambiguous and is 'standard use' in these assessments.
90	68776	1	5	30	5	32	The use of qualitative as inaccurate guesses as opposed to quantitative as supported with calculations seems not completely fair. Qualitative would mean descriptive and quantitative based on calculations taking into account uncertainty. Preferably, quantitative is used for expectations given in numbers and formulas, whereas qualitative uses words to give expectations. (NETHERLANDS)	Good point, have replaced with 'low confidence'
91	81473	1	5	38	5	38	Presumably adaptation should be included here along with "impacts and vulnerability"? (Katharine Mach, IPCC WGII TSU)	Accepted, adaptation was added
92	80285	1	5	47	0	0	What does IS92 stand for in "... IPCC IS92 Scenarios"? There is no use of IS92 before this in this report/chapter. In other other places (e.g. http://www.ipcc.ch/ipccreports/sres/emission/index.php?idp=27), this has been referred as, "IPCC 1992 (IS92) scenarios". Therefore, for the benefit of new readers/reviewers it would be helpful to provide consistent use of such acronyms. (Tek Gurung, Freelance consultant)	have edited to include correct reference and year.
93	76531	1	5	51	5	51	"returning" please change with "lefting" (Claudio Cassardo, University of Torino)	Accepted, changed "returning" to "leaving".
94	65513	1	6	0	0	0	Figure 1-3 Scale bars are not clear. (Michael Miloshis, Charles Darwin University)	Figure dropped.
95	62016	1	6	3	6	4	The sentence referes to the "burning embers" diagram which is in chapter 19, not 18 as stated. (Jon Rosales, St. Lawrence University)	Accepted, added reference to Chapter 19.
96	81474	1	6	4	6	4	In addition to mention of chapter 18 here, chapter 19 should be mentioned--both consider reasons for concern, but only chapter 19 updates the "historic" form of the burning embers diagram. (Katharine Mach, IPCC WGII TSU)	Accepted, added reference to Chapter 19.
97	84961	1	6	4	6	4	This figure is discussed in both chapters 18 and 19 in AR5. (Michael Mastrandrea, IPCC WGII TSU)	Accepted, added reference to Chapter 19.
98	76532	1	6	8	6	8	add "the number of" between "in" and "regional" (Claudio Cassardo, University of Torino)	Accepted, but we have dropped this statement.
99	81475	1	6	8	6	8	For clarity, "likely" on this line could be italicized. (Katharine Mach, IPCC WGII TSU)	We have deleted the quotation from AR4 in this paragraph. We have also gone through the entire Final draft manuscript and checked all calibrated language for italics.
100	76533	1	6	15	6	15	"continues": to do what? (Claudio Cassardo, University of Torino)	Here "continues and expands" the regional and sectoral aspects of the IPCC assessment report series, as stated.
101	62303	1	6	15	15	0	Will continue... (Dan F. Orcherton, PACE-Pacific Centre for Envionment and Sustainable Development)	Rejected, present tense is appropriate here.
102	81476	1	6	16	6	16	The word "affect" might be more accurate here in place of "threaten," given that the assessment is neutral in its departure point. (Katharine Mach, IPCC WGII TSU)	Accepted, changed to "influence".
103	66149	1	6	17	0	0	This para on 4AR and on 5AR might include: 4AR added a new dimension by asseseing imapcts and adaptation under observed climate change....and 5 AR has expanded on this (Martin Parry, Imperial College)	Not here (this is wrong place), but have augmented description of AR4.
104	57104	1	6	17	6	19	Replace this sentence with a referenced list of stressors (you could copy it from the legend of figure 1-3). This list is likely to be more informative than the current figure 1-3, which slanted components are individually very poor as regards to detail. A table of stressors would be more informative than figure 1-3. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, figure has been deleted.
105	57105	1	6	22	6	36	Delete text (see my preceding comment to lines 17-19. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, figure has been deleted.
106	59727	1	6	23	6	36	For all practical purposes, the stacked figures are wholly unreadable (fabrizio sassi, Naval Research Laboratory)	Accepted, figure has been deleted.
107	80286	1	6	31	0	0	CMIP is first used here in this chapter (CMIP=Coupled Model Intercomparison Project). However, there is suggested footnote concerning CMIP from line 24-28 on page 8. It would be appropriate to have fullform of accronym in sequential order. (Tek Gurung, Freelance consultant)	Figure has been deleted. CMIP is defined in footnote where first used.

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108	79360	1	6	39	0	0	Treatment of uncertainty: these definitions remain very difficult to read and interpret. They also allow for an undefined level of 'expert opinion'. I would much prefer a more rigorous set of definitions of the strength of the evidence in terms of nr of peer reviewed sources of primary research, nr of systematic reviews / meta-analyses, degree of agreement / disagreement in findings. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	Thank you for these comments, which are useful for considering further revisions to the guidance on consistent treatment of uncertainties in the next assessment cycle.
109	71597	1	7	21	7	22	The following statement is very confusing, please clarify: "Consistent evidence does not necessarily imply a high degree of agreement, if, for example, evidence is consistent but judged to be low in quality." (UNITED STATES OF AMERICA)	Accepted. The confusing statement has been deleted.
110	68777	1	7	38	7	39	In relation to the other comment on qualitative and quantitative, here it is described more accurately by stating that 'quantitative analysis can be expressed probabilistically'. It would be good if a similar description is added for qualitative, f.e.: qualitative results are described to best expert knowledge and insight, however not probabilistically expressed. (NETHERLANDS)	No change made: We have no basis in the background documents to add something here, although this is a interesting point.
111	71598	1	7	38	8	4	The general public most likely will be confused by the definitions of confidence and likelihood. The authors should strongly consider including the confidence figure (including low, medium, high, etc. on the shaded confidence scale) and likelihood table from the 2010 IPCC Uncertainty Guidance document. (UNITED STATES OF AMERICA)	That figure is included in Box 1-1.
112	57106	1	7	53	7	53	Granted that the term «exceptionally unlikely» has already been adopted by the scientific CC community. However it is misleading, because it might mean that the occurrence of an unlikely event is an odd experience; i.e. the unlikely event is frequent. «Virtually unlikely» would have been a better expression. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Thank you for this comment, but as the reviewer notes, this term is already in use for the Fifth Assessment cycle.
113	68226	1	8	0	0	0	"We see a focus..." I recommend the use of "A focus is seen on..." (Elda Tancredi, National University of Lujan. IHDP-Argentina)	This comment refers to wording on page 12. We have deleted that phrase.
114	68778	1	8	1	8	1	limited circumstances' is unspecific. Replace with the number of times, or more specified conditions. (NETHERLANDS)	This is the language used in the Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties. We have, however, changed the text in response to the comment: "Additional terms used more occasionally are extremely likely: 95–100% probability,..."
115	57107	1	8	2	8	2	Replace «are» with «can» (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	The sentence has been edited to clarify the intended meaning. The use of 'are' is correct here.
116	76534	1	8	3	8	3	remove "be" (Claudio Cassardo, University of Torino)	Thanks, this was a mistake. The sentence has been revised.
117	79361	1	8	8	0	0	Scenarios used: rationale and differences between old and new sets of scenarios remain very difficult for the uninitiated to understand. Need to explain meaning of scenarios in RCP2.6 --> RCP 8.5 better. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	This is a good point, but 'rationale' is beyond the scope of this chapter. The reasoning was not an IPCC one, but made by some members of the community.
118	71042	1	8	10	8	39	This introductory section to section 1.1.3 about scenarios may be a little too general for the needs of readers of the WGII report, as it mostly just describes the change in scenario development process from the SRES to RCP scenarios. It would be helpful for readers to have information about what to expect in the WGII report; for example, to what extent impacts assessed in the WGII report are based on the RCPs. The 5th paragraph in the Executive Summary states both SRES and RCPs informed the impacts assessment so readers may expect these equally informed the assessment. Some effort to manage expectations in this regard would be useful. (CANADA)	We believe that some historical perspective is needed so that one can look at previous assessments and recognize the scenarios. A full diagnosis of the different impacts of these, RCP vs. SRES, is beyond this chapter, sorry. We are sympathetic to the request but do not have access to the information needed to do such a full analysis. NOTE that there is some discussion and figures showing the overall climate change for these overlapping scenarios and there is a note that the pollutants are very different. Note that the concentration vs. emission pathway is not clean in the RCPs in spite of their title, hence we have tried to explain how these scenarios are actually used.
119	63476	1	8	11	8	13	Delete the sentence "Historical uses...", as it does not provide any relevant information, and the report is already long enough. (GERMANY)	Agreed, we have deleted the sentence
120	81477	1	8	16	8	16	It would be helpful to clarify more explicitly whether the joint effort was of working groups 1 and 3 or of working groups 1, 2, and 3. (Katharine Mach, IPCC WGII TSU)	Agreed, text has been clarified as recommended

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
121	84963	1	8	19	8	19	This is a strange framing. The SRES scenarios explicitly did not include climate policy, but subsequent research certainly explored mitigation from these baselines. Currently, this sounds like such research was discouraged. (Michael Mastrandrea, IPCC WGII TSU)	Accepted, this line has been edited to clarify that research was not "forbade"
122	76535	1	8	21	8	21	add "projected for the" between "and" and "21st" (Claudio Cassardo, University of Torino)	Accepted, but section has been shortened and this no longer applies.
123	76536	1	8	24	8	28	I think this footnote refers more appropriately to page 20, when also CMIP5 is mentioned, than here. (Claudio Cassardo, University of Torino)	The footnote needs to be tied to the first use of CMIP here. No change.
124	76537	1	8	28	8	28	remove "]" at the end of the sentence (Claudio Cassardo, University of Torino)	Accepted, change made as suggested
125	71043	1	8	30	8	39	Suggest the following revisions for this paragraph about the RCPs. 1. This explanation of what the RCPs are does not seem correct and is not consistent with the descriptions of the RCPs elsewhere in the AR5. The RCPs are defined as concentration pathways and while originally generated by a specific IAM emission scenario, are not tied to that. 2. Not all of the RCPs are considered stabilization scenarios for the 21st century; therefore, referring to them as such is misleading. 3. The statement about government approval is misleading. The more appropriate point to make here is that in contrast to the IPCC-led SRES development process, the RCP process is led by the scientific community. The sentences on lines 36-39 are very unclear and potentially misleading. (CANADA)	We have edited this statement for clarification, but note that it is consistent with WGI language. The RCPs are also defined by their emissions, particularly for ozone and aerosols, and the mitigation of RF in each RCP is indeed through mitigation of emissions. The term 'stabilization' is indeed incorrect as some continue to rise afterwards. The RCP process was led by the small group of authors who wrote the RCP papers, not by the "scientific community."
126	84965	1	8	30	8	39	It could be useful to mention here that socioeconomic scenarios and radiative forcing pathways are not linked one-to-one in this effort. (Michael Mastrandrea, IPCC WGII TSU)	Yes, this is now noted in section 1.1.3.
127	76538	1	8	34	8	34	add "expressed" between "century" and "in" (Claudio Cassardo, University of Torino)	Clarified another way in response to comments above.
128	84964	1	8	35	8	35	Was the lack of government approval process a prime motivation worth mentioning here, or were there other motivations? (Michael Mastrandrea, IPCC WGII TSU)	Yes, have changed to peer-reviewed/journals, but not part of the IPCC process. We added a footnote that helps the reader understand the shift from CMIP3 to CMIP 5 and relations to AR4 and AR5.
129	71599	1	8	36	8	36	The connection between the anthropogenic emissions and climate forcing is weaker with the RCPs. This statement is difficult to understand. Isn't the relationship between emissions and forcing determined by physical laws? How can it be different between RCPs and SRES (if that is indeed what is implied)? (UNITED STATES OF AMERICA)	Section is rewritten, but still says basically the same thing. The RCPs used an outdated model that does not represent AR5 science, and WGI partly evaluated that. Yes the relationship is just biogeochemistry laws, but we do not know them that well. With the SRES, the entire community, through the writing of the WGI chapters, assessed the mapping of emissions to forcing, but here it was a simple model.
130	79095	1	8	38	0	0	should be changed to " the best estimation" (VIETNAM)	Section revised to take account of this and other comments.
131	80357	1	8	38	8	38	Please provide a specific reference to WGI. (Gian-Kasper Plattner, IPCC WGI TSU)	Yes, done, points to Ch. 11 & 12.
132	78181	1	8	44	9	11	A summary of these paragraphs could be done for the SPM. (Christiano de Campos, Petroleo Brasileiro SA)	Good idea. We suggested that the SPM include an ES bullet about the RCPs from Ch. 1 in the SPM, but we can only pass this on to the SPM team.
133	68225	1	8	45	0	0	"We identify..." I recommend to use "it is identified here..." (Elda Tancredi, National University of Lujan. IHDP-Argentina)	Accepted, have revised for clarification, but differently.
134	71600	1	8	47	8	47	SRES B1 matches RCP4.5 Only approximately - and the distinction ought to be made clearly. (UNITED STATES OF AMERICA)	Yes, very good point, revised.
135	71601	1	8	48	8	49	The text indicates that the RCP2.6 scenario falls "2 W m ⁻² below SRES B2." Should SRES B2 be replaced with either SRES B1 or RCP 4.5 since those scenarios are approximately 4 W m ⁻² in 2100, approximately 2 W m ⁻² more than SRES B2, which is 2 W m ⁻² below? SRES B2 is approximately 6 W m ⁻² below. (UNITED STATES OF AMERICA)	Yes, thanks, have fixed mistake.
136	81478	1	8	49	8	49	Is B1 meant here rather than B2? (Katharine Mach, IPCC WGII TSU)	Yes, fixed.
137	80358	1	8	51	8	54	The AR5 WGI Tables for RF are AII.6.1-5, not AII.2.16-22. Please revise and ensure consistency. (Gian-Kasper Plattner, IPCC WGI TSU)	Ouch, this was a mistake. Thanks for noting it.

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138	71602	1	8	52	8	53	These lines make an excellent point. The RCPs - for example - have much lower aerosols (land use effects, etc.) than the SRES and for this reason, comparing total radiative forcings as done in Figure 1-5 may be misleading. The caption and relevant text should explicitly explain these differences. (UNITED STATES OF AMERICA)	Yes, have re-emphasized the Fig here.
139	79094	1	9	0	0	0	grammar " ...sustainability is..." should be changed to "...sustainability are..." (VIETNAM)	Rejected - we cannot find to what this comment refers.
140	66240	1	9	0	14	0	The chapter is very well organized and balanced with quick recall followed by the objective of the report and the background (Leopold Some, Centre National de la Recherche Scientifique Technologique)	Thank you for this comment.
141	71044	1	9	4	9	11	The sentences on lines 5-6 are unclear. In the text in this paragraph, suggest mentioning that only multi-model mean changes in global mean temperature are being compared in Fig 1-5 and so does not convey a complete picture of the overlap between the SRES and RCP scenarios. (CANADA)	Yes, good point. Text has been added to note that the model std dev overlaps, and that the uncertainties (Ch. 12 WGI) are even larger.
142	81479	1	9	7	9	7	Is the pattern asserted here of RCP 8.5 above A2 and A1FI robust even with the indication on line 21 of the differences between CMIP5 and 3 (illustrated for only one scenario)? (Katharine Mach, IPCC WGII TSU)	Difficult question, robustness requires assess for formal uncertainty range (Ch. 12 WGI) and then whether they lie outside some probability range. We cannot do this and have softened the language. Nevertheless, most WGII studies will be using middle-of-the-road results.
143	84966	1	9	10	9	11	Please specify whether the temperatures here are ensemble means or something else. (Michael Mastrandrea, IPCC WGII TSU)	Yes, this is done in text and was already stated in caption.
144	57690	1	9	11	9	11	It would be important to also indicate the additional uncertainty associated with variation between climate models, using the numbers given in the WG1 report. (Jouni Räisänen, University of Helsinki)	This is useful, but not if one is just using this as a comparison of impact studies. The model std dev is now noted to overlap for the RCPs.
145	80359	1	9	13	9	21	Figure 1.5: There still appears to be insufficient details on the limited comparability between the different scenario generations, the text does not cover preSRES scenarios at all. Please add this crucial information in order to prevent any wrong interpretations or confusion. Much more information is needed describing this figure and explaining how exactly scenarios from different sources, different base years etc. are combined and made comparable. Most importantly, the figure needs to be consistent with what WGI AR5 Chapter 1 (and possibly Chapter 12) do when comparing scenarios and climate projections from FAR to AR5. (Gian-Kasper Plattner, IPCC WGI TSU)	The goal here was to compare SRES and RCPs for the WGII audience who will have seen impacts assessments based on both. As such the model mean is appropriate for differentiating impact studies. We are not attempting to go back to IS92 and the FAR. They are mentioned in the historical section, but not here. Much has been added and pointers to the WGI figures or a parallel version are now given and explained in the caption with refs to WGI Chapters.
146	57695	1	9	14	9	21	It requires a very careful reading of the caption of Fig. 1-5 to understand that the differences between the AR4 and "AR5" A1B do not reflect differences between CMIP3 and CMIP5 models. I would reformulate the second half of the caption as follows: "The colored lines represent decadal ensemble mean temperature change for the RCP scenarios from CMIP5 models, and the yellow circles the same for the SRES A1B scenario from CMIP3 models (AR5 WG1 Chapters 11-12 and Annex II Table AII.7.5a). The colored squares show the temperature change for all six SRES scenarios based on a simple climate model tuned to the CMIP3 models (AR4 WG1 Figure 10.26). The difference between the yellow circles and yellow squares reflects differences between the simple model and the original CMIP3 data". (Jouni Räisänen, University of Helsinki)	Thank you - we have taken most of this wording as is.
147	71603	1	9	17	9	17	For the uninformed, it would be helpful to explain why the SRES values needed to be shifted to match 2000. (UNITED STATES OF AMERICA)	Good point. The caption has been expanded here. The older simple model Rf's have changed (both aerosols and GHG), and this offset does not significantly affect the evolution of 21st century climate.
148	63477	1	9	24	9	36	It would be important to have more concrete information on the SSPs, the reference in line 28 is not enough. (GERMANY)	Accepted, two new references and more text have been added about the SSPs.
149	71045	1	9	26	9	28	Are not the SSPs themselves the human development pathways (rather than the linkage between the RCPs and development pathways)? Suggest clarifying. (CANADA)	We have slightly expanded the description of the SSP process for clarification.
150	63478	1	9	28	9	29	write "socioeconomic challenges to mitigation and adaptation" instead of "socioeconomic challenges to mitigation and socioeconomic challenges to adaptation" (GERMANY)	Accepted, change has been made.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
151	79362	1	9	39	0	0	Evolution of understanding of interaction between CC impacts, adaptation, vulnerability with human and sustainable development: this section is dominated by literature about the interaction between CC and poverty reduction and social justice, which is only one aspect of human and sustainable development. Development is about much more than poverty reduction in poor countries. I am surprised that there is no mention in this chapter about the role of economics - economic drivers of development as well as the role of economic analysis in coming to grips with assessing impacts, vulnerability and adaptation - I thought that there was ample literature about this over the last 5 years+ (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	We have added more emphasis on the role of economic thinking even though the development literature has long recognized development is more complex than mere economic growth.
152	81480	1	9	39	0	0	Section 1.1.4. It may be beneficial to add subsections to this section for clarity. Additionally, the chapter team should ensure very careful coordination with the final key findings of the relevant chapters, tightening and shortening this introduction as much as possible. (Katharine Mach, IPCC WGII TSU)	Great suggestion, subheadings have been added to this section and the section has been edited for succinctness
153	81481	1	9	42	9	43	In this introduction of "unavoidable climate change impacts," it might be helpful to specify that these impacts and risks are associated with locked in climate change, whereas human agency and choices remain especially regarding risks relevant to the 2nd half of the 21st-century. (Katharine Mach, IPCC WGII TSU)	Accepted, wording changed to reflect committed climate change.
154	71604	1	9	44	9	45	Hawkins and Sutton seems not to be an appropriate work to cite here. It is about the relative contributions of imperfect knowledge of initial conditions, future emissions, and climate response, to overall uncertainty in future temperature. Please check that the statement made here here actually supported by this article. (UNITED STATES OF AMERICA)	Agreed, this reference has been deleted in this context.
155	60868	1	9	45	9	45	This statement is slightly misleading. The Hawkins/Sutton paper only considered temperature changes. Model uncertainty might be dominant for regional precipitation changes. This point is discussed in Ch.3, Section 3.3.1, I.15-24. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	Agreed, this reference has been deleted in this context.
156	76539	1	9	51	9	51	change "physical" with "latter", as 'physical' is less general than 'biophysical' (Claudio Cassardo, University of Torino)	Change made in Final chapter with a different sentence structure The term biophysical appears first, to convey a broader set of factors. The second related sentence, retains the term physical next to social, to convey their complementarities.
157	77946	1	10	0	11	0	The definition (as above) should enable a better interpretation of applications of maldaptation in these pages. (Krishna Rao Pinninti, Rutgers University)	Maladaptation figures now in this section as a central issue.
158	71046	1	10	4	10	7	Suggest that the evolution of the term "vulnerability" may warrant some additional discussion. The TAR definition, which was also adopted in the AR4, did capture structural conditions of poverty and inequality as a element of adaptive capacity. The fundamental change in the SREX and adopted in the AR5 was to separate exposure. This recognized socio-economic conditions as the determinant of vulnerability and that this is independent of any climate factors. (CANADA)	Accepted, we have created a new subsection 1.1.4.1. Vulnerability and Multiple Stressors. We have added the AR5 definition of vulnerability. Text and new figure in section 1.1.4 addresses the role of social and economic stressors.
159	78667	1	10	4	10	8	Please provide the definition used in AR5 explicitly (with reference to the SREX, assuming that the same definition is used). (Philippe Marbaix, Université catholique de Louvain)	The definition as per the AR5 glossary has been added to this section.
160	57117	1	10	9	0	0	add "environmental insecurity" - papers are available to support this; in addition, this is in line with chapter 3.5.1. where "water security is addressed". (some of the papers include: 1. Mihajlov, Andjelka and Stevanovic-Carapina, Hristina Environmental (In)Security from Citizens Perspective, Chapter 11 In: Advances in Environmental Research Vol 7,pp 1-14, Editor: Justin A.Daniels, 2010 Nova Science Publ.Inc., USA ; 2. Mihajlov, Andjelka and Aleksic, Danko Western Balkan Environmental Security, Regional and Local, in the Proceedings "Energy Security and Environment in the Western Balkans", Jouni Jarvinen, Emma Hakala (Editors), 2012 University of Helsinki, Aleksanteri Institute; 3. Mihajlov A. Ed., List of authors, Local Environmental Security, 2009, OSCE, Copperatione Italiana, and Environmental Ambassadors for Sustainable Development, Project Report) (Andjelka Mihajlov, Faculty of Technical Sciences University of Novi Sad / Environmental Ambassadors for Sustainable Development)	Thank you for the good suggestion, we have added "environmental insecurity".

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
161	57119	1	10	9	0	0	add "environmental insecurity" - papers are available to support this; in addition, this is in line with chapter 3.5.1. where "water security is addressed". (some of the papers include: 1. Mihajlov, Andjelka and Stevanovic-Carapina, Hristina Environmental (In)Security from Citizens Perspective, Chapter 11 In: Advances in Environmental Research Vol 7, pp 1-14, Editor: Justin A. Daniels, 2010 Nova Science Publ. Inc., USA ; 2. Mihajlov, Andjelka and Aleksic, Danko Western Balkan Environmental Security, Regional and Local, in the Proceedings "Energy Security and Environment in the Western Balkans", Jouni Jarvinen, Emma Hakala (Editors), 2012 University of Helsinki, Aleksanteri Institute; 3. Mihajlov A. Ed., List of authors, Local Environmental Security, 2009, OSCE, Copperatione Italiana, and Environmental Ambassadors for Sustainable Development, Project Report) (Andjelka Mihajlov, Faculty of Technical Sciences University of Novi Sad / Environmental Ambassadors for Sustainable Development)	Same comment as above
162	81482	1	10	9	10	9	Here, instead of "reverse," would it be more accurate to say "slow down and even reverse"? (Katharine Mach, IPCC WGII TSU)	Agreed, text has been changed to "slow down or reverse past development achievements"
163	63479	1	10	14	10	15	The statement in this sentence is too simplifying. You may want to check, e.g., Gupta et al. "The Adaptive Capacity Wheel:..." in Environmental Science & Policy 13 (2010), 459-471 or Jones et al. "Towards a characterization of adaptive capacity:...", ODI Background Note December 2010. Here you will find further aspects influencing adaptive capacity. (GERMANY)	Great suggestion, Gupta et al has been included as reference and sentence reworded to prevent such simplicity
164	63480	1	10	15	10	17	This statement is not only valid for Africa, but - in this general terms - for all developing countries. (GERMANY)	Thanks, the reference to Africa was replaced with "less developed countries".
165	80287	1	10	15	10	18	The statement starting with, "For example, ... , health care and education." also the same in Asian countries. So would it be possible to also mention "African and Asian continents" instead of just saying African? (Tek Gurung, Freelance consultant)	The sentence in question has been deleted.
166	71605	1	10	17	19	17	inappropriate housing is a strange phrase. Please consider revising the text. (UNITED STATES OF AMERICA)	Accepted. The revised sentence reads as follows: "For example, adaptive capacity in many urban centers in less developed countries is constrained by poverty, unemployment, quality of housing, or lack of access to potable water, sanitation, health care, and education interacting with land degradation, water stress, or biodiversity loss."
167	71606	1	10	18	10	20	The authors may want to consider citing Cutter et al.'s work on baseline resilience indicators for communities. Though the work is not focused specifically on climate risk, their use of socioeconomic data to identify community vulnerabilities and resilience are pertinent to this work. A citation for this work follows: Susan L. Cutter, Christopher G. Burton, and Christopher T. Emrich, published in the Journal of Homeland Security and Emergency Management, Volume 7, Issue 1, Article 51, 2010 (UNITED STATES OF AMERICA)	Thanks for suggestion, but this section is already too heavy on citations. This comment is more linked to chapter 20 that has a longer assessment on the resilience literature.
168	60869	1	10	22	10	24	Sustainability should be perceived as the overarching dynamic framework within which climate resilience should be factored in, rather than the other way around. Although reference is made to chapters 20.2 and 20.3.3, the "equitable distribution in human systems" should be further explained in this section as well. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	This chapter uses the definition of sustainability of the AR5 glossary.
169	62017	1	10	23	10	23	The term "endurance" is not appropriate and could be changed to "enduring viability." (Jon Rosales, St. Lawrence University)	The sentence in question has been.
170	71047	1	10	24	10	27	As highlighted in Canada's general comments on the WGII report, the terms introduced here for two eras are confusing and are not widely used in the scientific literature. The same points can be made effectively using purely objective language - such as "near term (2030-2040)" and "longer term (2080-2100)". (CANADA)	We have deleted the language about era of climate options and the era of climate responsibility. In the Final draft we refer use the term "era" to apply to the "nearer-term" and "longer-term".
171	78182	1	10	24	10	27	The approach of climate responsibility period versus climate options approach is an important insight, could be further explored in other chapters whenever possible. (Christiano de Campos, Petroleo Brasileiro SA)	We have deleted this language and refer now in a later part of this section to a clearer and more traditional use of the term "eras"
172	59724	1	10	25	10	25	eras or areas? (fabrizio sassi, Naval Research Laboratory)	We have deleted this language and refer now in a later part of this section to a clearer and more traditional use of the term "eras"
173	63481	1	10	25	10	27	Where do these concepts of climate responsibility and climate options come from, I was missing a reference for them - or a more detailed explanation, how the concepts were generated. If it is described somewhere else in the report of WGII, refer to it. (GERMANY)	We have deleted this language and refer now in a later part of this section to a clearer and more traditional use of the term "eras"

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
174	71607	1	10	25	10	27	The introduction of these artificial "eras" is confusing. Their descriptions are difficult to follow and their application is not intuitive. The authors should strongly consider dropping this new terminology or revising it for clarity - perhaps just using the indicative time horizons as opposed to newly coined terms. (UNITED STATES OF AMERICA)	We have deleted this language and refer now in a later part of this section to a clearer and more traditional use of the term "eras"
175	78665	1	10	25	10	27	I do not think that the so-called "era of climate options" (if it is in the second part of the century and beyond) can be viewed as "the opportunity space" : opportunities to mitigate climate change and impacts exist already, this is very ambiguous. (Philippe Marbaix, Université catholique de Louvain)	We have deleted this language and refer now in a later part of this section to a clear use of the term eras, as a general narrative arising in this Report
176	62304	1	10	29	30	0	missing reference (behind "methodological scholarship") (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	We have deleted this section with this sentence, for clarity and space.
177	76540	1	10	37	10	37	add "of these sources", or simply "sources", after "All" (Claudio Cassardo, University of Torino)	We have deleted this section, for clarity and space.
178	81483	1	10	40	10	46	On lines 40 and 46, should the role of values in addition to ethics be referenced? (Katharine Mach, IPCC WGII TSU)	Rejected, we focus this particular paragraph on ethics and potential "unfair outcomes"; values are discussed in section 1.1.4.3 in the final chapter.
179	79363	1	10	42	10	42	Change "needs" to "resources (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	Accepted, changed to "resources"
180	63482	1	10	45	10	45	"...that MAY have negative consequences for local and marginalized communities"; insert the "may", as the consequences for communities are not that straightforward as it is often suggested in the literature on land grabbing. (GERMANY)	Not accepted, we do not need to use the word "may" because we are talking here about projects that specifically have "negative consequences"
181	57108	1	10	48	10	51	Confusing piece of text, particularly the segment beginning «...attention to...systems...» because this fragment does not have an evident connection to the text preceding it. It seems that a verb is somewhere missing. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, this sentence has been deleted to avoid such lack of flow
182	64344	1	10	48	10	51	While issues of ethics and equity are an important new focus of research relevant to WGII, the main points are captured well in lines 40 - 47, while this final sentence seems to take the discussion over the top. Framing adaptation so dramatically tends to position it as the key to solving all of the World's ills. This is inappropriate. It also has policy implications with respect to the scope of what should be supported by climate change adaptation funds. When that scope becomes everything, the issue becomes meaningless. (Don Lemmen, Canada National Study)	Accepted, the last two sentences of this paragraph have been deleted
183	81484	1	10	48	10	51	Has this change in linkage also reflected changes in understanding of determinants of vulnerability? (Katharine Mach, IPCC WGII TSU)	The sentences in question have been deleted.
184	79364	1	10	53	11	5	This paragraph on disagreements is too broad to meaningfully cover the complexities of the disagreement. Suggest the paragraph is re-written. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	Accepted, the paragraph has been shortened and rewritten for clarity.
185	62305	1	10	53	53	0	relates with development complex and contested (ambiguous and lacking substance) (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	Accepted, the sentence with the phrase in question has been deleted.
186	57109	1	11	2	11	2	What does «development as usual» mean? (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, the phrase in question has been deleted
187	79365	1	11	3	11	4	Both the understanding of what is meant by "corrected" and what is meant by "development as usual" needs to be explained/defined. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	Accepted, the phrase in question has been deleted
188	81485	1	11	7	11	15	Further citations should be provided for this paragraph. (Katharine Mach, IPCC WGII TSU)	Earlier drafts of this section had substantive citations to several UN entities and NGOs. Due to the nature of chapter 1 and given that the claims made here are easily documented in subsequent chapters, the author team decided to delete references to the several UN system reports such as World Bank, UNESCO, UNICEF, WHO etc taking up the issue of climate change. We inserted references to the chapters that are devoted to the topic of adaptation.
189	64265	1	11	13	11	13	I suggest add: "....opportunities and limits of this concept AND THEIR SCOPE." referring to green growth. (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	We agree but the sentence in question has been deleted.
190	81486	1	11	17	11	18	This statement is also very much relevant to chapters 14-17, beyond the regional chapters, it seems, which could be mentioned. (Katharine Mach, IPCC WGII TSU)	Accepted, we have inserted a reference to chapters 14-17 as suggested and we also mention the regional chapters.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
191	84967	1	11	17	11	18	Is the logic correct here? It almost seems that the reverse would be true, but if not, please clarify. (Michael Mastrandrea, IPCC WGII TSU)	This paragraph has been edited and such relation are now more clearly stated.
192	62018	1	11	17	11	31	The evidence included in this paragraph does not support the claim made. The claim being made is that climate change policy so far has focused more on mitigation and impacts, not adaptation. To support this claim, evidence is drawn from national communications to the UNFCCC. The problem is that while adaptation needs are intended to be included in these communications, in practice these communications focus on mitigation. It has not been until recently that member states are providing NAPAs. Therefore, the metric being used in this paragraph to show that less attention has been given to adaptation by member states does not reflect their actual concern for adaptation. If this evidence is to be included in AR5, along with figure 1-6, the narrative should be more nuanced to say that much less documentation to the UNFCCC has been devoted to adaptation than mitigation... Implying that documentation on adaptation needs to catch up with mitigation within this body. (Jon Rosales, St. Lawrence University)	Accepted, the issue of now more clearly treated in a substantively revised version of this paragraph. Also, we deleted the figure that contained an analysis of the NAPAs.
193	64266	1	11	18	11	18	I suggest add: " The need for improve POLICIES AND decision analysis has also" (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	Accepted, the paragraph has been edited and now refers to "adaptation policies".
194	71048	1	11	22	11	31	Suggest these two sentences be shortened, and the discussion be more nuanced. Figure 1-6 could also be removed to save space. The analysis of Gagnon-Lebrun and Agrawala is based on the assumption that the amount of space devoted to specific issues in National Communications is proportionate to the attention an issue is given in a particular country. But this assumption is incorrect - National Communications follow a prescribed template that is biased towards mitigation issues. While it is correct that recent National Communications do reflect progress in adaptation, it is reflected in the substantive content of those documents - not the number of pages devoted to the topic. (CANADA)	Accepted in part, Figure 1-6 has been deleted. But we retained the findings of the Gagnon-Lebrun reference and we added reference to a similar analysis from Gutierrez and Espinosa (2010). We think these references are important and relevant to the topic.
195	60870	1	11	23	11	24	There is another excellent paper which speaks to the importance of organisations and institutions: Dovers, S.R., Hezri, A.A. (2010). Institutions and policy processes: the means to the ends of adaptation. WIRES Climate Change 1: 212-231. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	We reviewed the paper and found that it dealt mostly with institutions. We did not find a good place to insert the reference in this section.
196	71608	1	11	25	11	25	The work cited here is relatively old (2006). Is there a more recent citation? (UNITED STATES OF AMERICA)	Accepted, we added reference to a similar analysis by Gutierrez and Espinosa (2010) and the NAPAs from Iran (2010) and India (2012). .
197	81487	1	11	26	11	31	Is it possible to give a more global view of relevant trends? (Katharine Mach, IPCC WGII TSU)	We have deleted figure 1-6 with the analysis of the Latin American NAPAs. There is just not enough space to explain the outline and content of NAPAs, even for one region.
198	64267	1	11	34	11	38	Only for aclaration: Not is the same in the Second Communication recently finish(2013) by Cuba, where adaptation analysis and measures is one of the main task in the country, mainly against sea level rise taking into account the Cuban island character. (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	We have deleted figure 1-6 with the Latin American NAPAs.
199	76970	1	11	34	11	38	Update information of the Chile´s second national communication of climate change (CHILE)	We have deleted figure 1-6 with the information for Chile.
200	62306	1	11	38	38	0	no need for URL in text citation .This should be in general bibliography (Dan F. Orcherton, PACE-Pacific Centre for Enivonment and Sustainable Development)	We have deleted figure 1-6 and caption with the URL.
201	78068	1	11	42	0	0	There is a 2013 OECD document (ENV/EPOC/WPBWE(2013)2/REV1) that focuses on issues around development, water, and climate adaptation/mitigation that is very relevant and worth citing here (John Matthews, Conservation Internatonal)	Accepted, the citation has been added.
202	76541	1	11	50	11	50	change "this literature" with "these arguments" (Claudio Cassardo, University of Torino)	The sentence in question has been deleted.
203	71049	1	11	52	12	12	Suggest expanding this discussion of transformation given its fundamental importance to many elements of the WGII report (and as part of the approved outline for the Synthesis Report). "Change in the fundamental attributes of a system" is ambiguous. Transitioning to a low carbon economy is an obvious transformational change. Providing examples related to adaptation (and linkages with development and DRR) would be helpful to better understand what is meant by the term. (CANADA)	This section has been edited and the Final draft cites chapter 20, which has extensive discussions on this issue.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
204	64269	1	12	0	17	0	I suggest to shorten point 1.2 Major Conclusions of the WG II Fourth Assessment Report, and put the main attention in AR5, that is our task, establishing our analysis from 2007 year, that have happened from this year. Only mentioned main points in AR4 that is used as base for AR5 analysis. (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	We have shortened all parts of this section, but the section is required as part of the IPCC Plenary Approved outline for AR5. We have summarized the conclusions from AR4 that we considered most relevant to the AR5 chapters.
205	63483	1	12	1	12	2	The IPCC SREX should have a much more prominent role in this section 1.1.4, as it is a key document of the IPCC with regard to the topic of the section. (GERMANY)	Section 1.1.4 is about the evolution of understanding of the interactions of Evolution of Understanding the Interaction between Climate Change Impacts, Adaptation, and Vulnerability with Human and Sustainable Development - not findings of the SREX, which are in section 1.3.2.
206	62307	1	12	6	6	0	"emerging literature" (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	This section has been edited and more closely linked to chapter 20 which has extensive discussions on this issue.
207	81488	1	12	6	12	7	This sentence is a bit circular given the 2 mentions of "transformation." Could the 1st instance be replaced by "fundamental alterations of values..."? (Katharine Mach, IPCC WGII TSU)	this section has been condensed into a new subsection with such circularity avoided.
208	71050	1	12	14	12	30	Canada has suggested in general comment to avoid the use of the terms era of climate responsibility and era of climate options, and use more objective terms instead. This is the paragraph in the underlying report where these terms are first introduced and defined/described. The explanation for the creation of these terms seems weak. From this text it is not clear whether or not these eras are intended to be overlapping or parallel time periods (the emphasis is on relative efforts on adaptation vs. mitigation). This raises serious questions then about how these terms morphed into terms attached to 'near-term (up to 2040s)' and 'longer term' (towards end of the century) time periods in the SPM. Suggest revising this paragraph to avoid the use of these terms in an IPCC report. In so doing, careful attention should also be paid when using the "planetary boundary" language of Rockstrom et al., 2009, since this is another term that is still novel and has not yet been widely endorsed by the scientific community. We understand that the ICSU Future Earth Project, under its just-forming Science Committee, will be trying to advance the concept and its definition. Therefore, it is recommended that at this stage, the IPCC avoid endorsing the concept but point to it as an emerging conceptual model undergoing further development under ICSU. (CANADA)	The section has been edited and no longer introduces the terms, it mentions the idea of two eras along the lines of a narrative emerging from the AR5 synthesis products.
209	78664	1	12	14	12	30	I think that this paragraph needs an in-depth revision to make it clearer and closer to the reality of resilience, adaptation, and mitigation - in particular their timing. As far as I could find, the main reference - Rockström et al. 2009 - does not discuss "societal stressors" mentioned here, and the other reference - Raworth 2012 - is to a "discussion paper" by an NGO in which it is written that it is a "work in progress". More references are needed. The concept of "planetary boundaries created by interactions of biophysical and societal stressors" is not made clear in this discussion. This is an important discussion because societal factors have an important influence on vulnerability, resilience, etc., but the concepts are presented in a very unclear manner. The term "planetary boundaries", if used, should be used in close agreement with its definition in the literature (threshold levels ?), summarised in a clear way. (Philippe Marbaix, Université catholique de Louvain)	This section has been substantively edited and no longer uses the concept planetary boundaries
210	57110	1	12	14	12	37	Delete lines 14 to 30 together with their accompanying figure 1-7. The text in those lines does not add anything meaningful to understand the problem of the limits to growth and development vis-à-vis the condition of the environment. Reading this text is difficult without a clear statement of the meaning of some terms, like «opportunity space», «planetary boundaries» and other metaphors. For instance, (lines 23-24) «...climate change impacts can be envisioned as a double edged sword: entailing both an era of responsibility and an era of climate options.» This segment simply means that action on climate change faces us up to trade-offs between growth and development and the condition of our biophysical environment. Too much attention is given to a model that is undoubtedly ingenious but epistemically is neither better nor worse than many other relevant models around. The model's authors recognize, e.g., that «...[O]ur proposed boundaries are rough, first estimates only, surrounded by large uncertainties and knowledge gaps...» (abstract of the article «Planetary boundaries: exploring the safe operating space for humanity.» Ecology and Society 14(2): 32. [online] URL: http://www.ecologyandsociety.org/vol14/iss2/art32/ . Figure 1.7 is extremely difficult to understand, even with the aid of the text in lines 14-30 and its own legend. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	These lines have been substantively and the section no longer uses this language
211	62308	1	12	14	14	0	climate science is advancing "very" rapidly (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	accepted

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212	64268	1	12	15	12	16	I suggest add: " This provide s an " opprtunity space " for policy relevant information AND INTEGRATION to support policy decisions " (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	accepted
213	62019	1	12	15	12	17	This sentence is not clear. Rewrite. (Jon Rosales, St. Lawrence University)	accepted
214	58230	1	12	18	0	20	I suggest to best support the sustainability concept based in biophysical limits to incorporate the reference Fischer, J. M. Manning, A.D. Steffen, W. Rose, D.B. Daniell, K. Felton, A. Garnett, S. Gilna, B. Heinsohn, R. Lindenmayer, D.B. MacDonald, B. Mills, F.Newell, B.Reid, J. Robin, L. Sherren, K. Wade, A. 2007 Mind the sustainability gap. Trends in Ecology and Evolution 22 (12): 621-624. In my opinion also is interesting the point of view peresented in the UNEP Report 2012: Inclusive Wealth Report. Measuring progress toward sustainability[UNU-IHDP and UNEP (2012). Inclusive Wealth Report 2012. Both works can contribute to a better understanding of the idea of sustainability in a finite world (Ricardo Anadon, University of Oviedo)	This section has been edited and the discussion on sustainability limited to the definition in AR5.
215	71609	1	12	18	12	20	Here again the term "planetary boundaries" is puzzling. The meaning of this sentence is obscure; please clarify. (UNITED STATES OF AMERICA)	Terminology no longer used in chapter.
216	81489	1	12	23	12	23	Usage of the phrase "double edged sword" does not seem to be the clearest word choice possible. (Katharine Mach, IPCC WGII TSU)	Accepted, phrase deleted.
217	59725	1	12	24	12	25	again, era or areas? (fabrizio sassi, Naval Research Laboratory)	The correct word is "era" and in our Final draft we use it to refer to the "near-term era of committed climate change" and the "longer-term era of climate options" (during the second half of the 21st century and beyond).
218	60871	1	12	24	12	42	I would expect to see a reference to Stafford-Smith et al (2010) in this paragraph on the subject of incremental versus transformative. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	Accepted, we refer to Stafford-Smith et al (2011) in new subsection 1.1.4.4.
219	81490	1	12	25	12	25	Could it be indicated that these unavoidable impacts are those associated with locked in climate change? (Katharine Mach, IPCC WGII TSU)	Yes, we have edited the section to refer to "this near-term era of committed climate change" rather than the "era of responsibility".
220	71610	1	12	25	12	30	It is not clear whether or not the era of responsibility and the era of climate options occur at the same time. As explained here, it seems like we're experiencing both of these eras right now. Is that right? (UNITED STATES OF AMERICA)	Yes, we have edited the section to refer to the "near-term era of committed climate change" rather than the "era of responsibility".
221	81491	1	12	27	12	27	For the mitigation described on this line, the relevant time frame could be mentioned--with mitigation choices now and in the coming decades determining the level of climate change realized in the 2nd half of the 21st century and beyond. (Katharine Mach, IPCC WGII TSU)	Accepted, we now refer to the "near-term era of committed climate change" rather than the "era of responsibility". And we refer now to a "longer-term era of climate options" during the second half of the 21st century and beyond, rather than simply an "era of climate options".
222	78666	1	12	27	12	28	I think that it is dangerous to use of the wording "era of climate options" - it seems to be understood as an era "when this or that option is taking place" (in other parts of the report, with reference to periods in the second part of this century), but many readers will understand that it is an era when an option has to be chosen. The definition of this "era" is especially blurred here, because it is described as "an opportunity space" including mitigation. Obviously, the "options" in terms of climate are also the consequence of mitigation efforts in the first half of the century. The discussion must absolutely take into account the very specific dynamic of climate change - action on mitigation has most of its effect in the medium to long-term, there is a lot of inertia everywhere - from society to infrastructure to climate system. (Philippe Marbaix, Université catholique de Louvain)	Accepted, we now refer to the "near-term era of committed climate change" rather than the "era of responsibility". And we refer now to a "longer-term era of climate options" during the second half of the 21st century and beyond, rather than simply an "era of climate options".
223	81492	1	12	40	0	0	Section 1.2. As much as possible, all subsections of 1.2 should be tightened and focused. (Katharine Mach, IPCC WGII TSU)	Section 1.2 has been tightened: section 1.2.2 has been deleted and sections 1.2.3 and 1.2.4 have been merged.
224	79366	1	12	42	13	20	Paragraph 1.2.1 is not well linked to AR5 in the description of the issues. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	It is hard to summarise chapter 1 of AR4 much less all of the AR4 issues in just a few paragraphs. This section provides a summary of relevant WGII AR4 findings. Everything we have highlighted in this seciton relates directly to AR5. We added an introductory paragraph to help establish this context for the section.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
225	80288	1	13	28	0	0	CCCIIV = ? as it is being used for the first time in this chapter. (Tek Gurung, Freelance consultant)	The acronym was incorrect, but the sentence has been deleted.
226	76542	1	13	28	13	28	can you explain the meaning of CCCIV here? I do not remember its meaning, and as me many readers... (Claudio Cassardo, University of Torino)	The acronym was incorrect, but the sentence has been deleted.
227	78594	1	13	35	14	37	the possibility of a "run-away" greenhouse effect through positive feedbacks is alluded to here. This possibility is a crucial aspect of the problem & needs to be addressed more directly & openly. Earlier assessments raised the possibility but how much uncertainty surrounds the issue (tipping-points, rates before & after the threshold is passed, what happens beyond that - further thresholds & tipping-points or does the net +ve feedback lose its steam? How have earlier reports dealt specifically with this issue & how has our thinking changed over time regarding it. I look for the last chapter to discuss where we are now on it - even if only to say specifically that too much uncertainty still surrounds the concept to say anything definitive - but presumably we are narrowing the uncertainty? (richard arthur fleming, canadian forest service)	The understanding of feedbacks to the physical climate systems is a WGI challenge. Here we are summarizing the findings presented in the WGII AR4 document.
228	76543	1	13	38	13	38	Add "listed below" after "RfC's" (Claudio Cassardo, University of Torino)	Accepted, we have substantially reworded the introduction to the list of the RFC.
229	71051	1	13	48	0	0	While its very important to state that the SPMs have been approved line-by-line by the IPCC plenary, the distinction between the SPM and the remaining elements of the report is lost in this reference (and the one on p. 14 line 45). Suggest adding a sentence or two to section 1.1 that highlights the significance of the SPM. (CANADA)	Reference to plenary approved language has been removed
230	66150	1	14	0	0	0	One reason that the burning embers diag was not included in 4AR is that we believed the text, quoted in the paras above here, are more specific and informative than the colouring scheme. Smith et al produced a 2nd generation burning embers diag in 2009, after pubn of the 4AR. The burning embers figure, in general, remains problematic in that a) the colour scheme is not scaled (only that dark colour is high risk and light is low) and b) the method of deriving the conclusions (ie the analysts opinions) is not specified, and so is not scientifically replicable in precise terms (except by those who devised it originally). For 5AR I would recommend more text that describes the method by which analysts derived their opinion. This description of method might make the daigrams more replicable by other analysts. I have commented on this in chapter 19 and the SPM. (Martin Parry, Imperial College)	We have rewritten this summary of the evolution of the RFC concept from the TAR through AR5. We do not present a burning embers figure in chapter 1.
231	62309	1	14	5	5	0	"megadeltas" (give specific examples); Bangladesh; etc. (Dan F. Orcherton, PACE-Pacific Centre for Envionment and Sustainable Development)	We have substituted direct quotes for the 5 definitions.
232	81493	1	14	9	14	9	Assuming "high confidence" was assigned calibrated uncertainty language in the respective assessment, it should be italicized here. (Katharine Mach, IPCC WGII TSU)	We have substituted direct quotes for the 5 definitions.
233	76544	1	14	29	14	29	add "changes" after "temperature" (Claudio Cassardo, University of Torino)	This paragraph was deleted
234	62310	1	14	32	33	0	which "agriculture ecosystems" ? (e.g upland tropical vs. temperate land wheat fields) ? (Dan F. Orcherton, PACE-Pacific Centre for Envionment and Sustainable Development)	This paragraph was deleted
235	71611	1	14	33	14	33	It is unclear what the authors are trying to say in the sentence beginning on this line. (UNITED STATES OF AMERICA)	This paragraph was deleted
236	81494	1	14	33	14	33	The word "spreader" should be clarified. (Katharine Mach, IPCC WGII TSU)	This paragraph was deleted
237	57111	1	14	35	14	35	«vulnerable» instead of «vulnerability»? (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	This paragraph was deleted
238	59728	1	14	35	14	35	replace vulnerability with vulnerable (fabrizio sassi, Naval Research Laboratory)	This paragraph was deleted
239	76545	1	14	35	14	35	change "vulnerability" to "vulnerable" (Claudio Cassardo, University of Torino)	This paragraph was deleted
240	71612	1	14	42	14	42	The term "point of departure" seems to be used here to mean a distinction or difference (between AR4 and AR5). Elsewhere the term seems to mean a starting point, or more specifically the body of knowledge on which the AR5 is based. It would be best to use terminology consistently throughout. (UNITED STATES OF AMERICA)	The phrase "Point of Departure" was assigned as a title for chapter 1 in the outline for AR5 approved by the IPCC in Plenary Session. The subchapter headings include both the setting, which we interpret to include the scientific knowledge base, as well as a review of relevant IPCC reports. Also we modified the sentence in question so it does not overstate the point about risk management.
241	81495	1	14	42	14	42	This sentence feels a bit overstated. Could "a point of departure to be drawn from the AR4 for the AR5" be used instead? (Katharine Mach, IPCC WGII TSU)	Accepted we have modified this sentence so that it does not overstate the point made about "risk".
242	76546	1	14	45	14	45	can you explain the meaning of SPM here? (Claudio Cassardo, University of Torino)	This paragraph was deleted.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
243	81496	1	14	45	14	45	The emphasis here on plenary approval seems a bit of an overemphasis given that all SPM statements are plenary approved. (Katharine Mach, IPCC WGII TSU)	This paragraph was deleted
244	81497	1	14	46	14	46	It could be clarified that the relevant report for this topic 5 statement is the synthesis report. (Katharine Mach, IPCC WGII TSU)	This paragraph was deleted.
245	81498	1	15	12	15	15	This statement feels a bit overstated and not completely accurate. The emphasis on risk reflects the findings of previous assessment, evolution of the literature, and effective framings for the nature of evidence available. (Katharine Mach, IPCC WGII TSU)	This paragraph was deleted.
246	71613	1	15	14	15	14	This is the first of several examples of the apparently inappropriate use of future tense. By the time this is read, "authors had to add conclusions". See also line 45 on this same page for example. (UNITED STATES OF AMERICA)	This paragraph was deleted
247	81499	1	15	14	15	14	A more balanced phrasing could be appropriate here: author teams assess the full range of possible outcomes, including high-probability outcomes and low-probability outcomes, especially where the latter are associated with high consequence. (Katharine Mach, IPCC WGII TSU)	This paragraph was deleted.
248	78600	1	15	19	16	15	Section 1.2.5. This section is a good start but I don't think it represents how complex the process of adaptation can be. Adaptive Capacity (AC) may have its own complex dynamics in space & time: thresholds, nonlinearities, feedbacks, connectivity, redundancies, [eng & ecol] resilience, flexibility, elasticity, & idiosyncracies [e.g., effectiveness depending on the nature of the perturbation]. E.g., if AC exceeded is there a complete collapse of all systems or are there 'fall-back' positions where, although some collapse has occurred, it is now possible to adapt by reconfiguring the remaining systems/elements? (richard arthur fleming, canadian forest service)	Accepted, we edited this section to bring in more key messages specifically about the interaction of decisions involving mitigation and adaptation.
249	81500	1	15	21	15	24	It would be preferable in this statement to communicate the findings of the 4th assessment report, per the scope of this section, rather than provide not-fully-substantiated assertions on shifts in understanding. (Katharine Mach, IPCC WGII TSU)	Accepted, we edited this section to bring in more key AR4 messages specifically about the interaction of decisions involving mitigation and adaptation.
250	81501	1	15	24	15	26	The relevance of this statement to the section is not completely clear, given the focus of 1.2.5 on the working group 2 contribution to the 4th assessment report. (Katharine Mach, IPCC WGII TSU)	Accepted, we edited this section to bring in more key AR4 messages specifically about the interaction of decisions involving mitigation and adaptation.
251	60872	1	15	25	16	26	Much of this section seems to be off the topic promised in the section heading: interaction of adaptation and mitigation. The quote from AR4 that adaptation and mitigation can complement each other is not explained/ elaborated. I suggest referring to an excellent recent treatment of the issues: Moser, S. (2012). Adaptation, mitigation, and their disharmonious discontents. Climatic Change. 111 (2): 165-175. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	Accepted, we edited this section to bring in more key AR4 messages specifically about the interaction of decisions involving mitigation and adaptation.
252	84969	1	15	31	15	49	Lines 31 and 48-49 are redundant. (Michael Mastrandrea, IPCC WGII TSU)	Accepted, the redundancy has been eliminated.
253	81502	1	15	37	15	37	It would be preferable to communicate the finding with less editorializing. (Katharine Mach, IPCC WGII TSU)	Accepted, we edited this section to bring in more direct messages about the interaction of decisions involving mitigation and adaptation from AR4
254	81503	1	15	43	15	49	The focus of these statements should be on the 4th assessment report given the scope of this section. (Katharine Mach, IPCC WGII TSU)	Accepted, we edited this section to bring in more key AR4 messages specifically about the interaction of decisions involving mitigation and adaptation
255	64345	1	15	45	0	0	Incorrect tense used twice on this line - future tense should be changed to past tense ("have worked" and "have produced". (Don Lemmen, Canada National Study)	Sentence in question has been deleted.
256	80289	1	15	46	0	0	"... IPCC Working Groups II, II & III ...". The II (second) coming twice appears a typo error. (Tek Gurung, Freelance consultant)	Sentence in question has been deleted.
257	59729	1	15	46	15	46	Groups I, II, and III, not "Groups II,II, and III" (fabrizio sassi, Naval Research Laboratory)	Sentence in question has been deleted.
258	71614	1	15	46	15	46	Clarify that this line refers to the SYR from AR4. (UNITED STATES OF AMERICA)	Sentence in question has been deleted.
259	76547	1	15	46	15	46	"II, II and III"... I suppose you meant "I, II and III" (Claudio Cassardo, University of Torino)	Sentence in question has been deleted.
260	63484	1	15	52	15	54	Avoid repetitions. The importance of human development/poverty and access to resources was already mentioned on page 3, l. 36 and p.10, l.16. It might be a good idea to recheck the whole chapter for repetitions and consistency. (GERMANY)	The paragraph in question has been deleted.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
261	57112	1	15	53	15	54	That trends in «economic globalization» is a stress exacerbating the vulnerability to climate change cannot be accepted as a stressor unless the meaning of economic globalization is clearly stated. O'Brien et al (Global Environmental Change 14 (2004) 303-313) define economic globalization as synonymous with free international trade and reductions in agricultural subsidies. These two conditions would favour the substitution of local food production with foreign one in developing countries, thereby producing misery for local farmers. If the meaning of economic globalization were different from O'Brien et al's, it should be clearly stated so. Otherwise, economic globalization could be understood as a condition inimical to trade protectionism and political isolationism. These last two features obviously do not contribute to effectively deal with a global issue like present and future impacts of climate change. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Good suggestion and comment, but in response to other reviews and the need for brevity, the sentence in question has been deleted.
262	63485	1	16	2	16	3	Will there be examples within the report for such low-cost options? If yes, refer to the respective chapter, if not, recheck the statement. (GERMANY)	Sentence in question has been deleted.
263	62311	1	16	3	3	0	cost/benefit (C/B) ratios (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	Sentence in question has been deleted.
264	62312	1	16	9	9	9	Meridional Overturning Circulation (MOC) (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	This comment must refer to line 9 on page 17. The entire section has been deleted due to need for space to cover mandated topics in our outline.
265	76548	1	16	22	16	22	remove "of the" (Claudio Cassardo, University of Torino)	This paragraph (and the remainder of Section 1.2.6) was deleted in its entirety.
266	71615	1	16	26	16	26	As written, the sentence is ambiguous. Consider including a list of gaps and limitations identified in AR4 for which significant progress is evident subsequently in the literature (if this is what the authors intended) (UNITED STATES OF AMERICA)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
267	81504	1	16	26	16	26	Given the examples in this list, the assertion of "significant progress" does not seem accurate for all of them. It may be more accurate to say "progress, and in some cases significant progress, is evident..." (Katharine Mach, IPCC WGII TSU)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
268	76549	1	16	28	16	28	insert "in" between "difficulty" and "discerning" (Claudio Cassardo, University of Torino)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
269	80290	1	16	36	0	0	"... A2 and B2 families." Not clear for new readers. (Tek Gurung, Freelance consultant)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
270	60873	1	16	38	16	40	Much of what is said here is repeated in lines 44-45. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
271	71616	1	16	38	16	43	The point about precipitation changes and consequences for water resources is made twice. (UNITED STATES OF AMERICA)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
272	76550	1	16	39	16	39	remove "that is" (Claudio Cassardo, University of Torino)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
273	81505	1	16	41	16	41	Casual usage of "likely" should be avoided here. (Katharine Mach, IPCC WGII TSU)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
274	78601	1	16	41	16	44	Dai 2012 Increasing drought under global warming in observations & models. Nature Climate Change is relevant to this theme (richard arthur fleming, canadian forest service)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
275	76551	1	16	44	16	44	change "due in part" with "also in part due" (Claudio Cassardo, University of Torino)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
276	71617	1	17	7	17	7	As written, the sentence is ambiguous. Consider including a list of gaps and limitations identified in AR4 for which more modest or little progress is evident subsequently in the literature (if this is what the authors intended) (UNITED STATES OF AMERICA)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
277	71618	1	17	8	17	8	Does "present day trends" mean trends in climate or in measures of climate impacts? (UNITED STATES OF AMERICA)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
278	76552	1	17	8	17	8	add "the" between "as" and "collapse" (Claudio Cassardo, University of Torino)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
279	66151	1	17	19	0	0	Is lack of info on costs and benefits still a major gap ? Is the increase in info here since 4AR not really small in relation to the need. There is a risk in this list (of new info now available) of implying that those topics that do not feature are now adequately informed. I suggest a short para which says something like:"in spite of incd info in (costs of impacts, costs and benefits of adaptation, [and you might list others]) there are still serious knowledge gaps in these areas'. (Martin Parry, Imperial College)	Yes, literature about "costs" has not increased relative to many other aspects - see figure 1-1. However, this entire section has been deleted due to need for space to cover mandated topics in our outline.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
280	81506	1	17	20	17	20	This statement needs clarification. (Katharine Mach, IPCC WGII TSU)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
281	62313	1	17	20	20	0	abrupts should be dangerous climate change (Dan F. Orcherton, PACE-Pacific Centre for Environment and Sustainable Development)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
282	71619	1	17	25	17	28	The conclusion described in this sentence needs a citation. (UNITED STATES OF AMERICA)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
283	64346	1	17	26	17	28	This statement should include references to other chapters and provides an opening for a potentially very useful discussion of the value of higher resolution climate information for informing climate adaptation. This needs to be placed in the context that some will seek the absence of such information as an excuse for not taking adaptive action. (Don Lemmen, Canada National Study)	The entire section has been deleted due to need for space to cover mandated topics in our outline.
284	79367	1	17	43	17	49	discussion of attribution: this doesn't fit here. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	We disagree. The topic of attribution is discussed in the reports that are summarized in this section.
285	71620	1	17	45	17	45	attribution to observed warming should be "attribution to observed climate change" since some impacts result from precipitation and other non-warming aspects of climate change. (UNITED STATES OF AMERICA)	Yes, we agree and have edited this section
286	71621	1	17	45	17	46	Also, "attribution of local impacts to observed warming in that region" ignores the real possibility that impacts in one region can be caused by climate change in another region. (UNITED STATES OF AMERICA)	This may be true, but most of the WGII attribution of change in systems is to climate change where it directly affects the systems. This statement does not preclude the comment, but such teleconnections would be part of a later assessment.
287	57113	1	17	51	0	0	Table 1-1. Editorial. The rightmost column should refer to figure 1-8 instead of figure 1-7 (as currently does) (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Figure numbers have been revised and cross checked with text.
288	78595	1	18	4	0	0	This section never seems to discuss whether 2oC is still thought to be the important threshold as in TAR. Has this threshold temp been shifted, or is such a threshold now considered misleading? Might make a clear statement of this here before sending the reader to later chapt. (richard arthur fleming, canadian forest service)	This section is based on previous IPCC reports and does not discuss this matter. No change needed.
289	76553	1	18	15	18	15	change "to focus" with "focused" (Claudio Cassardo, University of Torino)	Accepted, change made.
290	64270	1	18	15	18	16	I suggest add: " The report integrates perspectives from historically distinct research communities studying climate science, climate impacts, RISKS OF EXTREME EVENTS AND IMPACTS, climate adaptation and disaster risk management ". (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	Accepted, change made.
291	78596	1	18	17	18	18	Hansen et al. (2012 Perception of climate change. PNAS) has done some interesting work in this area (richard arthur fleming, canadian forest service)	The section refers to SREX results and is not an assessment of other literature.
292	81507	1	18	19	18	19	It would be more accurate here to say "weather-and climate-related events and disasters and in disaster risk management." (Katharine Mach, IPCC WGII TSU)	Accepted. Change made.
293	81508	1	18	20	18	20	As specific projections of disaster losses were not made, it may be more accurate to say "trends in disaster losses." (Katharine Mach, IPCC WGII TSU)	Accepted. Text now refers to observed trends "in disaster losses".
294	64271	1	18	23	18	24	I suggest add: ".....such as,POLICIES IMPROVEMENT, early-warning systems," (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	We feel that "options for risk management and adaptation" covers policy options as well as others.
295	76554	1	18	23	18	38	at line 23 and 38 it is written "climate events"; what is a climate event? I think you mean "climate-related events" as correctly written in line 30. So I suggest using always this last expression: a climate event by definition do not exist! (Claudio Cassardo, University of Torino)	We disagree, the text makes it clear that we are talking about weather and climate-related events and we give many examples in the bullets with key findings from the SREX. Also please note that we added some SREX findings about the first theme - changing climate and climate-related extreme events.
296	79093	1	18	27	0	0	comment on part 1.3.1.1: SREX should include the part for integration of CCA, DRR into policie, plans and strategies (VIETNAM)	We agree and we address this integration in the subsequent section 1.3.2.2.
297	64274	1	18	27	19	31	Do you agree with these findings or not ? You would to take sides (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	This section offers a summary of the SREX, per the official outline, and is not meant to offer an assessment of the SREX.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
298	78597	1	18	27	19	31	easier to follow if there was some structure to this long list. None of your examples seem to address the first theme? (richard arthur fleming, canadian forest service)	Very good suggestion; we reorganized the bullets and added some SREX findings addressing the first theme - changing climate and climate-related extreme events.
299	64273	1	18	40	18	40	I suggest add: "domestic product(GDP), JUST AS ENVIRONMENTAL AFFECTATIONS, are higher in developing countries " (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	Not accepted we used wording from SREX, the proposed inclusion is not into the SREX SPM.
300	71622	1	18	48	18	50	As written this sentence is not comprehensible. Please clarify. (UNITED STATES OF AMERICA)	Accepted, the bullet has been edited for clarity.
301	59730	1	19	1	19	32	Repetitive bullet points (fabrizio sassi, Naval Research Laboratory)	Accepted, repetitions deleted.
302	76555	1	19	4	19	4	"to reduce and transfer risks": where? Could you explain? (Claudio Cassardo, University of Torino)	Text has been reworded and no longer mentions "transfer of risks".
303	71623	1	19	5	19	5	Should "high confidence" be italicized? If the authors mean here to use official IPCC uncertainty language, then yes. (UNITED STATES OF AMERICA)	All uncertainty language is now italicized.
304	81509	1	19	5	19	5	As calibrated uncertainty language, "high confidence" should be italicized. (Katharine Mach, IPCC WGII TSU)	All uncertainty language is now italicized.
305	57114	1	19	6	19	6	«...hardware measures...». «Hardware» is a noun; it is here used as an adjective. What does it mean as an adjective? (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Incorrect term, has been deleted
306	57115	1	19	6	19	6	«...soft solutions such as from improving...» Delete «from» (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Text about "soft solutions" has ben deleted.
307	84970	1	19	6	19	6	I believe "hard" is meant instead of "hardware" here. (Michael Mastrandrea, IPCC WGII TSU)	Text about "hardware" and "soft solutions" has ben deleted.
308	71624	1	19	7	19	7	As written, this phrase is unclear; please revise the text. (UNITED STATES OF AMERICA)	Text about "hardware" and "soft solutions" has been deleted.
309	76556	1	19	7	19	7	change "risk" in "risks" (Claudio Cassardo, University of Torino)	cBut this particular text has been deleted.
310	64272	1	19	9	19	13	This bullet is the same of last bullet from line 27 to line 31 (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	The repetitive bulleted point has been deleted.
311	71625	1	19	9	19	13	This bulleted conclusion is repeated verbatim in lines 27-31 of this page (UNITED STATES OF AMERICA)	The repetitive bulleted point has been deleted.
312	61978	1	19	9	19	31	The paragraph in line 27~31 is the same with line 9~13, it is suggested to delete. (Yinlong Xu, Institute of Environment and Sustainable Development in Agriculture (IEDA), Chinese Academy of Agricultural Sciences (CAAS))	The repetitive bulleted point has been deleted.
313	80624	1	19	9	19	31	The content between line 9-13 is exactly the same as line 27-31. SUGGESTION: delete line 27-31 (Jiahua PAN, Chinese Academy of Social Sciences)	The repetitive bulleted point has been deleted.
314	71626	1	19	15	19	15	between people and countries should be "among people and among countries" (UNITED STATES OF AMERICA)	We prefer the word "between", though the word "among" is acceptable as well.
315	57116	1	19	27	19	31	Editorial. Delete. The text is the same as that in lines 9 - 13. (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	The repetitive bulleted point has been deleted.
316	59817	1	19	27	19	31	The bullet point is the exact same (ie has been repeated) as the point at line 9 on the same page. (AUSTRALIA)	The repetitive bulleted point has been deleted.
317	71627	1	19	27	19	31	This bullet is repeated. (UNITED STATES OF AMERICA)	The repetitive bulleted point has been deleted.
318	60874	1	19	29	19	31	Text is a repeat of lines 11-13. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	The repetitive bulleted point has been deleted.
319	81510	1	19	46	19	46	As calibrated uncertainty language, "robust evidence" and "high agreement" should be italicized. It would also be clearer to place these summary terms for evidence and agreement within parentheses at the end of the statement. Additionally, it would be preferable to cite the wording of the summary for policymakers rather than the fact sheet. (Katharine Mach, IPCC WGII TSU)	Accepted. Text revised. Calibrated language is italicized as in the SREX SPM, and we no longer refer to the fact sheet..
320	71052	1	19	46	19	49	Suggest deleting this sentence as it repeats of the bullet at the top of the same page (Page 19, lines 1-3). (CANADA)	Accepted, sentence deleted.
321	76557	1	20	24	20	29	the numbers reported in this sentence (and in the Table) do not give a clear idea as they are not compared with the absolute tital values, or at least the percentages... (Claudio Cassardo, University of Torino)	Lines 20-29 have been deleted.
322	60875	1	20	27	20	27	What is meant by a "baseline scenario" in this context? (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	The phrase has been deleted

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
323	71628	1	20	27	20	27	There is something wrong with the phrase beginning at the end of this line. (UNITED STATES OF AMERICA)	The sentence has been deleted
324	81511	1	20	38	0	0	Section 1.3.3. In the final draft, the chapter team should ensure that all calibrated uncertainty language used in this section is italicized for clarity, including summary terms for evidence and agreement, levels of confidence, and likelihood terms. (Katharine Mach, IPCC WGII TSU)	We do not include the uncertainty language in every statement, only in specific cases. See the carefully expanded opening section and footnote. This should address the problems with the SOD draft reviewed here. The whole section has been updated to the AR5 WGI final SPM, and the FD drafts of the chapters, available as of 30 Sept 2013.
325	78183	1	20	38	23	14	I missed the use of the two metrics of communication in this item: evidence and agreement. I suggest to reconcile if possible. (Christiano de Campos, Petroleo Brasileiro SA)	This is a summary of the most relevant WGI findings. We have added an introductory paragraph that helps the reader understand the level of uncertainty ascribed by WGI for the conclusions that we have referenced (by WGI chapter)
326	76558	1	20	42	20	42	add "reported" after "statements" (Claudio Cassardo, University of Torino)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
327	71629	1	20	45	20	45	Why are there "" around "climate"? (UNITED STATES OF AMERICA)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
328	78598	1	20	45	21	2	see also Dai 2012 Increasing drought under global warming in observations & models. Nature Climate Change (richard arthur fleming, canadian forest service)	Not relevant. This is a summary of WGI findings.
329	71053	1	20	45	21	13	These paragraphs on climate models and comparison with the AR4 are WGI issues with marginal relevance for the content of the WGII report. The results of climate modeling, as captured in next paragraphs, are what should be highlighted. Suggest these two paragraphs be deleted. (CANADA)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
330	57691	1	21	5	21	5	But differ in the long term: in which way? This sentence masks the very large overlap between the CMIP5 and CMIP3 projections, even in the long term. (Jouni Räisänen, University of Helsinki)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
331	71630	1	21	16	21	18	Over every continent except Antarctica, GHG has made a substantial contribution to surface temperature increases. It is probably true in Antarctica as well that GHG have TENDED to increase temperatures. The difference between Antarctica and other regions seems to be that in Antarctica other factors have counteracted this warming tendency from GHG. So the statement as written seems to be incorrect (strictly speaking). Consider appropriate reference to relevant sections of WG1 describing regional observed temperature trends (i.e., WG1 Ch 3?) (UNITED STATES OF AMERICA)	This placeholder section has been substantially revised to match the final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
332	60876	1	21	19	21	19	Could express warming for 2016-2035 relative to preindustrial temperatures. (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	This placeholder section has been substantially revised to match the final SPM & government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD. Comparison to pre-industrial for 2016-2035 cannot be done - see WGI final SPM.
333	57692	1	21	21	21	22	WG1 Ch. 12 formulation: For RCP4.5, 6.0 and 8.5, global temperatures are projected to *likely* exceed 2C warming with respect to preindustrial by 2100. Considering the range of the model results, there is a non-negligible possibility that the warming would remain under this limit for RCP4.5. (Jouni Räisänen, University of Helsinki)	This placeholder section has been substantially revised to match the final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD. Comparison to pre-industrial for 2016-2035 cannot be done - see WGI final SPM.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
334	68779	1	21	22	21	22	Please specify 'other research' by a reference or mentioning type of research, f.e. literature studies, discourse analysis, etc. (NETHERLANDS)	This placeholder section has been substantially revised to match the final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD. Comparison to pre-industrial for 2016-2035 cannot be done - see WGI final SPM.
335	58319	1	21	35	21	35	What is K-1 ? (Martin Pecheux, Institut des Foraminifères Symbiotiques)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
336	60407	1	21	36	21	36	Change "Average precipitation in a much warmer world" to "Average precipitation change in a much warmer world" (David Parker, Met Office Hadley Centre)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
337	71631	1	21	36	21	36	average precipitation in a much warmed world should be "changes in average precipitation." (UNITED STATES OF AMERICA)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
338	76559	1	21	38	21	38	"changes": in positive or negative? Could you specify please? (Claudio Cassardo, University of Torino)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
339	80291	1	21	41	21	48	In this paragraph, some facts about China, Taiwan and Mekong river may improve the weightage. We hear a lot of news about heavy rainfall, floods and landslides in these areas but there seems a lack of specific analysis for them. Although I'm not expert on these areas but time a again I hear/read news and become curious to know whether these have link to climate change. Chinese, Taiwanese and expert from these area should contribute here. (Tek Gurung, Freelance consultant)	Not relevant. This is a summary of WGI.
340	71632	1	21	45	21	45	Similar for the near term but differ in the long term. But the scenarios are different, so how is this comparison made? (UNITED STATES OF AMERICA)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
341	80292	1	22	4	22	14	Shouldn't there be some description regarding impact on El Niño and La Niña? There is no mention of these anywhere. Wondering if these fall outside of the climate change discourse? (Tek Gurung, Freelance consultant)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
342	76560	1	22	8	22	8	I know this is a real fussiness, but a "decline" of -0.0015 yr ⁻¹ (i.e. negative) for me is an increment... so or remove the minus sign (also from 0.0024), or change "increment" in "variation" (Claudio Cassardo, University of Torino)	Have tried to clarify signs and direction of change. This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
343	57693	1	22	24	22	26	It would be better to include the inter-model variation in these projections. WG1 Ch12 SOD, P. 12-51 gives: 7 +-4% for RCP2.6 and 25 +-7% for RCP8.5 (+- indicating intermodel standard deviation). (Jouni Räisänen, University of Helsinki)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
344	58320	1	22	32	22	32	What is PM ? (Martin Pecheux, Institut des Foraminifères Symbiotiques)	Particulate Matter. This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
345	78599	1	22	43	23	2	Might be interested in recent work on this by Hansen et al. (2012 Perception of climate change. PNAS) (richard arthur fleming, canadian forest service)	Not relevant. This is a summary of WGI.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
346	66034	1	22	46	22	48	It says that there are inconsistency with AR4 because new results do not support global increasing trend in droughts since 1970, but it is not clear if we are speaking about drought frequency or drought severity and duration. Besides this, as it is said in chapter 3, page 10, lines 34-46, a main problem lacks in the own definition of drought and the associated indicators. On the other hand, it says that it continues to be the lack of evidence regarding the sign of the trend of frequency/magnitude of floods at global scale (consistency with AR4), assertion that should be considered in the SPM and TS. (Maria-Carmen Llasat, University of Barcelona)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
347	57694	1	23	4	23	14	As it is hopeless to give a meaningful summary of regional climate changes in just 11 lines, I would suggest deleting this paragraph. Alternatively, more generic issues (nearly all land areas very likely to warm, with most of them likely to warm faster than the global average, large geographical and in some regions seasonal variations of precipitation change, etc.) could be discussed here, with a reference to WG1 Chapter 14 for more detailed information. (Jouni Räisänen, University of Helsinki)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
348	64347	1	23	4	23	14	Given the impossibility of summarizing regional climate change in a single paragraph, it would seem logical to delete this paragraph and add a sentence to the first paragraph of section 1.3.3 (p. 20) that key findings with respect to regional climate changes are discussed in each of the regional chapters of the WGII report. (Don Lemmen, Canada National Study)	This placeholder section has been substantially revised to match the approved SPM and final government draft of WGI chapters. This rewrite should fix some of the awkwardness of the SOD.
349	81512	1	23	21	23	21	Casual usage of "likely" should be avoided, as it is a reserved likelihood term. (Katharine Mach, IPCC WGII TSU)	Accepted, "likely" was deleted
350	81513	1	23	28	23	28	It should be clarified what is meant by "2004 data." (Katharine Mach, IPCC WGII TSU)	Accepted, this unnecessary note is deleted.
351	62020	1	23	28	23	42	Many readers will focus on the first part of the second paragraph where GHG emissions growth is highlighted and leave the report believing that climate change is being caused by Asia. I suggest if the IPCC highlights emissions growth in Asia, they should also state in the first of these two paragraphs where the emissions "base" continues to come from and has come from since industrialization (Annex B countries). If not, then delete the first two sentences in the second paragraphs (lines 36-39). This is a sensitive matter to non-Annex B countries, that is, "developing" countries. (Jon Rosales, St. Lawrence University)	Accepted, we deleted the paragraph. And clearly described the balance of emissions by source.
352	71633	1	23	29	23	29	all time high assumes that future emissions will be lower than this. Should say "high to date." (UNITED STATES OF AMERICA)	Yes, this has been fixed and is precise. We inserted the phrase "higher than in any previous year since 1750".
353	71054	1	23	36	23	42	This point is extremely relevant to WGIII, but its relevance to WGII is less clear. Suggest either deleting or making an explicit link to equity. (CANADA)	Accepted, we deleted the paragraph.
354	57492	1	23	51	23	54	"... the large-scale application of ... CDR..." in the second half of the 21-st century would be possible if theoretical investigations and field experiments will be provided during the first half of the 21-st century (as soon as possible). Because the CDR-geoengineering methods are not effective on the time-scale of tens of years, it is very probably that application of SRM-geoengineering (Solar Radiation Management) will be needed in the second half of the 21-st century. (Alexey Ryaboshapko, Institute of Global Climate and Ecology)	Perhaps this is true but we are summarising the findings in the WGIII report.
355	63486	1	23	51	23	54	Wording implies that CDR technologies are already at hand. Also: Please consider the large uncertainties attached to CDR and, thus, reformulate, e.g.: "...require net negative emission in the second half of the 21st century. The potential contribution of CDR on this has yet to be proven: CDR technologies are far from being operational and attended by a large set of risks. Pathways..." (GERMANY)	No change. We agree in general but are maintaining consistency with the WGIII report when we state that "CDR methods are not mature and have biogeochemical and technological limitations to their potential on a global scale and carry side effects and long-term consequences on a global scale [WGI-SPM, WGIII 6]. "
356	64275	1	24	4	24	6	Could you explain better ? This affirmation isn't support or isn't explained (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	The sentence has been deleted. The following conclusion relating to synergies and trade-offs was taken directly from the WGIII report: "While mitigation efforts generate costs and trade-offs, they also offer possible synergies because many of the policies that can mitigate GHGs also help address other policy goals, such as managing air pollution, water scarcity, or energy security."

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
357	56994	1	24	25	24	26	This is only true for some seasons. Other seasons have realised drastic decreases in precipitation (KENYA)	This comment is misnumbered somehow. It may refer to page 21. If so that section is based on WGI assessment and adopts their wordings.
358	81216	1	24	41	0	0	FAQ 1-1 Use of the phrase 'information basis' may be confusing for some readers. Authors may wish to add explanation on the different aspects of the literature – types of discipline, research communities, epistemologies, methodological approaches. (Monalisa Chatterjee, IPCC WGII TSU)	Accepted, we deleted the words "information basis"
359	81514	1	24	45	24	45	The wording here on non-journal literature could be clarified to indicate that, in some cases, consideration is needed in order to understand the state of knowledge on topics that may not be fully treated within the confines of journal literature. (Katharine Mach, IPCC WGII TSU)	Accepted this FAQ has been edited to convey the importance of other sources.
360	71634	1	24	53	24	53	Fundamental advances such as? (UNITED STATES OF AMERICA)	Accepted, deleted the word "fundamental"
361	81217	1	25	2	25	3	FAQ 1-2 An example will be very useful here. (Monalisa Chatterjee, IPCC WGII TSU)	We have expanded the answer to this FAQ to give the reader a feel for the types of systems affected and the interactions among systems and expalined the relationship with WG1 and WGIII. The sentence about "complexities", which called for an example, was removed.
362	56995	1	25	4	25	14	There is need to discuss climate change in the African continent so as to depict regional balance in repoting. (KENYA)	See response above. Also it would not seem appropriate to call attention to any one country in the context of this FAQ.
363	81218	1	25	9	0	0	FAQ 1-3 Besides the last 2-3 lines the answer is focused on why there is uncertainty in scientific understanding of how things are going to be in the future. The question and answer do not fit. (Monalisa Chatterjee, IPCC WGII TSU)	Accepted, we have expanded the answer to this FAQ and we added the two sets of terms used to communicate uncertainty.
364	77082	1	25	9	25	22	The answer to this question seems convoluted. Perhaps move the last sentence to the beginning, so it begins with an answer that directly addresses the question itself. The rest of the information on uncertainties can follow that statement, elaborating on the "degree of certainty" comment (Erin Coughlan, Red Cross / Red Crescent Climate Centre)	Accepted, we have greatly simplified the answer to this FAQ.
365	63487	1	30	0	0	0	Table 1-1: Signature of "River Runoff" can not be distinguished from "CO2". Both are green with black outline. (GERMANY)	The two are different colors, they may not have displayed well for you. The colors are easily distinguished in our Final draft.
366	71055	1	30	0	0	0	Suggest merging Table 1.1 with Figure 1.8 into a single Figure since the two are not independent. The coloured squares in Table 1.1 are only significant in terms of their use in Figure 1.8. If either of these diagrams were used separately, they would not make sense. Also, the reference in the last column should be to Fig 1.8 not 1.7. Once merged, these diagrams will be very useful. (CANADA)	Table 1-1 contains the key data that cannot be put in the figure. But the figure shows the overall pattern of all the changes that cannot be seen from the table. We have kept both but reworked the figure and an accompanying table.
367	71635	1	30	0	0	0	Table 1-1: How does this table handle cases where there are different trends in different regions? This should be clearly explained. (UNITED STATES OF AMERICA)	The symbol of 'more regions increasing than decreasing' seems to say it. If the increasing/decreasing regions were balanced, then it would not be here. Such statements are not usually found with confidence in the assessments.
368	71636	1	30	0	0	0	Table 1-1: There seems to be no logic to which imapcts are attributed to GHG vs which are attributed to warming. It is not clear, either, why it is useful to make this distinction, or even if the distinction is meaningful for the impacts listed here. (Ocean acidification is one impact that is attributabtle to GHG but not warming; for the others the distrinction seems meaningless.) (UNITED STATES OF AMERICA)	Correct. The first grouping is the WGI definition, which is correctly an "attribution to GHGases" while the second category is the WGII definition that attributes natural or human changes to observed cliamte change in that region. There is substantial differences in these attributions. See also Chapter 18 in this assessment.

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
369	81515	1	30	0	0	0	Table 1-1. The chapter team is encouraged to further develop this table. As input, I provide perspectives on some features of the table. 1st, it is not completely clear what is meant by “trend”--expected, observed, and projected trends made differ across examples. 2nd, it would be strongly preferable to add a line-of-sight column, providing references to the chapter sections in which supporting assessment can be found. 3rd, the shading used for high to low confidence should be considered. To my eye, the darkly shaded cells jump out the most, which may be an attribute best suited to cells with higher confidence. 4th, the distinction between the very low or no confidence cells and the no assessment made cells could be enhanced. Overall, the combined use of shading and symbols to communicate confidence and likelihood is really effective. (Katharine Mach, IPCC WGII TSU)	Good points. The chapter references are interesting, but only apply to SRES or AR5 WGI here, we can add the Table in Chapters 18 & 19 to this table later. The inverse colors were tried but failed as they hid the key information (the likelihood levels) - esp when printed in B&W.
370	64263	1	30	0	30	0	I suggest in Table 1.1 try to differentiate more the colour of each small square because may come confusing, taking into account that some are in the same colour with different tonalities and are the basis for Figure 1.8 in page 38 that is very important (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	We are working on this, but the key for Fig 1-8 is the overall placement and pattern of dots, and while it needs to be traceable, we expect that people who want to identify the most certain results will go to the Table.
371	60866	1	30	1	30	0	in the table: upper right : fig 1-7 should be fig 1-8 (European Union DG Research, Directorate Environment Climate Change & Environmental Risks Unit)	Yes, figure numbers have been corrected.
372	76561	1	30	1	30	2	In Table caption, please add a reference to Fig. 1.8. In last column of the Table, "1.7" shuld be changed in "1.8" (Claudio Cassardo, University of Torino)	Yes,figure numbers have been corrected.
373	68073	1	32	0	0	0	The example of China given in Line 2 from the bottom, Row 2, Table 1-2 is not factual, hence suggested to be deleted. From a reference to Chapter 27, it is concluded here that wide-spread environmental degradation in Latin America is due to China’s economic growth. But this conclusion cannot be reached from the literature cited in Chapter 27. So the example in parentheses in Line 2 from the bottom, Row 2, Table1-2 must be deleted, namely “e.g. economic growth of giant consumers as China”. Similarly, Line 14-15, Page 30, Chapter 27 and Figure 27-6, Page 106 should also be deleted. (CHINA)	Accepted. Reference to growth in China has been eliminated
374	71637	1	32	0	0	0	Table 1-2: There are several instances of statements that do not make sense in this table. See for example, "or however possible". (UNITED STATES OF AMERICA)	Accepted, the phrase "or however possible" has been modified as well as many others.
375	79930	1	32	0	0	0	Table 1.2.: Please consider to replace "biofuels" in the sentence with "renewable bioenergy" (NORWAY)	We prefer the word "biofuel", as defined with examples is found in the WGII AR5 glossary.
376	81516	1	32	0	0	0	Table 1-2. When all findings are updated to reflect the final assessment of chapters, it would be preferable to also provide line-of-sight references to specific chapter sections, rather than simply referencing chapter numbers overall. Similarly, references to the special report on renewables would be preferably made at the level of chapter sections. As a few specific edits, casual usage of “likely” should be avoided in the 2nd cell for the working group 2 contribution to the 5th assessment report; if being used as a likelihood term, it should be italicized. In the next cell down, it would be preferable to provide further detail in place of the somewhat prescriptive “should be” formulation. (Katharine Mach, IPCC WGII TSU)	Accepted, we have inserted numerous WGI AR5 chapter and section references and we deleted the word "likely".
377	84971	1	32	0	0	0	Table 1-2: Please update all WGII findings based on final chapter drafts, and please provide line of sight to chapter sections for each finding in the table. In addition, WGII chapters 4, 9, 13, and 21 all have findings relevant to the first row. WGII chapter 10 has findings relevant to the second row. (Michael Mastrandrea, IPCC WGII TSU)	We have added the specific subsections of the SSREN report and will add the sections for the AR5 findings in this table when we have access to the final files.
378	57097	1	33	0	0	0	Figure 1-1. The worldmap shown on top of the figure is not explained in its legend. What do its many bars represent? (Hector Ginzo, Academia Argentina de Ciencias Ambientales)	Accepted, the figure 1-b (world map) title was inadvertently left off of the SOD but has been added in the Final draft.
379	68780	1	33	0	0	0	Figure 1-1 does not depict 1-1 b, although text refers to this. Please add 1-1 b to the map in Figure 1-1 (NETHERLANDS)	Accepted, the figure 1-b title was inadvertently left off of the SOD but has been added in the Final draft.
380	81346	1	33	0	0	0	Figure 1-1: I am not sure the rational for grouping of the countries. Why is Iceland part of North America? Similarly, Mexico should be grouped with North America. It may be also useful to provide (a brief) methodology (in supplementary material?) for those who are interested in using the data. Information such as: 1) how “country affiliation of authors” were determined (i.e., what happens when multiple authors are involved?); 2) what “search words” were used in native languages; and, 3) names of search engines used for each literature search... etc. would be quite useful. (Yuka Estrada, IPCC WGII TSU)	Accepted, we have regrouped Iceland and Greenland with Europe and Mexico with North America. We revised the capton to explain that each publication can be counted multiple times (i.e., the number of different countries in the author affiliation list).

#	ID	Ch	From Page	From Line	To Page	To Line	Comment	Response
381	81347	1	33	0	0	0	Figure 1-1: 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. This figure could look more concise and synthesized if we can find a way to combine and organize the data differently. TSU can help further refine the presentation of this figure. (Yuka Estrada, IPCC WGII TSU)	The figure was revised in cooperation with the TSU and the final map projection was selected by the TSU.
382	81517	1	33	0	0	0	Figure 1-1. For panel A, it would be helpful to further clarify the variable being plotted on the y-axis--number of publications. For panel B, it would be helpful to provide a title for the panel along with a label B. For panel C, it would again be helpful to clarify that the metric presented is number of publications. Within the parenthetical, it might clearest to say "region mentioned in title, keywords, or abstract." For panel D, it would be helpful to provide a title indicating that the data indicate the number of publications in different languages. (Katharine Mach, IPCC WGII TSU)	Accepted, the figure 1-b title was inadvertently left off of the SOD but has been added in the Final draft.
383	77261	1	33	0	33	0	Figure 1-1: See broad comments in File: IPCC-AR5-NBCCRC-MacLellan-2013.pdf. Essentially the analysis here should be greatly expanded. (James MacLellan, University of New Brunswick)	We agree, but there is not enough space to expand this section greatly.
384	60408	1	33	0	34	0	Figure 1-1. The results are not solely for an English literature search as suggested by the beginning of the caption, because four other languages are mentioned explicitly in (c) and (d). The map, having over 102,000 citations for 2001-10 for Europe, suggests that even more languages, such as German, may have been included, because 102,000 exceeds the European total in (c) and is not far short of the global total in (d). But overall this is a good illustration. (David Parker, Met Office Hadley Centre)	Accepted, we have changed the caption to reflect that the literature searches were not just in English.
385	77264	1	34	0	0	0	Figure 1-2: See broad comments in File: IPCC-AR5-NBCCRC-MacLellan-2013.pdf. Essentially the attempt to portray broader trends across assessment reports needs greater interpretation. (James MacLellan, University of New Brunswick)	We feel that this figure will help address this broad comment from the reviewer.
386	81518	1	34	0	0	0	Figure 1-2. A few small points. 1st, is the title provided for the 2nd assessment report correct? It differs from the title provided in the reference list for the chapter. 2nd, it would be preferable to match casing for all chapter titles; currently presentation switches between sentence case and title case. 3rd, within the legend, it may be most accurate to say "observed impacts, scenarios, and projected impacts." (Katharine Mach, IPCC WGII TSU)	We checked the IPCC webiste and the title of the second report of WGII is correct.
387	68074	1	35	0	0	0	Figure 1-3 (g) contains a world map with national borders. It is suggested to use a map without borders to avoid unnecessary disputes. (CHINA)	Figure has been deleted
388	81348	1	35	0	0	0	Figure 1-3: It will be useful to make vulnerability mapp less skewed and/or bigger in order to convey effectively this example of synthesis of multiple stressors. (Yuka Estrada, IPCC WGII TSU)	Figure has been deleted
389	84962	1	35	0	0	0	Figure 1-3: The figure panels are very difficult to read, and I would strongly recommend a different layout that allows them to be displayed more clearly. In addition, please explain in the caption and/or associated chapter text how panel (g) is calculated, as well as its relation to the other panels. (Michael Mastrandrea, IPCC WGII TSU)	Figure has been deleted
390	71638	1	36	0	0	0	Figure 1-4: The treatment of "agreement", "evidence", and "confidence" is very difficult to explain to the general public. Referencing the 1010 IPCC Uncertainty Guidance - along with the inclusion of the confidence figure and likelihood table from that document would be very beneficial. (UNITED STATES OF AMERICA)	Figure 1-4 is the confidence figure from the IPCC Guidance Note. This figure and the likelihood table are presented in Box 1-1, where the Guidance Note is also referenced.
391	71639	1	36	0	0	0	Figure 1-5: It would be helpful to explain why the 2100 RF projections for the RCP's do not intersect the far y-axis at their designated forcing targets. (UNITED STATES OF AMERICA)	This is a very good point, but it is a problem with the RCP designations that we do not understand and is beyond our control in this chapter.
392	81349	1	36	0	0	0	Figure 1-5: The figure caption needs more explanation and detail for non-experts to understand. All elements of the figure need to be explained, so that it can stand alone. You should formally define RF, RCP and SRES unless it is done somewhere (and made very clear) in the text prior to citing this figure. Colors should be consistent between the two plots. (Yuka Estrada, IPCC WGII TSU)	(1) The caption has been edited, but definition of all acronyms in the caption when they are in the text is too much. This is for those who are already cognizant of and interested in the differences between scenarios. (2) YES, figure has been redrafted by the TSU with consistent colors and symbols where appropriate.
393	81519	1	36	0	0	0	Figure 1-5. Within the caption, it might be helpful to clarify why the SRES RF are shifted upwards to match at year 2000. It might be helpful to also clarify how the yellow square/Circle comparison plays out for other scenarios--would the same downward shift be observed? Are there resulting implications for comparison with RCP temperature projections? (Katharine Mach, IPCC WGII TSU)	(1) Yes, the explanation of shift is given. (2) How the CMPI3 vs AR4 model play out for other SRES has NOT been done, cannot comment on.
394	81520	1	37	0	0	0	Figure 1-6. In final production of this graphic, it would be clearest to provide spacing between the columns for differing countries. (Katharine Mach, IPCC WGII TSU)	Figure has been deleted

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395	84968	1	37	0	0	0	Figure 1-6: It could be useful to organize this figure chronologically rather than by country to show patterns in the categorization over time (if any). (Michael Mastrandrea, IPCC WGII TSU)	Figure has been deleted
396	63488	1	38	0	0	0	Figure 1-7: This figure is very policy relevant, and with improvements it could also convey the AR5-WG2-concept of the eras of climate responsibility and option, and be included in the SPM. The figure should be accompanied by the text Ch1 P 12 L 14-30. The legend should explain the "opportunity space" in this context by inserting after the first sentence: "Rapidly advancing climate science provides an "opportunity space" for policy relevant information to support policy decisions. The pathways identified in this report point to an era of climate responsibility, addressing the interconnectedness of multiple vulnerabilities for unavoidable impacts, and the era of climate options, the opportunity space to transform our actions toward a low risk and high resilient future." (from Ch 1, P 12 and P 10). Specific suggestions: - details are too small, please enlarge figure and reduce detail - Inequality as societal stressors is mentioned twice. - the horizontal axis should indicate the two eras. - explain what the sections in the circle show. - legend of green/red policy decisions should be outside the graph, not on the time axis - explain the red arrows (are these two biophysical stressors?) - what a the link between the sectors indicated in the middle of the left circle and the wedges (planetary systems according Rockström) - is the green arrow (climate change) a process transgressing a planetary boundary? (is climate change not be a biophysical stressor?) (GERMANY)	The figure has been revised for clarity and simplicity, and no longer uses the term "planetary boundaries".
397	68223	1	38	0	0	0	Figure 1-7 Comment: there is no graphical differences between "today" biophysycal and societal stressos interactions and "tomorrow" scenario (see the one on the top of low vulnerability, low risk and high resilience.) It has to be modified because present time is equal to best future at the graph. (Elda Tancredi, National University of Lujan. IHDP-Argentina)	The terms "today" and "tomorrow" have been removed in the updated version of this figure.
398	68224	1	38	0	0	0	Figure 1-7 Comment: at "today" graph, where Societal Stressors are listed, concept INEQUALITY is twice (Elda Tancredi, National University of Lujan. IHDP-Argentina)	The terms today and tomorrow have been removed in the updated version of this figure.
399	71056	1	38	0	0	0	Fig 1-7: More general language such as "biophysical boundaries" would be preferable to "planetary boundaries" which is intimately linked to a specific concept of Rockstrom and colleagues. The planetary boundary concept tries to define boundaries for earth system variables/systems which will maintain a Holocene like state, for the benefit of humankind, not the planet itself. Therefore the term 'planetary boundaries' is potentially misleading and could be misunderstood by readers not familiar with the Rockstrom et al. concept. (CANADA)	The term "planetary boundaries" has been deleted in the new version of this figure.
400	71640	1	38	0	0	0	Figure 1-7: This figure is not helpful; the authors should strongly consider deleting it. (UNITED STATES OF AMERICA)	The figure has been thoroughly revised for clarity and simplicity. We have coordinated closely with authors of Chapter 20 to develop a figure that is useful for them as well.
401	78673	1	38	0	0	0	Figure 1.7: Many ingredients of this figure do not appear to have a clear meaning: - what is the meaning of the white inner area in the first circle on the left? What about the arrows ? (what is, for example, the effect of education on resilience ? shouldn't it help increasing resilience, among other benefits?) - what is the effect of "biophysical stressors" on the "planetary boundaries" (are those PBs reached due to the stressors or changed due to them ? how is this defined / explained ?) - what is the meaning of the green area "resilience space" ? - right circles : what is the cause of "low risk" here ? more mitigation ? less vulnerability ? are these two always associated ? (there should be "socio-economic pathways" that facilitates both types of objectives, but not necessarily all of these pathways?) - what is the precise meaning of the blue and red colours on the maps on the right (3 red and 6 blue means less risk ? what are the "wedges" ?) (Philippe Marbaix, Université catholique de Louvain)	The figure has been thoroughly revised for clarity and simplicity.
402	81350	1	38	0	0	0	Figure 1-7: This figure may be too complex and too detailed to convey the main message effectively. The author team should further develop the caption for this figure to provide a guide for readers in interpreting the concepts depicted. The left side of the figure particularly needs to be explained further and/or illustrated a little more clearly to help the audience visualize the main concept of this figure. For instance, what is the social boundary and planetary boundary? How are these interacting with climate change? The arrow indicating climate change on the right make it looks like climate change is originating from social boundaries which are comprised of social stressors. (Yuka Estrada, IPCC WGII TSU)	The figure has been thoroughly revised for clarity and simplicity and it has a completely revised name and caption.

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403	81351	1	38	0	0	0	Figure 1-8: The information provided in this figure is redundant. I think Table 1-1 provides the same information more effectively, and also offers more information by having trend data. (Yuka Estrada, IPCC WGII TSU)	Fig 1-8 is a summary figure (1-colm width) that shows the patterns and density of points. It is different than the table which does not show the overall relationships. We plan to keep it with revisisons for more schematic presentation.
404	81521	1	38	0	0	0	Figure 1-8. The chapter team is encouraged to prioritize development of the table presenting this information, as compared to this graphical version. The overall point driven home by this graphic is perhaps the visual pattern of all of the colored boxes; however, the visual pattern achieved seems merely a function of what changes one decides to include in the plots. The most important information--what has changed or what will change--is buried, as it is difficult for a reader to remember what each colored cell stands for. Additionally, it is similarly difficult for the reader to compare how understanding varies between observations and projections given the need to remember what each colored box stands for. (Katharine Mach, IPCC WGII TSU)	See above. The figure shows the only overall pattern of the items in the table. One uses the figure for the overall types of points and confidence levels, not the individual climate topics. The two panels will be combined.
405	64264	1	38	0	38	0	The same above (CRISTOBAL FELIX DIAZ MOREJON, Ministry of Science, Technology and the Environment)	We cannot determine what part of the chapter this comment refers to.