

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
1	5	0	0	0	0	The whole chapter has been improved significantly!!! (Bardt, Hubertus, Cologne Institute for Economic Research)	Thanks.
2	5	0	0	0	0	Sections 5.3.2 and 5.3.3 and Box 5.8 should cross-reference Case study 9.2.13 and section 6.3.3.1.2. These all discuss similar issues. (Nicholls, Neville, Monash University, School of Geography & Environmental Science)	This was done
3	5	0	0	0	0	Chapter 5 Figure 5.2 page 68 is incorrectly referenced. Citation on Figure 5.2 should be: O'Brien et al. 2011. The full citation of the reference (page 47) should be: O'Brien G., O'Keefe P., Devisscher T., (eds) 2011: The Adaptation Continuum: Groundwork for the Future, Lambert Academic Publishing, Germany. ISBN: 978-3-8433-8143-7 (O'Brien, Geoff, Northumbria University)	This was corrected
4	5	0	0	0	0	The present chapter is pretty much essential in SREX. It is highly appreciated if the chapter ES would provide clear explanation on how long term impacts of climate change can be managed at the local level dealing both with uncertainties of future projections of the impacts. (JAPAN)	Done
5	5	0	0	0	0	-At the beginning of chapter 5, theoretical and graphical description about top-down and bottom-top approaches must be given for risk management and adaptation. Then, it must be mentioned that: "a top-down approach involving the interpretation and downscaling of the global-scale scenarios to regional level, and a bottom-up approach, that builds scenarios by aggregating from the local to regional scales". (Eslamian, Saeid, Isfahan University of Technology)	Done with the provision of the figures
6	5	0	0	0	0	In this section, something about bottom-top approach must be written, the advantages and disadvantages (local scale) for risk management and adaptation should be also defined. (Eslamian, Saeid, Isfahan University of Technology)	Done
7	5	0	0	0	0	Chapter 5 deals with managing the risks from climate extremes at the local level. Examples of interactions between different bodies and networks in mitigating impacts of climate extremes at the local level are given. It is emphasized that the lack of access to information plays a significant role when barriers and constrains for adaptation are concerned. To a considerable extent it is true not only on the local level, but also on the national, regional and even global levels. It should be therefore reflected in the relevant subsequent sections (Chapters 6 and 7). Chapter 5 contains paragraphs describing a role of information, data and increased level of research. A set of ideas presented in these paragraphs should not be limited to the local level. These ideas should be of more general character and should also be emphasized in Chapters 6 and 7 (as an option, they can be considered in Chapters 3 and 4). (RUSSIAN FEDERATION)	The articulation between chapters 5, 6, 7 is done in the introductory chapeau
8	5	0	0	0	0	The whole chapter investigates how human societies (at the local level: but here, local should be defined - is really Katrina an example of local risk management since national entities have been involved? (page 34)) organise to face and anticipate climate extremes. However, it is often the case that climate extremes and changes are not anticipated: instead of that, human societies often first face a crises, then recover from it. This could be raised in the starting point, underlining thus the novelty of the "adaptation" approach. Some examples from the history can be quoted: see e.g. raise of the Egyptian civilization in the context of Sahara's desertification and population growth around the Nile (5300 BC to 3500 BC): Kuper R. and Kröpelin S. (11 2006) Climate-Controlled Holocene Occupation in the Sahara: Motor of Africa's Evolution Science 313 (5788), 803. ; Brooks, N. 2006. Cultural responses to aridity in the Middle Holocene and increased social complexity. Quaternary International 151, 29-49 (MODARESSI, HORMOZ, BRGM)	Notes
9	5	0	0	0	0	Most vulnerability and adaptation literature agrees that adaptation have to be identified in the context of and nested within scales of governance. This means that international, national/federal and regional/state regulation and legislation such as taxation, rights distribution etc may in some cases very closely determine and circumscribe what adaptations can actually be undertaken at local scale. It also means that adaptations cannot be identified on local scale only. While it is logical to separate chapters on different scales such as here chapters 5 and 6 on local and national systems, both of these would require a short paragraph/a few sentences in the start that acknowledge this fact. (Potential reference: Keskitalo, E. C. H. 2009. "Governance in Vulnerability Assessment: the role of decision-making networks in determining local vulnerability and adaptive capacity". Mitigation and Adaptation Strategies for Global Change 14 (2): 185-201). (SWEDEN)	this is handled in the chapeau
10	5	0	0	0	0	Chapter 5 is overall in good shape, and we thank the authors for their efforts especially in ensuring that statements are now well supported with multiple lines of cited evidence. We also appreciate the efforts that have been made to ensure that any general statements regarding physical changes in weather and climate extremes are for the most part avoided now, and the reader is appropriately referred to Chapter 3. (Stocker, Thomas, IPCC WGI TSU)	this was done

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11	5	0	0	0	0	UNCERTAINTY LANGUAGE: General concern remains with the unclear use of words "likely", "very likely", etc. throughout the chapter text. In IPCC, "Likely", "very likely" and all other expressions from the IPCC Uncertainty Guidance (2010) are part of calibrated IPCC language and therefore reserved. These words can only be used in relation to the formal treatment of uncertainty! They are formal terms used to quantify the likelihood of an outcome or result where a probabilistic basis can be established based on multiple lines of carefully assessed evidence. There are frequent cases throughout Chapter 5 where it is not clear if a formal likelihood statement is intended or if the terms have been used inappropriately. For clarity and consistency, these words (e.g., "likely", etc.) should only be used when assigning a formal likelihood statement and italicized in these instances. We have tried to note problematic instances in the detailed comments but the authors need to search and be sure all instances are clarified. (Stocker, Thomas, IPCC WGI TSU)	care was taken to improve the clarity of the language
12	5	0	0	0	0	A very interesting chapter in terms of its scope, but the link to the science and impacts information is largely missing -- how does/should what we know (and don't know) about changing extremes affect local decision-making? (International Federation of Red Cross and Red Crescent Societies (IFRC))	more specific examples are sprinkled throughout the chapter
13	5	0	0	0	0	One aspect that we are missing in the report at large is climate information across timescales. There is relatively little discussion of how to interpret climate (change) trends (observations and projections) in light of planning for the coming few years, also in light of information about variability on other timescales, particularly seasonal and decadal. In our applied programs, this is where we have found a lot of entry points for better use of climate information in disaster risk management (including longer-term change dimensions). One of the key questions is how the information on trends relates to what we know about variability - and in some cases predictable aspects of that variability. This applies to chapter 3, as well 5 and 6 (so we'll insert this comment for each of those chapters) (International Federation of Red Cross and Red Crescent Societies (IFRC))	this comment is more appropriate for chapter 3
14	5	0	0	0	0	The chapter seems to be very rural-oriented. What about the rapidly growing cities in developing countries? How about the role of city governments? (International Federation of Red Cross and Red Crescent Societies (IFRC))	see section 5.5.1 which details urban areas
15	5	0	0	0	0	Chapter 5 : overall - Community based management is not emphasized much (Islam, Md. Siarjul, North Sotuh University)	We disagree
16	5	0	0	0	0	Decisionmakers should be aware explicitly and directly from SREX that CCA is indeed in most cases the Disaster Risk Reduction when we are speaking about weather or climate events (hydrometeorological hazards); CCA it is not a new and a different activity indeed (it is basically a change of terminology). DRM includes also geohazards, therefore CCA is a specific intervention action of risk reduction regarding climate events. Of course, it is so important to mention in the SREX the differences between on corrective and prospective risk reduction; i.e. between the reduction on existing and stationary risks and new possible risks including the CC as a factor in the exacerbation of the present climate hazards. (Cardona, Omar, Universidad Nacional de Colombia)	Noted
17	5	0	0	0	0	Decisionmakers should understand clearly from SREX that the reduction of the present and future disaster risks related to climate is basically making interventions on vulnerability (socio-economic, institutional ...) and on the exposure in prone areas, by one side, and by environment management and CC mitigation (reduction of gases) on the other side (intervention on hazards). The messages to decisionmakers should be simple and clear. If the emphasis were to vulnerability and exposure and less to extremes (hazards), they should be a confirmation that the hazards are the origin of risk and are important but they are not the main driver of disaster risk at present and in the future, notwithstanding the CC. (Cardona, Omar, Universidad Nacional de Colombia)	Noted
18	5	0	0	0	0	Thank you for a greatly improved chapter 5 and congratulations! The chapter now is comprehensive and packed with good information. Regarding the structure: It is unclear why 5.3.2 about anticipating risk does not include structural mitigation, land use and ecosystem protection, and surplus and storage of resources currently in 5.2. We suggest that "risk" be taken out of the title of 5.2 so that this section focuses on coping during and after a disaster (rather than preparing to cope) and that current 5.2 be placed after 5.3. without 5.2.1, 5.2.3 and 5.2.4. which could fit in current 5.3.2. Also throughout the chapter DRR and DRM are used interchangeably. UNISDR uses the term DRR unless referring to a specific implementation strategy. Thank you for the opportunity to comment. (UN-International Strategy for Disaster Reduction (UN/ISDR))	We have made a statement in the introduction and are also following the approved glossary definitions.

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19	5	0	0	0	0	L'échelle locale face aux échelles nationales et globales - L'ordre bottom up est l'application du précepte : « penser globalement, agir localement ». On voit bien fonctionner ce mécanisme pour l'atténuation : les petites économies locale d'énergie créent en s'additionnant les grandes tendances de la consommation mondiale ; mais pour l'adaptation c'est beaucoup moins clair, les changements et les risques sont différenciés et les réductions locales de risques ne s'additionnent pas. D'une façon générale, le chapitre tourne autour de cette difficulté que l'adaptation au changement climatique suppose qu'il y a un et non des changements climatiques différenciés dans un système de climat planétaire fractal. La paradoxe de ce chapitre est qu'il démontre que les locaux ont une expérience des risques qu'il faut stimuler et orienter par le transfert d'une connaissance scientifique globale du changement climatique ; l'exercice glisse automatiquement vers le transfert des outils du management des risques qui se sont développés et sont appropriables. Il y a une différence de culture du local entre des pays qui ont ou restent structurés en communautés locales fédérées (USA, Suisse, Inde) et des pays à tradition centralisée (France, Chine, Russie). Le texte pensé à partir du premier groupe, gagnerait à être complété. La question universelle de la répartition des pouvoirs, et de la légitimité pour exprimer l'intérêt général se pose partout. (BOURRELIER, PAUL-HENRI, AFPCN)	We have tried to address the comment but have no French-speaking specialists on the chapter writing team.
20	5	0	0	0	0	Suite - • Les coûts non économiques : ils sont mentionnés comme étant difficiles à estimer... ce qui n'est pas faux, mais il devrait être possible d'en cerner au moins la nature, sans en rechercher l'exhaustivité vu l'extrême diversité des situations (écosystèmes, patrimoines, impacts culturels, santé, etc... par exemple). A cet égard, les domaines concernés peuvent être énoncés en quelques mots : santé, (et ce qui peut l'affecter) environnement (au sens large et habituel, c'est à dire les milieux et les écosystèmes..) et les biens patrimoniaux (bâts ou non). • Réduction des vulnérabilités : le texte n'indique guère comment parvenir à les réduire. Une lacune importante concerne l'organisation spatiale (occupations et utilisations des sols) et les documents de planification ad hoc. De même que le pilotage aux divers niveaux territoriaux (national voire international et local) reste succinct. Particulièrement tout ce qui est exprimé sur la « décentralisation » reste vague et peu approfondi, entre autre les divers niveaux de pilotages et de normes juridiques. La plupart des pays européens, même avec une forte prépondérance régionale ont élaboré des stratégies nationales qui encadrent les décisions locales à toutes échelles. (Le programme d'adaptation du Grand Londres conduit à repenser les modes de développement urbain d'une métropole comme Paris par exemple) • Le cas des mégapoles ou très grandes métropoles : le texte n'y fait pratiquement pas référence, ni de manière générale aux secteurs urbains denses, très vulnérables, et dont les atteintes peuvent avoir des effets différés fort importants à des échelles d'espace et de temps sur d'autres territoires aux tailles et densités variables. (BOURRELIER, PAUL-HENRI, AFPCN)	We have tried to address the comment but have no French-speaking specialists on the chapter writing team.
21	5	0	0	0	0	Suite - • Migrations : les événements climatiques sont de faible incidence sur les phénomènes migratoires existants d'ailleurs de longue date. Par ailleurs il faudrait indiquer que les secteurs les plus exposés de la planète (tous risques confondus...) connaissent une forte voire très forte densité de population et ceci s'inscrit également dans la durée comme en témoignent les récits anciens et les manifestations récentes. Les « réfugiés climatiques » seront bien peu nombreux à grossir le flux des réfugiés sous le coup des conflits armés par exemple et d'ailleurs des terres aujourd'hui inhospitalières peuvent demain devenir des territoires attractifs. Les gains territoriaux potentiels ne sont pas évoqués. • Les plans climat : il serait judicieux de prendre l'exemple des plans climat destinés à réduire les émissions de CO2 et de chercher à équilibrer la sensibilisation des collectivités locales vers l'adaptation • Conflits d'intérêt : sans atteindre la violence des conflits armés, le problème des conflits d'intérêt et d'abus de pouvoir sont toujours présents : clientélisme, mafias. La question de l'occupation du sol se heurte le plus souvent à la spéculation foncière Les pays démocratiques qui limitent en principe les dérapages au niveau national sont souvent impuissants au niveau local. Les armes sont : le débat public, les médias y compris les réseaux Internet, l'intervention de la justice notamment des poursuites après accident ou catastrophe, l'intervention d'entreprises telles que celles du secteur de l'assurance sous réserve de régulation, les contre pouvoirs à un niveau supérieur. (BOURRELIER, PAUL-HENRI, AFPCN)	We have tried to address the comment but have no French-speaking specialists on the chapter writing team.
22	5	0	0	0	0	Bibliography Add : Tabeaud M. 2009 Les territoires face au changement climatique in Adaptation au changement climatique, Responsabilité et Environnement, Annales des Mines, Paris. (BOURRELIER, PAUL-HENRI, AFPCN)	thank you for the reference

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23	5	0	0	0	0	The chapter is improved from the FOD, but still requires a lot of careful work. Major issues for the chapter as a whole are a) a bias towards floods and short-onset disasters and insufficient discussion of drought (especially as the SOD of Ch.9 says drought affects more people than any other hazard) b) excessive bias towards developed-country examples, c) an unclear structure - it is not well-enough flagged what the distinction between 5.2 and 5.3 is, and d) inconsistency (or at least lack of clarity) over when issues at national or global scales are discussed. The chapter also needs close-editing - there are a number of non-sentences, false quantities etc. (Morton, John, Natural Resources Institute, University of Greenwich)	Chapter was reorganized and streamlined.
24	5	0	0	0	0	Executive Summary seems to be too short (half page). Relations to corresponding chapters 6 & 7 are missed and also to the whole report itself. Maybe there could be an enhanced outline of section 5.4 "Challenges & Opportunities" and section 5.5 "Management strategies" within this summary. Also, some best practice examples could be mentioned. (GERMANY)	Executive summary was lengthened to provide more details.
25	5	0	0	0	0	Comprehensive chapter, but some of the things that I was expecting to find in this chapter have been covered in Chapter # 6, which in a way undermine what could be achieved at the local level. For example the role of CSOs and CBOs fits more well at the local level. Discussion around decentralization and resource allocation should be highlighted more in this chapter as well. The chapter takes a lot from the DRR literature but forgets to highlight the simple fact that in any disaster situation communities are the first responders, so more investment need to be made at this level. (Hillier, Debbie, Oxfam)	The mentioned CSOs and CBOs often are national organizations that operate at the local, thus they are described in Ch. 6
26	5	0	0	0	0	Chapter 5 includes considerable information but is lacking in strong conclusions - initially evident in the Executive Summary. It is more descriptive than analytical, and generally lacks practical insights that will enable action. If this is because "most of the studies to date have addressed factors that lead to policy adoption and not necessarily successful implementation" (section 5.6) this statement should be placed up front, to help manage expectations. (CANADA)	Improved language and clarity was done.
27	5	0	0	0	0	Additional figures are highly desirable in a chapter of this length. One possibility would be graphic depicting the step-wise decision analysis of Rosenzweig et al (section 5.4.2.2). Overall the chapter is well written, although editing is required particularly in latter sections, and linkages to other chapters (particularly Chapter 2) could be strengthened. (CANADA)	due to space limitations this wasn't done
28	5	0	0	0	0	Reference to insurance should be given in executive summary of the chapter, according to important discussions inside this chapter, addressing micro-economic level (NUSSBAUM, Roland, Mission Risques Naturels)	Done
29	5	0	0	0	0	It is clear from looking at Chapters 5, 6, 7, 8 that there is some overlap in terms of definitions and concepts that happens across these sections. Methods Models and Tools for example. Or concepts and definitions should perhaps be clarified as whole report. Whilst the chapter covers the issues of managing risks from climate extremes at the local level quite comprehensively it isn't clear what the main points being made are, and these could be usefully summarized and focused in the exec summary - see notes on that section. Only through having clear points and focus laid out in the exec summary of the chapter 5,6,7,8 particularly will it be easier to avoid duplication and replication in these chapters, which causes confusion. I have suggested references where useful to additional areas like integration of DRR, CCA and development and the tools to M&E this integration, as well as principles like accountability to beneficiaries that may be relevant to the local context more than other levels. I hope it is helpful, I have also tried to highlight where I think the chapter sounds overly critical of humanitarian response and reconstruction work. I think there is real justification for many of the criticisms highlighted here but it would be important to make sure these are balanced, and there is a need to acknowledge some of the wider processes like humanitarian accountability to beneficiaries, UN cluster coordination, non-operational work through local partnerships, good humanitarian donorship that highlight the recognition for some of the challenges of response and reconstruction. Otherwise it may look like the importance of risk reduction at local level is because humanitarian response is bad, rather than because risk reduction work is important and that ultimately there is a need for risk reduction and better humanitarian response work as part of an overarching support structure before, during and after emergencies. (Nightingale, Katherine, Christian Aid)	Chapter was reorganized and streamlined.

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30	5	0	0	0	0	We recommend incorporating asset creation as a community-level strategy for risk reduction. Such activities include, among others, resource conservation (through sand dune stabilisation, land rehabilitation, and coastal tree planting); participatory forest management; water management (including terracing, water harvesting, water infrastructure development); afforestation and reforestation; sustainable agriculture through multiple cropping and agroforestry; grain storage infrastructure; and storm and flood control mechanisms. Suggested source: Urquhart, P. (2010) WFP and Climate Change: A review of ongoing experience and recommendations for action. Occasional Paper No. 23. Rome: WFP. (World Food Programme (WFP))	This was already included in section 5.3.4
31	5	0	0	0	0	A lot of work was done by my team to collect and analyse data of flood-affected residents and companies after the severe flood in August 2002 in Germany, which gives some insight to risk reduction and learning processes at the local level. You might consider to include some of this work. Relevant papers are: THIEKEN, A.H., H. KREIBICH, M. MÜLLER, B. MERZ (2007): Coping with floods: preparedness, response and recovery of flood-affected residents in Germany in 2002. – Hydrological Sciences Journal 52(5): 1016-1037; KREIBICH, H., M. MÜLLER, A.H. THIEKEN, B. MERZ (2007): Flood precaution of companies and their ability to cope with the flood in August 2002 in Saxony, Germany. – Water Resources Research 43, W03408, doi: 10.1029/2005WR004691; PETROW, TH., A.H. THIEKEN, H. KREIBICH, C.H. BAHLBURG, B. MERZ (2006): Improvements on flood alleviation in Germany: Lessons Learned from the Elbe flood in August 2002. – Environmental Management 38(5): 717-732; THIEKEN, A.H., M. MÜLLER, H. KREIBICH, B. MERZ (2005): Flood damage and influencing factors: New insights from the August 2002 flood in Germany. – Water Resources Research 41(12), W12430, DOI: 101029/2005WR004177; KREIBICH, H., A.H. THIEKEN, TH. PETROW, M. MÜLLER, B. MERZ (2005): Flood loss reduction of private households due to building retrofitting – Lessons learned from the Elbe floods in August 2002. – Natural Hazards and Earth System Sciences 5: 117-126, SRef-ID: 1684-9981/nhess/2005-5-117; KREIBICH, H., I. SEIFERT, A.H. THIEKEN, E. LINDQUIST, K. WAGNER, B. MERZ (2011): Recent changes in flood preparedness of private households and businesses in Germany. – Regional Environmental Change 11(1): 59-71. (Thieken, Annegret, Helmholtz-Zentrum Geesthacht)	Thank your for the references to this work.
32	5	0	0	0	0	Out of the 3 management chapters, 6 is the most useful and easy to read. Consider adopting similar structure for 5 and 7. (NETHERLANDS)	Noted
33	5	0	0	0	0	Carefull editing the chapter cold cut the chapter length by a third, which would improve the quality (NETHERLANDS)	Editorial
34	5	0	0	0	0	The statement on grey literature downgrades the work from the authors as they already cite quite a lot of important wok. There is quite some missing relevant research which could replace the cited 'grey reports'. (NETHERLANDS)	box was removed
35	5	0	0	0	0	A separate section on dealing with uncertainties on the local scale (like downscaled CC scenarios) is absent, (but perhaps this topic is addressed in another chapter). (NETHERLANDS)	Not relevant to this chapter
36	5	0	0	0	0	General remark: It is not clear what the authors want to address in this section? What context are we talking about? Local vulnerability? This is not clear: this section is a collection of issues that have no clear relation. (NETHERLANDS)	Chapter was reorganized and streamlined.
37	5	0	0	0	0	The chapter is too long and there are many sections that show redundancy (NETHERLANDS)	Chapter was reorganized and streamlined.
38	5	0	0	0	0	Overall this is a good chapter which captures the current knowledge related to climate change and DRR at local level. Main concern is that climate change should not be separated from other hazards. (NETHERLANDS)	Thanks.
39	5	0	0	0	0	General comment: the information in the chapter does not appear to be presented in a manner that is consistent with a literature review. It is written in a format that embeds literature references but lacks the summary, review, and analysis of literature in a manner that supports conclusions. An analysis of literature results regarding local perspectives on climate extremes would be especially valuable and could convey to the reader how much agreement can be found or how much confidence can be associated with statements/findings. (UNITED STATES OF AMERICA)	chapter was reorganized and such confidence statements included where appropriate.
40	5	0	0	0	0	The chapter seems to bury one of the main points being emphasized in nearly all ongoing climate adaptation efforts (and reflected in much of the current literature). Local knowledge and experience in dealing with and preparing for extreme events can provide the critical foundation necessary for implementing climate adaptation action by building upon existing decision frameworks for hazards. (UNITED STATES OF AMERICA)	Main points are now more emphasized
41	5	0	0	0	0	General comment:Chapter 5 presents 'principles' that the authors identify as providing the substantive content for chapters 5, 6, and 7. But these don't seem to drive the content in Chapter 6 at all. If these are going to be used, it would be helpful to identify the sources in the literature that identified these issues as important drivers for managing risks. (UNITED STATES OF AMERICA)	Articulation between chapters has been done

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42	5	0	0	0	0	In general there is a strong need for more illustrations in this chapter. (NORWAY)	Agree, but space limitations preclude this
43	5	0	0	0	0	Use of calibrated uncertainty language: Throughout the chapter, evaluations of evidence and agreement are provided for assessed topics. To the extent possible, the author team should characterize these evaluations and resulting assessment findings with calibrated uncertainty language, especially summary terms for evidence and agreement and levels of confidence, per the AR5 Guidance Note on Treatment of Uncertainties. Use of calibrated language would help clearly delineate the author team's assessment findings in sections that richly review available literature, and such use of calibrated language would also enable the reader to understand more fully and compare more systematically the state of knowledge across statements. (IPCC WGII TSU)	Language was included on our evaluation of the literature
44	5	0	0	0	0	As done in chapter 1, it might be helpful for the reader to specify if, where "risk management" is referred to in chapter 5, it can be assumed to be synonymous with "disaster risk management." (IPCC WGII TSU)	Done
45	5	0	0	0	0	DRM v. CCA: Especially in the Executive Summary, it would be helpful to clarify the author team's conclusions, for the local scale, about the degree to which CCA has been implemented to date and the degree to which DRM and CCA are currently linked in practice, in addition to the author team's evaluations of different future evolutions of this linkage. (IPCC WGII TSU)	This was done
46	5	0	0	0	0	Disaster risk reduction v. disaster risk management: The author team should ensure that use of these terms throughout the chapter is consistent with their glossary entries and the discussion in chapter 1 and with their usage in other chapters. We have flagged a few locations where use may not be consistent with the glossary entries. (IPCC WGII TSU)	Terms are now consistent with the glossary
47	5	1	0	1	0	MAIN CONCERN. In the Executive Summary, the main conclusions have not uncertainty statements attached (Barros, Vicente, IPCC WGII TSU)	Uncertainty statements attached.
48	5	1	0	43	0	General comment about chapter: the aspect of tenure issue is a very critical aspect when talking about risks at the local level. There are some references but due to the fact that especially in developing countries people are exposed to risks and hazards often due to tenure issues, the issue could more explicitly be mentioned. See the following reference: C. Robledo, Clot N., Hammill A. and Riché B., 2011. The role of forest ecosystems in community-based coping strategies to climate hazards: three examples from rural areas in Africa. In Forest Policy and Economics (in revision) (Clot, Nicole, Intercooperation)	We disagree on the singular importance of this.
49	5	1	1	44	44	There are basic punctuation problems throughout the chapter and an edit is required. Examples: Page 3 line 16: a colon is needed after 'considerations'; Page 3 line 44: the word Principles should not be in quotes; page 5 line 23, a comma is needed after hazards; page 5 lines 47-49, punctuation is needed to prevent a run-on sentence. (Brooke, Roy, United Nations)	Editorial
50	5	2	0	0	0	The Exec Summary could be clearer and should perhaps be standardized in approach across the report. A good example that is a little clearer is the ES in Chapt 8 which has the main point of each section at the start of a paragraph in bold, followed by a few explanatory sentences. Also the point being made in the different parts of the following chapter need to be spelled out clearly and succinctly as the Chapt 8 does in the bold first phrases of each para. (Nightingale, Katherine, Christian Aid)	Executive summary was lengthened to provide more details.
51	5	2	0	0	0	I think a key aspect that needs to be included in the chapter and a main point of the Exec summary is that managing risks at local level involves integrating DRR, CCA and development in a systematic way. Work is being done to develop methodologies like the Climate Smart Approach to Disaster Risk Management www.csdrm.org - A range of articles from Institute of Development Studies document this. (Nightingale, Katherine, Christian Aid)	Noted
52	5	2	0	2	0	The ES should be extended and improved to better capture the ensuing discussion. (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	Done

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
53	5	2	0	4	0	Main Concern: 1. If is the chapeau for chapters 5, 6 and 7, it will be better to place it before and out of the chapter itself. 2. This section has a confuse wording. It addresses seven issues that certainly are cross cutting the three chapters. However to call them principles is incorrect. First, it is prescriptive language (not appropriated for an IPCC report) since there is not a policy agreement that define and states them as principles. In the case of being the result of a scientific understanding, it requires reference to sections, which is not done. It seems that they are the result of the consensus between the three chapters as central and cross cutting issues and as such should be named, The non appropriated name of "principle" come up in the text when is referred as "idea" (line 38) or in the paragraph on "systemic risks" that is far from being a principle or in the point 7 where "development" refers to an approach rather than to a principle. 3. Points 5 and 2 are related and perhaps would only require a single entry. Point 5 addresses how to implement point 2 (Barros, Vicente, IPCC WGII TSU)	This was done
54	5	2	1	7	54	The structure of 5.1 is confusing. Overall the entire chapter should follow the structure of Chapter 6, which is much easier to read. For example, key statements for which there is some empirical evidence need to be highlighted in the Executive Summary, indicating the level of confidence for each. This is required both for consistency, and also so that readers can 'take away' key points. I suggest in particular to bring out policy relevant points including: i) local risks arise not just from the hazard but underlying risks and the two must be considered together ii) there are many issues related to land/tenure but there is evidence to support the idea that ecosystem management is a no-regret policy iii) there is evidence that information must be better integrated and used iv) there are datascale schallenges that need to be addressed. Other comments: page 6 lines 1-9 are making a much broader point and and should be moved - probably to the end of the chapter since a conclusion is being drawn on the need for coordination across sectors. Similarly, page 6 lines 11-26 are making broad comments about conflict and do not flow well. Consider a cut-out box for this. I would suggest flipping the section around, with a chapeau, then definitions, then a broad context section, then narrower points. (Brooke, Roy, United Nations)	This was done following these good suggestions.
55	5	2	23	0	0	Executive Summary. Characterization of the degree of certainty in assessment findings: The assessment findings presented in this Executive Summary could potentially be characterized by calibrated uncertainty language, especially summary terms for evidence and agreement and levels of confidence, per the AR5 Guidance Note on Treatment of Uncertainties. We encourage the author team to consider assigning such calibrated language to findings here. The degree of certainty in some findings may not be completely clear to the reader and could be clarified with the use of calibrated language, thereby strengthening the clarity of the Executive Summary overall. A few examples of statements where calibrated uncertainty language could be considered are pointed out below. (IPCC WGII TSU)	Done
56	5	2	23	0	0	Executive Summary. Structure of ES: Most Executive Summaries in the SREX are structured so that the first sentence of each paragraph is the bold, emphasized sentence. It seems that, with very minor rearrangement and wording changes, the same, perhaps clearer, structure could be adopted here to emphasize the statements in each paragraph more in a "top to bottom" manner. For example, it seems that some of the first sentences of paragraphs in the current ES (e.g., for paragraphs 3 and 4) could be bolded as is, perhaps also with usage of calibrated uncertainty language to characterize the degree of uncertainty in them. (IPCC WGII TSU)	Done
57	5	2	23	3	5	The Executive Summary is does not capture the rich content of the chapter. To replicate the format of other chapters, bolded statements should come first and be followed by supporting text. Some possible stronger statements include "Strengthening local capacity in terms of housing, infrastructure, and disaster preparedness is one mechanism shown to improve urban resilience, and the adaptive capacity of cities to climate-sensitive hazards" (section 5.4.1.7) and "Insurance, including microinsurance, is an effective disaster risk reduction tool especially when combined with other risk management measures" (section 5.5.2). Other concepts worth capturing in the Executive Summary include governance, social capital and indigenous knowledge. (CANADA)	Executive summary was lengthened to provide more details.
58	5	2	25	2	34	This paragraph is too wordy for an executive summary (Morton, John, Natural Resources Institute, University of Greenwich)	Re-written
59	5	2	26	0	0	Locales change to "Local level" (GERMANY)	Change made

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
60	5	2	29	2	29	I absolutely agree that coping strategies have been developed at the local level; however, as it is formulated one can get the impression that such coping strategies have been developed at that level by themselves; however very often support by regional and national institutions are given. (Clot, Nicole, Intercooperation)	Noted
61	5	2	30	2	30	It is not completely clear how this statement matches with the discussion of interactions, as well as of the need to coordinate, across scales. (IPCC WGII TSU)	Sentence was clarified
62	5	2	31	0	0	The use of word "principle" is incorrect. See comments in the Chapeau section (Barros, Vicente, IPCC WGII TSU)	corrected
63	5	2	32	2	34	The author team should consider rephrasing this statement to avoid any possible interpretation of the statement being prescriptive. Also, could the sentence be characterized by calibrated uncertainty language per the AR5 Guidance Note on Treatment of Uncertainties? It could be very helpful for the reader to know the nature of the evidence and agreement on which this assessment finding is based (as could be characterized by summary terms for evidence and agreement) or to know the level of confidence associated with it. (IPCC WGII TSU)	Statement was re-written
64	5	2	33	2	34	here again I agree but based on my experience, it is the collaboration between local and regional/national which make the most efficient developing strategies. (Clot, Nicole, Intercooperation)	Noted
65	5	2	34	0	0	Proposition to add phrase: climate change further exacerbates already existing threats to the local communities. (NETHERLANDS)	done
66	5	2	36	2	38	While this paragraph is a direct quote from section 5.4, it is not actually well supported within that section. Indeed the only use of the term "mainstream" in this comes from section 5.1.4. While the statement is fine, it needs to be better supported, especially if it is to be retained in the Executive Summary. (CANADA)	Additional references were added to section 5.4
67	5	2	36	2	39	This statement originates from page 29, lines 31 through 33, yet there are differences in the two versions of the statement (here and on page 29). First, the later version refers to two key principles in DRR applicable to CCA, as opposed to two key principles in DRM. Presumably it would be preferable to be consistent. Additionally, in the later version which lacks a comma after "policies," the intended meaning of this statement is clearer than the Executive Summary version, which has a comma introduced after "policies and practices." The two versions of the statement should be harmonized. Additionally, it is not clear what is meant by "applicable to climate change adaptation." The current phrasing of the statement could be interpreted to mean that the described "policies and practices" and "planning and action" pertain specifically to CCA. Rewording of "applicable to climate change adaptation" could clarify what is meant in the statement and avoid ambiguity for the reader. (IPCC WGII TSU)	Done
68	5	2	36	2	45	UNISDR is pleased that these points are highlighted in the chapter's summary. It would be good to also include some of the other excellent points made on role of ecosystem protection, risk communication, etc. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Noted
69	5	2	37	2	38	Maintenance of ecosystem services and provisioning is as critical as addressing social welfare and the other issues. Ecosystem services provide important buffers against the impacts of hazards – i.e. mangroves in coastal areas against storm surges and provide the resource streams/ removal of wastes that contribute to overall reductions in vulnerability. The role of ecosystems in disaster risk reduction is mentioned in subsequent sections of the chapter, but not the Executive Summary. (Moench, Marcus, ISFT)	This was included in 5.3.3
70	5	2	37	2	38	Proposition to add 'ecosystems' (NETHERLANDS)	done
71	5	2	38	2	38	The hazard-chain approach is also needed for disaster risk management planning and action. It is suggested to add "and hazard-chain" after the word "multi-hazard". (CHINA)	hazard chain is not commonly used in the literature so it was not added
72	5	2	39	0	0	-Chapter 5: Page 2: Line 39: One of the main key for sustainability in local level is environmental and health, therefore the following item should be added in this line. (Eslamian, Saeid, Isfahan University of Techology)	noted
73	5	2	39	0	0	3) Considering individual and social security and health (Eslamian, Saeid, Isfahan University of Techology)	noted
74	5	2	41	2	42	Could the sentence here be characterized by calibrated uncertainty language per the AR5 Guidance Note on Treatment of Uncertainties? It could be very helpful for the reader to know the nature of the evidence and agreement on which this assessment finding is based (as could be characterized by summary terms for evidence and agreement), potentially also as the basis for an associated level of confidence. The wording of the sentence suggests high or very high confidence in its validity, but it would be helpful for the reader to know the author team's evaluation of the underlying information. (IPCC WGII TSU)	done

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
75	5	2	42	2	42	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	corrected
76	5	2	42	2	43	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	corrected
77	5	2	44	2	45	Proposition to add phrase: Ecosystem management and restoration is an important precondition for achieving sustainable livelihoods. (NETHERLANDS)	done
78	5	2	50	0	0	The main challenge for local adaptation is also the political commitment by the government (more relevant to developing countries) to invest at the local level and the actual resource allocation remains a huge challenge (Hillier, Debbie, Oxfam)	we concur
79	5	2	50	2	52	The bolded statement is difficult to understand. It seems that the major challenge is in fact reversing and avoiding unsustainable, risk-inducing practices at local level, and to do so in coordination with national and international levels. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Sentence was clarified
80	5	2	50	2	53	This sentence doesn't seem to be clear or make sense. Phrases like the local enhancement of local collective actions or subsidiary structures at national and international scales etc need to be clearer. What do you want to say here? Does this refer to national government, international efforts through Hyogo Framework or donors like GFDRR? (Nightingale, Katherine, Christian Aid)	Noted
81	5	2	52	2	53	Give an example about international subsidy structure (CHILE)	sentence was rewritten
82	5	3	1	3	2	It would be helpful to clarify what is meant in this sentence by "identification." Is the sentence saying that attribution of individual hazard events and resulting impacts to anthropogenic climate change is difficult (for events and impacts that have occurred in the past)? Or is it saying that projecting changes in extreme events and impacts due to future climate change at the local level is difficult? (IPCC WGII TSU)	sentence was rewritten
83	5	3	5	3	5	When dealing with a major issue, like the global climate system, governance would be a more appropriate description, as the hierarchy and complexity of the function is different to that of managing risks from climate extremes. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	noted
84	5	3	8	7	38	This section probably needs a bit of a conceptual roadmap at the beginning so that the reader knows what is coming, how it all relates, and why it is all being presented together in the introduction. Otherwise, the paragraphs seem to each have interesting thoughts but the larger point can be lost. (In some cases there may not be a larger point; where that is the case, an author might want to reconsider the utility of a given heading.) (UNITED STATES OF AMERICA)	new language was included in the introduction
85	5	3	12	3	13	Use of CBDR out of context? (UNITED STATES OF AMERICA)	comment seems out of place
86	5	3	15	3	15	Affect or enable? (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	comment seems out of place
87	5	3	21	3	25	As you say later on, hazards do not always follow national or regional boundaries, which is why there is also a need to transcend national or local responses. (Nightingale, Katherine, Christian Aid)	not exactly clear on the reviewer's comment
88	5	3	25	3	25	Primary focus by whom? (Morton, John, Natural Resources Institute, University of Greenwich)	made into active voice
89	5	3	26	3	29	Over long sentence, could easily be shortened (Morton, John, Natural Resources Institute, University of Greenwich)	editorial
90	5	3	29	3	31	The right approach should be that the guiding principles are those included in the UNFCCC rather than principles discerned from the assessment from science and practice (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	We disagree
91	5	3	31	3	32	Figure 5-2. The "Disaster Risk Management" arrow should have points at both ends to indicate that there are both bottom-up and top-down approaches (as described on lines 34-35). (CANADA)	yes, we concur and it has been changed
92	5	3	34	0	0	Reference : (Tabeaud 2009) (BOURRELIER, PAUL-HENRI, AFPCN)	thank you
93	5	3	37	3	37	How have these principles been defined, selected (including or excluding alternative ones) and adopted as a framework? This is a governance and policy matter rather than the consequence of a scientific understanding or approach. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	principles has been changed to elements to avoid confusion
94	5	3	41	3	48	The paragraph is implicitly biased towards the definition of the principle of subsidiarity when interventions or actions are required (in the case of extreme events), but misses or at least does not clearly frames issues related to planning, budgeting and elaboration of strategies in which the application of the principle requires a different approach. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	noted, section moved out of Chapter 5

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
95	5	3	42	0	0	These are not really principles for shared responsibility, only one is. Also, this seems a strange construct for an assessment. Why are principles needed? Clearly not all actors are motivated by the same principles. This chapter would be just as effective without section 5.1.1. (UNITED STATES OF AMERICA)	section was moved out of Chapter 5
96	5	3	42	4	38	Where do these principles come from? Are they policy-prescriptive in a way that IPCC reports should not be? (Morton, John, Natural Resources Institute, University of Greenwich)	section was moved out of Chapter 5
97	5	3	42	4	38	Box 5-1 focuses heavily on governments. There should also be discussion of the many other actors depicted in Figure 5-1 and highlighted by Agrawal (2009, as cited in section 5.3.7). (CANADA)	section was moved out of Chapter 5
98	5	3	48	0	0	The considerations on shared responsibility et the short presentation of the legal obligations seem questionable. (BOURRELIER, PAUL-HENRI, AFPCN)	section was moved out of Chapter 5
99	5	3	48	4	2	The discussion of subsidiarity is incomplete. The draft correctly notes that local is generally preferred over national, but it omits the tenet of subsidiarity that private action is to be favored over government action. This omission could lead IPCC critics to unfairly suggest that the report has a pro-government bias (even though other parts of the chapter clearly address private action). (UNITED STATES OF AMERICA)	We disagree, but the section was moved out of Chapter 5
100	5	3	50	0	0	It is not a "danger" if decisions are taken at places remote from areas of action. In the Indian context sometimes people are not aware of the large ramifications that decisions taken at a local level can have. It definitely increases accountability and local decision making is needed but in integration with the centre. But decisions taken at remote destinations (centre) need not necessarily be dangerous. Free electricity provided to farmers in some areas has large environmental concerns which were not thought of at the local level. This sentence should be removed as the following lines clarify the subsidiarity stand (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	section was moved out of Chapter 5
101	5	3	50	3	54	The paragraph mixes a positive and a normative interpretation of government functions and a few assertions in the text are either not fully demonstrable (Our common humanity leads people to care for each other especially in times of adversity) or historically inaccurate. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	section was moved out of Chapter 5
102	5	4	4	4	5	Communities are not examples of lower levels of government. Delete "such as communities". (UNITED STATES OF AMERICA)	ok
103	5	4	4	4	5	This passage seems to presume that only governments can manage these hazards. (UNITED STATES OF AMERICA)	sentence was changed
104	5	4	4	4	8	This paragraph does not define a principle. Furthermore are systemic and spatially extended synonymous, as the title refers to systemic risks while the text in the paragraph refers to the spatial scope of extreme events? (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	principle changed to elements
105	5	4	12	4	12	The phrase "impacts of climate extreme-related impacts" might be clearer if replaced by "impacts of extreme climate and weather events" or "impacts of climate extremes." (IPCC WGII TSU)	done
106	5	4	14	4	17	It would depend on the nature of the international agreement. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	that is correct
107	5	4	22	4	25	From a legal point of view, the term "obligation" usually denotes a legally binding requirement. In principle, whether there are actual consequences or not arising from breaching such an obligation does not change its legal character. Therefore, the reference to "soft law" in that context is confusing, and likely to be incorrect. (CANADA)	changed
108	5	4	22	4	25	This passage seems to presume that only governments can manage these hazards. (UNITED STATES OF AMERICA)	yes, we concur and it has been changed
109	5	4	23	0	0	change level s to levels (Vasseur, Liette, Brock University)	done
110	5	4	24	4	28	The paragraph implicitly refers to an approach rather than a principle and the description of approach itself should be clarified. The notion of sustainable development as the means to avoid recurrence of impacts requires a more apt definition, particularly in the context of this chapter. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	noted
111	5	4	30	4	30	Rather than a set of principles the box enumerates a set of criteria under the umbrella of a principle of shared responsibility. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	wording was changed to elements
112	5	4	32	4	32	Viewed by whom? Or does it mean "should be viewed"? (in which case the issue of policy-prescription is raised) (Morton, John, Natural Resources Institute, University of Greenwich)	wording was changed
113	5	4	34	4	34	The meaning of most acutely requires further clarification. Does it refer to the intensity of phenomena, to the fact that impacts are stronger at the local level than at national level or to the fact that the spatial expression of impacts is local? (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	wording was changed

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
114	5	4	34	4	36	In my opinion, an important issue should be added: institutions and development org. have already an existing network at place which could be better used in case of an emergency so that collaboration becomes a normal issue during emergencies and not that humanitarian organisations move into a region and are reluctant of what already exist resp. are not familiar with the dynamic and circumstances at the local level (Clot, Nicole, Intercooperation)	We disagree.
115	5	4	36	4	36	We suggest to replace "post event" with "that reduces rather than increases the risk of extreme impacts and disasters." The name of the principle should be sustainable development rather than just development. (UN-International Strategy for Disaster Reduction (UN/ISDR))	changed
116	5	4	43	5	2	This paragraph misses an important issue about "the local". The more local a field of action, the more relative importance is likely to be assumed by face-to-face, personalised and informal social relations and communications. In other words, smaller localities are more likely to fit the definition of, or share the characteristics of, a "community". (Morton, John, Natural Resources Institute. University of Greenwich)	point is taken and we've changed some of the language
117	5	4	45	4	47	The definition of "local" as including anything smaller than the national may be confusing or problematic. USA, Australia, Brazil, and Canada all have states (provinces) that are as large as many European and African Nations--and which have similar powers as nations. Hence it might be better to define local the way it is normally defined, and use the term "sub-national", "state" or "province" whenever the report is discussing measures taken at such levels. (UNITED STATES OF AMERICA)	more explanation was provided for the use of the term
118	5	4	48	4	48	Are these regions at the sub-national level or at the supranational one? (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	regions at the subnational
119	5	5	1	5	2	The relevance of Thomalla et al. to differing *definitions* of the local needs to be spelt out. (Morton, John, Natural Resources Institute, University of Greenwich)	referene was eliminated
120	5	5	4	0	0	Local is at times w.r.t. to some reference. India will be local in terms of the world, a district in terms of a state and so on. (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	noted
121	5	5	4	0	0	Locales change to "Local level" (GERMANY)	done
122	5	5	6	5	6	Please rephrase "localities and the people who live there" (UN-International Strategy for Disaster Reduction (UN/ISDR))	changed
123	5	5	7	5	8	It is difficult to accept without references or examples. (Barros, Vicente, IPCC WGII TSU)	examples were included where appropriate
124	5	5	7	5	51	This section misses the emerging global discussion on the role of migration as a central part of livelihood diversification strategies that can build the resilience of livelihoods under changing and variable climate conditions. Households and extended families often proactively use (short-term, seasonal or long-term) migration by one or more family members as a way to obtain access to diversified income sources through labor markets and business activities. These activities can be central in establishing streams of remittance income that buffer, for example, fluctuations in agricultural production systems. Remittances are also often a substantial source of income families use to recover from disaster or to invest in diversified livelihood strategies. By emphasizing the issue of large-scale push migration, the section misses the key role proactive migration by family members can play as part of adaptive strategies that build overall resilience. See: Adger, W. N., et al. (2002), Migration, Remittances, Livelihood Trajectories, and Social Resilience, <i>Ambio</i> , 31(4), 358-366. ; Moench, M., and A. Dixit (Eds.) (2004), Adaptive Capacity and Livelihood Resilience: Adaptive Strategies for Responding to Floods and Droughts in South Asia, 214 pp., Institute for Social and Environmental Transition-Boulder and ISET-Nepal, Kathmandu; From Research to Capacity, Policy and Action: Enabling Adaptation to Climate Change for Poor Populations in Asia through Research, Capacity Building and Innovation (ISET, 2008); Re-imagining the Rural-Urban Continuum: Understanding the Role Ecosystem Services Play in the Livelihoods of the Poor in Desakota Regions Undergoing Rapid Change (ISET, 2008) (Moench, Marcus, ISET)	this material is further explored in 5.2.2
125	5	5	13	5	14	Is it really intended that climate variability *fosters* sustainability and resilience? (Morton, John, Natural Resources Institute, University of Greenwich)	deleted fosters
126	5	5	21	0	0	Section 5.1.3. In this section, to maximize consistency with Chapter 3 (see 3.1.2) and the glossary, it would be helpful to present the three related terms "extreme (climate or weather) events," "climate extremes," and "hazards" and to indicate that, in this chapter (in the title, section headings, and text), the term "climate extremes" is an abbreviated term equivalent to "extreme (climate or weather) events," which appears in the glossary. The relation to the term "hazard" should also be clearly presented. (IPCC WGII TSU)	Section was reduced and text refers to Chapter 3 throughout

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
127	5	5	23	5	23	Poor wording - suggest: "...natural hazards, with many resulting from weather and climate events (see Chapter 3)" (Stocker, Thomas, IPCC WGI TSU)	done
128	5	5	23	5	37	The definition of climate extremes is unclear - Appears to be discussing extreme weather events. It could be more useful to discuss and describe in terms of climate change impacts on extreme events. I think the context is climate change impacts on extreme weather hazards (storms, rainfall, extreme heat, drought) and sea levels (land loss, increased coastal erosion, and increased inundation surge areas for tidal events, storms and tsunamis). The importance of discussing these from a local perspective is that many (if not most) of these issues are not necessarily going to be disasters of national magnitude - they will be incremental changes to current hazard "norms" creating ongoing problems for local risk management. (UNITED STATES OF AMERICA)	sentence modified
129	5	5	27	5	28	This sentence seems to be saying that local places routinely experience impacts from hazards that are not severe enough to cause a disaster. The current wording could be clarified to better communicate this point. As is, "hazards" are seemingly (and incorrectly) equated with impacts. (IPCC WGII TSU)	sentence was clarified
130	5	5	27	5	29	Part a big confusing "do not rise to the same level of impact as a disaster". How do you define a disaster in this context? According to ISDR it is a serious disruption of functioning of a community- This can also happen in case of snow and ice events etc. (Clot, Nicole, Intercooperation)	sentence was modified to improve clarity
131	5	5	29	5	29	Not clear what you mean with "heat waves and wildfires are more frequent events" - do you mean more frequent than storms, flooding etc as mentioned in the previous sentence? Or do you mean they are more frequent events as a result of climate change (in which case you would need to cite the relevant supporting sections from Chapter 3 and 4). Please clarify what you mean here. (Stocker, Thomas, IPCC WGI TSU)	sentence was deleted
132	5	5	30	5	31	For the half of this sentence about observed and projected trends in precipitation, it would be better to cite the specific relevant section and tables in chapter 3 (e.g., section 3.3.2 and tables 3.1-3.3). Additionally, it would be helpful to provide the calibrated language used in chapter 3 to characterize these observed and projected trends (e.g., use of "likely" in table 3.1). The findings of chapter 3 should also be considered for the second half of the sentence. (IPCC WGII TSU)	the section was re-written with more referencing to Chapter 3
133	5	5	31	5	32	This is only partly true; if local disaster are verified at different areas within the national boundaries the human security is threatened at the nationwide level. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	noted
134	5	5	31	5	32	Localities beyond Africa, India, and China experience drought, as established also in the second sentence of the paragraph and in chapter 3. It seems best to clarify what is meant in this sentence mentioning Africa, India, and China specifically or to broaden or delete the sentence. If specific drought observations or projections are intended here, they should follow from and reference the findings of chapter 3. (IPCC WGII TSU)	section was re-written with more referencing to chapter 3
135	5	5	32	5	32	What is the basis for highlighting Africa, India and China here? You could just as easily have picked out South Australia and the Mediterranean for this list. Note that in the case of China, chapter 3 reports low confidence in any trends, while in both India and Africa there are strong regional variations. Rather than providing a cherry-picked, problematic list here, you would be better to simply say that "Drought persists in many regions of the world (see Chapter 3)" (Stocker, Thomas, IPCC WGI TSU)	section was re-written and this sentence removed
136	5	5	32	5	33	What evidence can you cite to support this statement that worldwide, storms have become stronger? You can not make these bold statements without any scientific basis. Chapter 3 should be the basis for any such statements, and there you will find no evidence to suggest that 'worldwide' storms have become stronger. Please delete this statement. (Stocker, Thomas, IPCC WGI TSU)	section was re-written and this sentence removed
137	5	5	32	5	33	This sentence describing more erosion due to stronger storms needs to be consistent with the findings of chapter 3, which for example conclude low confidence in observed trends in cyclones but higher confidence in increases in extreme high water level (e.g., in Table 3.1 and underlying chapter 3 text). Additionally, consistency with chapter 3's discussion of coastal erosion in section 3.5.5 (and difficulties in attributing changes) should be ensured. (IPCC WGII TSU)	section was re-written and this sentence removed
138	5	5	33	5	35	another idea here to add could be: most communities are only prepared for a particular hazard and do not have the capacities to react for another hazard (could be referred to the subchapter when the later multi hazard approach is discussed) (Clot, Nicole, Intercooperation)	point noted and incorporated into text

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
139	5	5	33	5	36	Given low confidence in observed cyclone trends and difficulties in attributing them to anthropogenic causes, as assessed in chapter 3 and summarized, e.g., in Table 3.1, it would perhaps be preferable to use an example where observed trends and attribution more clearly demonstrate the phenomena of "some localities...experiencing certain types of hazards for the first time." Alternatively, it could be clarified with chapter 3 what can be said regarding attribution for this hurricane formation in an ocean region for which hurricanes had not previously been recorded. (IPCC WGII TSU)	Clarified with an example and reference to chapter 3
140	5	5	40	6	26	1.4: importantly, this chapter does not make any explicit statements that climate change causes conflict. However, I think in the paragraph spanning lines 11-26 that greater clarification is needed in the points made about armed conflict (line 13) and violent conflict (line 19). These comments suggest different things: on the one hand one implies that causality does exist through the chain of climate change, resource scarcity and human security with the outcome of "armed conflict". However, it then states that there is less to support the link between climate change and "violent conflict". These could therefore appear somewhat contradictory given that both armed and violent imply the same thing. (UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND)	both sides of the argument are included in a new text box
141	5	5	40	6	26	Define human security, and possibly draw more on the human security literature. (Sygna, Linda, Department of Sociology and Human Geography)	more of the human security literature was included
142	5	5	40	6	26	It is not clear why this section is included in the Introduction section. It is an important discussion to include but fits better in section 5.3. (UNITED STATES OF AMERICA)	The concepts are introduced here and expanded upon later
143	5	5	42	5	52	This paragraph needs reference to drought (Morton, John, Natural Resources Institute, University of Greenwich)	
144	5	5	43	5	43	What do you mean with "especially at the local level"? Why will the frequency or intensity of severe climatic events change more at a local than regional or larger scale? What is the basis for this statement? (Stocker, Thomas, IPCC WGI TSU)	sentence was clarified
145	5	5	45	0	0	LDCs: need to be defined (Vasseur, Liette, Brock University)	common usage; not changed
146	5	5	45	5	45	"from LIKELY increased flooding" - this is surely not meant as a formal likelihood statement here because there is low confidence in any future flood projections. Please replace "likely" with an alternative word. (Stocker, Thomas, IPCC WGI TSU)	language was changed
147	5	5	45	5	45	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	language was changed
148	5	5	47	5	49	Non-sentence (Morton, John, Natural Resources Institute, University of Greenwich)	editorial
149	5	5	49	0	0	Please remove Mirza et al 2003. This paper does not address Mozambique or ENSO please insert: Ward, P.J., Beets, W., Bouwer, L.M., Aerts, J.C.J.H. & Renssen, H. (2010) Sensitivity of river discharge to ENSO. Geophysical Research Letters, 37, L12402. doi:10.1029/2010GL043215. (NETHERLANDS)	done
150	5	5	52	0	0	Please remove Kabat et al 2002. This is a very broadly oriented scoping paper, with no relevant details on Somalia. (NETHERLANDS)	done
151	5	6	0	7	0	Box 5.2 Capturing Local Knowledge: The Use of Grey Literature - The content of this box refers to methodological aspects of the assessment and not to the subject of the chapter itself. A more short and concise explanation may be given at the Information, Data, and Research Gaps at the Local Level section without using a box. (Barros, Vicente, IPCC WGII TSU)	box was removed
152	5	6	1	6	9	Supporting literature: The Risk to Resilience Study Team (2009): Catalyzing Climate and Disaster Resilience: Processes for Identifying Tangible and Economically Robust Strategies: Final Report of the Risk to Resilience Study, eds. Moench, M., Fajber, E., Dixit, A., Caspari, E., & Anil Pokhrel, ISET, ISET-Nepal, Kathmandu, Nepal, 328 pp. ; Sperling, F., and F. Szekely (2005), Disaster Risk Management in a Changing Climate, in World Conference on Disaster Risk Reduction, edited, Vulnerability and Adaptation Resource Group (VARG), Kobe. ; Rojas Blanco, A. V. (2006), Local initiatives and adaptation to climate change, Disasters, 30(1), 140-147. (Moench, Marcus, ISET)	last reference was added
153	5	6	1	6	9	Some of the phrasing in this paragraph could potentially be interpreted as prescriptive, and some minor rewordings of "should" and "have to" sentences could help avoid misinterpretation. If the intent of the author team here is to communicate information presented in the provided citations, slightly different formulations could make this clearer. (IPCC WGII TSU)	change was made

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
154	5	6	4	6	9	What is the evidence to support assertion that coordination and involvement of broad range of stakeholders leads to effective reduction in vulnerability? I think the assertion is true, but shouldn't this be backed up with evidence from literature? (UNITED STATES OF AMERICA)	additional literature was added
155	5	6	6	0	0	to cope: is it the same definition than in chapter #3? Seems to be taken differently here. It might be good to keep some consistency. (Vasseur, Liette, Brock University)	definitions are consistent with the glossary
156	5	6	6	6	9	This sentence needs grounding in *peer-reviewed* literature (Morton, John, Natural Resources Institute, University of Greenwich)	ok
157	5	6	11	0	0	Conflict ? It is not clear what conflict is being talked about. (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	noted
158	5	6	11	0	0	Access to rare resources may generate conflicts ; the SREX is right when evocating this aspect, but it should add that rents from rare resources like oil are much more pernicious. (BOURRELIER, PAUL-HENRI, AFPCN)	noted
159	5	6	11	6	26	1) This para makes certain hypotheses appear to be statements of fact. More nuance is needed. Specifically, lines 14-15 should note that 'some research suggests that environmental stresses can feed tensions', rather than suggest that it is always the case. .2) This para also gives a very narrow view of the climate change / security linkage by suggesting that the parameters of the debate are climate change feeds scarcity which can feed conflict. The document at http://www.iisd.org/pdf/2009/rising_temps_middle_east.pdf provides additional perspective, showing how climate change can interact with other factors to increase the risks of conflicts. (Brooke, Roy, United Nations)	We provided both sides of the issue and used careful language throughout
160	5	6	11	6	26	The conflict discussion comes in another light when linked to human security. Maybe elaborate on it here or on page 5 under human security and bring in the discussion of the role of the state in negotiating in and resolving conflicts (Barnett, J. and Adger, W.N. 2007. Climate change, human security and violent conflict. Political Geography 26, 6 (Sygna, Linda, Department of Sociology and Human Geography)	noted and we introduce the idea here and go into more detail later in the chapter
161	5	6	11	6	26	This special report is about climate extremes, not climate change writ large. Yet this paragraph is focused on climate change. We suggest editing this paragraph to address extreme events if it is to be included. However, the connection between climate extremes and violent conflict is not well documented so it will be difficult to draw conclusions because of the lack of scientific literature. (UNITED STATES OF AMERICA)	paragraph was edited
162	5	6	11	6	26	Causal link between climate change and displacement is also uncertain and unsubstantiated by scientific literature as well. (UNITED STATES OF AMERICA)	We used very careful language about what is known/not known in this section
163	5	6	11	6	26	It is reasonable to discuss the possibility of violence. Yet this paragraph seems to come from "out of nowhere". Each section probably needs a bit of a conceptual roadmap at the beginning so that the reader knows what is coming, how it all relates, and why it is all being presented together. Otherwise, the paragraphs seem to each have interesting thoughts but the larger point can be lost. (In some cases there may not be a larger point; where that is the case, an author might want to reconsider the utility of a given heading.) (UNITED STATES OF AMERICA)	We introduce the notion of human security here and how that relates to armed conflict. We further set off the issue using a text box.
164	5	6	11	6	26	It seems that it might be helpful for the reader to characterize some of the academic debates described in this paragraph with summary terms for evidence and agreement, per the AR5 Guidance Note on Treatment of Uncertainties. For example, the sentence on lines 19 and 20, which describes "mixed evidence," could potentially use calibrated summary terms instead. (IPCC WGII TSU)	done
165	5	6	18	6	18	Please delete "refugees and internally displaced people" and replace with "people within and across borders". (UN-International Strategy for Disaster Reduction (UN/ISDR))	done
166	5	6	19	6	20	This is a very debatable message, suggestion: either (1) explain what exactly these mixed evidences are: There is no evidence that CC stimulates conflict. The CC signal itself is not evident, so there can be no evidence of such link. (2) Otherwise, leave out the "mixed evidence sentence", especially since the last sentence on "...more research is warranted.." contradicts the previous statements on "...mixed evidence..." Obviously, the link between climate variability and conflicts is an issue, but is unfortunately not mentioned here. (NETHERLANDS)	ok
167	5	6	25	6	26	Research may be needed, but research is not done in order to "demonstrate a causal linkage". Research would "determine if a linkage exists". (Stocker, Thomas, IPCC WGI TSU)	ok
168	5	6	32	0	0	Please use proper referencing for EMDAT and IFRC (NETHERLANDS)	both were deleted

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
169	5	6	33	6	33	"have addressed" - should be "will address". (Stocker, Thomas, IPCC WGI TSU)	editorial
170	5	6	36	0	0	delete 'a' between the and history (NETHERLANDS)	editorial
171	5	6	36	6	37	"a history of resource exploitation" cannot increase disaster vulnerability because it is history. (NETHERLANDS)	editorial
172	5	6	40	6	44	based on my experience in Mali and Burkina, I am a bit surprised about this conclusion. I would expect some reference. (Clot, Nicole, Intercooperation)	ok
173	5	6	41	6	44	These sentences make sharp, but not well substantiated distinctions between rural and urban areas. Given the rapid pace of urbanization and the permeation of communication and transportation networks into distant areas, a rural to urban continuum is now seen in many regions of the world. Peri-urban or "desakota" areas encompassing both rural and urban characteristics are quite pervasive in Asia, Latin America and Africa. The mix of vulnerabilities and jurisdictional issues are different than either purely rural or urban contexts, and should be acknowledged by the DRR community. See:H187 McGregor, D., et al. (Eds.) (2006), The Peri-Urban Interface: Approaches to Sustainable Natural and Human Resource Use, 336 pp., Earthscan, London. ISET Desakota piece <input type="checkbox"/> Disasters, 31(4), 18. H185Simon, D. (2008), Urban Environments: Issues on the Peri-Urban Fringe, Annual Review of Environmental Resources, 33, 18. (Moench, Marcus, ISET)	A re-wording of the sentence was done for clarification regarding the continuum from rural to urban
174	5	6	46	7	22	Box 5-2. I agree with the authors of the Box 5-2 the urgent necessity to include the grey literature into the IPCC process. I'm from a non English speaking country, with greater limitations to access the international peer review published journals. But I disagree with the message of the Box 5-2. One of the basis of the credibility of the IPCC assessments were the use of the peer review literature. We have to use the grey literature but which one, not all, the use of grey literature should have some regulations, limitations as currently the IPCC established. It would be good to mention into the text which are the new IPCC regulations on the use of grey literature, including the used of non English published literature. Refer to the definition of the Six Conference on Grey Literature of grey literature and the links with the commercial publishing. Also many grey literature have definitive economical and political interests behind it. (Suarez, Avelino, Institute of Ecology and Systematic, Cuban Environmental Agency)	We have noted this and the chapter groups will have taken these factors into account when evaluating the grey literature that they have included
175	5	6	48	0	0	Box 5-2. This box is very helpful in communicating the chapter's approach to literature to the reader and has been further strengthened through revisions since the FOD. (IPCC WGII TSU)	Noted
176	5	6	48	7	22	This box should be informed by the current debate within the IPCC on grey literature and include mention of the importance of validation and reliability of the information. This box, coming as it does in the local chapter should make the statement that grey literature can in some cases can be accessed to provide important information at the local level not available through other channels. (UNITED STATES OF AMERICA)	We make this point about the local level though the point is now moot as the box is being moved from chapter
177	5	6	48	7	22	It would be useful for the box to address where quality-controlled data fits in this spectrum. Data from a peer-reviewed study often is less reliable (having had less review) than quality-controlled data from a non peer-reviewed study. (UNITED STATES OF AMERICA)	Not sure that there is a quality control process other than author judgement and the series of reviews, which would hopefully uncover unsuitable references
178	5	6	48	7	22	Rather than emphasize whether the source is grey or not, why not emphasize the reliability of the information? An off-hand remark even in Science or another high-impact journal, for example, may actually have little reliability though the pedigree of publisher be high. By contrast, a newspaper reporting the statement of a disaster official in the midst of the disaster would have high reliability. Statements by eyewitnesses have high reliability. Reports made in the course of business have high reliability (e.g. a business annual report stating how many days it closed due to a disaster). Factual statements by organizations about what that organization does are more reliable than a statement in a peer-reviewed journal about what the same organization does. (UNITED STATES OF AMERICA)	The above statement covers part of this. Eyewitness accounts are often notoriously unreliable. We have to evaluate the validity of 'statements' in the grey literature.
179	5	6	48	8	22	Box 22 - There is no question that grey literature needs to be included as part of this Special Report as well as all IPCC assessment products. However, this box needs to be expanded to state how the writing teams assess the quality of grey literature and decide on the appropriateness of its inclusion in this report. Not all grey literature is equal. While much of it has gone through extensive review, not all of it has. The reader needs a fuller understanding of how this is handled. (CANADA)	The box originally had a flow diagram representing a process for doing this. But, the reality is that the situation is as described in response to reviewer comment # 177

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
180	5	6	50	0	0	Typo, should be "Grey literature encompasses non-journal based sources..." (Moench, Marcus, ISET)	Done: inserted 'refers to'
181	5	6	50	6	50	Grey literature "is a term for " non-journal ... (Stocker, Thomas, IPCC WGI TSU)	Done: inserted 'refers to'
182	5	6	50	6	50	(If there has to be definition) "Grey literature consists of..." (Morton, John, Natural Resources Institute, University of Greenwich)	Done: inserted 'refers to'
183	5	6	50	6	50	I suggest change "have not gone" to "may not have gone" because it is often hard to tell. (IPCC WGII TSU)	Done: inserted 'refers to'
184	5	6	50	6	51	This sentence needs to be rephrased: Is this a definition of grey literature? What is the relation with the header of this section: 'context'? (NETHERLANDS)	No longer in Chapter 5
185	5	6	50	7	5	I seriously doubt whether this is the place for a definition of grey literature, which in any case seems a pointless exercise, as the definition is fundamentally negative and context-dependent. These lines should be drastically shortened. (Morton, John, Natural Resources Institute, University of Greenwich)	No longer in Chapter 5
186	5	6	50	7	20	Need to be careful with grey literature, especially NGO reports that are not independently written, but are rather self-assessments whose aim includes advancing an organizational brand. Such self assessments may lack objective evaluation, and so terms like "effective," "successful," and "good practices" or "best practices" are used loosely and unsubstantiated. Also, while the box makes it seem like use of grey literature ensures that "voices" of vulnerable people are heard, this is not reflected actually in the chapter (voices are still pretty muted!). (UNITED STATES OF AMERICA)	Have included a sentence to this effect
187	5	7	10	0	0	What is chapeau in this context? It is not defined in the Webster dictionary (Simiu, Emil, National Institute of Standards and Technology)	No longer in Chapter 5
188	5	7	11	7	13	The box currently reads as if IPCC Reports are "grey literature" which they are not. Rewording needed to clarify. (Stocker, Thomas, IPCC WGI TSU)	Have removed the reference to IPCC
189	5	7	15	7	20	The value of using local knowledge and information as part of a debate, oversight and the percolation of strategies is recognised in the GFDRR report Natural Hazards, Unnatural Disasters, 2010, p8. It might be worth referencing this as part of the importance of grey literature. (Nightingale, Katherine, Christian Aid)	Noted
190	5	7	15	7	20	There is actually quite a lot of emerging scientific peer reviewed papers on local disaster risk management. What is indeed lacking is that a lot of potential local adaptation strategies are not yet evaluated against CC scenarios. However, this does not mean there is no scientific literature on local climate adaptation. A short inventory in Science direct using key words: 'climate, adaptation, water, local scale', delivers: 1)- Pandey, D.N Gupta, A.K. and Anderson, D.M,(2003) Rainwater harvesting as an adaptation to climate chang. Current Science, 85 (2003) 46-59; 2)- Rojas-Blanco (2006), A. Local initiatives and adaptation to climate change. Disasters Special Issue: Climate change and disasters. Volume 30, Issue 1, pages 140–147, March 2006; 3)- Aerts et al., 2007 J. Aerts, R. Lasage, W. Beets, H. De Moel, G. Mutiso, S. Mutiso and A. De Vries, Robustness of sand storage dams under climate change, Vadose Zone Journal 6 (2007), pp. 572–580. This section on grey literature is downgrading the chapter and the statements being made are simply not correct. Advice to re-consider this section. Suggestion: Instead of addressing all differences across developed/ developing countries and the required use of grey literature, it would be better to start this chapter outlining which common structures and issue need to be analyzed in order to stimulate local disaster risk reduction (governance, data availability, etc) . (NETHERLANDS)	No longer in Chapter 5. References could be included in relevant chapter sections. The statement the section is downgrading is an opinion that doesn't appear to be matched by the majority of other comments.
191	5	7	18	0	0	use proper reference, perhaps to a website where papers can be found. (NETHERLANDS)	not clear what is being suggested here
192	5	7	18	7	20	It could be clearer to phrase this final sentence of the box in the opposite manner, indicating that including grey literature in the chapter's assessment allows many more vulnerable communities to be considered. The current phrasing is a bit misleading since grey literature is in fact included. (IPCC WGII TSU)	Changes made to the sentence to frame it positively as suggested.
193	5	7	24	7	26	This sentence is not clear. (IPCC WGII TSU)	sentence clarified
194	5	7	24	7	38	What is the relation with context. An integrated approach is needed and we need to combine approaches from Disaster risk management with climate adaptation: However, is this the proper location to address this statement? (NETHERLANDS)	sentence was clarified
195	5	7	25	0	0	the implementation of what? This sentence seems incomplete, the rest being more or less connected to the first part. (Vasseur, Liette, Brock University)	sentence was clarified
196	5	7	30	0	0	Supporting literature: Rojas Blanco, A. V. (2006), Local initiatives and adaptation to climate change, Disasters, 30(1), 140-147. (Moench, Marcus, ISET)	thanks and this was included

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
197	5	7	30	7	30	"It is essential" is a strong statement that tends towards being policy-prescriptive. Soften, e.g., by saying "Some sources believe that it is essential..." (Stocker, Thomas, IPCC WGI TSU)	Sentence was toned down
198	5	7	30	7	30	Please delete "any" and add "risk" between "disaster reduction". (UN-International Strategy for Disaster Reduction (UN/ISDR))	done
199	5	7	30	7	32	This sentence could potentially be interpreted as prescriptive, and some minor rewording could help avoid misinterpretation. If the intent of the author team here is to communicate information presented in the provided citation, a slightly different formulation could make this clearer. (IPCC WGII TSU)	sentence was modified to improve clarity
200	5	7	34	7	35	Emphasis on the most vulnerable groups: Argument that a combination of development aid and then risk management (in that order) are the priorities of the most vulnerable groups. The most vulnerable groups are vulnerable because of under development (see the statements of the authors on p442, lines 1 and 2; and somewhat further on lines 50-51). However, reducing disaster vulnerability of local communities is indeed best reduced by increasing their resilience (see section 5.3): maybe rephrase and refer to section 5.3? (NETHERLANDS)	We disagree with the reviewer's interpretation.
201	5	7	34	7	37	This sentence could potentially be interpreted as prescriptive, and some minor rewording could help avoid misinterpretation. If the intent of the author team here is to communicate information presented in the provided citation, a slightly different formulation could make this clearer. (IPCC WGII TSU)	Woeding was changed
202	5	7	37	0	0	mal-adaptation. In other chapters, it is maladaptation. (Vasseur, Liette, Brock University)	editorial
203	5	7	41	7	41	Countermeasures for disaster risk management are organized here according to the sequential order in the risk management circle, namely from before, during and after an event. Thus it is suggested to put in order of structural measures, land use and ecosystem protection, surplus and storage of resources, emergency assistance and disaster relief, recovery and reconstruction, and migration. Early warning system, which is also an important and common way at local level for coping with disaster risks, is suggested to be incorporated before the countermeasures of emergency assistance and disaster relief. (CHINA)	The restructuring of sections 5.2 and 5.3 of the chapter takes care of these issues.
204	5	7	41	14	44	Organization of paper is confusing. What differentiates this section from and connects it to sections 5.3? List (structural measures, relief, reconstruction/rehabilitation, land use and ecosystem planning) is incomplete - what about all the "soft" measures, like community-based disaster risk management activities? Also, if key drivers of disaster risk are non-climate stressors, like population growth and unplanned urbanization, this section falls short of addressing how local places are adapting to those aspects of disaster risk. (UNITED STATES OF AMERICA)	The restructuring of sections 5.2 and 5.3 of the chapter takes care of these issues.
205	5	7	43	7	43	Please replace "localities" with "local people" or rephrase. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Done
206	5	7	43	7	43	In the United States, "localities" often refers to a local unit of government (which may be town, city, village, county, borough, parish, district, or township) Whether or not that is intended, the term probably needs to be defined since it might also mean local societies apart from the local unit of government (UNITED STATES OF AMERICA)	Changed to 'local people'
207	5	7	43	7	44	This opening sentence gives the implicit and wrong understanding that measures are for flood protection, while the paragraph is about wider spectrum. (Barros, Vicente, IPCC WGII TSU)	Noted
208	5	7	44	7	45	Proposition to add a phrase like: However, communities also have interactions that are damaging the environment severely, such as the cutting down of trees for firewood or charcoal production, which ultimately leads to further threats of their livelihoods in the long run. (NETHERLANDS)	done
209	5	7	49	7	54	Here is some redundancy as the authors emphasize that apart from CC, other developments such as socio-economic trend are affecting local communities. This is true as stated above, but this section 5.2. is about coping, and not on the causes of local climate change vulnerability. Suggestion: explain why and how you have divided S5.2 into the subsections. Perhaps use the disaster cycle as a way of structuring local adaptation measures? (NETHERLANDS)	This section is included to show that local measures can't always work where the driving factors are larger scale processes. The restructuring of sections 5.2 and 5.3 of the chapter takes care of structuring issues.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
210	5	7	52	7	53	This assertion should cross reference a part of the SREX where the assertion is truly substantiated and discussed, or that should be done here. In Chapter 1 a box explains how Dutch flood disasters are much less frequent now than previous due to the flood infrastructure. In the USA even Katrina was not as bad as some flood disasters in the 19th and early 20th century. Massive starvations seem to have been worse in the past as well. (UNITED STATES OF AMERICA)	I think this refers to the opening paragraph to the next section. Have added a more inclusive opening sentence.
211	5	7	52	7	53	This statement does not logically follow from the previous statement, inspite of "Accordingly". Moreover, either this assertion should cross reference a part of the SREX where the assertion is truly substantiated and discussed, or that should be done here. In Chapter 1 a box explains how Dutch flood disasters are much less frequent now than previous due to the flood infrastructure. In the USA even Katrina was not as bad as some flood disasters in the 19th and early 20th century. Massive starvations seem to have been worse in the past as well. (UNITED STATES OF AMERICA)	The data show that fatalities have dropped but the numbers affected by disasters, the losses measures in dollar terms and the numbers of disaster events have all increased significantly. Developing countries still do have high death rates (for example compare Cyclone Nargis (>130,000 deaths with Hurricane Katrina (c. 1800)
212	5	7	52	7	54	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	changed to 'may'
213	5	7	53	7	53	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	changed to 'may'
214	5	7	54	8	1	A link/short introduction between the chapter 5.2 and the following subsequent chapters is necessary; otherwise the reader is a bit lost resp. one cannot understand why you start to talk suddenly about structural measures. Considering the draft version as a reviewer you know what you refer to as in the previous version there was a kind of introduction. (Clot, Nicole, Intercooperation)	The restructuring of sections 5.2 and 5.3 of the chapter takes care of these issues. Have included a sentence linking to the three sections of new 5.2
215	5	8	0	0	0	By listing Structural Measures as the first item under How Local Places Currently Cope with Disaster Risk, especially large-scale structural measures, the reader is being left with the impression that these are the most common and preferred means of dealing with disaster risk reduction. Not enough discussion of non-structural measures such as building codes, floodplain management, or wildfire land management, is given, except to describe issues with adoption of such measures. There is a body of emerging evidence on the cost effectiveness of disaster risk reduction measures, particularly non-structural measures: Working Papers 5-7 of RtR series ; FEMA (1998), Protecting Business Operations: Second Report on Costs and Benefits of Natural Hazard Mitigation, 50 pp, Federal Emergency Management Agency, Washington DC. ; ERM and DFID (2005), Natural Disaster and Disaster Risk Reduction Measures: A Desk Review of Costs and Benefits, 45 pp, Department for International Development, Environmental Resources Management Limited, London. ; Burby, R. J., et al. (2000), Creating Hazard Resilient Communities through Land-Use Planning, Natural Hazards Review, 1(2), 99-106. (Moench, Marcus, ISET)	The restructuring of sections 5.2 and 5.3 of this chapter takes care of these issues.
216	5	8	5	8	25	Section 5.2.1: By listing Structural Measures as the first item under How Local Places Currently Cope with Disaster Risk, especially large-scale structural measures, the reader is being left with the impression that these are the most common and preferred means of dealing with disaster risk reduction. Not enough discussion of non-structural measures such as building codes, floodplain management, or wildfire land management, is given, except to describe issues with adoption of such measures. There is a body of emerging evidence on the cost effectiveness of disaster risk reduction measures, particularly non-structural measures: <input type="checkbox"/> Working Papers 5-7 of RtR series ; FEMA (1998), Protecting Business Operations: Second Report on Costs and Benefits of Natural Hazard Mitigation, 50 pp, Federal Emergency Management Agency, Washington DC <input type="checkbox"/> DFID (2005), Natural Disaster and Disaster Risk Reduction Measures: A Desk Review of Costs and Benefits, 45 pp, Department for International Development, Environmental Resources Management Limited, London. <input type="checkbox"/> Hazard Resilient Communities through Land-Use Planning, Natural Hazards Review, 1(2), 99-106. (Moench, Marcus, ISET)	The restructuring of sections 5.2 and 5.3 of the chapter takes care of the first of these issues. These issues are covered in the reorganised section 5.3

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
217	5	8	5	9	29	This section should be more balanced and not focused on large scale infrastructure measures. There should be discussion of smaller structural measures such as retrofitting--particularly of key infrastructure such as hospitals and schools. Building codes are only cursorily mentioned to identify their limitations, which should be remedied. There is a body of emerging evidence on the cost effectiveness of disaster risk reduction measures, particularly non-structural measures: Working Papers 5-7 of RtR series ; FEMA (1998), Protecting Business Operations: Second Report on Costs and Benefits of Natural Hazard Mitigation, 50 pp, Federal Emergency Management Agency, Washington DC. ; ERM and DFID (2005), Natural Disaster and Disaster Risk Reduction Measures: A Desk Review of Costs and Benefits, 45 pp, Department for International Development, Environmental Resources Management Limited, London. ; Burby, R. J., et al. (2000), Creating Hazard Resilient Communities through Land-Use Planning, Natural Hazards Review, 1(2), 99-106. (UN-International Strategy for Disaster Reduction (UN/ISDR))	The restructuring of sections 5.2 and 5.3 of the chapter takes care of the first of these issues. These issues are covered in the reorganised section 5.3
218	5	8	12	8	14	Is that what we want? I would rephrase that sentence as it is not what we are aiming at. Well planned structural measures should indeed not be short-term solution, shouldn't they? Well planned measures include risk assessment should include climate projections and are thus sustainable and provide long-term solutions. (Clot, Nicole, Intercooperation)	sentence deleted
219	5	8	12	8	20	Structural measures should not be called short term in either service lives or benefits. Most buildings, transportation, water supply and storm water management systems have actual service lives of a century or more. (Wright, Richard, American Society of Civil Engineers)	sentence deleted
220	5	8	14	8	14	This might be a good place to make the point that return periods for extremes are changing because of climate change and that engineers must take this into consideration. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Have entered the following sentence: "In the event that the frequency and magnitude of extreme events increase as a result of climate change new design levels may be necessary."
221	5	8	15	8	17	Poor sentence structure (Morton, John, Natural Resources Institute, University of Greenwich)	Replaced "not preclude" with "also include"
222	5	8	17	8	17	a good reference could be the recently published DRR effectiveness report by the Swiss Agency for Development (c.f subchapter Bangladesh - cyclone shelters). See reference: Swiss Agency for Development and Cooperation, 2011. Disaster Risk Reduction in International Cooperation: Switzerland's Contribution to the Protection of Lives and Livelihoods. (Clot, Nicole, Intercooperation)	Have added sentence citing this.
223	5	8	18	8	18	The term "local" is used twice with apparently two different meanings in this sentence. (UNITED STATES OF AMERICA)	have changed the first 'local' to 'subnational'
224	5	8	22	0	0	replace 'technological' with 'structural': technology also means data, software, etc (NETHERLANDS)	done
225	5	8	32	8	32	The use of highly technical language such as 'trans-scalar lens' is not appropriate for policy audiences (Brooke, Roy, United Nations)	changed to the following 'using a perspective that takes into account all levels of management'
226	5	8	33	8	34	Examples are... Is not a sentence. Something has been cut. (Vasseur, Liette, Brock University)	removed 'examples are'
227	5	8	36	0	0	Typo, "...dams could both generate energy..." (Moench, Marcus, ISET)	changed to both
228	5	8	36	0	0	bother? (Vasseur, Liette, Brock University)	changed to both
229	5	8	36	8	36	"bother" - should be "both" (Stocker, Thomas, IPCC WGI TSU)	changed to both
230	5	8	42	9	10	Another example of how adaptation at one scale undermines it elsewhere would be the impact of dams on sedimentation in a delta. The dam prevents flooding in the watershed downstream, but by blocking sediment it can cause the permanent flooding of a delta. (UNITED STATES OF AMERICA)	Added sentence: For example dams may lead to erosion and inundation of deltas {{845 Yang, S.L. 2011}}
231	5	8	47	8	48	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	changed to 'could'

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
232	5	9	0	0	0	Emergency Assistance and Disaster Relief, as currently written, reflects outside interventions and is very weak on actual references and examples of locally organized assistance and relief, other than cursory mention. In doing so this, section ignores the wide literature on local coping strategies such as reliance on kinship networks, remittances and reorganization of assets, or the role of local private sector in recovery and relief. Furthermore, this section is not acknowledging the gender differences in local disaster preparedness measures or post-disaster response. Would suggest starting the section with a discussion on the scale of disasters and how that influences the scale of emergency assistance and disaster relief. This would allow for better coverage of relief efforts drawing on kinship networks, remittances, loans, etc. before moving onto discussion of large-scale response and relief when the scale of the disaster overwhelms local capacity. See: Adger, W. N., et al. (2002), Migration, Remittances, Livelihood Trajectories, and Social Resilience, <i>Ambio</i> , 31(4), 358-366. ; Moench, M., and A. Dixit (Eds.) (2004), Adaptive Capacity and Livelihood Resilience: Adaptive Strategies for Responding to Floods and Droughts in South Asia, 214 pp., Institute for Social and Environmental Transition-Boulder and ISET-Nepal, Kathmandu. ; DAW (2001), Gender Equality, Environmental Management and Natural Disaster Mitigation UN Division for the Advancement of Women, International Strategy for Disaster Reduction, Ankara. ; Dawe, D., et al. (2009), Institutional, policy and farmer responses to drought: El Nino events and rice in the Philippines, <i>Disasters</i> , 33(2), 291-307. Indeed, further down on pages 16-18, the Individual and Collective behavior is actually more of a discussion of some local response and relief activities. It might be better to merge elements of the two sections together. Those elements related to individual risk perception and decisions to take pro-active action before a hazard occurs should remain separate under the Individual and Collective Behavior section. Lines 23-36 of 5.3.1.2 should be moved to section 5.2.2. (Moench, Marcus, ISET)	Most of these issues are considered in later sections such as 'moral economy, gender etc. The reviewer notes the later section on individual and collective behaviour. The complete restructuring of sections 5.2 and 5.3 should account for these concerns
233	5	9	2	0	0	Please remove New Zealand. Please make this into a more general statement: "In many regions, this led to a preponderance of...". Then insert these references next to the Eriksen (1986) citation: 1) Bouwer, L.M., Crompton, R.P., Faust, E., Höpfe, P., and Pielke, Jr., R. A. (2007) <i>Confronting Disaster Losses</i> , Science, Vol. 318, 753-2) De Moel, H., Aerts, J.C.J.H and Koomen, E. (2011) <i>Land use change and flood risk in The Netherlands</i> . <i>Global Environmental Change</i> (In press) (NETHERLANDS)	I think we have to leave NZ in as the last sentence of the paragraph would make no sense. Also the two suggested citations don't appear suitable. I have read the first citation (Bouwer et al.) but can't see any reference to this topic at all -- it is a general call for action to reduce disaster risk. Also we cannot include the 'in press' reference as it is past the cut off date for publications.
234	5	9	4	9	4	Sand bagging is a common practice of flood proofing in many locations -- delete the specific reference "in Asia". (Stocker, Thomas, IPCC WGI TSU)	done
235	5	9	6	9	6	What "can also reduce"? (Morton, John, Natural Resources Institute, University of Greenwich)	Have deleted this sentence
236	5	9	13	9	17	In the USA, the report known as CCSP SAP 4.1 "Coastal Sensitivity to Sea Level Rise" (pages 165-170) makes the similar point that this tendency has created a bias for structural protection over nonstructural measures such as not developing the vulnerable areas. See http://www.epa.gov/climatechange/effects/coastal/pdfs/ccsp_part3.pdf#page=27 The citation information is found at page 15 on http://epa.gov/climatechange/effects/coastal/pdfs/ccsp_front.pdf#page=15 (UNITED STATES OF AMERICA)	Have inserted the following sentence: "Similar trends have been observed in relation to coastal protection where structural measures are often favoured over non-structural options ({{847 Titus, J.G. 2009}})."
237	5	9	16	9	16	Not clear to me what "armoured areas" means (Stocker, Thomas, IPCC WGI TSU)	Changed to: 'areas with structural measures'
238	5	9	16	9	16	Please delete "catastrophic" before "disasters" (UN-International Strategy for Disaster Reduction (UN/ISDR))	Changed to major
239	5	9	19	9	19	Explain the levee effect. Does it refer to fiscal incentives leading to the building of levees, or levee construction leading to risky behaviour? (Morton, John, Natural Resources Institute, University of Greenwich)	have change 'the levee effect' to 'this levee effect' linking it to the process outlined in previous sentence
240	5	9	19	9	19	Elsewhere in this report, the "levee effect" is called "safe development paradox" (UNITED STATES OF AMERICA)	Noted.
241	5	9	24	0	0	Building codes closely align... Since when? Not in all countries. In fact, there is a huge resistance in changing building codes (at least in Canada). I rather like seeing this sentence qualified a little more. (Vasseur, Liette, Brock University)	Changed to: 'building codes can be closely aligned'

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
242	5	9	26	0	0	Insert reference next to Kang et al., 2009: - Aerts, J., Major, D., Bowman, M., Dircke, P. (2009) Connecting Delta Cities Coastal cities, flood risk management and adaptation to climate change. VU University press, Amsterdam pp96 (NETHERLANDS)	Have inserted this reference
243	5	9	29	0	0	Please add a line: Insurance arrangements can provide incentives to local governments and households to implement building codes (Botzen et al., 2009): - Botzen, W., Aerts, J.C.J.H., Bergh van de J. (2009) Willingness of Homeowners to Mitigate Climate Risk through Insurance. Ecological Economics, 68 (8-9): 2265-2277. (NETHERLANDS)	Done
244	5	9	32	9	52	Section 5.2.2: Emergency Assistance and Disaster Relief, as currently written, reflects outside interventions and is very weak on actual references and examples of locally organized assistance and relief, other than cursory mention. In doing so this, section ignores the wide literature on local coping strategies such as reliance on kinship networks, remittances and reorganization of assets, or the role of local private sector in recovery and relief. Furthermore, this section is not acknowledging the gender differences in local disaster preparedness measures or post-disaster response. Would suggest starting the section with a discussion on the scale of disasters and how that influences the scale of emergency assistance and disaster relief. This would allow for better coverage of relief efforts drawing on kinship networks, remittances, loans, etc. before moving onto discussion of large-scale response and relief when the scale of the disaster overwhelms local capacity. Adger, W. N., et al. (2002), Migration, Remittances, Livelihood Trajectories, and Social Resilience, <i>Ambio</i> , 31(4), 358-366. Moench, M., and A. Dixit (Eds.) (2004), Adaptive Capacity and Livelihood Resilience: Adaptive Strategies for Responding to Floods and Droughts in South Asia, 214 pp., Institute for Social and Environmental Transition-Boulder and ISET-Nepal, Kathmandu. DAW (2001), Gender Equality, Environmental Management and Natural Disaster Mitigation UN Division for the Advancement of Women, International Strategy for Disaster Reduction, Ankara. Dawe, D., et al. (2009), Institutional, policy and farmer responses to drought: El Nino events and rice in the Philippines, <i>Disasters</i> , 33(2), 291-307. Indeed, further down on pages 16-18, the Individual and Collective behavior is actually more of a discussion of some local response and relief activities. It might be better to merge elements of the two sections together. Those elements related to individual risk perception and decisions to take pro-active action before a hazard occurs should remain separate under the Individual and Collective Behavior section. Lines 23-36 of 5.3.1.2 should be moved to section 5.2.2. (Moench, Marcus, ISET)	Have amended the first sentence to read: 'Humanitarian assistance is often required when other measures to reduce disasters have been unsuccessful and plays a critical role in helping local people cope with the effects of disasters.' The second sentence is positive and much of paragraph 2 is neutral. Most of the other issues are covered elsewhere. The reference is more relevant to new section 5.2.2
245	5	9	32	10	43	This section on emergency assistance and disaster relief is overly negative. Yes, all of the problems outlined here are genuine ones, and the humanitarian system still has much work to do to improve. But the chapter overlooks the fact that all of these issues are being discussed within the humanitarian community, and there are real attempts to overcome them. It reads like this has been written by someone who is not very familiar with the humanitarian system - with an excessive stress on eg the media parachuting into emergencies, and no mention of other real problems that still need to be solved, such as coordination. As well as the problems, there are good examples of disaster relief - which does involve local people in a sensitive way, which does attempt to address underlying vulnerabilities and which does address gender power balances. (Hillier, Debbie, Oxfam)	See response to comment 244. It would have been useful to have these good examples.
246	5	9	32	10	43	Section should be entitled "emergency response" rather than emergency assistance and disaster relief, as local places do cope/respond to disasters with internal resources. However, section focuses on assistance rather than local places' response capacity. (UNITED STATES OF AMERICA)	This section is on assistance and relief. The other issues are dealt with elsewhere in the chapter.
247	5	9	34	9	40	The section 5.2.2 seems to imply certain things about humanitarian relief which relief agencies could see as overly negative. In this paragraph it is implied that by its nature external humanitarian relief believes that people are helpless.(e.g. line 36) In reality external humanitarian relief comes in many forms and some approaches do not do that. Work by organisations working in partnership with local orgs that are non-operational but that support humanitarian aid through supporting local orgs in their response specifically see local communities and actors as leaders and actors in their own relief efforts. This is a trend in humanitarian approach that has been around for many years but is getting more widely recognised as important to strengthen resilience and support first responders and then longer-term relief to development. (Nightingale, Katherine, Christian Aid)	See response to comment 244. The sentence begins with 'Sometimes' and doesn't imply this happens all the time

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248	5	9	34	10	43	Many of the sources in this section are old. We suggest starting the section with a discussion on the scale of disasters and how that influences the scale of emergency assistance and disaster relief. This would allow for better coverage of relief efforts drawing on kinship networks, remittances, loans, etc. before moving onto discussion of large-scale response and relief when the scale of the disaster overwhelms local capacity. See: Adger, W. N., et al. (2002), Migration, Remittances, Livelihood Trajectories, and Social Resilience, <i>Ambio</i> , 31(4), 358-366. ; Moench, M., and A. Dixit (Eds.) (2004), Adaptive Capacity and Livelihood Resilience: Adaptive Strategies for Responding to Floods and Droughts in South Asia, 214 pp., Institute for Social and Environmental Transition-Boulder and ISET-Nepal, Kathmandu. ; DAW (2001), Gender Equality, Environmental Management and Natural Disaster Mitigation UN Division for the Advancement of Women, International Strategy for Disaster Reduction, Ankara. ; Dawe, D., et al. (2009), Institutional, policy and farmer responses to drought: El Nino events and rice in the Philippines, <i>Disasters</i> , 33(2), 291-307. Indeed, further down on pages 16-18, the Individual and Collective behavior is actually more of a discussion of some local response and relief activities. It might be better to merge elements of the two sections together. See UNISDR's general comments for Chapter 5 as well please. (UN-International Strategy for Disaster Reduction (UN/ISDR))	The Cuny reference is old, but it is a classic. The references provided are not about relief and assistance but about community responses which are elsewhere in the chapter. As recognised by the reviewer these issues are addressed elsewhere in the chapter.
249	5	9	34	10	43	This section needs some discussion of disaster mitigation measures (protecting livelihoods rather than relief per se), such as seed distribution, labour-intensive public works, and in pastoral contexts "destocking", feed distribution, and emergency livestock vaccination. For the latter, see the LEGS Handbook and references therein. (Morton, John, Natural Resources Institute, University of Greenwich)	This is covered in new section 5.4
250	5	9	34	10	43	I find the whole discussion on the limits of relief not very useful, as it mostly brings forward problems associated with its provision. Also, it somewhat suggests that local networks work well under disaster stresses, while it has been well proven that in the face of covariate risk these local formal and informal mechanisms are bound to break down. I would personally be more interested in hearing how the provision of relief can be improved in terms of efficiency, equity and providing entry points for linking to risk reduction (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	This suggestion basically contradicts the previous 7 comments. However, the section does claim that all mechanisms work well -- if they did there would be no disaster. However, section 5.2 is about coping, and, local people do cope (for better or worse) and this coping is assisted by external interventions.
251	5	9	36	9	36	Change "unsuitable" to "unnecessary" (UNITED STATES OF AMERICA)	Done
252	5	9	39	9	40	The phrase 'relief serves to remove agency from disaster victims ...' does not make sense. I cannot reformulate as I do not know what is intended. (Brooke, Roy, United Nations)	Changed agency to 'independence or autonomy'
253	5	9	42	9	52	It would be important to reference the principle of accountability to beneficiaries for humanitarian aid an approach that is being rolled out in different humanitarian agencies through accreditation and membership of organisations like HAP Humanitarian Accountability Partnership. It would also be important to outline the UN Cluster system and efforts to strengthen coordination in emergencies (Nightingale, Katherine, Christian Aid)	Have added following sentence to para 1: 'Many humanitarian organizations are increasingly aware of these concerns and many are addressing them through coordination of activities, addressing gendered
254	5	9	43	9	43	For me the logical consequence of this fact should be somewhere stated, probably best after the first sentence. Capacity building for emergency assistance at the local level is, therefore, crucial. Preparing local actors is a very efficient preparedness measures. (Clot, Nicole, Intercooperation)	This is covered in new section 5.3
255	5	9	46	9	52	The idea of relief in developed countries is introduced, but no explicit contrast with developing countries is made, despite the citations referring to developing countries. Morgan 1994 is a very old reference - perhaps something could be found in the SPHERE Handbook, or in publications of the Feinstein International Centre (Morton, John, Natural Resources Institute, University of Greenwich)	Have added the following sentence to address the issue: The provision of international relief is usually from members of the OECD to developing countries {{367 Development Initiatives, 2009}}.
256	5	9	47	9	49	This sentence refers to something happening "over the past two decades" and references a paper that is 15 years old. Does this refer to the two decades prior to the publication? And if so, is there evidence whether or not this trend has continued to present (hence past 4 decades)? (CANADA)	Have added a 2010 reference.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
257	5	9	47	9	52	Two different issues are dealt together in this paragraph: one referred to attributes of relief: (scarce, inequitable, impinged by corruption) and the other issue, when referring to relief as a deterrent to strengthening appropriate adaptive capacities and resilience. The latter should be highlighted as it leads to an improved understanding of how to enhance adaptation strategies. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	Changes to these two paragraphs outlined above should cover these concerns.
258	5	10	4	10	6	So this identifies the importance of appropriate needs assessments. One study of this is http://www.odi.org.uk/resources/download/271.pdf (Nightingale, Katherine, Christian Aid)	Have added it to the references
259	5	10	6	10	8	I would disagree with the word 'recent' - international NGOs have been working with partners for decades. And yes, while nothing is perfect, particularly in the highly pressured environment of an emergency, it is still better to work with local partners - who have local knowledge, are sensitive to cultural issues etc - than parachute in from the North and work independently (Hillier, Debbie. Oxfam)	Deleted 'recent'
260	5	10	6	10	15	The paper could appear overly negative to humanitarian work, as it says external assistance treats beneficiaries as victims and incapable of helping themselves, and those organisations working with local organisations impose external cultural values resulting in resentment. Probably this slightly negative tone needs to be balanced out more in this section 5.2.2, maybe with references to benefits from humanitarian response work either directly or through partners. Perhaps recognising the importance of efforts to increase accountability to beneficiaries would also help, see Humanitarian Accountability Partnership. Also referencing efforts to improve humanitarian coordination at UN Cluster level might be important. (Nightingale, Katherine, Christian Aid)	These issues are addressed in responses to previous comments
261	5	10	7	10	13	the risk of imposing external cultural values and relief can undermine local coping capacities can be true; however it can be clearly diminished when working with development organisations and their network, I think something to add and rephrase positively. (Clot, Nicole. Intercooperation)	Have prefaced with the words 'on occasion'
262	5	10	10	0	0	More importantly relief will never cover up for the entire loss economic/social/infrastructural etc. (Can be added). Also referred in Page 15 Line 53-54 (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	Have inserted the following sentence: 'Relief cannot cover all losses most of which are borne locally.'
263	5	10	10	10	15	Very old references (Morton, John, Natural Resources Institute, University of Greenwich)	Unable to locate more recent and relevant sources in the peer reviewed literature.
264	5	10	11	10	14	How can relief undermine local coping capacities and reduce resilience and sustainability? What is the evidence? (UNITED STATES OF AMERICA)	Relief can render some responses (e.g, famine foods, food storage and preservation) unnecessary and when the next disaster strikes there is greater dependency on relief.
265	5	10	13	10	14	What about extensive experience of aid agencies and what that experience tells us in terms of minimizing harm when delivering aid? And what about the impact of response preparedness in improving response, i.e., prepositioning supplies, disaster management plans, etc.? (UNITED STATES OF AMERICA)	Have modified lines 10-11 to include these concerns: 'Relief, nevertheless, is often a critically important strategy for coping, and relief organisations have built capacity based on experience in recent years, have become increasingly accountable and are obliged to follow humanitarian principles. Despite these improvements, some problems do remain.'

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
266	5	10	19	10	19	In my experience this is not true. Small events and their impact are not ignored by aid agencies themselves, and often the agencies are responding as much as they can either directly or through partners. But this response does not get the coverage because the event itself does not get the coverage in media. Similarly donors and governments are moved by media and it is through their funds to UN and aid agencies that enable or undermine response. So often aid agencies will go to donors for funds for forgotten or unseen emergencies only to be told that it isn't a priority. But they are not overlooked by aid agencies. See for example http://www.unicef.org/emerg/index_24931.html or http://www.lwr.org/emergencies/forgotten/index.asp This is also the reason that the CERF was established and why initiatives like the Good Humanitarian Donorship Initiative have emerged in the last few years. See http://www.goodhumanitarianandonorship.org/gns/home.aspx (Nightingale, Katherine, Christian Aid)	I have changed 'often' to 'sometimes'
267	5	10	21	0	0	No need to cite Olympics, newsworthy is enough (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	changed to: 'major sporting events'
268	5	10	21	10	22	Please clarify which disaster was overshadowed by television coverage of the Olympics. (UNITED STATES OF AMERICA)	have removed reference top olympics
269	5	10	24	10	27	The parenthetical comment seems to editorialize and should be deleted. (IPCC WGII TSU)	deleted
270	5	10	31	10	34	Important point; UNISDR is pleased to see it here and supports strengthening it. (UN-International Strategy for Disaster Reduction (UN/ISDR))	noted
271	5	10	31	10	34	Is it also that relief is more easily understood by the public and others than DRR efforts. In the public consciousness in many countries and cultures it seems that disasters are understood as unpreventable. (Nightingale, Katherine, Christian Aid)	Agree with this but have struggled to find suitable references
272	5	10	36	10	43	Think these are important points to make. Additional aspects to include might be about the move to use cash transfers to affected populations where appropriate to try and avoid some of the distortions of aid in kind. Some docs http://www.sdc-cashprojects.ch/en/Home/Publications Also good to include reference to the issues of debt and debt relief for disaster affected populations. Haiti had debt relief in the wake of the 2010 earthquake http://www.google.com/hostednews/afp/article/ALeqM5hCK-vVemjKRHTm0wfzlcLFXBgdnA Discussions also took place about Pakistan debt relief following the flooding. (Nightingale, Katherine, Christian Aid)	The first group on cash transfers is interesting but unfortunately don't fit IPCC regulations about acceptable sources. The Haiti example would be better placed in either chapters 6 or 7, but again the news item would not be acceptable.
273	5	10	38	10	39	Yes, relief goods can distort local markets, that's why there is increasing emphasis on cash or vouchers for food, rather than food itself. This has been a long battle but WFP is starting to change. (Hillier, Debbie, Oxfam)	Added the following sentence and reference These problems can be overcome by directly transferring cash to local people to buy building materials, seed and the like. Such programmes have performed well where local supplies are available (853 Farrington, John 2000)
274	5	10	40	10	43	It should be stated that this is only really a problem in situations of long term aid. (Hillier, Debbie, Oxfam)	Short term disaster relief can have such effects for repetitive events such as tropical cyclones, floods and droughts. Relief can render some responses (e.g, famine foods, food storage and preservation) unnecessary and when the next disaster strikes there is greater dependency on relief.
275	5	10	48	11	32	This section should explain why landuse is a key DRR measure (rather than state it is popular, explain why). The discussion focuses on the negatives of landuse rather than providing examples of where and why it works. Consider reformulating please. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Have changed as follows: 'Local land use planning embedded in zoning, local comprehensive plans, and retreat and relocation policies is a useful approach to disaster risk management that seeks to keep people and property away from locations exposed to risk.'

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
276	5	10	50	10	50	Suggest changing "popular" to "commonly proposed" or some other term--proposals to retreat are often extremely unpopular. (UNITED STATES OF AMERICA)	changed to useful: see above response
277	5	10	54	10	54	What is "the takings issue"? (UN-International Strategy for Disaster Reduction (UN/ISDR))	changed to: 'resistance against land acquisition'
278	5	10	54	10	54	What is the takings issue? (Morton, John, Natural Resources Institute, University of Greenwich)	changed to: 'resistance against land acquisition'
279	5	10	54	19	54	The 'takings issue' must be defined (Brooke, Roy, United Nations)	changed to: 'resistance against land acquisition'
280	5	11	3	11	5	Tsunami is not a climatic event (CHILE)	This is true, but the same approach could be applied to storm surge. Sea level rise may also alter the height of tsunamis relative to the land.
281	5	11	8	0	0	The authors may want to note at the end of this paragraph that in the U.S. some property owners have felt so strongly about restrictions they have taken legal action. (UNITED STATES OF AMERICA)	This is a useful point but recent references seem hard to find.
282	5	11	8	0	0	We suggest adding to the end of the sentence "or believe that it takes private property for a public purpose (Lucas v. South Carolina Coastal Council, 1992). Complete citation is Lucas v. South Carolina Coastal Council, 505 US Reports, 1003 (1992) (UNITED STATES OF AMERICA)	Rather old reference but have added the suggested words. Difficulty in referencing in reworks.
283	5	11	10	11	14	I guess this is one possible consequence; however, for instance in the Sahel region the tenure systems has rather a negative influence/additional burden which makes certain social groups even more vulnerable. See reference: Clot, N. and J. Carter, 2009: Focus no 2/09. Disaster Risk Reduction: A Gender and Livelihood Perspective. InfoResources, Zollikofen. Switzerland. And: C. Robledo, Clot N., A. Hammill and B. Riché (2011). The role of forest ecosystems in community-based coping strategies to climate hazards: three examples from rural areas in Africa. In Forest Policy and Economics (in revision). (Clot, Nicole, Intercooperation)	Have added the first reference. The second one is in revision and thus not eligible.
284	5	11	17	11	19	the recently published SDC Effectiveness report clearly confirms this observation. See reference: Swiss Agency for Development and Cooperation, 2011. Disaster Risk Reduction in International Cooperation: Switzerland's Contribution to the Protection of Lives and Livelihoods. (Clot, Nicole, Intercooperation)	Has been added
285	5	11	21	11	36	The issues of traditional knowledge and social/spiritual connection to the land is very superficially described here but should be relooked. For example, Inuit communities in the Arctic Canada are well documented. (Vasseur, Liette, Brock University)	I have searched google scholar and other sources but have not been able to locate anything other than indirect references to land.
286	5	11	22	11	22	Existing competition over land use between smallholders and industry (agriculture and forestry, mining activity, energy crops) will further increase as a result of desertification and soil degradation. (WBGU 2007:156; Carius et al 2006:42) (CHINA)	This is a valid observation but does not relate to the issue of land acquisition as discussed in this section
287	5	11	26	11	26	The concept of 'political will' must be either defined or dropped. As it stands, it is an empty buzzword. (Brooke, Roy, United Nations)	Changed w/'will' to support as the lack of political willingness to use such measures is a major factor.
288	5	11	29	11	29	Suggest adding the following sentence: In the United States, some state and local governments have adopted "rolling easement" policies, which allow construction in vulnerable areas subject to the requirement that the structures will be removed if and when the landward edge of a wetland or beach encroaches. The complete citation is Titus, J.G. Rolling Easements. US Environmental Protection Agency. Washington, D.C. (May 2011). (UNITED STATES OF AMERICA)	Have done so.
289	5	11	32	11	34	French NatCat regime is providing an example, with decades of experience, illustrating the long range process to reach efficiency (NUSSBAUM, Roland, Mission Risques Naturels)	My search for NatCat yielded a number of ppt presentations on the insurance scheme but I was unable to find any reference to land use planning that could be cited
290	5	11	33	11	35	This is helpful information. More of such insight would be useful to strengthen the section. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Noted
291	5	11	40	11	40	Please replace Asian with Indian Ocean (UN-International Strategy for Disaster Reduction (UN/ISDR))	Done

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
292	5	11	41	11	41	Non-sustainable management of natural resource has already led to local conflicts over resources in the past. In large parts of Latin America this constitutes an additional factor that amplifies the impacts of climate change. (IPCC 2007b:599) (CHINA)	I presume the reference is IPCC (not IPCC which I couldn't find)) but could find no reference to local conflicts on page 599 and the only reference to conflict in the entire chapter was in relation to conflict between policies, laws etc.
293	5	11	43	11	44	I question the relevance of carbon sequestration here - at most it should be flagged as a side-benefit. (Morton, John, Natural Resources Institute, University of Greenwich)	noted
294	5	12	0	0	0	Section 5.2.4: superficial and general. Rationing water is possible with metering but is it an effective method? It has been proven not. (Vasseur, Liette, Brock University)	Water metering is listed as one among many mechanisms to ration water.
295	5	12	1	0	0	Retention of livelihood can be part of a regulation practice but it may constitute a break in solidarity. Stockpiling at local level did not obviate starvation in the past, and has induced recently bad shocks on markets. A reasonable balance has to be found. (BOURRELIER, PAUL-HENRI, AFPCN)	In many places traditional systems of food preservation and storage were successful mechanisms
296	5	12	1	12	1	as the chapter is more about rationing, it should be included in the title: storage and rationing of resources (Clot, Nicole, Intercooperation)	done
297	5	12	1	12	13	An interesting example could be shown by N. Clot 2008 in the publication: gender perspectives: integrating DRR into CC adaptation, highlighting local coping strategies for drought. ISDR. In particular women put food aside when food is scarce during lean periods such as droughts. (Clot, Nicole, Intercooperation)	done
298	5	12	9	0	0	dioscorea, cyrtosperma, etc.: these are scientific genus names and should be capitalized and italicized. (Vasseur, Liette, Brock University)	removed the latin names
299	5	12	15	12	27	When talking about rationing at local level and in households it might be important to specify if you mean also self-induced rationing, for example where families reduce the number of daily meals. Christian Aid research with partners and Groundswell International in the Sahel identified these local strategies in http://community.eldis.org/?233@@/.59e99ac1!enclosure=.59e9e601&ad=1 (Nightingale, Katherine, Christian Aid)	Couldn't find reference to self rationing in this publication, but have added to the sentence: 'Rationing at the local level is often self-rationing instituted at the level of households'
300	5	12	21	12	27	It should be stated that food rationing occurs first amongst women and children - this is surprisingly constant across the world, altho varying in degree. This has longterm impacts on health, cognitive development and ultimately poverty/development. See Hyder A et al. (2005). The pervasive triad of food security, gender inequity and women's health: exploratory research from sub-Saharan Africa. African Health Sciences, vol. 5, no. 4. AND Ramachandran N (2006) Women and Food Security in South Asia: Current Issues and Emerging Concerns. UNI-WIDER Research Paper 131 Households don't just sell livestock, they first sell unproductive assets, and then productive assets. In some cultures, it is the women's assets (eg goats, or jewellery) that gets sold first. See http://farhanasultana.com/wordpress/wp-content/uploads/2008/09/Sultana-EnvHazards-Final-2010.pdf Sultana, Farhana (2010). Living in hazardous waterscapes: Gendered vulnerabilities and experiences of floods and disasters. (Hillier, Debbie, Oxfam)	Have added the following: Often, rationing initially occurs among women and children {{858 Hyder, Adnan A.}} {{859 Ramachandran, Nira 2006}}.
301	5	12	21	12	27	Should we use "food crisis" instead of "famine"? (UNITED STATES OF AMERICA)	changed accordingly
302	5	12	24	12	25	This description of changes in drought should consider and cite relevant assessment findings and sections in chapter 3. (IPCC WGII TSU)	Have included a cross reference to chapter three section 3.5.1
303	5	12	24	12	27	true, but out of place here (Morton, John, Natural Resources Institute, University of Greenwich)	We think it is important that readers are reminded that natural disasters are often as much as, if not more so, a reflection of social processes.
304	5	12	34	12	35	The water-use restrictions are the most common drought-time approach to rationing in the United States. The sentence says "can be" It might be worthwhile distinguishing what is done from what can be done. (UNITED STATES OF AMERICA)	Changed 'can be' to 'are'
305	5	12	37	12	49	The question of impacts on electricity supply needs to be treated carefully, as in many countries it is gridded nationally and therefore not "local". If this section stays, I undersand Venezuela in the early 2000s is a useful example (but have no references). (Morton, John, Natural Resources Institute, University of Greenwich)	Have added the following sentence after the opening sentence of the paragraph: 'While a number of countries have national electrical grids decisions on responses to shortages are

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
306	5	12	38	12	38	Migration should not be seen as a coping strategy but as the consequence of a failure to cope, as in most cases it is not a voluntary choice. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	The literature tends to show that migration can be seen as a valid coping mechanism. Mass migration may be a failure to cope but organised migration and the use of remittances is a valid coping mechanism enabling livelihoods at the origin to be sustained.
307	5	12	41	0	0	Incorrect referencing "Rose and Liao (Rose and Liao, 2005)" should be "Rose and Liao (2005)" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	This is a formatting problem for the editors I presume
308	5	12	41	0	0	Remove Rose and Liao in the parentheses, not needed. (Vasseur, Liette, Brock University)	This is a formatting problem for the editors I presume
309	5	12	42	12	42	This paragraph probably should have a sentence about what homeowners do, as distinct from businesses. (UNITED STATES OF AMERICA)	Struggled to find acceptable references on domestic responses other than those about
310	5	12	44	12	44	Delete "some". A 'possible scenario' already implies that it will not be seen under all projections. (Stocker, Thomas, IPCC WGI TSU)	done
311	5	12	46	0	0	remove one of the) in 2000)) (Vasseur, Liette, Brock University)	This is a formatting problem for the editors I presume
312	5	12	47	12	49	Last sentence, "It should be noted..." -- should either be backed up with multiple citations or deleted. (Stocker, Thomas, IPCC WGI TSU)	done -- sentence deleted
313	5	12	47	12	49	Maladaptation should not be applied to any activities that may result in increased greenhouse gas emissions. As defined in Chapter 2, maladaptation refers to actions that inadvertently increase vulnerability. Greenhouse gas emissions relate to hazard, and Chapter 1 stresses that vulnerability is independent of hazard. (CANADA)	Sentence has been deleted
314	5	12	47	12	50	Caution against speaking of fossil fuels as a maladaptive behaviour or carbon emission reductions in general in the context of this report. Important to remember the natural variability component in climate change and extreme events, and the inability to directly attribute anthropogenic GHG to many types of extreme event. (Stocker, Thomas, IPCC WGI TSU)	Sentence has been deleted
315	5	12	49	0	0	CCS is not reducing emissions. The line should simply read "maladaptive option if technologies to reduce emissions (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	Sentence has been deleted
316	5	13	5	0	0	Section 5.2.5. Consider terminology. Perhaps use "displacement" in addition to "migration" in heading and other places necessary since the two terms have different legal and policy implications. For law and policy on evacuations and relocations see Kolmannskog, V. Dignity in Disasters and Displacement – Exploring Law and Policy on Internal Displacement in the Context of Climate Change, to be published in Global Environmental Change and Human Security Project 2011/12. The Changing Environment for Human Security: New Agendas for Research, Policy, and Action. An early draft exists as a conference paper presented at GECHS Synthesis Conference, "Human Security in an Era of Global Change", June 22-24, 2009, available at http://www.nrc.no/?aid=9411918 . In addition UNHCR has a paper with recommendations for statelessness and major relocations in the context of climate change: Climate Change and Statelessness: An Overview, submitted by UNHCR supported by IOM and NRC to the UNFCCC, 15 May 2009, available at http://www.unhcr.org/refworld/docid/4a2d189d3.html (Kolmannskog, Vikram, Norwegian Refugee Council)	The first 2 references are not suitable (waiting for publication and conference paper) and the third is not relevant to the local level. Have inserted the word displacement in two places in this section.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
317	5	13	5	13	51	Section on migration does not address key drivers of disaster risk, i.e., social, political and economic factors. Are there studies out there that look at migration and gender dynamics at the local level, i.e., do men migrate more, what does this mean for female headed households? What are the push and pull factors? This section is not very enlightening. (UNITED STATES OF AMERICA)	The key drivers of disaster risk should be treated in Chapter 2. The second point on gender is an important one. Two recent review papers on migration and gender indicate that gender is usually overlooked in migration studies in general let alone disaster related displacement, especially at the local level. Have added the following sentence: 'Migration is highly gendered both in terms of drivers and impacts which differ between men and women although it is not clear how these differences might be played out in the context of climate change {{863 Hugo, Graeme 2010}}.'
318	5	13	7	13	14	Temporary relocation, especially forced, has very strong social consequences for people. Again I am surprised that this aspect is not really discussed since there is a lot of literature on this. (Vasseur, Liette, Brock University)	A thorough search of bibliographic databases did not yield suitable references on this issue.
319	5	13	7	13	26	Consider referring to the Norwegian Refugee Council report on displacements from extreme weather events in 2008 and the need for deeper analysis on this matter. Report is here http://www.nrc.no/?did=9429522 . The document is referenced elsewhere in the report in a different context. (Brooke, Roy, United Nations)	This was an interesting report but doesn't really tell us much about the local level implications
320	5	13	7	13	51	Could cite here example of Kiribati nursing training programme in Australia to prepare for expected migration. (UN-International Strategy for Disaster Reduction (UN/ISDR))	This is a very good example but there is no peer reviewed literature on it. There is also debate about whether it is a CCA activity or a development strategy. The official documents (e.g. AUSAID) do not refer to climate change in relation to the scheme, even though it is widely reported to be the case.
321	5	13	14	13	14	The citation for Laczko (2009) is not provided in the chapter's reference list. Please ensure this citation is added to the reference list. (IPCC WGII TSU)	The reference is in the list -- it has to be because of the refworks system. See page 55 of SOD)
322	5	13	18	13	21	What is the baseline for the 5-10% increase? What % increase is 200 million? (IPCC WGII TSU)	These sentences have been deleted -- they don't say anything about the local.
323	5	13	19	13	19	"Current" needs to be defined in both time (based on estimates from year x) and in numbers (estimate of absolute number or the range of numbers migrating). (Stocker, Thomas, IPCC WGI TSU)	These sentences have been deleted -- they don't say anything about the local.
324	5	13	19	13	21	Avoid mixing absolute and percentages when providing data from multiple sources or provide enough information to give the reader the full information needed to allow for both. Providing the absolute of the "current" rate and/or the percent increase represented by "200 million" would be helpful to the reader for a complete understanding of the information available/provided. (Stocker, Thomas, IPCC WGI TSU)	These sentences have been deleted -- they don't say anything about the local.
325	5	13	19	13	21	Note that "scenario" has specific meaning in IPCC [and the climate change science/policy communities] - rephrase "worst case scenario" to better define what is meant. (Stocker, Thomas, IPCC WGI TSU)	These sentences have been deleted -- they don't say anything about the local.
326	5	13	21	13	22	A mysterious sentence (Morton, John, Natural Resources Institute, University of Greenwich)	Modified sentence:

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
327	5	13	22	0	0	Supporting literature: Tacoli, C. (2009), Crisis or adaptation? Migration and climate change in a context of high mobility, Environment and Urbanization, 21(2), 18. ; Tacoli, C. (2007), Migration and adaptation to climate change, 2 pp, International Institute for Environment and Development, London. ; Resurreccion, B. P., et al. (2008), Climate Adaptation in Asia: Knowledge Gaps and Research Issues in South East Asia, 84 pp, Institute for Social and Environmental Transition (Boulder), Institute for Social and Environmental Transition (Nepal). (Moench, Marcus, ISET)	Have added the peer reviewed reference
328	5	13	23	13	25	Many consider migration not to be a problem' should either be qualified or disaggregated ... occupants of small island developing states, as noted later in the document, would certainly feel that migration is, indeed, a problem. (Brooke, Roy, United Nations)	As the paragraph observes migration ranges from forced displacement to voluntary migration. Pacific Island people are already highly mobile. The problem arises when migration is forced and whole communities are relocated
329	5	13	28	13	28	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	Deleted likely
330	5	13	31	0	0	add , after for example (Vasseur, Liette, Brock University)	Don't understand this comment
331	5	13	32	0	0	Change to Howang et al. (2007, 2010) (Vasseur, Liette, Brock University)	They are not the same sets of authors though Hwang is the lead author of both articles
332	5	13	32	13	32	Duplicated - Hwang et al. (Stocker, Thomas, IPCC WGI TSU)	Have deleted one -- hope this doesn't upset cite and write
333	5	13	36	13	39	Property loss of value is not correlated, due to amenity effects, as illustrated by different site studies (NUSSBAUM, Roland, Mission Risques Naturels)	The first two sentences have been deleted to avoid the overlap with page 11.
334	5	13	36	13	51	Seems this should have been combined with p. 11 lines 21-36. It is repetitive and not well connected to this point. (Vasseur, Liette, Brock University)	The first two sentences have been deleted to avoid the overlap with page 11. Community relocation is included here as it is a form of displacement.
335	5	13	41	13	42	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	wording changed
336	5	13	42	13	51	Please note that in 5.2.1. Structural measures there is a remark in line 44 that people have to re-locate because of reservoir development. Rather than only cite theoretical papers, you can simply refer to the literature on the effects of re-locating many households when the Three Gorges dam in China was built. (NETHERLANDS)	done
337	5	14	0	29	0	The multiple subsections under 5.3 contain much rich material, but need better organization in order to be coherent and meaningful. We would suggest reorganizing the material explicitly around the two themes that seem to emerge from the text and creating two new main sections -- Communication of Information (should be it's own major subsection and pull together the following elements that are scattered throughout pages 14-29): Actual modes of communication - who is communicating to whom, what is being communicated, timescale of information being conveyed (is it early-warning for an impending disaster, for a slow-onset, creeping disaster, or for much longer changes in the trend and variability of local climate) mode of communication (TV, cell phone, social media, etc.), and reason for communicating (what does the communicator hope to achieve)? ; Factors influencing effective communication on the part of the communicator (this part is extremely weak to non-existent in the text) and ; Factors influencing both the uptake of information by intended audiences. ; All of material related to these three themes should be expressly moved into a Communications only section, and include the material from section 5.6 Information, Data and Research Gaps at the Local Level as the final subsection of the explicit Communications section. -- Opportunities and Challenges Influencing Risk Reduction Behavior. This would include most material from subsection 5.4.1, 5.3.1.2, 5.3.1.1, and 5.3.4 through 5.3.7. (Moench, Marcus, ISET)	This is out of place but presumably the reorganisation of 5..2 and 5.3 will address these comments
338	5	14	1	14	44	Reference should be added to insurance as ex ante reconstruction financing instrument, leveraging DRM action (NUSSBAUM, Roland, Mission Risques Naturels)	I could not find any refereed references to ex ante reconstruction on several search engines. Are such decisions made by insurance companies local?

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
339	5	14	1	14	44	Should title be "recovery and rehabilitation" rather than reconstruction? Focus of section is heavy on hard approaches, e.g., housing, with barely mention of soft approaches. Is this because there is more literature on housing? If so, stating that fact would be helpful context. (UNITED STATES OF AMERICA)	Added the following to the beginning of sentence on 24: "Less is published on the ... equally important, if indeed"
340	5	14	3	14	44	This needs discussion of agricultural rehabilitation - distribution of seed, fertilizer and agricultural implements, and restocking (Morton, John, Natural Resources Institute, University of Greenwich)	Added the following sentence: Agricultural rehabilitation (e.g. the provision of seeds, planting material, fertilisers and stock, and the remediation of land) is particularly important where local livelihoods are directly affected such as in subsistence or semi-subsistence societies.
341	5	14	14	14	14	Suggesting reordering words to avoid talking about "recovery in the scientific literature" (UNITED STATES OF AMERICA)	Done
342	5	14	18	0	0	'...insufficiency of funds' . Please add a sentence that insurers and re-insurers can assist in supplying funds for reconstruction. Please insert this reference: Aerts, J.C.J.H., and Botzen, W. (2011) Climate Change Impacts on Long-Term Flood Risk and Insurance: A Comprehensive Study for The Netherlands. Global Environmental Change (Accepted) (NETHERLANDS)	Can't include reference as not yet published. Have inserted a sentence in line 8: " On the other hand insurance can be used to assist in recovery and reconstruction."
343	5	14	27	0	0	Supporting literature: Dorosh, P., et al. (2010), Rehabilitating Agriculture and Promoting Food Security following the 2010 Pakistan Floods: Insights from South Asian Experience, 36 pp, International Food Policy Research Institute. (Moench, Marcus, ISET)	Done. Inserted after the new sentence in response to comment 340
344	5	14	31	14	32	Important to put 'CAN' in this first sentence. Major problems can occur where planning etc are taken from local communities, but major problems can also take place when the planning involves them. It depends what the cause of the problems are. Would be good to phrase this in a more balanced way. (Nightingale, Katherine, Christian Aid)	Done
345	5	14	34	14	38	From this statement it sounds as if the use of inappropriate materials and techniques is what results in local community members having little involvement in decision making and being. (What is decision-being?) I am not sure what is being suggested, please be sure that Wisner et al 2004 are suggesting that the majority of the houses built in humanitarian response work are unsuitable for their occupants, as this is what you imply. If it is not the majority, then the word 'often' should be changed to sometimes/at times, etc. (Nightingale, Katherine, Christian Aid)	Have inserted 'In addition' at beginning of the sentence to more clearly separate it from the previous one.
346	5	14	35	14	35	End of the phrase before the semi-colon "and being" needs to be completed or deleted (Stocker, Thomas, IPCC WGI TSU)	Done
347	5	14	40	14	44	Important point; UNISDR is pleased to see it here and supports strengthening it. (UN-International Strategy for Disaster Reduction (UN/ISDR))	Space constraints restrict further elaboration
348	5	14	47	0	0	It should be much clearer and more upfront how 5.3 is differentiated from 5.2. Is it by putting management of extreme events in a climate change context? Or is it by distinguishing planned/assisted from autonomous adaptation? Either way, some sub-sections, 5.3.1.2 in particular, have little clear rationale for being here. Material in 5.3.2, 5.3.3, 5.3.4 could apply to managing climate variability, even if variability was not increasing. (Morton, John, Natural Resources Institute, University of Greenwich)	Sections 5.2 and 5.3 were totally re-organized along the lines suggested
349	5	14	47	0	0	Section 5.3 In assessing future climate related risks, the Norwegian Climate adaptation Programme emphasizes the importance of combining research knowledge (climate projections) with knowledge of local impact of extreme weather events. Further, detailed knowledge about institutional and policy frameworks is also essential. Thus, climate projections are just one part of the knowledge needed to include adaptation in plans and strategies. (NORWAY)	Noted

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
350	5	14	47	20	8	Suggest this section could include discussion of the Institutional Adaptation to Climate Change (IACC) project, which is a recently completed international project that brought together 18 researchers from Canada and Chile. A significant component of the project involved the study of vulnerabilities of rural communities in both countries to climate extremes. Several in-depth community vulnerability assessments were conducted (vulnerability-exposure-sensitivities and adaptive capacities) from 2005 to 2007 using a participatory approach. The Canadian case studies are highlighted in the following two references: Wandel, J., J. Pittman and S. Prado, 2010. "Rural Vulnerability to Climate Change in the South Saskatchewan River Basin" in Sauchyn, D., H. Diaz and S. Kulshreshtha (eds.) 2010. The New Normal: The Canadian Prairies in a Changing Climate, Canadian Plains Research Center (CPRC) Press, University of Regina, pp.245-258; Wittrock, V., S.N. Kulshreshtha and E. Wheaton. 2011. Canadian Prairie Rural Communities: their Vulnerabilities and Adaptive Capacities to Drought. Mitigation and Adaptation Strategies for Global Change. 16(3): 267-290. doi: 10.1007/s11027-010-9262-x. The Chilean case studies can be found at the IACC website: http://www.parc.ca/mcri (CANADA)	Thanks for the references, which we were unable to include.
351	5	14	49	14	49	As a minor point, this sentence implies, following the section title, that local and community-based risk management are equivalent, whereas the glossary indicates that community-based (disaster) risk management is a subset of local (disaster) risk management. (IPCC WGII TSU)	has been corrected
352	5	15	1	15	3	ISET's work can also be cited here: Dixit, A. and M. Moench [Eds.] (2010), Adaptation and Livelihood Resilience: Implementation Pilots and Research in Regions Vulnerable to Extreme Climatic Variability and Change, 122 pp., Institute for Social and Environmental Transition-Nepal, Kathmandu. (Moench, Marcus, ISET)	noted and we introduce the idea here and go into more detail later in the chapter
353	5	15	5	15	5	Define capacity investment (Morton, John, Natural Resources Institute, University of Greenwich)	sentence deleted
354	5	15	5	15	22	Myopia not mentioned which often is key to understand bounded rationality. (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	noted
355	5	15	6	15	8	How can adoption be both prior and during events? (Morton, John, Natural Resources Institute, University of Greenwich)	the word prior was removed
356	5	15	7	15	9	Migration should not be seen as a coping strategy but as the consequence of a failure to cope, as in most cases it is not a voluntary choice. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	comments seems out of place
357	5	15	14	0	0	Change to Burton et al. (2001, p. ?) since it is a citation. (Vasseur, Liette, Brock University)	fixed
358	5	15	14	15	14	Duplicated - Burton et al. (Stocker, Thomas, IPCC WGI TSU)	fixed
359	5	15	16	15	18	The relevant time period for these sentences should be clarified. Presumably they refer to pre-Katrina research and government, but the sentences are phrased ambiguously if this interpretation is the desired one. (IPCC WGII TSU)	sentence was changed to include time frame
360	5	15	22	15	22	One other possibility that needs to be enumerated is that in some cases, reasonable people choose to take the risk. (For example, the value of living near the coast pays back the cost of the structure in a few years, and building a stronger home is not always cost-effective). This point is made in many of the US sea level rise adaptation studies (UNITED STATES OF AMERICA)	point was included
361	5	15	22	15	22	And knowledge is often discounted. (IPCC WGII TSU)	point was included
362	5	15	31	15	39	Is policy not a national issue and therefore out of place here? (Morton, John, Natural Resources Institute, University of Greenwich)	paragraph was removed
363	5	15	32	15	34	change to " ...triggering or focusing ON events... And by changing governments and public opinion". (Vasseur, Liette, Brock University)	paragraph was removed
364	5	15	53	15	54	We suggest including this point in section 5.2.2. (UN-International Strategy for Disaster Reduction (UN/ISDR))	point included
365	5	15	54	15	54	Insert "that" after "recognition" (Stocker, Thomas, IPCC WGI TSU)	done
366	5	16	7	0	0	It says 'another pro-active action...'. The impression is given that this section addresses what happens 'after the event' and views extreme event as 'windows of opportunity' (P15, L27) (NETHERLANDS)	sentence was clarified
367	5	16	7	16	9	Please include in section 5.2.3 (UN-International Strategy for Disaster Reduction (UN/ISDR))	We disagree with this point
368	5	16	7	16	35	These two paragraphs do not seem to belong in a section entitled "Focusing events". Move, delete or reword to clarify. (Stocker, Thomas, IPCC WGI TSU)	headings were changed so the section is more about pro-active actions
369	5	16	8	16	8	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	rephrased

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
370	5	16	21	0	0	The effect of ENSO events, according to the study, take place only in Brazil and Peru, but not in all Latin America. Include data and information of the phenomenon in Chile. (CHILE)	sentence was deleted
371	5	16	22	16	22	Please describe these DRR ENSO events that increased vulnerability (UN-International Strategy for Disaster Reduction (UN/ISDR))	sentence was deleted
372	5	16	24	16	26	Should the terminology of "levee effect" used above also be used here? (Morton, John, Natural Resources Institute, University of Greenwich)	added
373	5	16	24	16	28	Redundant with section 5.2.1 and Chapter 2. Delete or consolidate discussion. (CANADA)	redundancy removed
374	5	16	26	16	28	Is the "safe development paradox" equivalent to the "levee effect"? If so, redundancy with description of the levee effect elsewhere in the chapter should be considered, and equivalency of the terms should be presented here. (IPCC WGII TSU)	redundancy removed
375	5	16	28	16	28	This statement needs a few citations, or cross references if the paradox is explained and cited elsewhere in this chapter or possibly chapter 1. (UNITED STATES OF AMERICA)	modified and moved to 5.3.2
376	5	16	35	16	35	Please refer to Chapter 3 at the end of this sentence. (Stocker, Thomas, IPCC WGI TSU)	done
377	5	16	43	16	44	Risk perception is another critical factor. (IPCC WGII TSU)	added
378	5	16	52	16	54	Planning is seen as an imposition in this case? Is there a compulsory component or an organization system that is effective? Is it not biased? (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	Not clear on the reviewer's comment
379	5	17	1	17	9	The discussion focuses on problems with the shelter. A separate problem concerns fears with leaving (e.g. looting and safety of pets). (UNITED STATES OF AMERICA)	point noted and incorporated into text
380	5	17	5	17	5	Why is culture used for Bangladesh example but not for developed country examples? One could argue that not evacuating because of one's pet is also cultural... (UNITED STATES OF AMERICA)	This is true, but we are striving for balance in the examples.
381	5	17	5	17	9	For this reason, it is particularly important to consider cultural issues when elaborating evacuation procedures. See success story in: Clot, N. and J. Carter, 2009: Focus no 2/09. Disaster Risk Reduction:A Gender and Livelihood Perspective. InfoResources, Zollikofen. Switzerland. (c.f. subchapter physical assets) (Clot, Nicole, Intercooperation)	included
382	5	17	6	17	9	Why not also cite positive examples of how governments and NGOs are addressing these issues and how they are learning from mistakes? (UNITED STATES OF AMERICA)	evidence is not in the literature that we could find
383	5	17	16	17	17	Seeking refuge from a wildfire in a backyard swimming pool would seem to be unsafe unless someone had a gas mask, so some additional explanation here would be useful. (UNITED STATES OF AMERICA)	We don't understand the comment
384	5	17	17	0	0	shelter in place ACTION (?) is... What is action doing here? (Vasseur, Liette, Brock University)	unclear about the comment
385	5	17	17	17	18	Needs more explanation of SDLE: as aopsed to what? (Morton, John, Natural Resources Institute, University of Greenwich)	sentence clarified
386	5	17	20	0	0	missing a) (Vasseur, Liette, Brock University)	fixed
387	5	17	23	17	25	For Cuba, the protective actions are coordinated by state authorities with wide social participation . On the same parragraph referring to Cuba the authors mentioned "the organization of the civil defense committees are at block, neighborhood, and community levels working in conjunction with centralized governmetal authorities " and " Planning for natural disasters is a way of life in Cuba, where everyone is taught at an early age to mobilize quickly in the case of a natural disaster." The authors of section 8.6.1.2 refer "The Cuban success in disaster preparadnes was built on solid local organization, relied on sustained support from national level" . Are the protective actions imposed by states authorities? (Suarez, Avelino, Institute of Ecology and Systematic, Cuban Environmental Agency)	changed to say "coordinated by centralized authorities"
388	5	17	25	17	25	The "China" in the sentence "other protective actions for individuals or households are imposed by state authorities such as Cuba and China" should be deleted as no document has been for it as a fact. (CHINA)	changed to say "coordinated by centralized authorities"
389	5	17	25	17	26	Please remove "natural" from "disaster" and replace the second one with "in the case of a natural hazard". (UN-International Strategy for Disaster Reduction (UN/ISDR))	done
390	5	17	25	17	30	While the success of Cuba in minimizing loss of life from natural disasters is well know, it is worth providing some detail on how that is achieved, even if it is in a unique setting. (CANADA)	noted

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
391	5	17	32	17	43	I am not sure about the notions of traditional and pre-capitalist. It seems easy to discuss the merits of traditional networks that existed at low levels of subsistence, and high levels of mortality and morbidity. I think some more fundamental debate about the coevolution of development and risk would be useful here. Many modern societies, call those capitalist (which I don't like), have managed to develop sophisticated, but of course not perfect, systems for managing risks, which have coevolved with development. Why focus here on the shell economy in Vanuatu and how can this discussion help move forward the discussion on adaptation? (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	noted
392	5	17	34	17	34	This overestimates the role of reciprocity in the moral economy as conceived by Scott - his point is more to do with limiting exploitation such that everyone has basic security. (Morton, John, Natural Resources Institute, University of Greenwich)	point clarified
393	5	17	35	17	36	This citations in this sentence reads very strange. Would be better to reword as: "...identified in Southeast Asia (Scott 1976), in Western Africa (Watts 1983), and in the Pacific Islands (Paulson 1993). (Stocker, Thomas, IPCC WGI TSU)	changed
394	5	17	38	0	0	Limpopo Basin, in northern South Africa (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	added
395	5	17	45	18	8	The message of the box is unclear. What does the reference to colonialism, christianity and cash economy lead to? The "moral economy" is a form of collective insurance, which can work very well in christian societies with "cash economies". (Bardt, Hubertus, Cologne Institute for Economic Research)	In many parts of the world traditional moral economies were broken down by this process as the example shows. The chapter tends to have a preponderance of material pertinent to industrialized countries. Developing countries (former colonies) have dome different elements of resilience and vulnerability to disaster. The erosion of these aspects has reduced capacity in many societies.
396	5	17	49	18	6	I really do not see the merits of this system, and why has the introduction of money destroyed it? (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	In may parts of the developing world economies were 'subsistence' based (e.e. no cash component). These non-cash exchange systems that operated were complex and one of their benefits was that they helped local communities to be resilient. With the introduction of the cash economy (amongst other colonial processes) these systems fell away and vulnerability increased.
397	5	18	3	18	3	The suggestion that conversion to Christianity has destroyed traditional assistance networks in Vanuatu should either be placed in context or deleted. Religious institutions have had many impacts on how people cope with disasters, which include mosques often having the highest floor elevations and hence providing flood refuge in some locations, disaster aid relief, the teaching and promotion of a charitable ethic, economic development, and construction. A box or short section explaining the many impacts of religion on disasters could be very informative. But a passing reference to an adverse impact of a single religion could become distracting. (UNITED STATES OF AMERICA)	changed to religious conversion and removed missionaries
398	5	18	10	18	27	It seems that it might be helpful for the reader to characterize existing knowledge and academic debates described in these paragraphs with summary terms for evidence and agreement, per the AR5 Guidance Note on Treatment of Uncertainties. (IPCC WGII TSU)	ok
399	5	18	22	18	22	Which writers? (Morton, John, Natural Resources Institute, University of Greenwich)	deleted first sentence and modified the second in this section

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
400	5	18	26	18	27	There has got to be more than one source (Campbell, 2006) to support this statement. (UNITED STATES OF AMERICA)	There is little in the way of recent longitudinal studies of disaster occurrence and response in these kinds of settings. There are other articles by Campbell but this one is a comprehensive overview of traditional DRM in Pacific Island countries
401	5	18	27	18	27	I would doubt this and causality seems difficult to establish here, when disaster losses are rising everywhere, and this mostly as we hear in ch.4 due to exposure changes. (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	Throughout the Pacific region, at least, there has been a clear link between disaster relief and the falling away of traditional DRM measures. Much of the research done is relatively dated and excluded here but includes Waddell, 1983 (Papua New Guinea); Paulson, 1993 (Samoa); Campbell 1985 (Fiji); Bayliss-Smith et al., 1988 (Fiji), Campbell, 1990 (Vanuatu); Thaman, 1981 (Tonga)
402	5	18	29	18	36	Yes, this point is well made and there are some examples of diverse networks coming together through community based processes and then links to scientific research bodies and national NGOs in Philippines and elsewhere. If useful a good Philippines network example is the BDRCL learning circle publication here: http://community.eldis.org/DRR/.59e3c4cb/.59e99723 and particularly (Nightingale, Katherine, Christian Aid)	Unfortunately this site does not seem to be operable. There is reference to the Philippines example but the link is not active.
403	5	18	39	0	0	On anticipation of climate change et of hazards (including reference level for DRR at local level), it is convenient to refer to chapter 3. (BOURRELIER, PAUL-HENRI, AFPCN)	ok
404	5	18	41	18	54	Consider adding from some of the recent literature emerging on using seasonal climate information. SCIENCE VOL 318 5, OCTOBER 2007. East Africa Regional El Nino Preparedness and Response Mapping Exercise 19 March 2010 Nairobi, Kenya; Whatever the weather....Making climate information user friendly for humanitarian organizations IFRC 2010. (Brooke, Roy, United Nations)	unable to add reference due to time pressures
405	5	18	43	0	0	affected should be "affected" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	done
406	5	18	54	18	54	In relation to early warning systems, you should also refer the reader to Chapter 9, Case Study 9.2.13. (Stocker, Thomas, IPCC WGI TSU)	done
407	5	19	0	0	0	Integrating CC information into DRR seems to be the focus on this section and the understanding of Community Based Adaptation but I wondered if you had considered the importance of building capacity to deal with uncertainty and unpredictability as a core part of CBA. Work on Strengthening Climate Resilience www.csdm.org has been aimed at doing this as part of an overall approach to integrating CC information and implications into DRR and wider development work. (Nightingale, Katherine, Christian Aid)	noted
408	5	19	0	0	0	If it is useful to reference examples of tools for CBA many orgs have them. One example of Participatory Vulnerability and Capacity Assessments Guidelines http://community.eldis.org/?233@@/.59e79141!enclosure=.59e79148&ad=1 And the Climate Change Toolkit that includes the importance of integrating external knowledge alongside PVCA http://www.worldresourcesreport.org/in-the-news/christian-aid-toolkit-series-integrating-climate-change-adaptation-secure-livelihoods (Nightingale, Katherine, Christian Aid)	thanks for the references.
409	5	19	1	19	7	FEWS has been well evaluated for lessons learned. I believe it has examples of relief coming late. (IPCC WGII TSU)	ok
410	5	19	9	19	11	These sentences could potentially be interpreted as prescriptive, and some minor rewording could help avoid misinterpretation. If the intent of the author team here is to communicate information presented in the provided citation, a slightly different formulation could make this clearer. (IPCC WGII TSU)	sentence was rewritten
411	5	19	9	19	14	1) This para needs additional definition. Better systems of what are necessary? A systematic restructuring of what is needed? 2) Also, suggest to move to s 5.4 (Brooke, Roy, United Nations)	section was moved and sentence was restructured.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
412	5	19	9	19	14	It's not clear why the focus is on the humanitarian community. At local level people need weather and climate info targeted to their needs for their livelihoods. Furthermore, while forecasts can be effective if targeted appropriately to the context, inclusion of potential impacts with the forecast can increase the rate at which it is understood and heeded. Pennesi, K. E. (2007), The Predicament of Prediction: Rain Prophets and Meteorologists in Northeast Brazil, 387 pp, University of Arizona. ; Agrawala, S., et al. (2010), Incorporating Climate Change Impacts and Adaptation in Environmental Impact Assessments: Opportunities and Challenges, 38 pp, OECD Environmental Working Paper No. 24. ; Dolcemascolo, G., et al. (2002), Climate Applications and Preparedness, in Regional Workshop on Best Practices in Disaster Mitigation, p. 64, Asian Disaster Preparedness Center, Bangkok, Thailand. ; NRC (2006), Completing the Forecast: Characterizing and Communicating Uncertainty for Better Decisions Using Weather and Climate Forecasts, pp. 124, Committee on Estimating and Communicating Uncertainty in Weather and Climate Forecasts, National Research Council. See: Paton, D. (2003), Disaster preparedness: A social-cognitive perspective, Disaster Prevention and Management, 12(3): 210-216. (UN-International Strategy for Disaster Reduction (UN/ISDR))	added
413	5	19	9	19	14	This is perhaps the most critical paragraph to highlight in terms of communication, and perhaps should be in a box of its own. The breakdown in communication is not just one-way. The way the two paragraphs are written, there is the implicit perception that if decision-makers (be they individual farmers deciding what to plant or government) simply understood climate information, they would use it. This assumption is a repetition of early sentiments about information uptake and usage in disaster situations, which were discredited by subsequent research into risk perception and behavior. Very rarely does the climate science community consider the actual decision processes of various decision makers and the types of information that they actually need. For example, extreme events are often pegged to the statistical standards of the 10th and 90th percentiles by the climate community. However, a farmer may not care about these extremes because for her/him, significant crop loss occurs when rainfall is 70% of normal b/c of a number of confounding factors – crop type, soil moisture retention, access to irrigation, etc. Therefore, the extremes and information need to be tailored to specific user contexts in order to be effective, which is often hard for the academic climate community to understand. The informal climate community has a better grasp of this concept, such as the Weather Channel in the U.S. Furthermore, while forecasts can be effective if targeted appropriately to the context, inclusion of potential impacts with the forecast can increase the rate at which it is understood and heeded. Pennesi, K. E. (2007), The Predicament of Prediction: Rain Prophets and Meteorologists in Northeast Brazil, 387 pp, University of Arizona. ; Agrawala, S., et al. (2010), Incorporating Climate Change Impacts and Adaptation in Environmental Impact Assessments: Opportunities and Challenges, 38 pp, OECD Environmental Working Paper No. 24. ; Dolcemascolo, G., et al. (2002), Climate Applications and Preparedness, in Regional Workshop on Best Practices in Disaster Mitigation, p. 64, Asian Disaster Preparedness Center, Bangkok, Thailand. ; NRC (2006), Completing the Forecast: Characterizing and Communicating Uncertainty for Better Decisions Using Weather and Climate Forecasts, pp. 124, Committee on Estimating and Communicating Uncertainty in Weather and Climate Forecasts, National Research Council. See: Paton, D. (2003), Disaster preparedness: A social-cognitive perspective, Disaster Prevention and Management, 12(3): 210-216. (Moench, Marcus, ISET)	points included in the revised section
414	5	19	11	19	11	"climate change scenarios" - should be "climate change PROJECTIONS" (Stocker, Thomas, IPCC WGI TSU)	done
415	5	19	13	19	14	This sentence could potentially be interpreted as prescriptive, and some minor rewording could help avoid misinterpretation. If the intent of the author team here is to communicate information presented in the provided citation, a slightly different formulation could make this clearer. (IPCC WGII TSU)	done
416	5	19	16	19	29	The Community-based risk screening tool- adaptation and livelihood (CRISTAL) allows exactly to collect information that is rooted at the community level and enables communities to identify responses to enhance resilience. See reference: OECD guideline, 2009. Integrating CC Adaptation into Development Co-operation; And: N. Clot, 2008. Highlighting local coping strategies for drought in ISDR Gender perspectives: integrating DRR into CCA (Clot, Nicole, Intercooperation)	noted
417	5	19	17	0	0	since CBA has been defined in the previous page, just use CBA, not the full name and then use e.g. line 31 (Vasseur, Liette, Brock University)	editorial

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
418	5	19	19	0	0	Proposition: Also include other risks, don't isolate climate change risks. It is only one of the risks threatening communities. Climate change exacerbates the other risks that are already there. (NETHERLANDS)	noted
419	5	19	21	0	0	Supporting literature: ISET (2010), The Shared Learning Dialogue: Building Stakeholder Capacity and Engagment for Resilience Action, 29 pp, Institute for Social and Environmental Transition, Boulder. (Moench, Marcus, ISET)	noted
420	5	19	26	19	26	Please replace "risks" with vulnerabilities and capacities. (UN-International Strategy for Disaster Reduction (UN/ISDR))	not done
421	5	19	31	19	38	It should be also highlighted here that not only there is a challenge of limited access to downscaled climate change scenarios relevant at the local level but also because of the fact that where these projections are available there is not enough capacities at the local level to analyse and put them in practical use. (Hillier, Debbie, Oxfam)	included
422	5	19	40	19	51	Paragraph conflates CDBP with CBA. Why not just refer to them as community-based approaches, as that seems to be what this paragraph is getting at. Also, paragraph doesn't link activities with outcomes. Is this because it is too early to assess impact? If so, state it. (UNITED STATES OF AMERICA)	done
423	5	20	0	0	0	Section 5.3.3: Communicating Risk: lots here on the methods of communication (workshops, radio, etc.) but more on HOW to communicate risk, a complex topic, with people who are not experts in the areas of climate change, technology, etc. More examples would be useful. (International Petroleum Industry Environmental Conservation Association (IPIECA))	we agree, but there's not much in the literature that we could find.
424	5	20	12	0	0	Box 5-5: Can this box be strengthened by referring to a wider range of literature beyond the single study that is currently cited? (Stocker, Thomas, IPCC WGI TSU)	trying to find another supporting source for the example.
425	5	20	17	20	20	Include the botanical name <i>Aspalathus linearis</i> . (Morton, John, Natural Resources Institute, University of Greenwich)	not done
426	5	20	35	20	38	Based on what evidence? How was adaptive capacity built, and how was it known that it was built? (UNITED STATES OF AMERICA)	Additional references were included to augment the point in general using the case study as one small example.
427	5	20	47	20	52	The author team might consider citing case study 9.2.11 here. (IPCC WGII TSU)	A citation to the case study was added to the text.
428	5	20	51	20	53	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. Additionally, the intended meaning of the sentence is very difficult to understand. (IPCC WGII TSU)	This language was changed.
429	5	20	53	21	2	It seems that a more comprehensive assessment of literature for this topic, regarding risk perception of climate change, is needed, given the diversity of views beyond those presented here (e.g., other papers by Leiserowitz, by Slovic, and by Kaspersen). (IPCC WGII TSU)	The entire section has been edited to create a more comprehensive review of the literature.
430	5	21	2	21	2	Not clear what you mean with "more concern than mentioning other climate change impacts"? Please clarify what is meant here. (Stocker, Thomas, IPCC WGI TSU)	the language was changed for clarity.
431	5	21	7	21	10	Sentence needs fixing. (Morton, John, Natural Resources Institute, University of Greenwich)	sentence edited.
432	5	21	12	21	16	While in many locations early-warning is within the purvey of the government, because of bureaucracy, official early warnings might not reach the intended communities until after the event. Private communications networks, such as cell phones (mentioned here), community radio stations, social networking sites like Twitter, can be far more effective in providing timely warnings and prompting action because the messages are sent by people known/trusted by the recipient. The preference and form the communication is determined by what is available to people. The Risk to Resilience Study Team (2009), Catalyzing Climate and Disaster Resilience: Processes for Identifying Tangible and Economically Robust Strategies: Final Report of the Risk to Resilience Study, 328 pp, ISET and ISET-N, Kathmandu. Institute for Social and Environmental Transition (Nepal), Kathmandu. Pacific Disaster Center (2010), Access Disaster Alerts Anywhere, Anytime on Facebook and Twitter, http://www.pdc.org/PDCNewsWebArticles/2010/SocialMedia/social_media.htm , accessed 30 March, 2011. Palen, L. et al. (2007), Crisis Informatics: Studying Crisis in a Networked World, Third International Conference on e-Social Science, Ann Arbor, Michigan, October 7-9, 2007. Palen, L. et al. (2007), Online Forums Supporting Grassroots Participation in Emergency Preparedness and Response, Communications of the ACM, 50(3): 54-58. (Moench, Marcus, ISET)	The idea was added to the document with references.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
433	5	21	20	0	0	Box 5-6: We do not consider this box to be a useful component of the chapter. What is the key message coming from this box relevant for 'local'? What element of an assessment is included in this box? (Stocker, Thomas, IPCC WGI TSU)	removed the latin names
434	5	21	20	21	36	What is the criteria for inclusion and exclusion in this list of selected sources? How local is the information provided by those listed? (UN-International Strategy for Disaster Reduction (UN/ISDR))	text deleted
435	5	21	22	21	27	There are still too many US examples in relation to international examples (Bardt, Hubertus, Cologne Institute for Economic Research)	text removed
436	5	21	22	21	27	Box 5-6. The list of "selected sources" is curious and of questionable value. It seems to dismiss the role played by national governments. It also appears to contradict a central tenant of this chapter that bottom-up process are critical for determining risk and vulnerability. (CANADA)	text was removed
437	5	21	28	21	35	There also are vulnerability and adaptation assessments. (IPCC WGII TSU)	text was removed
438	5	21	29	0	0	Not needed (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	text was removed
439	5	21	34	0	0	telenovelas etc. add a , before etc. (Vasseur, Liette, Brock University)	text was removed
440	5	21	40	22	19	This issue is closely linked to effective early warning systems. We found in the Sahel that there were a range of factors that contributed to the failure of EWS messages to reach local communities, including the different cultural languages and understanding of the risks. Also problematic was the different levels of trust in the information provided meant that alternative EWS process were created which resulted in several EWS and a political dynamic to which information was believed etc. For more info see http://community.eldis.org/?233@@/.59e99ac1!enclosure=.59e9e601&ad=1 (Nightingale, Katherine, Christian Aid)	These issues with regards to early warning systems are discussed slightly later in the chapter.
441	5	22	0	23	0	Proposition: Include somewhere: NGO's have worked on more simple tools with communities through methods like community managed disaster risk reduction, whereby communities draw their own maps and communication tools indicating where their hazards are, for what they are vulnerable and what their own capacities are to deal with the hazards. (NETHERLANDS)	These types of issues are discussed in the section on Community Based Adaptation later in this chapter.
442	5	22	1	22	37	I am very surprised that literally nothing is mentioned regarding neighborhood watch/warning. This is used in small or isolated communities. I seems in general that the search for literature was limited. (Vasseur, Liette, Brock University)	concept added to the text
443	5	22	1	23	24	Useful information, thank you. (UN-International Strategy for Disaster Reduction (UN/ISDR))	good
444	5	22	17	22	19	Examples of "effective" communication approaches? (UNITED STATES OF AMERICA)	the question is addressed with the new table in the chapter that addresses actionable findings
445	5	23	0	0	0	Proposition (see phrase above): This includes local early warning systems using their own symbols. (NETHERLANDS)	it is unclear which phrase this comments refers to
446	5	23	3	23	15	The US National Research Council America's Climate Choices would be an appropriate reference. (IPCC WGII TSU)	reference added
447	5	23	6	23	8	This reference to "extreme impacts of climate change" suggests that there has been attribution work done to differentiate these extreme impacts from extremes of variability. This language is quite different from that used in the rest of the chapter. Unless such attribution has been done and is referenced, it would be more appropriate to state "...in high-stress situations such as those associated with extreme climate impacts". (CANADA)	language was changed.
448	5	23	7	23	15	To my knowledge, participatory video is about allowing poor communities to communicate with elites, in which case it relevance needs to be demonstrated. (Morton, John, Natural Resources Institute, University of Greenwich)	This it not what is expressed in the literature about participatory video. It can be used to communicate across a variety of stakeholders.
449	5	23	9	23	15	A common approach in Asia and Africa is "community drama" - it doesn't rely on technology, and it allows for two way communication (dramas are usuallly followed by discussion). (UNITED STATES OF AMERICA)	The idea was added to the document.
450	5	23	10	23	10	Do you mean "...constraints to accessing accurate climate information"? (Stocker, Thomas, IPCC WGI TSU)	Yes. This text was edited to account for this change.
451	5	23	11	23	11	What do you mean with "opinions leaders"? (Stocker, Thomas, IPCC WGI TSU)	This term is not used in this location.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
452	5	23	27	24	17	This section focuses on Early Warning Systems which base on climate forecasts (seasonal forecasts). Due to the relative great uncertainty of seasonal forecasts, I would prefer to distinguish between Early Information Systems (based on seasonal forecasts) and Warning Systems for the next few days based on weather forecasts. Anyway these short-range Warning Systems should be mentioned in this section and it should become clear for the reader that there are several time-scales of "warnings" or "early information". In Ch9 Case Study 9.2.13 the issue of early warning systems is described very well. I would suggest to move the case study (which is not really a case study because it describes the problem very generally) to Ch 5. (Koppe, Christina, Deutscher Wetterdienst)	noted
453	5	23	27	24	17	What about examples of local level EWS, i.e., traditional knowledge (water turning different color, wind shifting, etc), innovative use of cell phones, basic tech like megaphones, and sticks in a river? (UNITED STATES OF AMERICA)	included
454	5	23	27	25	14	Please cite findings from the United Nations 2006 "Global Survey of Early Warning Systems: An assessment of capacities, gaps and opportunities toward building a comprehensive global early warning system for all natural hazards" in particular on need to improve dissemination of warnings. (UN-International Strategy for Disaster Reduction (UN/ISDR))	This reference was included and the findings noted.
455	5	23	29	23	31	It is not clear how "communities have shown" should be interpreted. It would perhaps be preferable to indicate specific relevant citations here. (IPCC WGII TSU)	references added
456	5	23	29	23	45	The author team might consider citing case study 9.2.13 here. (IPCC WGII TSU)	inserted
457	5	23	30	23	30	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	changed
458	5	23	38	23	39	Please cite chapter 3 here, in relation to forecast skill characterization. (Stocker, Thomas, IPCC WGI TSU)	done
459	5	23	47	23	48	I don't recall reading if the report mentions the value of environmental warning signs of extreme events (for those out of range of warning systems, in remote areas, and countries that don't have the resources for monitoring/instrumentation. There is a good body of research/documentation of the value of environmental warning signs. Can it be added here or elsewhere in the report? (UNITED STATES OF AMERICA)	included
460	5	23	47	24	5	An example can be included here of Early Warning Systems in Central America (SATCA) to illustrate how early warnings can be communicated to vulnerable communities. Please see for further information: http://www.satcaweb.org/ (World Food Programme (WFP))	noted
461	5	24	2	0	0	in case of emergency, you may call 911 in the US, but in other parts of the world you call 110, 112 or other numbers. 911 is to US specific for this document (Bardt, Hubertus, Cologne Institute for Economic Research)	included
462	5	24	21	0	0	Box 5-8: Can this box be strengthened by referring to a wider range of literature beyond the single study that is currently cited? (Stocker, Thomas, IPCC WGI TSU)	box deleted
463	5	24	21	25	14	Section on FEWSNET should reference the fact that FEWSNET focuses on drought as a key hazard and uses NDVI (Normalised Difference Vegetation Index) as a key indicator. FEWSNET does work on prices and markets, and see this as a risk in itself, drought is still the main focus. Should mention the fact that FEWSNET has been instrumental in making linkages between climate forecasts and response and that this as had a lot of success (certainly in sub saharan Africa) It should be noted that FEWSNET was never intended to inform decisions of communities, therefore it is questionable whether this is the right section. Certainly this should be clarified. (Hillier, Debbie, Oxfam)	box deleted
464	5	24	21	25	14	Is there a problem with the fact that FEWSNET is dealing with different scales of information, i.e., downscaled climate projections and upscaled food insecurity projections? (UNITED STATES OF AMERICA)	box deleted
465	5	25	1	25	14	This is all very positive; what are the lessons learned? (IPCC WGII TSU)	box deleted
466	5	25	10	0	0	after the disaster (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	box deleted
467	5	25	21	25	45	Particularly line 45 it might be good to say that accountability and governance of climate and disaster management issues is growing in importance, see Might want to look at www.climategovernance.org where reports like Working Paper 2 - Accountability in Disaster Risk Reduction: Lessons from the Philippines. Emily Polack, Emmanuel Luna, Jessica Dator-Bercilla www.climategovernance.org/docs/Accountability%20for%20DRR_Final%20Paper8%20Feb%202011.pdf look at accountability on DRR and efforts by networks like DRRnet that start to hold governments to account by outing government policies http://www.climategovernance.org/docs/InTheMidstPhil.pdf (Nightingale, Katherine, Christian Aid)	noted and the point included.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
468	5	25	24	25	25	Why choose this particular definition of empowerment? There are many. (UNITED STATES OF AMERICA)	Justification was provided.
469	5	25	39	25	45	Empowerment is something that is also linked to the overall enabling environment, which should be conducive to bring the desired result. (Hillier, Debbie, Oxfam)	ok
470	5	25	48	0	0	There needs to be information in this section on social drivers concerning the role of religion. Both as a positive force - in providing assistance and support - and in some cases as a source of fatalism towards disasters which results in a lack of preparedness. (Hillier, Debbie, Oxfam)	religion was added to the text as one of the many different social drivers
471	5	25	51	0	0	Remove "both"; "operates" should be "operate"; "intersects" should be "intersect" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	text changed
472	5	25	53	25	53	It would be preferable to cite specific relevant sections in chapter 2. (IPCC WGII TSU)	Noted.
473	5	26	1	26	3	Consistency between chapters is useful. Chapter 2 (section 2.5.8) relates the disproportionate number of fatalities among women to them working along the shoreline while the men were out to sea when the tsunami hit, citing Doocy et al (2007). Both reasons may well be correct, and if so both should be cited in both chapters. (CANADA)	added
474	5	26	2	0	0	and also because people don't warn them as they often work in isolation in the field. (Vasseur, Liette, Brock University)	Discussion was added regarding other factors that made the women vulnerable.
475	5	26	2	26	2	There were other documented reasons, other than women not knowing how to swim, e.g. EWS, men fishing/in boats, etc. (UNITED STATES OF AMERICA)	Discussion was added regarding other factors that made the women
476	5	26	5	26	49	I am uncomfortable with the way terms from social theory are used here. Norms, social capital, social networks are not "things" with obvious definitions, but ways in which social scientists of different stripes choose to describe social life. (Morton, John, Natural Resources Institute, University of Greenwich)	The social science literature uses these concepts to define social life, and as such, have developed definitions in order to be able to do so. Without further specification regarding what is 'uncomfortable,' there is little available to correct.
477	5	26	14	0	0	engagement should be "engagements" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	done
478	5	26	14	26	25	In this section, social capital is presented as a multi-faceted concept and as an important element to prevent, prepare and cope with disasters. In this section, the theoretical foundations of the concept of social capital should be mentioned by referring to Bourdieu: Bourdieu, P. (1983): Ökonomisches Kapital, kulturelles Kapital, soziales Kapital. In: R. Kreckel (ed.): Soziale Ungleichheiten – Soziale Welt, Sonderband 2: 183-198. Moreover, a distinction between individual and collective notions of social capital could be made and discussed in the context of promoting social capital as a long-term adaptation strategy. Reference: Bohle, H.-G. (2006): Soziales oder unsoziales Kapital? Das Konzept von Sozialkapital in der Geographischen Verwundbarkeitsforschung. In: Geographische Zeitschrift, 93 (2): 65-81. Lastly, the attempts of the World Bank to promote social capital as a „missing link“ in development might be mentioned, and the critical reflection on this attempt by John Harriss et al. could be shortly commented on (Harriss, J. and De Renzio, P. (1997): “Missing Link” or analytically missing? The concept of social capital. Journal of International Development 9 (7): 919-937). (Bohle, Hans-Georg, University of Bonn)	These are important ideas, but perhaps too detailed and nuanced for our purposes in this chapter.
479	5	26	14	26	49	There is nothing related to local governance here. No local governance means very limited social capital and therefore limited capacity of adaptation. (Vasseur, Liette, Brock University)	governance is discussed elsewhere in the chapter
480	5	26	30	26	30	The citation for Crabbé (2006) is not provided in the chapter's reference list. Please ensure this citation is added to the reference list. (IPCC WGII TSU)	reference was added
481	5	26	34	26	34	This is repeated elsewhere. (IPCC WGII TSU)	could not find the redundancy
482	5	26	41	26	49	The topic sentence suggests that social networks can impair adaptation. But the body of the paragraph instead focuses on situations where something harmed the social networks, thereby impairing their ability to help. (UNITED STATES OF AMERICA)	the text was changed
483	5	26	41	26	49	Networks are not all working in the same direction; there is considerable polarization. (IPCC WGII TSU)	This nuance in the assessment of social networks was added.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
484	5	26	44	26	44	"As people migrate away from climate risks" - there are many pull/push factors that induce people to move. Cannot attribute reason directly to climate risks. (UNITED STATES OF AMERICA)	The sentence is about how some social networks encourage remaining in place. Does not imply it is the only factor.
485	5	27	0	0	0	Section 5.3.6: local knowledge is NOT only indigenous knowledge. There is a need to broaden this section and add more on other aspects of local knowledge. (Vasseur, Liette, Brock University)	added a sentence and indicated later in the section that more research is necessary in this area.
486	5	27	1	27	43	Section on integrating local knowledge doesn't say much about how and what it looks like, in concrete terms. (UNITED STATES OF AMERICA)	an example in the paragraph shows how
487	5	27	18	27	21	Unclear what was more consistent than what, and why. (Morton, John, Natural Resources Institute, University of Greenwich)	restructured the paragraph to clarify
488	5	27	21	27	23	There is a climate change and health newsletter from the Alaska Native Tribal Health Consortium that may point to additional information. (IPCC WGII TSU)	added
489	5	27	23	27	23	another example to add: The programme, called the Climate Change Adaptation Programme (Spanish acronym PACC), focuses on water resources, disaster prevention and food security, and combines local and scientific knowledge in an interdisciplinary fashion. See reference: ISDR Briefing Note 2, 2009. Adaptation to Climate Change by Reducing Disaster Risks: Country Practices and Lessons. (Clot, Nicole, Intercooperation)	checked this. The example on integration of local and scientific knowledge is not detailed enough to include.
490	5	27	25	27	34	the explicit mentioning of ownership is somehow missing in my opinion (Clot, Nicole, Intercooperation)	ownership of what?
491	5	27	32	27	34	Not clear how local stakeholder perspectives can provide input for climate change modelling. Please clarify what you mean here, perhaps giving an example. (Stocker, Thomas, IPCC WGI TSU)	added a sentence to explain
492	5	27	38	27	40	"Nomadic pastoralism" or "pastoralism" in general are terms very little used in Southern Africa. Only some very small and marginal groups (Himba, Nama, perhaps Bakgalagadi) are both nomadic and livestock dependent, and more mainstream groups like the Tswana, even though livestock dependent, have not historically been described as "pastoralist". (Morton, John, Natural Resources Institute, University of Greenwich)	deleted 'nomadic pastoralim'
493	5	27	48	0	0	shape should be "bring" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	changed
494	5	27	48	0	0	Governance is mentioned here but again very limited. In addition, this sentence needs to be rework. Two different ideas and the second part is difficult to understand. I should that I even do not agree with it. This is not only in poorer countries. probably worst there but also in developed countries. (Vasseur, Liette, Brock University)	deleted the phrase at the end of the sentence
495	5	27	48	27	50	This sentence is not clear. (IPCC WGII TSU)	deleted
496	5	27	50	0	0	experincing should be "experience" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	deleted
497	5	27	51	0	0	at the national level not needed. Centralization is at the national level (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	restructured the sentence to delete national level, replaced by centralized
498	5	28	9	28	11	Also states in the US. (IPCC WGII TSU)	added
499	5	28	21	28	21	Typo, "...adaptation tend to support..." (Moench, Marcus, ISET)	changed
500	5	28	34	28	34	Primate? (IPCC WGII TSU)	refers to major cities--these are large urban entities central to politics, culture, and economy..primate refers to the top of the urban hierarchy. The term is widely used in the urban literature.
501	5	28	35	28	36	The citation for Lundqvist (2008) is not provided in the chapter's reference list. Please ensure this citation is added to the reference list. (IPCC WGII TSU)	should be Lundqvist and Borgste 2008 which is in the ref list
502	5	28	39	28	39	The citation for Crabbé (2006) is not provided in the chapter's reference list. Please ensure this citation is added to the reference list. (IPCC WGII TSU)	should be Crabbe and Robin 2006 which is in the reference list
503	5	28	48	28	54	Examples exist. Communities are linking community based plans with district level plans (which are tied to development budgets from central government). (UNITED STATES OF AMERICA)	we need more information from the reviewer on specific examples and references

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
504	5	28	53	28	53	Command system at CDC? (IPCC WGII TSU)	this is the formal Incident Command System (ICS) that all federal agencies use during disasters in the US
505	5	29	0	0	0	-Page 29: Part 5.4.1: In this chapter and particularly this part, the integrated definition about the "Adaptation" and "Coping to Climate Change" have not been brought herein. For example: This paragraph could be added. (Eslamian, Saeid, Isfahan University of Technology)	noted
506	5	29	0	0	0	Should this whole section reference some of the work done by Twigg to define the Characteristics of a Disaster Resilient Community, http://community.eldis.org/.59e907ee/Characteristics2EDITION.pdf (Nightingale, Katherine, Christian Aid)	yes, but much of this appears in the grey literature
507	5	29	2	29	15	This is about the only place in the chapter or report where the roles of the private sector (businesses and professions) are recognized in adaptation and disaster risk reduction. These roles should get greater attention in the (Wright, Richard, American Society of Civil Engineers)	The largest role of the private sector in disaster management is the provision of private insurance. It is extensively mentioned in the risk transfer section of the chapter.
508	5	29	29	0	0	Section 5.4. Use of calibrated uncertainty language: The extensive literature reviews in this section seem ripe for application of the AR5 Guidance Note on Treatment of Uncertainties. Use of calibrated uncertainty language, especially summary terms for evidence and agreement and levels of confidence, would help clearly delineate assessment findings and conclusions--and the author team's degree of certainty in them--given the section's extensive evaluation of evidence and agreement for covered topics. (IPCC WGII TSU)	included where possible
509	5	29	29	29	29	Various disaster risk management countermeasures will increase the coping capacity to disasters of a community, and benefit community's sustainable development in a long term. That is one of the most important opportunities for disaster risk management. (CHINA)	already mentioned this earlier in the chapter
510	5	29	29	34	46	The vulnerability of indigeneous / aboriginal communities should be highlighted in these sections. These groups have different levels of being able to cope/adapt to climate extremes due to levels of poverty, education, access to technology and information and institutional barriers. Several case studies of several aboriginal communities in the Canadian Prairies have been highlighted in 2 recently published books: Marchildon, Gregory P. (ed.), 2010. A Dry Oasis: Institutional Adaptation to Climate on the Canadian Plains. Canadian Plains Research Center (CPRC) Press, University of Regina, 318 pp. (Chapters 12 and 13), and Sauchyn, D., H. Diaz and S. Kulshreshtha (eds.) 2010. The New Normal: The Canadian Prairies in a Changing Climate, Canadian Plains Research Center (CPRC) Press, University of Regina, 380 pp. (Chapters 15 and 21). There was also a 2009 symposium held in Canada on the impacts of cc and water on aboriginal communities which brought together @80 First Nation representations from across the country to discuss adapting to cc and extremes - see: Plummer, R, K. Cave, P. General and B. May, 2009. Symposium on the impacts of climate change and water within the Great Lakes Basin: Implications for Aboriginal communities. Available on-line at www.indigenousadaptationnetwork.com (CANADA)	thank for the references; unfortunately we are unable to examine them.
511	5	29	31	29	33	These two key principals are not clearly supported by the subsequent (or previous) sections, and appear out of place here. While they are useful, they would be more appropriate in the front part of this chapter (perhaps section 5.1.4). (CANADA)	sentence moved
512	5	29	31	29	33	How is this statement (two key principles) linked with rest of the section? (UNITED STATES OF AMERICA)	sentence moved
513	5	29	31	39	33	In the Executive Summary, a similar sentence appears but refers to two key principles in DRM applicable to CCA, as opposed to two key principles in DRR. Presumably it would be preferable to be consistent. Additionally, without a comma after "policies," the intended meaning of this sentence is clearer than the Executive Summary version, which has a comma introduced after "policies and practices." (IPCC WGII TSU)	sentence moved
514	5	29	33	29	33	The disaster-chain/hazard-chain approach should also be incorporated into planning and action, especially at the places with extremely high disaster risks. (CHINA)	noted

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
515	5	29	35	0	0	Again, we cannot stress enough the difficulty with definitions of what constitutes an extreme climate event. If one accepts the climate science community's definition of an extreme as "rare events within the statistical reference distribution of particular weather elements at a particular place" (Klein Tank et al. 2009: 8), typically at either 10th/90th or 5th/95th percentiles, this ignores the importance of specific thresholds of concern for particular agents and systems. Because of unmoderated land-use changes, poor or non-existent development and planning, consolidation in manufacturing and trade in the name of efficiency, concentrating populations in dense areas, etc., while ignoring non-stationarity in climate norms, we are increasing sensitivity and exposure – manufacturing risk. The ability of agents and systems in a particular location and at a certain scale – to plan for, respond to and recover from a 65th percentile event might be just as compromised as at the 5th percentile event level. Presenting information on potential changes in extremes (climate definition) might not be as useful to certain sets of decision-makers because their systems will be overwhelmed long before the extreme. Thus, we are advocating further research and conceptual debate to push the definition of extreme to be based partially on impacts to particular systems and agents and to acknowledge the non-stationarity of human choices that increase or decrease local risk. (Moench, Marcus, ISET)	This is clarified in chapter 3 and in the glossary
516	5	29	38	0	0	In this section, differences in coping and risk management are put forward. A very stimulating approach in this respect is the idea of the "coping strategy index" as put forward by Maxwell. A systematic analysis of the coping strategy index also provides a simple, but well-operationalized approach to measure vulnerability on the local level. References to the Coping Strategy Index: Maxwell, D. (1996): Measuring Food Security: The Frequency and Severity of 'Coping Strategies'. In: Food Policy 21 (3): 291-303; or, more technically: Maxwell, D., Watkins, B., Wheeler, R. & Collins, G. (2003): The Coping Strategies Index. Field Methods Manual. FAO / WFP / CARE. http://www.fao.org/crisisandhunger/root/pdf/cop_strat.pdf (Bohle, Hans-Georg, University of Bonn)	included this as an example
517	5	29	38	0	0	This section strongly links to questions of adaptive capacity and should to points on this in other sections. And integrated approach to risk reduction would need combine efforts to tackle changing disaster risks and uncertainties with building adaptive capacity and addressing underlying vulnerabilities and structural causes. (Nightingale, Katherine, Christian Aid)	we concur
518	5	29	38	34	46	Section talks about the importance of individual characteristics in determining vulnerability. But previous sections do not address this statement. If this is because literature on the link doesn't exist (which we find hard to believe), state this here. (UNITED STATES OF AMERICA)	sentence was added in the introduction to tie this together
519	5	29	41	29	41	Climate change intensifies the marginalization of population groups. Loss of income, increasing cost of living and lack of autonomous capacity for action threaten to marginalize poor sections of the population even more. (IPCC 2007b,373) (CHINA)	Noted.
520	5	29	43	29	46	The listing of the characteristics should be organized according to the sequence of the chapters (Clot, Nicole, Intercooperation)	Not clear on the reviewer's comment
521	5	29	51	29	51	It would be preferable to cite specific relevant sections in chapter 2. (IPCC WGII TSU)	done
522	5	29	54	30	1	The key problem for women is their lack of access to resources, as well as their lack of power and legal protection. Economic options. When Grenada was hit by Hurricane Ivan in 2004, this destroyed the livelihoods of both men and women in tourism and the nutmeg industry, but men were more able to shift into the subsequent construction boom, whereas women had fewer economic options were pushed into poverty and dependency. SEE ECLAC, UNDFW, UNDP (2005) Grenada: A gender impact assessment of Hurricane Ivan – making the invisible visible. http://www.eclac.cl/portofspain/noticias/paginas/0/34530/L.048.pdf In the 2010 Pakistan floods, women sometimes had to physically compete with men to get relief goods, or they were not able to directly access aid as most women do not have their own identification cards. Fouzia from Mianwali in Punjab narrates how her husband was out looking for missing relatives when tents were distributed to people in her camp. Since he was not there at the time, the family did not get one, and were either out in the open or requesting other people to allow them in to their tents for over two weeks till they received one. SEE UNIFEM (2010). Pakistan Floods 2010 – Rapid Gender Needs Assessment of Flood-Affected Communities (Hillier, Debbie, Oxfam)	we concur and have included language to cover this.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
523	5	30	1	30	4	...and endurance). Another idea to add: relation between tenure and gender: the impact of a disaster will worsen the exclusion of women involved in agriculture as it is the case in the Sahel region where land can usually only be owned by men; in other words, the power of the male land owners over the natural resources means that the poorest groups, in particular women, are doubly excluded-from both land and its resources- and are thus more vulnerable. Reference: N. Clot, 2008: Highlighting local coping strategies for drought in Gender Perspectives: Integrating DRR into CCA, UNISDR. (Clot, Nicole, Intercooperation)	this is covered more appropriately in chapter 2
524	5	30	7	30	8	Evidence? We believe this may be true, but given this is an IPCC report, would be good to cite studies. If it's just anecdotal evidence at this point, state it. (UNITED STATES OF AMERICA)	references added
525	5	30	10	30	10	"women's 'indigenous' knowledge"? This needs rewording to clarify what is meant. Women may have specific knowledge gained from experiences that differ from men, but women do not have inherent, innate information only because they are women. (Stocker, Thomas, IPCC WGI TSU)	sentence reworded
526	5	30	16	0	0	Box 5-9: Can this box be strengthened by referring to a wider range of literature beyond the single study that is currently cited? (Stocker, Thomas, IPCC WGI TSU)	references added
527	5	30	16	30	30	Section on proactive women - Studies show that women are more likely to volunteer for projects in their communities for activities related to emergency management, perhaps realising their vulnerability. Women also tend to participate more often than men in grassroots organisations tackling community preparedness. SEE Oxfam International (2008). Rethinking Disasters: why death and destruction is not nature's fault but human failure. (Hillier, Debbie, Oxfam)	noted
528	5	30	16	30	32	Box 5-9. References are needed to support this very interesting and useful box. The only paper cited is Enarson and Morrow(1997) , but as Hurricane Mitch occurred in 1998 that cannot be source for most of the content of the box. (CANADA)	reference changed and more were added
529	5	30	18	30	30	The source of information on Hurricane Mitch needs to be clarified, given that the sole citation dates to before the hurricane (Enarson and Morrow, 1997). Additionally, the author team should more clearly indicate that the information described from Enarson and Morrow (1997), focused on Hurricane Andrew, does not pertain (presumably) to Hurricane Mitch. (IPCC WGII TSU)	reference was changed and more added
530	5	30	22	30	23	How can the outcome be directly attributed to preparedness? What is the evidence? (UNITED STATES OF AMERICA)	sentence was reworded
531	5	30	23	0	0	change disaster, Gender to disaster. Gender. (Vasseur, Liette, Brock University)	fixed
532	5	30	37	30	39	Somehow a very specific example which does not fit to start a new subchapter. Should come later in this subchapter (Clot, Nicole, Intercooperation)	sentences adjusted
533	5	30	48	30	48	Delete first sentence "At the other end of.....". This is stating the obvious! (Stocker, Thomas, IPCC WGI TSU)	done
534	5	31	6	31	11	Insurance regimes like the French one smoothen the differences (NUSSBAUM, Roland, Mission Risques Naturels)	noted
535	5	31	11	0	0	This example is not suited as it just talks about wealthier regions being more vulnerable. The example should highlight how wealth is some way reduces and in some way increases vulnerability (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	noted
536	5	31	11	31	13	It would be helpful to clarify how the switch from wood to masonry increased vulnerability. (IPCC WGII TSU)	Wood is much better at sustaining earthquakes than masonry buildings, thereby increasing the exposure
537	5	31	24	0	0	Box 5-10: For law and policy on evacuations and relocations using the example of Katrina, see Kolmannskog, V. Dignity in Disasters and Displacement – Exploring Law and Policy on Internal Displacement in the Context of Climate Change, to be published in Global Environmental Change and Human Security Project 2011/12. The Changing Environment for Human Security: New Agendas for Research, Policy, and Action. An early draft exists as a conference paper presented at GECHS Synthesis Conference, "Human Security in an Era of Global Change", June 22-24, 2009, available at http://www.nrc.no/?aid=9411918 . (Kolmannskog, Vikram, Norwegian Refugee Council)	We are unable to include unpublished works at this late stage in the assessment
538	5	31	33	0	0	The example does not clarify interaction of which factors is being talked about. How is this related to wealth is also not clear. (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	We don't understand the comment

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
539	5	32	2	32	2	The Sustainable Livelihood Approach can be very helpful in the context of DRR, to analyse vulnerability according to the six different livelihood assets: natural, physical, social, human, financial and political. See resource: Clot, N. and J. Carter, 2009: Focus no 2/09. Disaster Risk Reduction: A Gender and Livelihood Perspective. InfoResources, Zollikofen. Switzerland. (c.f. subchapter physical assets) And. C. Robledo, Clot N., A. Hammill and B. Riché (2011). The role of forest ecosystems in community-based coping strategies to climate hazards: three examples from rural areas in Africa. In Forest Policy and Economics (in revision). (Clot, Nicole, Intercooperation)	thanks for the references
540	5	32	5	32	5	Please add "(e.g., floods, droughts)..." to make it clear this list is not complete. (Stocker, Thomas, IPCC WGI TSU)	done
541	5	32	13	32	15	How do these interventions lead to those outcomes, what is the evidence to substantiate this assertion? (UNITED STATES OF AMERICA)	sentence was restructured to provide the evidence
542	5	32	29	33	4	Found this section on entitlements confusing. Practical application of the information is unclear. (UN-International Strategy for Disaster Reduction (UN/ISDR))	section was shortened.
543	5	32	39	32	39	As I understand the Leach reference. Access to and ownership of resources *are* entitlements, not just affect them. (Morton, John, Natural Resources Institute, University of Greenwich)	sentence was fixed
544	5	32	52	0	0	they should be "the" (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	fixed
545	5	32	52	32	52	Typo, "...but they household..." (Moench, Marcus, ISET)	fixed
546	5	33	0	0	0	Section 5.4.1.6: weak on disabled people who like elderly people have limited mobility (Vasseur, Liette, Brock University)	noted
547	5	33	7	33	8	Sentence is redundant, or perhaps should come in 5.4.1 (Morton, John, Natural Resources Institute, University of Greenwich)	sentence was moved to introduction for this subsection 5.4.1.2
548	5	33	8	33	10	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	sentence eliminated
549	5	33	9	33	9	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	sentence eliminated
550	5	33	10	33	13	In this section, institutions are discussed. The reference on Bohle et al. 2009, in this context, is not the reference given in the references for this chapter (page 47, line 3-4). It is rather: Bohle, H.-G., Etzold, B., Keck, M. & Zingel, W.-P. (2009): Informality as Agency – Negotiating Food Security in Dhaka, In: Die Erde 140 (1): 3-24. This citation should replace the article on "Resilience as Agency", which will play a role when I discuss chapter 8. (Bohle, Hans-Georg, University of Bonn)	sentence eliminated
551	5	33	19	33	20	This is heavily debated and not generally accepted. An instance where using grey literature may lead to heavy debates. (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	The text was changed to indicate the debate and underestimation.
552	5	33	20	33	21	The fact that the figures come from models does not in itself explain why it is likely to be an underestimate. Modelling could just as well produce an overestimate. It is the data and factors accounted for in the modeling that may justify the conclusion that resulting figures are likely to be under/overestimates. (Grynszpan, Delphine, UK Health Protection Agency)	language was changed.
553	5	33	20	33	21	Statement of "this is likely an underestimate since it is based on modeling and not actual observations" needs support. What is inherent to the models that result in them consistently underestimating impacts? While clearly it is desirable to have observed data, it would seem an equal probability of models to underestimate or overestimate reality. (CANADA)	language was changed.
554	5	33	21	33	21	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	Sentence was changed.
555	5	33	21	33	21	It is an underestimate because not all impacts are included; also no observations based on death certificates. (IPCC WGII TSU)	point noted and incorporated into text
556	5	33	21	33	22	Why is the number based on modelling "likely an underestimate"? Attributing climate change to specific deaths is a complex issue and "observations" are not without error. Could the models not just as easily be overestimating? Explain reasoning and provide citations. (Stocker, Thomas, IPCC WGI TSU)	The models do not account for all impacts (see about SU comment) and so was changed.
557	5	33	21	33	22	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	Likely was removed

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
558	5	33	21	33	22	In this sentence, the phrase "extreme impacts of climate change" would be more accurate if phrased as "changes in extreme events and impacts due to climate change," "extreme events and impacts, some of which are influenced by climate change," etc. Additionally, it would be preferable to provide more specific citations to chapters 3 and 4. (IPCC WGII TSU)	wording was changed
559	5	33	22	33	22	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	sentence was deleted
560	5	33	22	33	22	Which sections of Chapters 3 and 4? (IPCC WGII TSU)	3.1.1 and 4.4.6
561	5	33	23	33	23	Heat also has a direct effect on cardiovascular disease: in hot weather, the blood circulation is increased to help cool the body temperature down, this increases the strain on the heart and can lead to cardiovascular events (angina, myocardial infarction) particularly in people with underlying cardiovascular disease. (Grynszpan, Delphine, UK Health Protection Agency)	this risk was included
562	5	33	24	0	0	Note that surface ozone does increase with T, but also increases during drought because deposition on vegetated areas is less. (Boucher, Olivier, Met Office)	Noted, but drought is not the topic of this case study.
563	5	33	25	33	25	The term "race" has unfortunate historical undertones in Europe (the variable usually used is ethnicity). There is a direct physiological correlation between age and the effects of heat, but to my knowledge in this context ethnicity is an indirect measure of socioeconomic status and behavioural patterns - it is the latter that are truly risk factors for mortality/morbidity in heatwaves. (Grynszpan, Delphine, UK Health Protection Agency)	Race was changed to ethnicity. Race/ethnicity does play a particular role with health outcomes as distinct from socioeconomic class. There is a large literature that identifies this which is not relevant in this section and therefore not cited.
564	5	33	26	33	26	Cite specific case study, ie, 9.2.2. (Stocker, Thomas, IPCC WGI TSU)	included
565	5	33	26	33	26	It would be preferable to cite specific relevant sections (case studies) in chapter 9. (IPCC WGII TSU)	done
566	5	33	35	0	0	References are needed to support the statement "Other illness linked to climate change affect localities and are best managed at that scale". Do all localities have the capacity to manage these issues? (CANADA)	sentence deleted
567	5	33	35	33	35	Surveillance should be local and national. (IPCC WGII TSU)	noted
568	5	33	35	33	40	Are these statements about vector-borne diseases substantiated by latest literature? We thought finding from AR4 was that incidence of malaria would increase in areas where there is already malaria? (UNITED STATES OF AMERICA)	These statements do not contradict that malaria will increase, but rather draw attention to the location-specificity of risks.
569	5	33	37	33	37	As you correctly discuss later, the incidence of vector-borne illnesses is a result of the prevalence of the vector AND the availability of prevention and control programmes AND the susceptibility of the population. So it is probably prudent to rephrase this sentence to say "Vector-borne diseases May increase" or "Some literature has concluded that" (Grynszpan, Delphine, UK Health Protection Agency)	the language was changed for clarity.
570	5	33	38	33	40	The phrase "as seasons lengthen" needs to be clarified--what seasons are meant, and what is meant by their lengthening? Additionally, the phrase "promise to expand" should be replace by more specific language on relevant projections. (IPCC WGII TSU)	the reference to season lengthening was changed so that mosquito movement is the focus.
571	5	33	39	33	40	Maybe, but depends on a range of factors. (IPCC WGII TSU)	Yes, that is the point of the sentence and more text was added to clarify.
572	5	33	40	33	40	You need to cite evidence that pools of standing water "promise to expand"? Suggest you cite Chapter 10 of the WGI AR4 (Meehl et al. 2007), which indicates mean precipitation will generally increase in the tropics. (Stocker, Thomas, IPCC WGI TSU)	Statement is already supported
573	5	33	41	33	42	Mouchet et al #####? (Stocker, Thomas, IPCC WGI TSU)	this was removed.
574	5	33	41	33	42	For Mouchet et al.: The reference contains no publication year. Please add this information to the reference in both the chapter text and reference list. (IPCC WGII TSU)	this was removed.
575	5	33	43	33	43	Not exactly true; surveillance programs need common characteristics to support national programs. (IPCC WGII TSU)	This was added
576	5	33	45	33	46	It would be helpful to specify the types of "population growth or change" relevant here. (IPCC WGII TSU)	another sentence was added
577	5	33	47	33	50	These sentences are unclear. (IPCC WGII TSU)	sentence was re-written for clarity

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
578	5	34	0	0	0	Should this section reference the findings of GFDRR's report on Natural Hazards, Unnatural disasters and the economics of effective prevention, Nov 2010? (Nightingale, Katherine, Christian Aid)	This reference is not necessary
579	5	34	1	34	3	It is not clear what "the event" was and therefore how the sentence should be interpreted. (IPCC WGII TSU)	Edited for clarity
580	5	34	7	0	0	It should be suitable to refer to chapter 4 and recall the tools of land planning. (BOURRELIER, PAUL-HENRI, AFPCN)	This is done earlier in the chapter in 5.3.3
581	5	34	7	0	0	Section on human settlements. For the first time, over half the world's population lives in cities and towns and, although precise numbers are lacking, around one billion urban dwellers live in informal settlements, where housing conditions, infrastructure and services are generally very poor. Whilst urban dwellers should have access to more resources and services than rural populations, in practice many are often in dire situations due to: • Lack of knowledge, financial capacity and sometimes willingness of urban authorities to reduce risks and vulnerabilities. • A high proportion of urban households and communities which are forced to live in high risk areas due to low incomes, limited political influence, high land prices and corrupt practices in land-use management. REF - IFRC (2010), World Disasters Report 2010: Focus on urban risk. (Hillier, Debbie, Oxfam)	points are noted. These are general points and should be addressed in chapter 2.
582	5	34	7	34	46	This could be an important section but is of only limited impact, and includes duplication with material presented in Chapter 2. An interesting element to add to the chapter would be examining how communities of differing capacities address similar problems, taking advantage of their strengths in adaptive capacity. One paper presenting such a comparison is Walker, I.J. and Sydneysmith, R. (2008): British Columbia; in From Impacts to Adaptation: Canada in a Changing Climate 2007, edited by D.S. Lemmen, F.J.Warren, J. Lacroix and E. Bush; Government of Canada, Ottawa, ON, p. 329-386. (see pages 358-362). (CANADA)	point and reference added
583	5	34	8	34	8	Shouldn't be better to use extreme event instead of large scale event, to avoid confusing the issue? (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	comments seems out of place
584	5	34	10	34	11	Are these direct non-market losses? Or both? If the last option, asset losses should be included. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	comments seems out of place
585	5	34	11	34	12	The wording of the sentence should more clearly indicate that "rural livelihoods and poverty" are drivers but not the only drivers of disaster risk. (IPCC WGII TSU)	sentence was changed for clarity
586	5	34	12	0	0	change risk, Poverty to risk. Poverty (Vasseur, Liette, Brock University)	changed
587	5	34	12	34	14	sentence to be reworked re. Verbs, etc. (Vasseur, Liette, Brock University)	sentence rewritten for clarity
588	5	34	12	34	14	It seems that these factors "reduce" coping capacity, rather than compound them. It is not clear what is meant here by the verb "compounds." (IPCC WGII TSU)	sentence rewritten for clarity
589	5	34	23	34	26	It would be much preferable to use a more measured and precise phrase in place of "untold billions." (IPCC WGII TSU)	deleted untold
590	5	34	26	34	28	The word "insures" here seems incorrect. The described interaction presumably can increase the potential for catastrophic losses when disaster strikes one of these areas, but it does not guarantee such losses. (IPCC WGII TSU)	sentence deleted
591	5	34	27	34	28	But that is the definition of a disaster. (IPCC WGII TSU)	sentence deleted
592	5	34	45	34	45	The use of "likely" here appears to be casual, not tied to the AR5 Guidance Note on Treatment of Uncertainties, and therefore its use should be avoided. (IPCC WGII TSU)	sentence deleted
593	5	34	45	34	46	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	sentence deleted
594	5	34	45	34	46	It would be helpful to indicate more clearly how increased urbanization will affect rural areas. (IPCC WGII TSU)	sentence deleted
595	5	34	49	0	0	Section 5.4.2 Costs of Managing Disaster Risk and Risk from Climate Extremes should be its own major section on the level of 5.4 or, should be the first logical subsection under 5.4 Challenges and Opportunities. This suggestion is based on the observation that much of the material of subsection 5.4.1 belongs under section 5.3, after 5.3 have been significantly reorganized. (Moench, Marcus, ISET)	we have restructured some of the sections. Though economic impact and loss are very important, a lack of local data and difficulties of local boundary delineation, unfortunately it does not merit a section of its own.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
596	5	34	53	35	45	This seems too case specific, can it be summarized concisely? (Mechler, Reinhard, INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS)	there are several rural cases of local-level adaptation and cost in developing countries here that merit a full length discussion
597	5	34	54	34	54	It would be preferable to cite specific relevant sections in chapter 4. (IPCC WGII TSU)	deleted
598	5	35	1	35	2	Presumably, "they" at the start of this sentence refers to "direct non-market losses" instead of to "direct losses." It would be best to clarify the intended meaning of "they." (IPCC WGII TSU)	clarified
599	5	35	4	0	0	[? Needs to close after 1999) (Vasseur, Liette, Brock University)	editorial
600	5	35	32	35	33	Earthquakes are not a climatic event. (CHILE)	but the studies have relevance to climate extremes
601	5	35	35	35	36	Use of "likely" - is this intended as a formal likelihood assessment? (Stocker, Thomas, IPCC WGI TSU)	changed
602	5	35	37	35	37	The citation for U.S. Bureau of Labor Statistics (2006) is not provided in the chapter's reference list. Please ensure this citation is added to the reference list. (IPCC WGII TSU)	added
603	5	35	44	35	45	It may be preferable to consider the framing of this statement, perhaps more clearly indicating the implications of this lack of research. (IPCC WGII TSU)	added a phrase (problem of under-reporting and overestimating) to delineate the implications
604	5	35	51	35	54	The discussion of "cost/benefit ratios" in these sentences needs to be clarified. The first sentence suggests that costs are greater than benefits in the described locations. The second sentence then confusingly posits that other results "also" demonstrated benefits that exceed costs--seemingly in contrast to the first sentence, despite the use of "also." Additionally, "ratio" seems to be used loosely in the second sentence, since it seems the ratio would always be positive, with the relevant consideration being whether the value is greater than or less than one. (IPCC WGII TSU)	we switched to "benefit/cost ratios" and clarified that benefits exceed the cost by adding this phrase explicitly
605	5	36	4	0	0	Study team,, 2008): to correct (Vasseur, Liette, Brock University)	corrected
606	5	36	14	0	0	change to Rosenzweig et al. (2007, 2011) have developed... (Vasseur, Liette, Brock University)	corrected
607	5	36	17	0	0	same for Hallegate et al. (Vasseur, Liette, Brock University)	corrected
608	5	36	38	36	38	The approach to financial limitations is restricted to considering microfinance. There are other financial mechanisms and structures that can play a role even if it is at the local level. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	this comment is misplaced as this line does not discuss microfinancing
609	5	36	52	37	3	This paragraph deals very shortly with two * major* issues : the discount rate and the evaluation of non-market costs. These topic bear very important ramifications, and therefore should be discussed more thoroughly. Indeed, by slight modifications on the discount rate or the way to treat biodiversity, an infrastructure project can be viewed as financially interesting or absolutely not. These are important topic; if they are discussed at length in the report, it would be interesting to tell the reader. (FRANCE)	We agree these are important topics. They are not the main issue of the SREX Report, however, and thus are not discussed at length. The AR4 provides a more detailed discussion of this topic
610	5	36	53	36	53	It would be preferable to cite specific relevant sections in chapter 4. (IPCC WGII TSU)	added section 4.6
611	5	37	0	37	0	Section 5.4.3 Limits to Adaptation is missing the much larger discussion on scale and agents of adaptation. Much of the discussion is implicitly about autonomous adaptation by individuals/households, but missing integration with other types/scales of adaptation, such as planned. For example, see: Nepal Climate Vulnerability Study Team (2009), Vulnerability Through the Eyes of the Vulnerable: Climate Change Induced Uncertainties and Nepal's Development Predicaments, 114 pp, ISET- Nepal and ISET - Boulder, Kathmandu. Particularly pages 74-74. ; Moser, S. C., and J. A. Ekstrom (2010), A framework to diagnose barriers to climate change adaptation, Proceedings of the National Academies of Science, 107(51), 6. ; Chambwere, M., and J. Stage (2010), Climate change adaptation in developing countries: issues and perspectives for economic analysis, 39 pp, International Institute for Environment and Development. (Moench, Marcus, ISET)	We included a sentence about planned adaptation and mention scale with references to chapter 6 and 7.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
612	5	37	6	38	12	We concur with Moench about this Section 5.4.3 Limits to Adaptation: it is missing the much larger discussion on scale and agents of adaptation. Much of the discussion is implicitly about autonomous adaptation by individuals/households, but missing integration with other types/scales of adaptation, such as planned. For example, see: Nepal Climate Vulnerability Study Team (2009), Vulnerability Through the Eyes of the Vulnerable: Climate Change Induced Uncertainties and Nepal's Development Predicaments, 114 pp, ISET- Nepal and ISET - Boulder, Kathmandu. Particularly pages 74-74. ; Moser, S. C., and J. A. Ekstrom (2010), A framework to diagnose barriers to climate change adaptation, Proceedings of the National Academies of Science, 107(51), 6. ; Chambwere, M., and J. Stage (2010), Climate change adaptation in developing countries: issues and perspectives for economic analysis, 39 pp, International Institute for Environment and Development. (UN-International Strategy for Disaster Reduction (UN/ISDR))	We included a sentence about planned adaptation and mention scale with references to chapter 6 and 7.
613	5	37	10	0	0	Examples and literature source of "teaching women to swim in tsunami-prone coastal areas" shall be described in 5.4.1.1 Gender with more informative explanation. (JAPAN)	sentence deleted
614	5	37	22	37	30	This conflates a gender-specific and a more general point - it would be worth dealing with each separately. (Morton, John, Natural Resources Institute, University of Greenwich)	noted
615	5	37	22	37	30	based on my experience in Mali and Burkina, I am a bit surprised about this conclusion. I would expect some reference. (Clot, Nicole, Intercooperation)	reference was given , e.g. UN 2008
616	5	37	25	37	27	How do we know it was an effective approach? Measured against what? (UNITED STATES OF AMERICA)	sentence was modified "...is one approach for improving...."
617	5	37	27	37	29	How do we know it was a successful initiative? (UNITED STATES OF AMERICA)	sentence was modified "...is one approach for improving...."
618	5	37	30	37	30	Please cite evidence indicating that people die in a Tsunami because they are unable to swim. It seems obvious, but given the power and destructive forces involved in a Tsunami, the ability to swim may seem somewhat irrelevant to some readers. We know there is evidence from past Tsunami that children, woman and elderly have drowned due to an inability to swim, and this evidence needs to be cited here. (Stocker, Thomas, IPCC WGI TSU)	sentence deleted as insufficient evidence was found to support it
619	5	37	34	37	35	Based on one citation? This sounds like an easy thing to prove (reach of microfinance to the poorest and most vulnerable), but it is not. (UNITED STATES OF AMERICA)	additional citation added
620	5	37	35	37	37	This sentence could potentially be interpreted as prescriptive, and some minor rewording could help avoid misinterpretation. Additionally, it would be preferable to provide relevant citations. (IPCC WGII TSU)	sentence modified
621	5	37	40	0	0	Change to: Kunreuther et al. (2009) report... (Vasseur, Liette, Brock University)	done
622	5	37	44	37	46	Use "risk mitigation" to avoid confusion with the use of "mitigation" in climate change literature. (CANADA)	changed
623	5	37	49	37	49	Using SI-units instead of the United States customary system requires recalculation, not just exchanging the units! 10 \$ per square foot do not convert to 10 \$ per square metre. A square foot is 0.3048 m * 0.3048 m, so 10\$ / square foot are equal to 107.64 \$ / square metre. (Rock, Joachim, Johann Heinrich von Thuenen-Institute)	changed
624	5	38	0	38	0	Methods, Models, Assessment Tools. This section is particularly weak, and we would recommend just cutting it from section 5.5. As written, it does a very poor job of cataloguing the wide range of assessment methods available, when each is appropriate, how the information gleaned from the assessment can be used in identifying and prioritizing planned adaptation strategies, etc. that are covered extensively in both academic and grey literature. These topics are covered extensively in Chapter 2 and this section should just refer back to that chapter. (Moench, Marcus, ISET)	section has been reorganized and strengthened
625	5	38	1	38	1	What do you mean by 'climate shocks'? Are these distinct from extreme climate events? (Stocker, Thomas, IPCC WGI TSU)	change made
626	5	38	15	38	15	I wonder if "environmental justice" is suitable for the title of SRX. (Kazama, So, Tohoku University)	Yes, the literature suggests it is an important element in understanding differential responses and capacities to adapt to climate extremes
627	5	38	25	38	26	Isn't this linked to accountability and governance? There is quite a lot of research done on this but more needs to happen. See www.climategovernance.org (Nightingale, Katherine, Christian Aid)	Yes; language was added to include this concern.

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
628	5	38	33	38	41	If possible, it would be desirable to provide citations for the disaster risk evaluation approaches described in this paragraph or to indicate which sections of the chapter discuss these approaches further (e.g., clearly section 5.5.1 for elements 1 and 2 and potentially 5.4.2 for element 3). (IPCC WGII TSU)	done
629	5	38	44	38	44	It would be preferable to cite specific relevant sections in chapter 2. (IPCC WGII TSU)	done
630	5	39	21	39	21	Interesting citation (World Vision), given World Vision isn't necessarily a leader on CBA. Are there other actors employing this methodology? (UNITED STATES OF AMERICA)	other reference added
631	5	39	27	41	31	Although there is excellent information in this section, much of it is repeated in chapter 7. (UN-International Strategy for Disaster Reduction (UN/ISDR))	noted
632	5	39	27	41	31	This sub-paragraph 5.5.2. should partly belong to chapter 2, (after § 2.8), as introductory remarks on risk transfer and insurance (as it has been done for other risk management steps), instead of this chapter, where only features more specific to the local level should be introduced (like micro insurance experience for instance). (NUSSBAUM, Roland, Mission Risques Naturels)	section was shortened, and references made to chapters 2 and 7.
633	5	39	32	0	0	the adverb "explicitly" is not precise enough : an option may be to emphasize in what respect insurance forces or encourages insured people or corporations to take action in order to reduce the vulnerability of their assets, which in the end contributes to alleviate the damages. (FRANCE)	sentence was deleted
634	5	39	36	39	40	Maybe a too simplistic judgement... In France, it is not the design of insurance mechanism but an inefficient coupling with other DRM obligations (land use planning or construction rules) that reduce incentive efficiency (NUSSBAUM, Roland, Mission Risques Naturels)	sentence was deleted
635	5	39	42	39	50	It would be worth mentioning traditional livestock loans here - the Oba reference already cited can be used. (Morton, John, Natural Resources Institute, University of Greenwich)	included
636	5	39	45	39	47	The definition of "local" as including anything smaller than the national may be confusing or problematic. USA, Australia, Brazil, and Canada all have states (provinces) that are as large as many European and African Nations--and which have similar powers as nations. Hence it might be better to define local the way it is normally defined, and use the term "state" or "province" whenever the report is discussing measures taken by such entities. (UNITED STATES OF AMERICA)	already done earlier in the chapter; comment seems out of place
637	5	40	0	40	0	Supporting literature: Mechler, R., Hochrainer, S., Kull, D., Chopde, S., Singh, P., S. Wajih and The Risk to Resilience Study Team, (2008): Uttar Pradesh Drought Cost-Benefit Analysis, From Risk to Resilience Working Paper No. 5., eds. Moench, M., Caspari, E. & A. Pokhrel ISET, ISET-Nepal and ProVention, Kathmandu, Nepal, 40 pp. (Moench, Marcus, ISET)	Thanks; unable to examine due to time limitations.
638	5	40	19	0	0	This example needs more elaboration as to how it is enabling risk reduction (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	sentence clarified
639	5	40	30	40	36	The discussion here includes "emerging" and "developing" countries. It seems that the author team is suggesting emerging countries differ from developing countries more generally, but clarification of the use of these terms is needed. (IPCC WGII TSU)	paragraph deleted as not specific enough to the local scale--more a national issue
640	5	40	30	40	38	The author team might consider citing case study 9.2.10 here. (IPCC WGII TSU)	paragraph deleted as not specific enough to the local scale--more a national issue
641	5	40	37	40	37	This section presents an extremely relevant area which requires further conceptual and practical development. It should be expanded. (CARLINO, HERNAN, UNIVERSIDAD TORCUATO DI TELLA)	paragraph deleted as not specific enough to the local scale--more a national issue
642	5	40	47	40	50	These two sentences seem to be referring to the same example, and this linkage needs to be clarified, perhaps by merging the sentences. (IPCC WGII TSU)	sentences combined
643	5	40	52	41	9	It may be worth searching for work by Andrew Mude for up-to-date citations from Kenya (Morton, John, Natural Resources Institute, University of Greenwich)	thanks for the suggestion
644	5	41	18	41	18	Duplicate - Vellinga et al. (Stocker, Thomas, IPCC WGI TSU)	fixed
645	5	41	21	0	0	After the parenthesis, add "and weather derivatives" (FRANCE)	fixed
646	5	41	24	0	0	Who are the others? Needs a reference (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	phrase deleted
647	5	41	30	41	31	"...describes a number of ways..." -- This sentence is useless to the reader as written. It references seemingly important information but neither provides the specifics of the information nor assesses anything. Sentence needs to be expanded to include the specific information on what the "number of ways" are. (Stocker, Thomas, IPCC WGI TSU)	sentence deleted

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
648	5	41	36	41	42	A more fulsome discussion of O'Brien et al is warranted because the limited description provided here could lead readers to conclude that, in the absence of transformational change, DRR and CCA efforts are destined to failure. This conclusion could serve as a disincentive invest in these areas. (CANADA)	The word critical was replaced by important to clarify the meaning of the sentence.
649	5	41	40	41	42	This text is better placed in the caption to Figure 5-2 as the figure is difficult to understand without it. (CANADA)	Noted.
650	5	41	45	41	45	Please note: O'Brien et al. 2009 is missing from the reference list. (Stocker, Thomas, IPCC WGI TSU)	references was 2011 and was corrected
651	5	41	45	41	45	The citation for O'Brien et al. (2009) is not provided in the chapter's reference list. Please ensure this citation is added to the reference list. (IPCC WGII TSU)	corrected
652	5	41	47	41	48	The ability to learn is also a key component of the disaster risk management process. (CANADA)	included
653	5	42	6	0	0	Delete the word "if" in this sentence. Previous IPCC assessment reports, and a vast body of literature, have clearly demonstrated that adaptation is a process. (CANADA)	changed
654	5	42	11	42	12	Suggest replacing phrase "limited human capacity to implement policies can ..." with something like "Barriers to the implementation of policies can ..." This would be even stronger if specific barriers (institutional, governance, resource) were identified. (CANADA)	sentence was altered for clarity
655	5	42	18	0	0	What is social time? (GARG, AMIT, INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD)	term omitted
656	5	42	21	42	23	In this list, it seems that perhaps "changes in extreme precipitation" is what is meant, given "climate change" and "sea level rise" as the other elements in the list. Additionally, because the term "mitigation" is being used here in relation to disasters (instead of directly in relation to climate change), use of the term should be avoided. (IPCC WGII TSU)	wording changed
657	5	42	34	42	35	The first two sentences are stating relatively the same thing. They should be modified/combined. (Vasseur, Liette, Brock University)	second sentence deleted
658	5	42	38	42	38	Why is "and heat" separate here? Is heat not a component of severe weather? (Stocker, Thomas, IPCC WGI TSU)	the parenthetical statement was removed
659	5	42	40	0	0	Is the South of United States, or the south of Latin América? (CHILE)	good point; changed to US South
660	5	43	26	43	26	"Develop" is in the imperative - all other points begin with an indicative. (Morton, John, Natural Resources Institute, University of Greenwich)	changed
661	5	43	29	43	30	The author team should consider whether the ordering of DRM and DRR in this sentence (i.e., "DRM including DRR") is consistent with the glossary entries for these terms. (IPCC WGII TSU)	this is consistent with new language in glossary
662	5	44	12	44	13	It would be preferable to more clearly indicate what is meant by "socially constructed disasters." (IPCC WGII TSU)	sentence was reworded
663	5	46	43	46	44	For Birkmann et al. (2010): The information on this reference seems to be incomplete. Please add the missing information, e.g. the volume and issue of the journal where this article was published, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
664	5	47	30	47	31	For Brulle (2010): The information on this reference seems to be incomplete. Please add the missing information, e.g. the volume and issue of the journal where this article was published, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
665	5	48	7	48	9	For Burton, I., J. Soussan, and A. Hammill (2003): The information on this reference seems to be incomplete. Please add the missing information, e.g. the complete title of the document cited, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
666	5	51	5	51	5	For Ellis, F. (2000): The reference is incomplete. Please add the missing information. (IPCC WGII TSU)	Problems with RefWorks, fixed
667	5	51	6	51	6	For Ellis, F. and E. Allison (2004): The reference is incomplete. Please add the missing information. (IPCC WGII TSU)	Problems with RefWorks, fixed
668	5	51	9	51	10	This citation for a book chapter is not correct and needs to be revised appropriately. Please provide the book title. (IPCC WGII TSU)	Problems with RefWorks, fixed
669	5	51	20	0	0	Change first author; Eriksen, S., K. O'Brien, and L. Rosentrater,... (Sygna, Linda, Department of Sociology and Human Geography)	Problems with RefWorks, fixed
670	5	52	5	52	5	For Fuchs (2009): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
671	5	53	21	53	21	For Helms (2006): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
672	5	53	50	53	50	For ICIMOD (2009): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
673	5	55	7	0	0	remove with between names (Vasseur, Liette, Brock University)	Problems with RefWorks, fixed

#	Chapter	From Page	From Line	To Page	To Line	Comment	Response
674	5	60	38	60	39	For Podestá, G., D. Letson, C. Messina, F. Royce, and and 6 others (2002): All author names should be listed here for this reference, without use of "and 6 others" Please add the other author names to the reference list. (IPCC WGII TSU)	Problems with RefWorks, fixed
675	5	61	36	61	37	For Rodriguez-Oreggia et al. (2009): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
676	5	62	24	62	24	For Scoones (1998): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
677	5	62	40	62	41	For Shoaf, K. and S. Rottmann (2000): The information on this reference seems to be incomplete. Please add the missing information, e.g. the volume and issue of the journal where this article was published, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
678	5	64	49	64	49	For Valdes, H.M. (1997): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
679	5	65	28	65	29	For Warner et al. (2009): The information on this reference seems to be incomplete. Please add the missing information, e.g. the volume and issue of the journal where this article was published, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
680	5	66	40	66	41	For Ziervogel, G. and P. Ericksen (2010): The information on this reference seems to be incomplete. Please add the missing information, e.g. the volume and issue of the journal where this article was published, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
681	5	66	42	66	43	For Ziervogel et al. (2009): The information on this reference seems to be incomplete. Please add the missing information, e.g. on the publisher, for this reference. (IPCC WGII TSU)	Problems with RefWorks, fixed
682	5	67	0	0	0	Figure 5-1. It would be helpful to clarify in the figure legend how the arrows in this figure should be interpreted by the reader. For example, the small arrows between global and national and between national and local are placed in different locations left-to-right in the pyramid. Is this placement intended to intentionally indicate that it is "administrative units" at the local level that most interact with the national level and similarly that it is "governance" at the national level that most interacts with the global level? It seems this interpretation is not the one intended, and uniform arrow placements and explanation in the figure legend could clarify the intended interpretation. Additionally, how do the vertical arrows for information and knowledge flows and financial flows relate to the angled arrows for DRM and CCA? For example, the horizontal arrow from DRM to the vertical financial flows arrow suggests that it is through DRM that some (all?) of the described financial flows are derived, but it should be clarified how the arrows should be interpreted. Also, might it be clearer to put the flows arrows on one side of the pyramid and the DRM and CCA arrows on the other? Additionally, why does the arrow for DRM have a single head while the arrow for CCA has two heads? It would be very helpful for the reader to clarify all of these questions in the figure legend, perhaps with some modification of the figure. Finally, it might be preferable to label the top triangle as "international" instead of "global," given the chapters of SREX. (IPCC WGII TSU)	Figure was altered to reflect the comments
683	5	68	0	0	0	Figure 5-2. It would be helpful to provide a figure legend to explain the interactions among the arrows. For example, what does the long diagonal arrow (unlabeled) indicate? It seems to suggest a pathway from "individual learning" and "impacts" focus to "partnership," yet the "where many are" boxes seem to suggest that few are at "individual learning" and "impacts" focus. Should the boxes indicated for "where many are" and "where all should be" be interpreted as being situated in the graph itself or as separate from the axes presented? (IPCC WGII TSU)	Done