

| IPCC AR6 WGII First Order Draft Government and Expert Review Comment Responses (Entire Report) |           |           |         |         |   |                 |  |   |
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| Comment id   | From page | From line | To page | To line | Comment   | Reviewer        | Country  | Chapter Team Response   |
| 36318  | 0         | 0         | 0       | 0       | Presently observed impacts and predicted future impacts are presented in a way that does not always make it easy to distinguish between them. Please consider separating more clearly between impacts observed up until today, and those projected for the future by following the subtitles accordingly.   | Aurora Stenmark | Norway   | The SPM, Technical Summary, and chapters are now organized around a narrative that aims to separate: 1) the observed impacts and 2) projected risks. The narrative then turns to 3) solutions   |
| 24692  | 0         | 0         | 0       | 0       | There is a lot of conceptual material across Chapters 1,6, 17 and 18 which I have read at stage. There are substantial overlaps that could be eliminated. Inevitable at the FOD stage, but there is sense that every chapter subsequent to 1 wants to be its own "introduction and framing" chapter.  | Jim Skea        | United Kingdom (of Great Britain and Northern Ireland) | We have tried to reduce these overlaps in the SOD, and expect to do more to reduce them in the final draft  |
| 25048  | 0         | 0         | 0       |         | There is an inconsistency in the definition of "migration" and "displacement" throughout the report. This leads in particular to a confusion between long-term and short term consequences of the environmental hazards linked to CC.   | Etienne Piguet  | Switzerland  | Taken into account. The definition for migration will be included in the Glossary. Authors will make sure that the terms are used correctly and consistently across chapters.   |
| 25044  | 0         | 0         | 0       |         | The literature review on the migration/climate change nexus is not exhaustive. I suggest to check <a href="https://www.unine.ch/geographie/climig_database">https://www.unine.ch/geographie/climig_database</a>   | Etienne Piguet  | Switzerland  | Chapter 7 addresses migration and its literature review is now more exhaustive. The report now also has a cross chapter box on migration.   |
| 7182   | 0         | 0         | 300     |         | Thank you (TSU) for the email clarifying the options for "category"   | Tony Weir       | Australia  | Noted with thanks.  |
| 10502  | 0         | 0         |         |         | Rather than refer to developing countries as Global South, can the categories be divided into LDCs/ MICs etc? The terms Global South and Global North as misleading. And IPCC is considered a leading report, which should be politically correct.  | Aarsi Sagar     | Republic of Korea                                      | The term 'global south' is well established in the literature. We have remained faithful to this literature in our assessment   |
| 5850   | 0         | 0         |         |         | No mention of the influence of tectonic plate shifting on sea level rise.   | Joseph Zajac    | United States of America                               | Noted. The WGII AR6 is about impacts, adaptation and vulnerability, so in this report the focus is on impacts of sea level rise, future risks and adaptation options. The physical science basis is addressed in the WGI AR6. The key processes driving sea level change are addressed in the WGI report in Chapter 9, Box 9.1.               |
| 11926  | 0         | 0         |         |         | Smart Adaptation Strategy (SAS). Smart adaptation is comprised of: 1. Clean slate thinking and rejection of all prior assumptions. 2. Reassessment of risks and threats. 3. A simpler climate change model. 4. A new problem solving technique. 5. Indigenous adaptation strategies. 6. Proactive adaptation strategies. 7. Reactive adaptation strategies. 8. Applying existing solutions. 9. Repurpose other technologies. Adaptation strategies are either proactive or reactive. The vast majority of current adaptation strategies provided by western culture are reactive. Reactive strategies focus on managing the aftermath of destruction of ecology, economy and sociology. Western culture tends to focus on waiting for the damage to occur, then attempts to provide economic and social solutions to the ecological damage. But it is far too late and cannot be solved with money or words. Proactive strategies reduce or eliminate risk factors that result in destruction. Indigenous strategies are proactive and focus on protecting ecology. Since indigenous habitat, food and water are provided directly by ecology and not indirectly via economy or sociology as they are in the west, indigenous people are very skilled at adapting through EbA. However, indigenous EbA has some limitations since climate change is a new phenomena. Indigenous adaptation can provide many solutions to the climate change problem. Western thinking provides illogical solutions to habitat destruction. When a home is destroyed in a region where wildfires, floods or landslides are common, we will rebuild in the same place using the same building methods and materials. The indigenous would adapt by relocating away from the threat and redesigning their habitat to be more resilient. Western thinking seems unwilling to learn from their mistakes, because we do not relocate and we do not redesign our habitats to be more resilient. We continue to build closer and closer to unstable ocean cliffs despite knowing for decades that coastal erosion is destroying many homes. We continue to build homes out of flammable materials at the edge of forests, despite watching thousands of homes burn to the ground on the news. We build cities at, or even below sea level and act surprised when they flood. We build homes at the bottom of steep hills and act surprised when a landslide occurs. We do not understand adaptation. We fail to identify risks and do not take precautionary action. When disaster strikes, we restore our habitats to their original position using the same construction techniques, inviting the threat to strike again. We cannot understand adaptation because western understanding of the process of both climate change and adaptation are incorrect. For example: Problem: climate change is a negative variable in the equation and therefore the solution will be negative unless adaptation is successful. Current adaptation: Try to minimise the negative. Add another variable that is positive. Solution will be less negative or neutral. Smart adaptation: eliminate or minimise the negative variable. Take the threatened element | Paul Crewther   | New Zealand  | Rejected. The focus of the adaptation section has never been just on reactive solutions. We focus more broadly on incremental adaptation not being able to meet adaptation needs in the long term and the need for transformational adaptation. This is also highlighted as we develop the section on climate resilient development pathways. |

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|  |           |           |         |         | <p>away from the threat. Positive variables remain. Solution is positive. Current strategies fail to address some of the more likely and most imminent threats to humanity, and instead attempt to address threats that are less likely and less imminent. The following model represents a new method of assessing threats and time line urgency. There is a logical progression of risks / effects as the earth warms. Stage 1 effects are directly caused by trapping heat. Stage 2 effects are caused by stage 1 effects and so on, until stage 8. Stage 1: higher average land temperatures, warmer oceans, more atmospheric energy. Stage 2: stronger winds. Melting of ice. Increased evapotranspiration. Increased evaporation. More heatwaves. Extinction of some species intolerant to the new temperatures. Stage 3: increased humidity. Rising sea levels. More storms. Less frequent moderate rain. More frequent extreme rain. Disruption of the polar vortex. Larger and more frequent hail. Further extinction. Loss of habitat to strong winds. Stage 4: Flooding. Flash flooding. Landslides. Wet bulb. Water scarcity. Decreased soil moisture content. Decreased vegetation moisture content. Saline ingress of farmland. Loss of habitat to flooding, hail, high winds and sea level rise. Stage 5: crop losses. Wildfires. Dehydration. Disease. Contamination. Loss of habitat to flooding and landslides. Stage 6: Food shortages. Smoke. Loss of habitat to wildfires. Stage 7: Malnutrition. Starvation. Sickness from poor air and water quality. Loss of habitat to smoke. Stage 8: Climate migration. Social decay. Economic decay. Stage 1 are the most likely and most urgent threats. Stage 8 are the least likely and least urgent threats. Stage 3 effects occur if there is a failure to adapt to stage 2 effects. Stage 4 effects occur if there is a failure to adapt to stage 3 effects, and so on. Adaptation strategy should focus on reducing or eliminating ALL threats at each stage, using both proactive and reactive strategies, beginning with stage 1. Many of these threats currently have no proactive or reactive solutions, while others are addressed using reactive solutions only. Many strategies assume that stage 8 will occur imminently. This is only possible if there is a failure to adapt to stages 1 through 7. In some regions the threats have progressed in part all the way to stage 8, but there were external factors in addition to climate change threats. This model indicates that the most likely and urgent threat to human life is heatwaves at stage 2. This is confirmed by the fact that 70,000 people died during the 2003 heatwave in Europe, 16 years ago and is the worst climate change event in recent history. Yet there is still no focus on adaptation solutions for heatwaves. It is automatically assumed that heatwaves cannot be survived, and that no action by humanity can mitigate this threat. It is assumed that new technology cannot assist, it is simply stated that existing technologies such as air conditioning and fans may be insufficient. Historically, the large death tolls from heatwaves have all occurred in western countries. Indigenous people have survived heatwaves for 8000 years. They have adapted to extreme temperatures by reducing their exposure to the threat. They use earth and rock to provide a barrier between them and the weather. They retreat to caves or build subterranean habitats that stay at a comfortable temperature, regardless of the climate. If western culture understood adaptation, they would respond in the same manner. But current adaptation strategy does not even consider this as an option. Once these indigenous solutions are used for adaptation strategy, it radically changes the prospects of uninhabitable zones and migration. The current main focus of adaptation is on water scarcity, with water quality being second and food security being third. Dehydration is a stage 5 threat according to this new model, while malnutrition and starvation are stage 7 threats. Stage 2, 3 and 4 threats are more likely and more urgent, yet are considered to be far less important. Strong winds are another stage 2 threat with no proactive strategy to adapt, however they are survivable by making changes to habitat. Dehydration at stage 5 is only likely to occur if the preceding threat of water scarcity is not reduced or eliminated at stage 4.</p> |          |         |                       |

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| 30032  | 0         | 0         |         |         | <p>My greatest concern, however, is that one major topic seems generally under represented: Human vulnerability towards heat stress. While this topic is mentioned prominently as key risk (human mortality and morbidity) and the concept of vulnerability is introduced, the underlying human vulnerabilities in the two main domains physical sensitivity and environmental exposure remain largely unexplored. This lack of information corresponds with a lack of related adaptation options. Thus it will be difficult to answer the respective FAQs in the Second Order Draft.</p> <p>There are only few information on human vulnerability towards heat stress available in the different chapters and the available information remain vague and are sometimes inconsistent. Some examples are:</p> <ol style="list-style-type: none"> <li>1) Heat-related mortality and morbidity are listed as key risk in Table 7.4 and in Table 13.8.</li> <li>2) The text in chapter 7, however, only names the elderly as vulnerable group (chapter 7.3.4.2) with no further detail. On the other hand, in chapter 13 (13.7.1.1) the list includes Elderly, children, (pregnant) women, and socially isolated" as well as people „suffering from pre-existing medical conditions“.</li> <li>3) Table 7.4 (again chapter 7) names only outside workers as vulnerable group.</li> </ol> <p>There is current scientific evidence that supports that individual physical sensitivity, mainly determined by health status and physical fitness, rather than age per se (Schuster, C., Honold, J., Lauf, S., Lakes, T. (2017): Urban heat stress: novel survey suggests health and fitness as future avenue for research and adaptation strategies. Environmental Research Letters (<a href="https://iopscience.iop.org/article/10.1088/1748-9326/aa5f35">https://iopscience.iop.org/article/10.1088/1748-9326/aa5f35</a>)).</p> <p>This study describes why we should conceive humans' cardiovascular capacity to be the major underlying effect causing individual heat stress. The importance of physical sensitivity appears to be generally overseen (or underestimated) in most publications. The paper describes evidence from neighboring scientific fields (e.g. from physiology/medical sciences) which seem to have been lost in the climate change scientific community.</p> <p>This observation may yield a focus shift in future heat stress adaptation research and policy since adaptation through health prevention is not included in recent official recommendations at all (e.g., EEA 2012, IPCC 2014). This might be a consequence of the perception of urbanization, global warming, and aging as root causes (Fernandez and Creutzig 2015) with limited adaptation potential and the missing information in frequently applied mortality studies.</p> <p>However, back in 2004, the WHO Report mentioned the importance of physical fitness, leading to the formulation of the following: "Long-term intervention strategy: Maintain high natural levels of heat acclimatization. This can be achieved by an active lifestyle (fitness) with properly adjusted climatic exposure (behaviour and climate)". Since then, this topic does not occur in official recommendations anymore.</p> <p>Age cannot be changed, population health can. Active travel represents the most effective way to improve cardiovascular health by integrating physical activity into daily life routines (Bassuk and Manson 2005, Mackett and Brown 2011, Nazelle et al 2011, WHO 2002, Creutzig et al 2012). And it is already identified as a means for climate change mitigation (EEA 2009, IPCC 2014). Through reduced CO2 emissions from urban transport, societies could reap double rewards by addressing two root causes of urban heat stress: population health and global warming.</p> <p>I strongly believe that this topic should have more emphasis in the AR6. It should be part of the further research necessary and methodological challenges. It delivers a strong and very comprehensive mitigation/adaptation option with many co-benefits.</p> <p>For questions on this topic please contact me via <a href="mailto:chr.schuster@gmail.com">chr.schuster@gmail.com</a> or via <a href="mailto:christian.schuster@uba.de">christian.schuster@uba.de</a>. If you do not have respective expertise for that aspect/chapter I will be happy to support or name further scientists with expertise in this field.</p> | Christian Schuster | Germany | The reviewer's comments & expertise are noted. Heat-related health risks are assessed in the SOD in 3 sections of Chapter 7 (observed impacts, projected risks and adaptation solutions), with reference made to the reviewer's publication. It is likely that WGIII will also reference co-benefits of public transport for reducing urban heat stress. |

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| 5844   | 0         | 0         |         |         | No dissenting opinions are mentioned.   | Joseph Zajac                   | United States of America | A "dissenting opinion" approach is not used in the Assessment report; rather, confidence and evidence statements are used. Where there is considerable dissent in the literature, this is reflected in the text description of a finding, may be relected in a low confidence/low evidence statement, or a statement of finding may not be included at all. In Chapter 7 (health, migration, conflict), for examle, there are numerous instances of hypothesized links between CC and specific outcomes for which there is mixed evidence and/or dissent among researchers, and this is stated explicitly in the chapter text. |
| 25022  | 0         | 0         |         |         | The link between climate change and human mobility is properly adressed in the different chapters. However a conceptual harmonization is needed: different wording are used in different chapters (and within chapters) without clear definitions (for example "displacement" versus "migration", "planned migration" versus "forced migration", "migration" (without details) versus "forced migration", etc.)   | Etienne Piguet                 | Switzerland              | Taken into account. The definition for migration will be included in the Glossary. Authors will make sure that the terms are used correctly and consistently across chapters.  |
| 10130  | 0         | 0         |         |         | Throughout, I strongly recommend that you not refer to"indigenous knowledge" and instead say "indigenous expertise" or "indigenous expertise and local knowledge.". One reason is because this invites a contrast with scientific knowledge (at COP25 I heard worse ... someone contrasted it with modern knowledge). Knowledge is knowledge and it comes from different places. We should be emphasizing that IPs have expertise in virute of where they live and their tradition of knowing that place intimately. It also makes it seem like a parochial concern, instead of something central. I also think we can and should talk about indigneous values throughout such as the value of multi-generational planning.     | Weisberg Michael               | United States of America | Accept in part. Indigenous Knowledge as been defined in glossary and used consistently across the chapters including a Cross Chapter Box which acknowledges the centrality and value of Indigenous Knowledge   |
| 28134  | 0         | 0         |         |         | Replace term "the poor" to "people living in poverty" as the first term connotes a permanent state of being, which is not or should not be the case. Even better replace the terms "rich and poor" with "people of varying economic means".   | Tracy Raczek                   | United States of America | Accept. Taken into account and language standardised across all Chapters to reflect a range of vulnerable groups of people.  |
| 10508  | 0         | 0         |         |         | Through the report it would be useful if acronyms can be spelled out, completely understand that this is a draft version of the report  | Aarsi Sagar                    | Republic of Korea        | Accepted. Authors tried to avoid the use of acronyms or, if acronyms are being used, to clearly define them.   |
| 34708  | 0         | 0         |         |         | There is a tendency in many chapters to make many generalized statements about issues without addressing issues in greater detail. Policy makers by now know about the main dangers, risks, impacts of climate change. Now they need to know what exactly the response options are, the pros and cons of different designs, useful details that could be taken up into related legislation. This report is the opportunity to give policy makers the evidence they need to drive best practice.   | Debra Roberts and Durban Team  | South Africa             | Accepted. The SOD will include a stronger focus on solutions and details, through a systematic adaptation assessment in chapt 4,5 and others.  |
| 34710  | 0         | 0         |         |         | Is it still possible to consider a Cross-Chapter-Box on advances in Detection and Attribution, as this is relevant to most chapters. Or a more comprehensive section in Chapter 1 or 16 that other chapters can refer to. Global information should not be repeated in chapters, but only such evidence on Detection and Attribution that is relevant to the chapter. At this point in time this issue is more important than ongoing details on well-understood impacts.   | Debra Roberts and Durban Team  | South Africa             | Accepted. This is now part of the WGI-WGII Handshake.  |
| 36776  | 0         | 0         |         |         | There is need for improved coordination of the use of scenarios (including naming) across chapter. The scenarios referred to in chapters are in most cases not at all described. It would help to include a box on scenarios used in this report and their description in chapter 1.  | Hans-Otto Pörtner and WGII TSU | Germany                  | Accepted: Chapter 1 defines and describes scenarios.   |
| 29254  | 0         | 0         |         |         | It's nice that every chapter offers some indication of confidence level to key statements, especially those in executive summaries. However, nowhere in the report explains what the confidence levels really mean, and how they were judged: Are they based on some quantitative measures or just subjective impressions? Some basic expalantions will be helpful and don't need to be long. Further, different chapters use different terms, e.g. chapter 1 uses "high confidence", chapter 6 uses "high evidence, high agreement", which makes these confidence statements more confusing. The terminology needs to be unified! If there are reasons to keep the diverging uses of terms, they need to be clearly explained. | Jing Gao                       | United States of America | Accepted: Chapter 1 includes definitions and description of confidence assessments.  |

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| 34712  | 0         | 0         |         |         | There is a tendency in some chapters to repeat and repackage things that are already known, reorganizing information that is in SR15 and SROCC and SRCCL. For instance, everything to do with water ( ocean, cryosphere, floods, rainfall, run-off, aquifers, irrigation, coasts etc) appears repeatedly in different reports and chapters, in slightly different context, just rearranged. Sometimes the SRs are not even mentioned. Does this mean the AR6 authors are repeating the work, reviewing the (same) literature? or different literature and sometimes coming up with conflicting messages? If there are such different data sets or projections out there, that produce such different results, then the IPCC assessment would have to document all the different views, assess who used the best methods, and which results are best supported by the evidence. (For example, the clear message in the SRs has been that Southern Africa is getting drier. Yet now we read about this region getting wetter. There are fundamental conflicts between maps presented here and published before. Different sources? But what does that mean? )  | Debra Roberts and Durban Team | South Africa | All the chapters have been revised based on this comment as well as others.  |
| 20668  | 0         | 0         |         |         | In many places of the report, especially Asia chapter- the term "natural disasters" is used. There is immense literature in the social sciences of disasters clearly indicating that there are only natural hazards and no natural disasters. For example, see: Wisner, B. et al. (2004) At Risk: natural hazards, people's vulnerability and disasters. London: Routledge.  | Emmanuel Raju                 | Sweden       | Authors use terms that appear in the literature - and 'natural disasters' is still seen in some cases. Specific point passed on to Asia chapter authors. |
| 34716  | 0         | 0         |         |         | See Ch16 p4, 6-8: These key questions need to be picked up and identified by every sectoral and regional chapter. In Ch16 one then expects to see lots of cross-references to other chapters.  | Debra Roberts and Durban Team | South Africa | Chapter 16 has been revised taking this into account.  |
| 5054   | 0         | 0         |         |         | I do not find reference to the possible tradeoff between mitigation and adaptation actions. For example seawater desalination can be viewed as adaptation, but unless powered by renewables is deleterious from a mitigation point of view - what Barnett calls misadaptation.   | Eran Feitelson                | Israel       | Chapters have been revised to include the relationship between adaptation and mitigation, including trade-offs.  |
| 30030  | 0         | 0         |         |         | The Working Group II contribution to the IPCC Sixth Assessment Report covers a wide range of topics and theoretical concepts and appears to be a comprehensive collection of the state existing knowledge on climate change impacts and adaptation. Also, the general structure of the report appears logic and seems to be consistent among different chapters that overlap.  | Christian Schuster            | Germany      | Comment noted  |
| 21434  | 0         | 0         |         |         | In various places, warming rates in particular regions (geographic or theme-based) are compared with global means or other regions. A useful benchmark here is the global land warming rate: we expect that WGI will report a global mean change for land areas from 1850-1900 to 2009-2018 in the order of 1.4C (exact number will depend on final versions of various data sets).  | Blair Trewin                  | Australia    | Comment noted, but not all the assessed papers refer to that warming rate.   |
| 11998  | 0         | 0         |         |         | Multiple Problem Cancellation Strategy (MPCS) can be used to provide solutions to many problems: Problem 1: lack of hardware and energy globally to compress air to produce drinking water. Problem 1: huge quantities of redundant internal combustion engines sitting idle after fossil fuel use is ceased. Problem 3: excess wind. Western culture: build new hardware at great expense with associated huge emissions from manufacture. Transport the hardware all over the world causing even more emissions. Will take years to start producing. Observe ecological impact of billions of decaying redundant engines, or scrap and recycle engines causing large emissions. MPCS: repurpose the redundant engines to become Atmospheric Water Generators (AWG). Engines are already abundant in all regions and easily modified. There are therefore no emissions to manufacture or distribute the hardware across the world and they can start producing quickly. If the water scarcity and quality problems can be solved using condensation and compression strategies, then one of the major risks affecting food security is eliminated, therefore reducing the incidence of malnutrition and starvation. Smart Adaptation Strategy attempts to reduce or eliminate earlier stages of climate change threats which results in reduced likelihood of later stage problems. Current adaptation strategy simply ignores many of the lower stages because it is incorrectly assumed that they cannot be solved, which is a loss by default and allows them to progress to later stages. | Paul Crewther                 | New Zealand  | Comment noted. No literature cited   |

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| 36132  | 0         | 0         |         |         | Overall, Chapters 1-10 contain a remarkable amount of information. The writing is often very good and clear. The amount of work reflected across the board is impressive. However, I have several serious cautions and a few recommendations to offer because AR6 is likely to be the most socio-politically significant report published by the IPCC. Public attentiveness is extremely high, and the report will be widely covered and highly scrutinized, not just - or even primarily - by critics. People will be looking to this report for an honest-brokered, credible assessment and concrete clues that can inform action, decisions, attitudes, and degrees of hope. I wish I were exaggerating, but I think this is the correct expectation to be writing toward. So first the cautions: 1) Chapter 1 needs a major editing overhaul. The purpose of the chapter is not clear; the organization is meandering and unfocused; the writing style is uneven, starting off with a strong plain language style and devolving in to academic jargon the further it goes (nicely written, but not for this publication). Most distressing, the content comes across as not ready for prime time. If risk, adaptation, resilience, and vulnerability are being introduced as the new lenses for AR6, this chapter has to do a much clearer, crisper, better job of communicating why and how those concepts will be used in the chapters to come. The chapter is, in any case, way too long and far less polished than the other chapters. Quite frankly, it is a terrible lead-off to the whole report. Please don't do this. The executive summary, when I first read it, shocked me because of its vague substance, organizational incoherence, and unpolished writing style. When I read the whole chapter, I didn't find that the executive summary reflected the content effectively. The organization may be problematic, but there is a lot of good content in this chapter. I realize this is a harsh critique, and I regret that. However, this chapter, as is, does not serve the IPCC well or do justice to the report. The level of revision required exceeds the capacity of an Excel spread sheet comment form to describe. Please rethink it. 2) Executive summaries are CRUCIAL. They will be all that many people read. They should be designed and written with that in mind. Right now, some are better than others -- and some are very good. However, they are very, very dissimilar in length, style, organizational structure; and they do not constitute a coherent narrative when taken together as a whole. They need to function that way. Here's a test: print off just the exec summs, staple them together, and read them just like that start to finish. They should constitute a coherent narrative that accurately reflects the entire report. Tall order but realistic and necessary. I RECOMMEND that a common template (for length, structure, style, level of detail, quality of bold headings) be designed and utilized across all chapters. The content will differ, but the consistency of assessment approach and style of translational communication should be apparent. Although each chapter is different, the analytical framework | Elisabeth Graffy  | United States of America | Comments have been noted with appreciation and shared with the underlying Chapters. Individual Chapters are drafted based on the approved outline. The assessment is based on the published literature. The report will undergo significant revision in response to reviewer comments. Additional guidance on the preparation of Executive Summaries will be developed. Further development of cross cutting themes and topics will also be of particular focus in the SOD. A Glossary will be provided with the SOD. |
| 25028  | 0         | 0         |         |         | The exhaustivity of the literature review, the criteria and tools used for the literature search, as well as the criteria used to decide which literature is cited are not very clear and do not always seem to be consistent (see examples in the next comments).  | Etienne Piguet  | Switzerland              | Consistency will be increased during and throughout the drafting stages   |
| 34722  | 0         | 0         |         |         | All sectoral and regional chapters should have a section on climate resilient development pathways for that sector or region that can link to the Ch 18 synthesis.  | Debra Roberts and Durban Team                                 | South Africa             | CRDP has been integrated in chapter revisions.  |
| 34686  | 0         | 0         |         |         | When referring to Loss and damagae in the UNFCCC sense capitalise: Losa and Damage  | Debra Roberts and Durban Team                                 | South Africa             | Editorial   |
| 34706  | 0         | 0         |         |         | It is a bit confusing to see future projections written about in the past tense: "spill over was stopped and very little land use change was found" – and rather say "models outputs projected reduced land use change when assuming a carbon tax on terrestrial emissions" or something like that. In fact, this comment is relevant to the entire report – when writing about model outputs it is confusing to the reader if results are reported as having been "observed".  | Debra Roberts and Durban Team                                 | South Africa             | Editorial.  |
| 27498  | 0         | 0         |         |         | The overall format of the chapters for the regions needs to be somewhat more consistent.  | Soojeong Myeong   | Republic of Korea        | Efforts have been undertaken to coordinate more strongly among the regional chapters in the iteration from FOD to SOD, while respecting the regional differences and varying perspectives in regional literature. The synthesis chapters (16-18) also serve the purpose of collating information from the various regional chapters in a systematic way.  |
| 21228  | 0         | 0         |         |         | Names of Group Reviewers: Claudia Schneider; Erin Coughlan de Perez; Sarah Dryhurst; Tobias Pforr; Sienna Templeman   | Red Cross Red Crescent Climate Centre and Columbia University | United States of America | Group Review Member list - For TSU  |
| 21258  | 0         | 0         |         |         | Group Review Members: Sienna Templeman, Sanchi Sharma, Katherine Beem, Maitrayee Basu, Lynsey Atkinson, John Quinn  | Red Cross Red Crescent Climate Centre and Columbia University | United States of America | Group Review Member list - For TSU  |

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| 36092  | 0         | 0         |         |         | Our group reviewed is named "University of Alberta Graduate Students and Early Career Researchers", and was prepared by following participants: Mário Sérgio Dainez-Filho; Heather Nixdorff; Iain Miller; McKenzie Tilstra; Rosemary Nnabude; Krisha Quiambao; Sujun Basnet; Charlotte Ryder-Burbidge; Katy Davis; Wolfgang Riedler; Chinwe Vivien Obiakor; Ryan Thiessen; Grace Enns; Jacqueline Middleton; Kaitlin Patterson; Christopher Nzediegwu; Alexa MacPherson; Raytha Murillo; Nikki van Klaveren; Grace George; Aneri Garg; Camille Jodouin; Aaron Boyd; Sydney Huculak; Jiabi Wen; Folakemi Jolaoso; Crystal Gong; Jennifer Ann Brown (Née McGetrick); Shelby Yamamoto; Sherilee Harper  | University of Alberta Graduate Students and Early Career Researchers | Canada                   | Group Review Member list - For TSU   |
| 21248  | 0         | 0         |         |         | This draft of the report does not include very diverse perspectives. How can you address this in the second-order draft?   | Red Cross Red Crescent Climate Centre and Columbia University        | United States of America | Taken into account. IPCC reports are prepared by teams of Lead Authors who are carefully selected considering e.g. regional and gender balance and coverage of a broad range of expertises to ensure diversity of perspectives. Further contributing authors bringing in new perspectives will be added to the teams while preparing the next draft. Additionally, the comments received in this expert and government review helps to ensure that diverse perspectives are covered in the next draft. |
| 21156  | 0         | 0         |         |         | What can different categories of people do with the report? Could you provide an overview of the policy-relevance of different sections?   | Red Cross Red Crescent Climate Centre and Columbia University        | United States of America | IPCC reports provide policy relevant assessments of the current state of knowledge on climate change. The primary audience of the report is policy makers, however the summary products to be provided with the SOD (ie. TS and SPM) are drafted with a broader target audience. The reviewer is also referred to the FAQs.  |
| 6820   | 0         | 0         |         |         | <p>Given the charge of WG2 is to consider the "vulnerabilities and the capacities and limits of these natural and human systems to adapt to climate change and thereby reduce climate-associated risks together with options for creating a sustainable future for all through an equitable and integrated approach to mitigation and adaptation efforts at all scales", it is concerning to see so little mention of education, broadly defined, to raise awareness, build capacity and reduce risks. Many chapters seem to ignore education as a key social factor at all, and even the final chapter on Climate Resilient Development Pathways lack an understanding of the opportunities for education in reducing climate risks and the "shadow side" of modern education, which generally fosters high-impact lifestyles. The reason for this oversight is likely because none of the WG2 authors, however expert in their domains and even if they teach in high education, appear to be familiar with the research and literature, which is substantial. For example, the recent book Climate Change and the Role of Education (Filho, Hemstock 2019) touches on many of the issues relating to integrating climate into formal and informal curriculum. <a href="https://link.springer.com/book/10.1007/978-3-030-32898-6">https://link.springer.com/book/10.1007/978-3-030-32898-6</a></p> <p>Ideally, the final AR6WG2 report should have at a minimum a strong statement along the lines of the IPCC 1.5C Report, which, in D.5.6, made clear: "Education, information, and community approaches, including those that are informed by indigenous knowledge and local knowledge, can accelerate the wide-scale behaviour changes consistent with adapting to and limiting global warming to 1.5°C. These approaches are more effective when combined with other policies and tailored to the motivations, capabilities and resources of specific actors and contexts (high confidence). Public acceptability can enable or inhibit the implementation of policies and measures to limit global warming to 1.5°C and to adapt to the consequences. Public acceptability depends on the individual's evaluation of expected policy consequences, the perceived fairness of the distribution of these consequences, and perceived fairness of decision procedures (high confidence)."</p> <p>In addition, the important research mentioned in 4.3.5.3m, Education and learning, of the IPCC 1.5C report should be further examined and augmented: "Educational adaptation options motivate adaptation through building awareness (Butler et al., 2016; Myers et al., 2017), leveraging multiple knowledge systems (Pearce et al., 2015; Janif et al., 2016), developing participatory action research and social learning processes (Butler and Adamowski, 2015; Ensor and Harvey, 2015; Butler et al., 2016; Thi Hong Phuong et al., 2017; Ford et al., 2018), strengthening extension</p> | Mark Mccaffrey   | Hungary                  | Limited climate literacy is highlighted as a key barrier for climate change adaptation in the SPM of the WG2 report  |

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|  |           |           |         |         | <p>services, and building mechanisms for learning and knowledge sharing through community-based platforms, international conferences and knowledge networks (Vinke-de Kruijf and Pahl-Wostl, 2016) (medium) evidence, high agreement)."</p> <p>One of the challenges climate educators and trainers have experienced is the inherent tension between the goal of general universal education to build critical thinking and social skills promoted by many education advocates versus a more content-specific knowledge and skills focused approach in order to understand and be better able address specialized content areas (Bengtsson 2018). While universal education, especially at the secondary level and above, has been demonstrated to reduce natural disaster risks associated with climate change (Lutz 2014, Muttarak 2014), there is also an acknowledged down-side to increased levels of education: increased affluence and energy consumption. As O'Neill and co-authors (2018) highlight, while most social goals related to directly meeting physical needs-- nutrition, income, access to energy and sanitation--are inherently connected to resource use, they can in theory be modified and streamlined without going beyond planetary boundaries. However, "[a]n important exception to the overall pattern is secondary education, which is both strongly coupled to resource use and associated with high resource use."</p> <p>Therefore, to avoid universal secondary education from being a substantial contributing factor to increased resource consumption, educational practices will need to encourage climate smart, low-impact, sustainable lifestyle pathways. Inherent in the climate literacy theory of change is the assumption that well delivered, pedagogically sound climate education that results in cognitive, attitudinal and behavioral change will foster appropriate action to reduce climate risks and thereby protect current and future generations.</p> <p>Over the past two decades, research on climate education has examined different populations, including university students (Bain 2016), secondary (Plutzer 2016) and undergraduate educators (Lombardi 2012) and the general public (Lee 2015, Leiserowitz 2018). Specialized techniques, such as school assemblies (Flora 2015) and role-playing simulations (Rooney-Varga 2018), have been evaluated, and this has all contributed to a growing body of literature and understanding of effective practices. Emerging from this research is a growing consensus that knowledge about climate change is insufficient to motivate individuals into action (Dewaters 2013, Schultz 2005), and that affective and social dynamics have a strong influence on risk perception and in motivating climate</p> |          |         |                       |



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|  |           |           |         |         | <p>action (Doherty 2016, Kahan 2012, Weber 2006). Climate education, which overlaps with and ideally is integrated synergistically with related communication and outreach (McCaffrey 2015), should inform and inspire action (Vaughter 2016, Niepold 2018), and the evidence is clear that knowledge, as important as it is in making informed decisions, must be coupled with beliefs, emotions (Smith 2014), and motivation to result in behavior change and action (Lombardi 2012, Bain 2016).</p> <p>It is to the credit of the authors of Chapter 18 that a strong focus on justice has been included, but where is it that such values and ethics are conveyed? In some cases at home and/or through religious training, but often through the broad education systems, which ideally convey not only the basics of reading, writing and mathematics but also societal and personal responsibility. While such values are inherently culturally framed, they may also threaten the status quo; many popular uprisings, including the climate strikes mentioned in Chapter 18, are led by students who have “done their homework” and resist the status quo. (In a related context, it is worth mentioning that the UNFCCC’s Article 6 called on nations to educate, inform and engage their publics about climate change so they can help “develop adequate responses to climate change” but few nations have followed through with this, arguably in part because vested interests that have successfully delayed, denied and derailed climate action at the political level are also not keen on an informed, engaged public demanding climate action, which could diminish profits from fossil fuels and/or disrupt the status quo.)</p> <p>Finally, there is robust research on transforming schools and other learning environments into “living laboratories” and/or deploying effective pedagogical and communication practices to inform and engage learners. For example, see Monroe, M. C., Plate, R. R., Oxarart, A., Bowers, A., &amp; Chaves, W. A. (2019). Identifying effective climate change education strategies: a systematic review of the research. <i>Environmental Education Research</i>, 25(6), 791-812.- <a href="https://www.tandfonline.com/doi/abs/10.1080/13504622.2017.1360842?af=R&amp;journalCode=ceer20">https://www.tandfonline.com/doi/abs/10.1080/13504622.2017.1360842?af=R&amp;journalCode=ceer20</a></p> <p>In the future, WG2 and WG3 should include education experts who recognize the value of climate literacy for informed action.</p> <p>Suggested literature<br/>                     Bain, P. G., Milfont, T. L., Kashima, Y., Bilewicz, M., Doron, G., Garðarsdóttir, R. B., ... &amp; Corral-Verdugo, V. (2016). Co-benefits of addressing climate change can motivate action around the world. <i>Nature Climate Change</i>, 6(2), 154.</p> |          |         |                       |

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|  |           |           |         |         | <p>Ballew, M., Marlon, J., Maibach, E., Gustafson, A., Goldberg, M., and Leiserowitz, A. (2018). Americans are more worried about global warming, and show signs of losing hope. Yale University. New Haven, CT: Yale Program on Climate Change Communication. Retrieved from: <a href="http://climatecommunication.yale.edu/publications/americans-are-more-worried-about-global-warming-but-show-signs-of-losing-hope/">http://climatecommunication.yale.edu/publications/americans-are-more-worried-about-global-warming-but-show-signs-of-losing-hope/</a></p> <p>Barth, M. (2016). Teaching and learning in sustainability science. In: H. Heinrichs, P. Martens, G. Michelsen und A. Wiek (eds.). Sustainability science. An introduction. Dordrecht, Netherlands: Springer Netherlands, 325–333. Retrieved from: <a href="https://www.researchgate.net/publication/289055882_Teaching_and_Learning_in_Sustainability_Science">https://www.researchgate.net/publication/289055882_Teaching_and_Learning_in_Sustainability_Science</a></p> <p>Bengtsson, S. E., Barakat, B., &amp; Mutarak, R. (2018). The role of education in enabling the sustainable development agenda. Routledge.</p> <p>Bushell, S., Buisson, G. S., Workman, M., &amp; Colley, T. (2017). Strategic narratives in climate change: Towards a unifying narrative to address the action gap on climate change. Energy Research &amp; Social Science, 28, 39-49.</p> <p>DeWaters, J., &amp; Powers, S. (2013). Establishing measurement criteria for an energy literacy questionnaire. The Journal of Environmental Education, 44(1), 38–55.</p> <p>Doherty, K. and Webler, T. (2016). Social norms and efficacy beliefs drive the alarmed segment's public-sphere climate actions. Nature Climate Change, 6, 879-884. Retrieved from: <a href="https://doi.org/10.1038/nclimate3025">https://doi.org/10.1038/nclimate3025</a></p> <p>Flora, J. A., Saphir, M., Lappe, M., Roser-Renouf, C., Maibach, E. W., &amp; Leiserowitz, A. A. (2014). Evaluation of a national high school entertainment education program: The Alliance for Climate Education. Climatic Change, 127(3), 419–434.</p> <p>Heald, S. (2017). Climate Silence, Moral Disengagement, and Self-Efficacy: How Albert Bandura's Theories Inform Our Climate-Change Predicament. Environment: Science and Policy for</p> |          |         |                       |

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|  |           |           |         |         | <p>...from: <i>Climate Change Treatment: Environment, Science and Policy for Sustainable Development</i>, 59(6), 4-15.</p> <p>Kahan, D. M., Peters, E., Wittlin, M., Slovic, P., Ouellette, L. L., Braman, D., and Mandel, G. (2012). The polarizing impact of science literacy and numeracy on perceived climate change risks. <i>Nature Climate Change</i>, 2(10), 732–735.</p> <p>Lee, T. M., Markowitz, E. M., Howe, P. D., Ko, C. Y., &amp; Leiserowitz, A. A. (2015). Predictors of public climate change awareness and risk perception around the world. <i>Nature climate change</i>, 5(11), 1014.</p> <p>Leiserowitz, A., Maibach, E., Roser-Renouf, C., Rosenthal, S., Cutler, M., and Kotcher, J. (2018). <i>Climate change in the American mind: March 2018</i>. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication. Retrieved from: <a href="http://climatecommunication.yale.edu/wp-content/uploads/2018/04/Climate-Change-American-Mind-March-2018-1.pdf">http://climatecommunication.yale.edu/wp-content/uploads/2018/04/Climate-Change-American-Mind-March-2018-1.pdf</a></p> <p>Lombardi, D. and Sinatra, G. M. (2012). College students' perceptions about the plausibility of human-induced climate change. <i>Research in Science Education</i>, 42(2), 201–217.</p> <p>Lutz, W., Muttarak, R., &amp; Striessnig, E. (2014). Universal education is key to enhanced climate adaptation. <i>Science</i>, 346(6213), 1061-1062.</p> <p>McCaffrey, M. (2015). <i>Climate Change for Mere Mortals</i>. Originally published on BEE Communications, October 2015. Retrieved from <a href="https://medium.com/@markmccaffrey_90684/climate-change-for-mere-mortals-95e4b22aea17">https://medium.com/@markmccaffrey_90684/climate-change-for-mere-mortals-95e4b22aea17</a></p> <p>Molthan-Hill, P., Worsfold, N., Nagy, G. J., Leal Filho, W., &amp; Mifsud, M. (2019). Climate change education for universities: A conceptual framework from an international study. <i>Journal of Cleaner Production</i>, 226, 1092-1101.</p> <p>Muttarak, R., &amp; Lutz, W. (2014). Is education a key to reducing vulnerability to natural disasters and hence unavoidable climate change?. <i>Ecology and Society</i>, 19(1), 1-8.</p> |          |         |                       |

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|  |           |           |         |         | <p>National Research Council (2010). Informing an Effective Response to Climate Change. Washington, D.C.: The National Academies Press. <a href="https://doi.org/10.17226/12784">https://doi.org/10.17226/12784</a></p> <p>National Research Council. (2011). Climate change education: Goals, audiences, and strategies: A workshop summary. Washington, DC: National Academies Press.</p> <p>Niepold, F., Poppleton, K., J. Kretser. (2018). Climate Change Education: Building Hope and Social Capacity in 21st Century Students. Green Schools Catalyst Quarterly. Received from: <a href="http://catalyst.greenschoolsnationalnetwork.org/gscatalyst/december_2018/">http://catalyst.greenschoolsnationalnetwork.org/gscatalyst/december_2018/</a></p> <p>O'Brien, K. (2015). Political agency: the key to tackling climate change. <i>Science</i>, 350(6265), 1170-1171.</p> <p>O'Neill, D. W., Fanning, A. L., Lamb, W. F., &amp; Steinberger, J. K. (2018). A good life for all within planetary boundaries. <i>Nature Sustainability</i>, 1.</p> <p>Otto, I. M., Donges, J.F., Bhowmik, A., Cremades, R., Lucht, W, Rockström, J., Allerberge, F., Doe, S., Hewitt, R., Lenferna, A., McCaffrey, M., Nerea Morán, N., van Vuuren, D. P. , Schellnhuber, H. J. (in review). Social tipping dynamics for stabilizing Earth's climate by 2050.</p> <p>Otto, I. M., Kim, K. M., Dubrovsky, N., &amp; Lucht, W. (2019). Shift the focus from the super-poor to the super-rich. <i>Nature Climate Change</i>, 9(2), 82.</p> <p>Pew Research Center, February, 2019, "Climate Change Still Seen as the Top Global Threat, but Cyberattacks a Rising Concern". Retrieved from:</p> <p>Plutzer, E., McCaffrey, M., Hannah, A. L., Rosenau, J., Berbeco, M., &amp; Reid, A. H. (2016). Climate confusion among US teachers. <i>Science</i>, 351(6274), 664-665.</p> <p>Pugliese, A., &amp; Ray, J. (2009). A heated debate: global attitudes toward climate change. <i>Harvard International Review</i>, 31(3), 64.</p> <p>Rooney-Varga, J. N., Sterman, J. D., Fracassi, E., Franck, T., Kapmeier, F., Kurker, V., ... &amp; Rath, K. (2018). Combining role-play with interactive simulation to motivate informed climate action: Evidence from the World Climate simulation. <i>PloS one</i>, 13(8), e0202877.</p> <p>Schultz, P. W., Gouveia, V. V., Cameron, L. D., Tankha, G., Schmuck, P., and Franěk, M. (2005). Values and their relationship to environmental concern and conservation behavior. <i>Journal of Cross-Cultural Psychology</i>, 36(4), 457-475. Retrieved from <a href="https://doi.org/10.1177/0022022105275962">https://doi.org/10.1177/0022022105275962</a></p> <p>Smith, N. and Leiserowitz, A. (2014). The role of emotion in global warming policy support and opposition. <i>Risk Analysis</i>, 34, 937-948. doi:10.1111/risa.12140</p> <p>UNFCCC (2016). Review of the Doha work programme on Article 6 of the Convention Progress made in implementing the Doha work programme on Article 6 of the Convention. Synthesis report by the secretariat. Retrieved from: <a href="https://unfccc.int/resource/docs/2016/sbi/eng/06.pdf">https://unfccc.int/resource/docs/2016/sbi/eng/06.pdf</a></p> <p>Vaughter, P. (2016). Climate change education: From critical thinking to critical action. UNU-IAS Policy Brief. Toyko, Japan: United Nations University Institute for the Advanced Study of Sustainability. Retrieved from: <a href="https://www.unclearn.org/sites/default/files/unuias_pb_4.pdf">https://www.unclearn.org/sites/default/files/unuias_pb_4.pdf</a></p> <p>Weber, E. (2006). Experience-based and description-based perceptions of long-term risk: Why global warming does not scare us (yet). <i>Climatic Change</i>, 77(1), 103-120.</p> |          |         |                       |

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| 5066   | 0         | 0         |         |         | The MENA region receives scant attention. The Asia chapter hardly discusses western Asia, while the African chapter focuses on sub-saharan Africa. This is not a chance. The MENA region has its own characteristics, very different from other parts of Asia and Africa. In world Bank and UN documents it is often discussed as a separate region. Moreover, this is a region that is likely to be among the most adversely affected by climate change. Hence, it merits a chapter, as well as separate discussion in other chapters, particularly the water chapter.   | Eran Feitelson  | Israel                   | Not possible to add new chapters or regions to the approved outline. Comment passed to both Asia and Africa chapters to coordinate.   |
| 7862   | 0         | 0         |         |         | Overall, this reviewer sees a large philosophical shift in the direction the IPCC is taking the science in its role in framing policy options, and a stronger more direct application of social science in this report. From the viewpoint of how this document will affect the next cycle of implementation of the Paris Agreement in particular, ensuring that greater continuity of that shift is maintained, even through the contributions of different authors, seems particularly important in the AR6. As an information note, I am sending this from COP25 and have been participating in these UNFCCC meetings since 2007 so have observed the changes in the science/policy interface over time. I joined this review process in October, and upon arriving in Spain found that my original document was corrupted so this version is an attempt to synthesize some of those main points and make the deadline for the FOD. I have other comments and references that I will be pleased to include in the SOD in the spring, or send late. I hope that is acceptable and useful within the process.  | Lynn Wilson   | United States of America | Noted   |
| 36582  | 0         | 0         |         |         | Simple reproduction of figures from and with WGI information should be avoided to minimize overlap with WGI, unless unique (not covered in WGI report) or combined with impacts information. Relevant WGI information on climate drivers of change could be described in a brief summary section and to the extent possible, graphics material on climatic changes should indeed be combined with information on vulnerable systems or impacts or risks.  | Hans-Otto Pörtner and WGII TSU                                | Germany                  | Noted   |
| 21154  | 0         | 0         |         |         | Names of Group Reviewers: Brigitte Rudram, Cecilia Costella, Erin Coughlan de Perez, Irene Amuron, Sienna Templeman   | Red Cross Red Crescent Climate Centre and Columbia University | United States of America | noted   |
| 23412  | 0         | 0         |         |         | I've reviewed Chapters 1 and 5. The quality and the breadth of the data presented here is phenomenal. However, in reading these chapters I've struggled to understand the 'so what'. The messaging needs a lot more sharpening. I would suggest that each paragraph should begin and conclude with the key message. I would also recommend that each chapter should graphically present its key messages, in a way that a generalist reader can grasp the importance of the evidence being presented here.  | Rohini Chaturvedi   | India                    | Noted   |
| 9238   | 0         | 0         |         |         | Please consider comments #5 & #7 throughout the entire report   | Sergio Salinas-Rodríguez                                      | Mexico                   | Noted   |
| 25030  | 0         | 0         |         |         | The underlining logic behind references and quotations is not very clear to me : is their an idea of exhaustivity ? (i.e. all relevant literature is cited) or an idea of illustration (only a few references are more or less arbitrarily mentioned) or an idea of significance ? (the cited reference directly confirm a statement).  | Etienne Piguet  | Switzerland              | Noted - not all references to a topic can be cited, the ones used are highly relevant, are often summative assessments, and illustrative  |
| 16738  | 0         | 0         |         |         | I don't understand why some chapters of reports written by groups under the supervision of the United Nations (ex: IPCC, FAO) are cited with the chapter lead author's name whereas more general references of such reports are with the group name and a date. The fruit of such reports, their content, should be impersonal and only refer to the collective. The IPCC work is a collective effort towards the understanding a Climate change and its effects on Nature, including humans, claiming respect and protection of our environment through the prism of Sciences and their will to access the truth. Citing the lead author of a chapter is a, maybe involuntary, way to uplift a scientist, whereas the IPCC is an international collective working with the same objective. Furthermore, referring to previous reports this way hides the distinction between a "fundamental" reference, citing a scientific paper, and an "overview" reference, citing a report built on "fundamental" references. In my view, this way to reference previous reports should evolve to directly give value to them and not indirectly through a name who contributed to it. There is a race in Sciences for publishing and being cited - we can no longer ignore it -, but the IPCC should definitely be opaque to it. | APECS_PYRN_P AGES ECN_YESS_MRI                                | Canada                   | Noted - the referencing has been standardised, IPCC SPM though are cited as IPCC as authors as per convention,  |
| 26954  | 0         | 0         |         |         | Very good report and errors can be rectified  | Anohar John   | India                    | Noted and errors rectified  |
| 19506  | 0         | 0         |         |         | Where there is text about Arctic Indigenous Peoples, there should be an Arctic Indigenous person or organization as contributing author. It is inappropriate without.   | Joanna Petrasek Macdonald                                     | Canada                   | Noted, and concrete steps have been taken where possible. For example, in Ch 7, two additional CA's have been recruited to contribute on Indigenous health (including Arctic communities), from Canada and Sweden (Saami) |

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| 5790   | 0         | 0         |         |         | Use of undefined terms, not universally accepted terms, and terms that do not appear in the AMS Glossary of Meteorology <a href="http://glossary.ametsoc.org/wiki/Main_Page">http://glossary.ametsoc.org/wiki/Main_Page</a> and terms not in NOAA's glossary <a href="https://w1.weather.gov/glossary/">https://w1.weather.gov/glossary/</a>  | Joseph Zajac                  | United States of America | Noted, efforts are being made for final draft to ensure consistency of terminology.   |
| 27276  | 0         | 0         |         |         | Based on my review of Chapter 5, the FOD is a rigorous and comprehensive effort.  | Christine Negra               | United States of America | Noted.  |
| 9798   | 0         | 0         |         |         | Chapter 1 is a general introduction   | Ayman Batisha                 | Egypt                    | Noted. This is the case.  |
| 31082  | 0         | 0         |         |         | WG II should consider consistency in the topics covered across the chapters and systems   | Ignatius Kauvee               | Namibia                  | Noted. Coordination across chapters has continued for this draft to ensure greater consistency  |
| 25430  | 0         | 0         |         |         | The report is well written and much more updated compared to AR5  | Marlon Pareja                 | Philippines              | Noted. Thank you very much for this comment.  |
| 34628  | 0         | 0         |         |         | It is not clear why different chapters use different RCP scenarios. For consistency, it will be useful to agree on the scenarios that will be reported for ease of comparison.  | Debra Roberts and Durban Team | South Africa             | Noted. To some extent we are limited by which scenarios have been used in the literature that we are assessing. However if a paper uses several RCPs, in the FOD we may not always have report results from all RCPs, so we could look again at the papers and see if others have been used. In addition to RCPs, we and other chapters also report results on Global Warming Levels. At LAM3, the Scenarios Breakout Group proposed a framework for harmonising results that use different approaches, by asking chapters to report the RCP, time period, and (if known) Global Warming Level.   |
| 5842   | 0         | 0         |         |         | Chapters have a social justice theme pushing fear.  | Joseph Zajac                  | United States of America | Noted: Chapter 11 has identified the social justice implications of the impacts of and adaptation to climate changes. Underlying vulnerabilities across society exacerbate these impacts.   |
| 29762  | 0         | 0         |         |         | Dear IPCC colleagues: I don't have a comment. Rather, I would like to submit an idea of a product that could educate and help decision makers and the public absorb and digest the knowledge of the report and make smarter decisions: How about an IPCC Atlas for the climate crisis? My basic intuition is that individuals, governments and organizations who want or have a mandate to confront the risks of climate change are inadvertently or counterintuitively doing suboptimal if not altogether useless things. Wasted action is tragic and costly. For example, I work in the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). My role is to help develop anticipatory action frameworks that tie data to the release of pre-arranged finance for the implementation of interventions that can reduce the impact of a crises caused by a specific shock. As excited as I am to be doing this, I sometimes wonder if we are assessing risk appropriately, both temporally and spatially, and whether our interventions are the most impactful, not just to address what is likely to happen tomorrow but in five, ten, fifty years. Are we unknowingly putting people at risk by encouraging them to stay -as a result of reaching them with help- in places that are unsafe? More awareness and insight can come in handy. An atlas strikes me as a great option. If it is accessible and visually beautiful, an Atlas can help eliminate the excuse that we didn't do the right thing because the science was too complex for us to understand it. Your work basically suggests things are bad. The question is "how bad" and what can we still do where. You describe different strategies, such as improving food production systems, land management, fire management, reducing pollution, reducing waste in food systems, livelihood diversification, managing urban sprawl, developing risk sharing financial instruments, building barriers, ecosystem-based adaptation, relocation and retreat, etc. Could you visually overlay where and when what strategies make sense on a map of the world (and zoom in as much as you can) based on your data and long-range predictions or scenarios of how the climate crisis could unfold? | Juan Chaves-Gonzalez          | United States of America | Noted: Thank you for the idea. The 6th Assessment Report will include an Atlas that will highlight regional issues.   |
| 4828   | 0         | 0         |         |         | For the Entire Report, consider adding a clear and succinct model of different phenology scenarios and how changes in phenology may impact all ecosystems on Earth due to climate change. The details in these scenarios would potentially be very useful for planning and policy decisions. They may be structured in a way that allows for comparing cascading effects. This is a large undertaking, but falls clearly within the scope of this report, and would increase its utility.   | Daniel Helman                 | United States of America | Observed changes in phenology are discussed at length in Ch. 2 for various terrestrial and freshwater ecosystems and in Ch. 3 for ocean and coastal ecosystems. Models for projected changes in different scenarios are not available for natural systems. In agricultural systems, phenology projection is the primary step for crop production study and is quite common in crop yield projections. Possible consequences of multi-species changes in phenology are still challenging. Some complexities and difficulties in projections of multi-species shifts are indicated in Chapter 5 (food), but literature is still limited for the comprehensive assessment. To fully address the request of the reviewer, a cross-chapter box would be needed focused on phenology changes alone. |

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| 12210  | 0         | 0         |         |         | I don't think the topic "Climate-related migration, displacement and conflict" (section 7.4) is well placed in Chapter 7. In my view, this is an issue that cuts across sectors and regions and would therefore be much better suited for Chapter 16.   | Andreas Neef  | New Zealand              | Reject. IPCC countries agreed to include migration in Chapter 7. However, Chapter 11 has included issues around migration in a chapter Box on Implications beyond Australia and New Zealand. Chapter 16 covers key risks from climate change and Chapter 7 risks.   |
| 4830   | 0         | 0         |         |         | For the Entire Report, consider adding a clear and succinct model of different energy sector scenarios and how climate change might influence the capacity and utility of the various sectors that contribute to the global energy supply. It could include adaptations, such as oil and gas companies diverting some of their technology and resources for drilling geothermal wells or creating geothermal reservoirs for enhanced geothermal systems (EGS). It could also include scenarios wherein nuclear power becomes more widespread, and creates an increased risk of nuclear arms proliferation. (Reference: Goldemberg, J., 2009. Nuclear energy in developing countries. Daedalus, 138(4): 71-80.) The scenarios might be structured in a way that allows for comparing different outcomes. This is a large undertaking, but falls clearly within the scope of this report, as it deals with adaptation. It would increase the utility of the report.   | Daniel Helman | United States of America | Rejected - beyond the mandate of the WGII report.   |
| 4832   | 0         | 0         |         |         | For the Entire Report, consider adding a clear and succinct model of different transportation scenarios and how climate change might influence the technologies and modalities that humans use for transportation of goods and people. It might include a scenario that focuses on the planned transition in various countries away from internal combustion engines towards an electric vehicle mandate as an adaptation strategy. Another scenario might focus on compressed hydrogen as an alternative transportation adaptation. Likewise, shipping options might be detailed in another scenario. All of these would be compared clearly in a model, and would help immensely for energy planning, as much energy usage is related to transportation. Because these are adaptations of existing economic systems in response to climate change, the model falls clearly within the scope of this report, and would increase its utility.   | Daniel Helman | United States of America | Rejected - beyond the mandate of the WGII report.   |
| 4836   | 0         | 0         |         |         | For the Entire Report, consider including a chapter on military GHG emissions contributions to climate change. The emissions under military control globally are very large, and including a strong description of them will help to focus attention on adaptation strategies under direct governmental control. The description of how the world's militaries might adapt their technologies in a way that will allow for increased well-being for all on the planet is warranted and may have strong ramifications on how the scholarship and outcomes are framed in the coming years. This is a large undertaking, but falls clearly within the scope of this report, and would increase its utility.  | Daniel Helman | United States of America | Rejected - beyond the mandate of the WGII report.   |
| 9796   | 0         | 0         |         |         | I suggest rearrange the entire report into 4 parts.   | Ayman Batisha | Egypt                    | Rejected. The report is structured according to the approved outline agreed with governments at the outset  |
| 9800   | 0         | 0         |         |         | The 1st is devoted to deal with geographic and regions view. (Chapters 9-14)  | Ayman Batisha | Egypt                    | Rejected. The report is structured according to the approved outline agreed with governments at the outset  |
| 9802   | 0         | 0         |         |         | The 2nd is devoted to deal with sectors view. (Chapters 2-8) + Cross-Chapter Paper 01   | Ayman Batisha | Egypt                    | Rejected. The report is structured according to the approved outline agreed with governments at the outset  |
| 9804   | 0         | 0         |         |         | The 3rd is devoted to deal with hot issues view. (Chapter 15) + Cross-Chapter Paper (02 – 07)   | Ayman Batisha | Egypt                    | Rejected. The report is structured according to the approved outline agreed with governments at the outset  |
| 2364   | 0         | 0         |         |         | The reference lists in most of the chapters are very long. This reflects the great overwhelming attention of scientific communities to addressing climate changes and their impacts on human and natural systems. However, I think that unnecessarily lengthy lists can blur readers' view on the latest important new advances in the literature. I think that the numbers of the references can be shortened by 1) dropping the references prior to 2014, as the most important and significant studies and their results earlier have been reported in previous Assessment Reports; 2) limiting the number of studies from the same author (or his/her team) to no more than 2; 3) most importantly, dropping the references that are not specifically addressing the theme of the chapter. For example, in Chapter 4 Water, many references in the list are not specifically about water, but about environment, ecosystems, land use, human migration, gender, climate ethics..... Although these aspects have many overlaps and connections with water, they have been addressed separately in other chapters in AR6. The references in each chapter should be more focused on the theme of the chapter to reduce the length and enhance the focus. | Hong Yang     | Switzerland              | Rejected: Following guidance from the IPCC and WGII co-chairs, authors have focused on literature published since AR5; older literature may be included to support statements. Authors cite literature to support chapter statements regardless of the authors of the literature being supported. The wide range of topics such as water imply a wide range of impacts, and therefore some overlap with other chapters is needed to support statements. |
| 2362   | 0         | 0         |         |         | The individual chapters are generally too long. It would need an enormous effort for any reader, particularly policy makers and relevant managers, to read through from the beginning to the end for even one chapter, let alone 15 chapters all together.  | Hong Yang     | Switzerland              | Rejected: Word limits for chapters were defined in 2017 in advance of the report writing and approved by the IPCC (the member countries). Executive Summaries are provided by chapters to facilitate reading.   |

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| 9806   | 0         | 0         |         |         | The 4th is devoted to deal with assessment and Resilient Pathways view. (Chapters 16-18)  | Ayman Batisha                  | Egypt   | Rejected:The report outline and structure have been approved by IPCC member nations and are no longer able to be changed. See, e.g., <a href="https://www.ipcc.ch/meeting-doc/ipcc-46/">https://www.ipcc.ch/meeting-doc/ipcc-46/</a> |
| 9808   | 0         | 0         |         |         | The Chapters 9-14 should be logically arranged. Chapter 09, Africa; Chapter 10, Asia; Chapter 11, Australasia; Chapter 12, Central and South America; Chapter 13, Europe; Chapter 14, North America. The logic is to arrange continents according to their areas, not alphabetically, because the area is the absolute fact.  | Ayman Batisha                  | Egypt   | Rejected:The report outline and structure have been approved by IPCC member nations and are no longer able to be changed. See, e.g., <a href="https://www.ipcc.ch/meeting-doc/ipcc-46/">https://www.ipcc.ch/meeting-doc/ipcc-46/</a> |
| 9810   | 0         | 0         |         |         | Some chapters and sections should change their names to be more precise.  | Ayman Batisha                  | Egypt   | Rejected:The report outline and structure have been approved by IPCC member nations and are no longer able to be changed. See, e.g., <a href="https://www.ipcc.ch/meeting-doc/ipcc-46/">https://www.ipcc.ch/meeting-doc/ipcc-46/</a> |
| 36502  | 0         | 0         |         |         | ESs need numbers, quantifying the changes and their confidence. Text should be as specific as possible, vague circumscriptions without specific content are not eligible for ES and SPM. Pairing specific knowns with unknowns would be useful, considering AR5 and the findings in the SRs as points of departure. ES should clearly distinguish observations from projections.  | Hans-Otto Pörtner and WGII TSU | Germany | Relevant for all chapters - has been brought up in LAMs and other forums.  |
| 36542  | 0         | 0         |         |         | Authors are encouraged to deepen their treatment of solution options and of their effectiveness as well as think about how they could contribute to the development of climate resilient development pathways, e.g. by use of relevant elements of shared socioeconomic pathways.   | Hans-Otto Pörtner and WGII TSU | Germany | Relevant for all chapters - has been brought up in LAMs and other forums.  |
| 5058   | 0         | 0         |         |         | While it is true that there is no real evidence of climate change causing conflicts (as stated in Ch. 8), conflict does affect vulnerability. Yet, I did not find references to this aspect. In conflictual areas (such as Syria or Southern Sudan) the conflicts adversely affect the adaptive capacity and hence aggravate vulnerability.   | Eran Feitelson                 | Israel  | Response will be limited by available literature, but the point relating conflict to vulnerability is constructive.  |
| 26228  | 0         | 0         |         |         | You should consider to incorporate more information about the relation between microorganisms and the ecosystem, because these organisms are involved in important biogeochemical cycles, and climate change break that balance between both [1]. In fact, a good way to control the actual consequences of climate change and revert this is using new techniques like bioremediation where microorganisms can be used for pollution control [2].<br><br>References:<br>[1] Cavicchioli, R. et al., (2019): Scientists' warning to humanity: Microorganisms and climate change. Nature Reviews Microbiology, 17(9), 569–586. <a href="https://doi.org/10.1038/s41579-019-0222-5">https://doi.org/10.1038/s41579-019-0222-5</a><br>[2] Azubuike, C. C., Chikere, C. B. and Okpokwasili, G. C. (2016): Bioremediation techniques—classification based on site of application: Principles, advantages, limitations and prospects. World Journal of Microbiology and Biotechnology, 32(11), 180. <a href="https://doi.org/10.1007/s11274-016-2137-x">https://doi.org/10.1007/s11274-016-2137-x</a> | Camilo Sierpe González         | Chile   | Suggestion noted but we discussed climate change impact on natural systems (ecosystems) and not specifically on species level.   |
| 5056   | 0         | 0         |         |         | I do not find sufficient reference to the time scale of adaptation measures. This is important, as the timescale of adaptation has to be related to the extent and timescale of climate change effects. Thus, infrastructure adaptation, particularly with regard to sea level rise is very costly and requires extended periods of time in comparison with measures such as monitoring systems.  | Eran Feitelson                 | Israel  | Synthesis Report will speak explicitly to time-scales for climate responses (e.g. near term).  |
| 9794   | 0         | 0         |         |         | All Chapters should have an Introduction, Some Chapters have NO Introduction.   | Ayman Batisha                  | Egypt   | Taken into account. All chapter have been substantial revised, including introducing their topic   |



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| 34714  | 0         | 0         |         |         | <p>"Out there" people are crying out for information on solutions. Since SR15 the question of how bad things are has been established. The overwhelming focus of AR6 needs to be on response options. This should be reflected in pages dedicated to solutions vs problems (ideally 2:1 ratio?). It should also be reflected in systematic and complete coverage. As far as possible, every problem/risk/impact/hazard documented throughout previous ARs and SRs, should ideally now have one or more solutions attached to it, with enough helpful description (e.g. not just 'rainwater harvesting', but the different methods for home, agricultural, urban use) with examples of where interventions have been used, and with evidence of how well it works, as far as the literature have the information, systematically and completely, not just for selected examples, and including sufficient details (technical, financial, policy, social) to make the chapter relevant to all world regions. Structurally, to make this truly a policy-relevant, helpful go-to document, then response options should ideally be presented in one section (ideally Ch 18 with a feasibility analysis), at least as in the form of summary tables with references, rather than scattered across sections. As far as possible cross-linkages with mitigation and sustainable development should be explored, as comprehensively as the literature allows. Re impacts/risks, it would be useful to start by summarizing very briefly the understanding on vulnerabilities, risks and impacts (observed and projected) citing AR5 and AR6 SRs, where relevant, indicating whether confidence in findings has increased (with evidence trail) instead of repeating in detail what is fully understood already. It would also be helpful to highlight truly new evidence / new understanding / new knowledge, for example on complex / compound / cascading impacts or dangerous tipping points or connections that were not recognised before. This is how Ch16 approaches it, and Ch16 should be able to link back easily to the corresponding content in other chapters.</p> | Debra Roberts and Durban Team | South Africa       | Taken into account. A balance between risks and solutions are reconsidered. Adaptation benefits across sectors are summarised in Chapter 17, and feasibility and linkage with WG3 are summarised in Chapter 18.  |
| 23628  | 0         | 0         |         |         | <p>That's true that recent global warming is unprecedented and it leads to more frequent and intense weather extremes. However, if the authors of some chapters put attention to the individual extreme events for definite years (e.g., 2018) as a result of the global warming this may lead to misunderstanding because the natural interannual-to-interdecadal climate variability is very important regulating factor of such events. This natural variability can prevail for definite years and decades. It should be also emphasized that to separate the anthropogenic and natural signals is not the trivial task.</p>  | Alexander Polonsky            | Russian Federation | Taken into account. Extreme weather attribution is covered in WG1 and impact attribution is covered in all chapters. In so far as interannual to interdecadal variability is a factor in particular region as e.g. Australasia (Australia and New Zealand) this is noted.  |
| 11996  | 0         | 0         |         |         | <p>We cannot understand adaptation because western understanding of the process of both climate change and adaptation are incorrect. For example: Problem: climate change is a negative variable in the equation and therefore the solution will be negative unless adaptation is successful. Current adaptation: Try to minimise the negative. Add another variable that is positive. Solution will be less negative or neutral. Smart adaptation: eliminate or minimise the negative variable. Take the threatened element away from the threat. Positive variables remain. Solution is positive. Current strategies fail to address some of the more likely and most imminent threats to humanity, and instead attempt to address threats that are less likely and less imminent. the most likely and urgent threat to human life is heatwaves at stage 2. This is confirmed by the fact that 70,000 people died during the 2003 heatwave in Europe, 16 years ago and is the worst climate change event in recent history. Yet there is still no focus on adaptation solutions for heatwaves. It is automatically assumed that heatwaves cannot be survived, and that no action by humanity can mitigate this threat. It is assumed that new technology cannot assist, it is simply stated that existing technologies such as air conditioning and fans may be insufficient. Historically, the large death tolls from heatwaves have all occurred in western countries. Indigenous people have survived heatwaves for 8000 years. They have adapted to extreme temperatures by reducing their exposure to the threat. They use earth and rock to provide a barrier between them and the weather. They retreat to caves or build subterranean habitats that stay at a comfortable temperature, regardless of the climate. If western culture understood adaptation, they would respond in the same manner. But current adaptation strategy does not even consider this as an option. Once these indigenous solutions are used for adaptation strategy, it radically changes the prospects of uninhabitable zones and migration.</p>                                   | Paul Crewther                 | New Zealand        | Taken into account. in Chapter 11 section on Cities, Settlements and Infrastructure in particular adaptation to heatwaves, and in the key risks. IPCC has adopted a risk assessment approach across all chapters. All chapters have distinguished observed, projected impacts and adaptations that fit the confidence level assigned to the assessment of literature.              |
| 25026  | 0         | 0         |         |         | <p>The Conflict/CC nexus is addressed in many chapters &gt; a transversal effort to streamline and harmonize the messages on that topic is needed. The cited literature on that topic also varies significantly among the chapters.</p>   | Etienne Piguet                | Switzerland        | Taken into account. Since FOD, efforts have been invested in addressing inconsistencies and gaps in how climate change-conflict links are treated across chapters, facilitated by a cross-chapter breakout session on conflict risk, as well as involvement of Contributing Authors from various chapters in Ch. 16 synthesis assessment of impacts and risks related to conflict. |

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| 25024  | 0         | 0         |         |         | The migration/CC nexus is addressed in many chapters > a transversal effort to streamline and harmonize the messages on that topic is needed. The cited literature on that topic also varies significantly among the chapters. All chapters should make reference and elaborate on chapter 7 in order to guarantee coherence.  | Etienne Piguet                       | Switzerland | Taken into account. Since FOD, efforts have been invested in addressing inconsistencies and gaps in how climate change-migration links are treated across chapters, facilitated by a standing cross-chapter breakout group on migration, as well as involvement of Contributing Authors from various chapters in Ch. 16 synthesis assessment of impacts and risks related to migration.  |
| 9792   | 0         | 0         |         |         | The entire report should be homogenously arranged, logically build and fully integrated with no inconsistency, disharmony or overlapping.  | Ayman Batisha                        | Egypt       | Taken into account. This is has been a priority in revising the report   |
| 19188  | 0         | 0         |         |         | I would like to discuss in a few lines the role of the IPCC and the way it shares its work, since I find this report too tangled up with other reports losing part of its quality (FIRST) and I cannot accept the explicite explanation of some economic projections - which are subjective - at times in this report (SECOND). FIRST, the amount of citations referring to previous reports of the IPCC really question the strategy of this United Nations body for assessing the science related to Climate Change, created more than three decades ago. Obviously, the reports are now completely interdependent each, since from Biology to Physics passing by Chemistry, those Sciences, when applied to the global Earth system, are marked by temporal scales, which can be a lot longer compared Human's life expectancy. Climate Sciences in a broaden frame are Sciences with an unrivaled complexity, due to the amount of its variables and their interactions as much spatial as temporal in a huge space covering our planet from the upper part of the Earth crust to the extremity of the atmosphere passing by the oceans. From microscopic to macroscopic, they involve turbulence and probabilistic aspects that statistics can reveal only through vast spatial and long temporal scales. In a context of sudden change in the climate system, the different variables are difficult to analyze through time. As a consequence, the complexity of Climate Sciences, pushed towards projections, strongly increase. Human - being actor in the climate machinery, insignificant physically but horrendous artificially with his tools and machines - struggles, with difficulty, to access a truth that he modifies by himself at the option of time. But the IPCC cannot fall into the behavioral analysis of Human, which would lead to his acceptance of the situation he has been pushing Nature into, fully responsible. To avoid this, the IPCC must give to understand for all world citizens the knowledge of the climate system up to now, the current observations and the possible projections in order to point out the risks and consequences of this anthropogenic Climate Change for Nature, mainly for the subsistence of Life. The objective of the IPCC is, then, to give material to take a legitimate stand for policy makers but also for anyone on Earth. Such a group of international experts should deliver a state of the art, as clear as possible, to complete the inventory of our knowledge, year after year, to maintain a coherence through time. The idea is neither to rebuild in each report what the IPCC has already built, nor to rewrite what the IPCC has already written, but to complete with the last scientific knowledge an already robust knowledge base, and to make it accessible to a broad public. In my view, writing reports referring plenty of times to previous ones is a sign of repetitions, and therefore, of discontinuity, in the information shared by the IPCC. This contributes to make Climate Sciences more and more complex to understand, and to dilute the information shared. Considering that the equations that govern the climate system are continuous, I think that so should be the IPCC work | APECS_PYRN_P<br>AGES<br>ECN_YESS_MRI | Canada      | Taken into account: Authors have been given guidance to primarily review new findings and literature published since AR5. WGII authors and TSU also have the goal of communicating findings to the public and stake holders in addition to other scientists. Furthermore, the outline of AR6 WGII was set in 2017 prior to the beginning of writing the report, and approved by the IPCC (the member countries). Chapters have the charge of evaluating impacts of climate change, including economic projections, as well as evaluating their confidence in the findings. |

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|  |           |           |         |         | <p>output. On the one hand, structuring the knowledge in different sections and sub-sections create a discontinuity, leading to repetitions, is inevitable to make the information organized and clear. But on the other hand, the discontinuities entailed by the way the IPCC shares knowledge through reports is avoidable. Indeed, I suggest that the IPCC work should be shared through a book containing the entire result of its work up to now. Moreover, in order to maintain a work of the IPCC through stages of a few years, I suggest that, in its book, it enables the reader to visually see the evolution through time of its content, and that in addition to the consolidation of the general executive summary, a special executive summary, focusing on the last scientific results, is also shared. In a nutshell, I do think that the IPCC should go on working through stages - which are inevitable for writing and reviewing, but also to have an impact on the media and geopolitical scenes - but ensuring that the resulting piece of work steps up and maintains over time, in a continuous way, which is permitted through a book and almost impossible through reports.</p> <p>SECOND, I would like to point out some economic projections, which are explicitly present in this report, e.g. in the Cross-Chapter about Polar Regions. If the IPCC was sharing only scientific results, it would be totally objective and neutral. Nonetheless, when it comes to the climate system of our planet, Earth, this total objectivity has to deal with Humans, since Climate Sciences have shown that our activity has more and more been playing an important role in this global machinery during those past decades and even centuries. Yet, as soon as human activity is taken into account Climate Sciences can no longer be objective when it comes to projections - due to the faculty of the human consciousness and its technical level, which enables him to play with Natural laws to satisfy certain passions that would need to be controlled by ourselves. Indeed, the frivolity of human being is a multiple variable, totally impossible to predict on scientific bases. Thus, the climate models run to feed, among others, the IPCC reports need a part of subjectivity consisting of a parametrization for human activity in the future. To face the complex role of Human in the climate projections, each of the different climate models runs different scenarios corresponding to a range of human parametrizations. In a nutshell, even though one of the aims of the IPCC is to be objective, it is impossible since Climate Sciences are objective when they look backwards, but whether we want it or not, they are, nowadays, intrinsically subjective when they look forwards. But I do think that the IPCC is dealing well with this issue, and I would like to congratulate all the contributors for that. However, I suggest to push the reflexion a bit further. Indeed, to me, Sciences are objective, but the scientific activity by itself is subjective. This subjectivity is, in my view, the driver of Sciences. And what is marvelous with Sciences, is that through the subjectivity of the tool of the mind design, the</p> |          |         |                       |

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|  |           |           |         |         | thoughts pathway, and the action led, one comes to pick the objectivity of the result, universal. A scientific result is not a message, it is a piece of information, a fact, a reality, a universality. It becomes a message - intrinsically subjective and turned towards future - as soon as it is interpreted. Coming back to the IPCC, due to the inherent subjectivity of Climate Sciences, it struggles to offer an information as objective as possible. Indeed, in its guideline, this group of international experts is not supposed to share a message, but information, facts, or observations. It is the interpretation of the reports which contributes to a message for our society. Why ? Because a reasoned Human perceives and feels the fundamental issues raised by the IPCC about the respect of Nature, Equality and Justice. Climate change, and its anthropogenic origin, put the rope around the neck of our legitimacy towards the natural laws, without any doubt. If we sum it up, the IPCC is supposed to share information, which are supposed to naturally lead to reflexion every Human of reason, responsible of his acts, and finally drive to a message through our reasoned interpretation facing the illegitimacy of our disrespect of Nature. I do think that the action to lead against Climate Change should not lean on economic considerations - which are deprived of values, except the monetary one. It should lean on Sciences and values taught by Nature about Respect, Equality and Justice. Understanding the past through the glasses of a historian or a scientist is a work towards objectivity, but its complexity may leave part of subjectivity in it. Thus, if necessary and relevant, the IPCC can talk about scientific, socio-economical, or geopolitical information about the past without any problems. However, when it comes to projections, only scientific information should be shared in the IPCC reports to maintain the objectivity and neutrality of its work. Sociological and ecological information, neither objective nor neutral in essence, could also be accepted since they rely, in theory, on Respect, Justice and Equality, which is the tryptic of sustainability and the base of the Living laws that have an original and natural legitimacy. However, including economic remarks when it comes to projections - in a document that is above all scientific - is more than risky, it is harmful. It deconstructs the credibility of the IPCC work. Some economic projections are made in this report and shouldn't in my view. Is the IPCC, talking about climate Change, able to speak about economic opportunities, risks, and impacts? I do think that the answer is no! From the consideration that Climate Change is from anthropogenic origin, it is disrespectful, irresponsible, and to say the truth, outrageous to read such remarks in such a report. Recalling that the IPCC has a worldwide scientific fame, such remarks soil a scientific reasoning of an exceptional complexity, with the key element of our system - which has led us in the situation we are currently facing and have imposed on Nature -, the exploitation of economics for passionnal purposes. If a wish to make economic projections emerges, they should be completed and shared by another group than the IPCC, not to tarnish the image of a group of experts thought to bring to light the truth for a broad public about Climate Change. In a word, the IPCC cannot base its speech about resilience on economic actions, but on fundamental and natural values for our society of Respect, Justice and Equality towards Nature and the Living. FINALLY, to conclude, I would like to thank the entire IPCC group and all those who contribute to this outstanding international work generally speaking. This piece of work is more than key to face Climate Change, it is crucial, since lots of geopolitical decisions rely on its content. |                               |              |   |
| 34622  | 0         | 0         |         |         | Figures and Tables are opportunities to draw attention to and summarize main messages of respective chapters. There is not yet a clear indication that this is being done systematically. Each chapter should look at their proposed Executive Summary (their main messages) and see what Tables and Figures could support the communication of these messages, by presenting details or mental pictures or processes etc. Tables and Figures are the tools that elevate important messages that readers want and need to come back to.  | Debra Roberts and Durban Team | South Africa | Taken into account: Chapters received this guidance at LAM3 and are working with TSU communications officers to improve figures and tables.                     |
| 33834  | 0         | 0         |         |         | Constantly changing reference periods make it difficult to keep things in perspective. Strongly recommend that all temperatures of global warming should be given with the same reference period (pre-industrial for instance, exactly defined) so that 2°C warming always means the same thing.   | Debra Roberts and Durban Team | South Africa | Taken into account: Baseline and reference periods have been established for WGI and greater consistency is being sought via the WGI-WGII handshake activities. |

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| 21428  | 0         | 0         |         |         | There are currently two different case studies (Chapters 8 and 9) on the Cape Town water crisis, and a third one (Chapter 6) mooted, which appear to have significant overlap. Consolidation should be considered (perhaps as a cross-chapter box?).  | Blair Trewin                  | Australia    | Thank you for noticing this. The two case studies are actually different because Chapter 8 and 9 got together to remove the overlaps. Chapter 8 now concentrates more on the economic and livelihood impact of the drought and the governance dynamics related while Ch. 9 case is lessons for cities facing water scarcity. Chapter 6 can take the advantage of cross-referencing with the boxes in the two Chapters (8 and 9). The Cape Town countdown to Day Zero was fundamentally a water issue and it was flashed around globally – it would be a shame if the water section did not use this excellent example of cities facing water scarcity. |
| 21426  | 0         | 0         |         |         | While the WGII report obviously needs to be complete as a standalone report, there would be value in maximising the alignment with WGI in the areas of overlap. The most obvious overlap is that WGI's main channel for region-by-region information is the Atlas - this will be a valuable resource for information on observations and projections in individual regions for the relevant WGII chapters.  | Blair Trewin                  | Australia    | Thank you for the reminder. The WG2 LAs for regional chapters are in permanent connection with WG1 regional chapters and Atlas LAs.  |
| 21420  | 0         | 0         |         |         | I am a little surprised at the lack of integration across Chapters 16, 17 and 18. Instead of providing clear, integrated messages, there is quite a lot of overlap and repetition in the assessments provided in these three chapters. The linking threads that had started to emerge in the ZOD seem to have been removed in the FOD, which leads to an overall impression of disjointed messages, lengthy text and apparent repetition. It would be helpful to see this messaging streamlined as the drafts develop further.  | Jess Melbourne-Thomas         | Australia    | The content of Ch16, 17, 18 is to a large degree dependent on the government approved bullet points. Consistency and streamlined messages has been a focus across the three chapters and accounted for where possible.   |
| 10726  | 0         | 0         |         |         | The level of placeholder text throughout the FOD is really scary and in the case of the cross chapter paper I reviewed it makes it very difficult to provide any constructive comments. It is a farce for IPCC to claim that reports truly undergo multiple rounds of review when chapters are so incomplete at the FOD stage, meaning crucial sections will be reviewed only once by experts at the SOD stage (with no chance to see until after publication how comments are acted upon). The leadership of IPCC needs to address this issue for AR7, as obviously the schedule for AR6 has been too demanding.   | Simon Allen                   | Switzerland  | The place holders in the FOD are addressed in the SOD  |
| 34720  | 0         | 0         |         |         | (1) An in-depth evaluation of how mitigation increases adaptive capacity, and what adaptation contributes to mitigation, and how both are furthering or obstructing sustainability and human development, seems to be lacking. (2) Also missing is an in-depth assessment of global processes that drive local emissions, local development and local sustainability: including global economic processes (commodities trade, legal and illegal trading (timber, fishing, mining, wildlife products, etc), commerce, investments, insurance trends, exploitative 'economic colonialism' etc.), political power games, historical power relations, health research and pharma, agricultural products (chemicals and GMO and their implication on sustainability in different parts of the world, the environment and food security),... i.e. a general in-depth analysis of climate justice. (3) Another question that does not come up is technology and resource transfer as per Paris Agreement. What technology, where, how, with what strings attached or not, IPRs, etc. NDCs get discussed but not transfer of resources, which is a recognized requirement for successful adaptation, mitigation to meet Paris targets and global sustainable development. | Debra Roberts and Durban Team | South Africa | The relationship of mitigation and adaptation has been discussed in revised chapters.  |

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| 8946   | 0         | 0         |         |         | <p>COMMENTS ON AR6 WGII DRAFT REPORT – NOVEMBER 2019<br/>                     By Dr. Richard A. Rosen, Tellus Institute (retired)<br/>                     [rrosen10435@gmail.com]</p> <p>While these comments might seem too harsh, I certainly appreciate all the hard work that the AR6 co-authors have put into this first draft of the WGII report. Unfortunately, much of that hard work has been mis-directed and, therefore, wasted.</p> <p>1.Regarding the draft Executive Summary – pages 1-1 through 1-5:<br/>                     The Executive Summary (ES) is basically useless the way it is currently written. It does not convey any sense of urgency at all for the need for major new investments to combat climate change and to try to adapt to it, at least temporarily. It is full of very weak truisms like "Adaptation to the impacts of climate change is required to reduce climate-related risks". (page 1-3) And that is one of the strongest conclusions. The world does not need a new WGII report to conclude this. The ES does not even begin to describe what kinds of major investments in adaptation are required in different parts of the world, and how much they might cost and how long they would take to implement. It does not say specifically what kinds of fundamental changes are needed in each sector of society that are noted in the report. It only states that "Numerous actions can be taken, by many different actors, to pursue adaptation goals (very high confidence). Actors at many scales and in many sectors are adapting already and can take additional and more profound adaptation responses." (page 1-4 – why use the word "can"? – of course people can do these things) Again, if this is all that the AR6 WGII can conclude they ought not bother to publish this report. Everyone who knows anything about climate change knows these things already – they are obvious though very vague. Even worse, the ES and the entire report falsely creates the illusion that there is such a thing as a climate resilient development pathway without ever clearly demonstrating how development pathways can be truly resilient when major changes in the climate occur, and over what time frame. In contrast, the ES needs to make very clear concretely what resilience really means, and what the limitations of resilience are depending on the kinds of likely climate change impacts we expect. What kinds of conclusions, then, should be stated in the Executive Summary, and how forcefully should they be stated? In my opinion, an example of what one such conclusion and the basic message of the whole report should be is: "It will be almost impossible for societies to adapt to climate change no matter what climatic zone they are in, or how rich they are. The scale and magnitude of climate change is too vast. Major new investments in infrastructure cannot, in</p> | Richard Rosen | United States of America | The SPM and TS now include statements on the requirement for increased climate finance to accelrate adaptation action. |

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|  |           |           |         |         | <p>general, protect people, buildings, transportation systems, animals, crops, and the eco-system from severe weather made much worse by climate change. Even rich people cannot live in climate change-proof bubbles. This is why it is more important to invest large sums of money first and foremost to mitigate and try to prevent climate change, and only then to try to adapt to it if additional funds are available. At best, adaptation is a very partial and temporary fix to a severe long-term problem."</p> <p>What are some of the types of evidence supporting such a conclusion? Clearly, most regions of the world cannot adapt to severe heat waves unless the all people and businesses are rich enough to buy air-conditioners and to pay for the electricity to operate them. In Germany this might be possible over the next decade, but in India it is will not be possible. But most animals, farm lands, and eco-systems cannot be air-conditioned. Similarly, cities can try to build expensive new dykes to protect them from flooding caused by up-river rains, but if 50 or 60 cm of rain falls directly on a city due to a single stronger cyclone than used to exist, no type of infra-structure investment could prevent severe flooding and the damage it would cause. Similarly, if the oceans rise by 50 cm over the next few decades due to climate change, a few rich areas of the world could invest in new barriers to protect some of their buildings and roadways from flooding, but most regions could not, and such a rise in sea level would destroy most beaches in the world anyway and the tourism they bring. Thus, the ability of the world to make major investments that would be effective in adapting to climate change and in creating resilient development pathways is very limited. Again, this implies that the extremely limited investment funds that are available so far to cope with climate change should be used first for mitigation, which would definitely have favorable global impacts on a permanent basis, rather than for major adaptation efforts, which would probably be primarily located in rich areas of the world that could afford such investments, and that would only work temporarily.</p> <p>2.The entire draft WGII report is far too long and repetitive. A team of technical editors should boil this first draft down to about 200 pages, with about 10 pages for a clearly written Executive Summary containing strong messages to the public about what new has been learned about adaptation issues since AR5, and what should be done to influence adaptation and mitigation policies in light of this new research. The public also needs to understand exactly which adaptation policies could be implemented in different parts of the world based on the likely need for them. Otherwise almost no one will read this report except for the Executive Summary. Frankly, the authors of each chapter should ask themselves whether or not they would even read the other</p> |          |         |                       |

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|  |           |           |         |         | <p>chapters of the report that they did not co-author. The chapters need to be interesting, exciting, and relevant to the reading public; perhaps even scary. The primary purpose of the chapters should not be just to cite in a boring way all relevant literature on an issue so that the authors maximize the number of references to their own work. These chapters should not be written in the form of literature reviews, but should provide maximum guidance to policy makers and the public.</p> <p>3. When the authors include references in the report, if the references involve the use of models that are not fully documented and available for public scientific review, including all equations and input assumptions, those references should either be deleted, or at the very least it should be stated in the list of references that the models used have not been fully documented and have not been subject to peer review, when this is the case.</p> <p>4. In general, this AR6 report must demonstrate to the world that the IPCC report writing process about every seven years is still policy-relevant, with special reports in between, and is still the most essential set of reports serving the urgent public purpose for coping with and preventing extreme climate change. If the AR6 working groups fail in this endeavor, then they will have only themselves to blame if the IPCC working groups are terminated after AR6, as many people support.</p> <p>The style and type of content of the AR6 reports must be drastically changed relative to the style and content of the AR5 reports. As you know, the October 2018 Special Report on 1.5 Degree Celsius Scenarios was far more influential and far more effective in educating the public and policy makers than any prior AR report. Part of the reason for this was that the various topics and issues involving climate change were integrated together in one much shorter report. In addition, the Executive Summary of the October 2018 Special Report was more direct, shorter, and somewhat more clearly written than prior Executive Summaries, though the new ones for the AR6 reports could be even better. These AR6 Executive Summaries should only be written by technical editors who can write clearly for the public, and not the report co-authors! Let's all face the fact that physical and social scientists are not always very good at presenting their results and policy analyses to the public.</p> |   |                          |  |
| 21222  | 0         | 0         |         |         | Vulnerability is often used as a blanket term but needs to be further specified in context. What are the different ways that people are vulnerable? Vulnerability is specific, not intrinsic. One is vulnerable to a specific hazard in a specific way - 'vulnerable groups' is vague and refers to one category of vulnerability but there are other types.  | Red Cross Red Crescent Climate Centre and Columbia University | United States of America | This is a fair point, partly also reflecting a continued variable use of the term in the underlying literature. The discussions of vulnerability in the SOD are also organized with sectoral and regional chapters, which discuss vulnerability in those contexts.                                   |
| 5846   | 0         | 0         |         |         | No confirmation of replicating the findings in any paper cited.   | Joseph Zajac  | United States of America | IPCC reports provide a scientific assessment of the current state of knowledge on climate change and are based on the published scientific literature.   |
| 5852   | 0         | 0         |         |         | No mention of the margin of error in any paper cited.   | Joseph Zajac  | United States of America | IPCC reports provide a scientific assessment of the current state of knowledge on climate change and are based on the published scientific literature. IPCC reports use calibrated language in its assessment. The Guidance Note on the Use of Uncertainty Language available from the IPCC website. |
| 5854   | 0         | 0         |         |         | No tables that lists all the papers cited with their margin of error on each conclusion.  | Joseph Zajac  | United States of America | IPCC reports provide a scientific assessment of the current state of knowledge on climate change and are based on the published scientific literature. IPCC reports use calibrated language in its assessment. The Guidance Note on the Use of Uncertainty Language available from the IPCC website. |
| 5848   | 0         | 0         |         |         | An overabundance of references cited makes for a poor read and gives the impression of throwing spaghetti at a wall to see what sticks.   | Joseph Zajac  | United States of America | IPCC reports are scientific assessments and require citation to sourced literature.  |
| 34718  | 0         | 0         |         |         | Check: Population growth, fertility, especially as pertaining to SSPs needs to be discussed somewhere in some detail. It is a sensitive albeit important topic. Perhaps Ch 7 Or Ch16/17/18?   | Debra Roberts and Durban Team                                 | South Africa             | This is noted.   |
| 27640  | 0         | 0         |         |         | Check whether all chapters use the same acronym for indigenous and local knowledge - IK & LK versus ILK   | Michelle North  | South Africa             | We use indigenous and local knowledge (I&LK) and is consistent with other chapters   |
| 30016  | 0         | 0         |         |         | Understanding, defining and applying appropriately the concepts of hazard/threat and vulnerability/ontologicity would be a nice contribution of this report to propose a framework to better acceptance of climate change and to the right solutions for its cascade events by normal people.   | Modesto Portilla Gamboa                                       | Colombia                 | We used the terms hazard and vulnerability in the report to be consistent with the literature cited  |



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| 21226  | 0         | 0         |         |         | When providing an overview of what has changed since previous reports, it would be helpful to be specific about how much more certainty is there about specific impacts in specific places. Much of the description of change since AR5, for example, is focused on generalities.  | Red Cross Red Crescent Climate Centre and Columbia University | United States of America | Will be addressed by Ch10   |
| 4834   | 0         | 0         |         |         | For the Entire Report consider adding a clear and succinct model of different global agriculture scenarios under both high- and low-probability events, including high-impact events. It would be useful to have a ready reference for these scenarios. Including clear details of high-impact climate effects that can affect agricultural output will help to clarify worst-case outcomes for climate change. These will help with planning and policy-making, and are warranted in order to communicate the range of possibilities more clearly. This is a large undertaking, but falls clearly within the scope of this report, and would increase its utility.  | Daniel Helman   | United States of America | Noted. The general assessment of global agriculture has been developed in SOD |
| 34624  | 0         | 0         |         |         | IPCC reports are a global assessments. Every chapter, every section should consciously work against regional bias. When it comes to giving examples to illustrate a point, it is not acceptable to have a strong bias for mentioning examples from the USA (and EU), and only occasionally from other regions. A strong regional bias is evident in many chapters simply by searching for the frequency with which that country names or region names get mentioned. In each topic it would be important to mention the region or country first (as examples) where the factor that is under discussion has the most serious implication – this is where regional bias is most jarring, such as when an example on malnutrition comes from USA and not Africa, or when an example on food waste comes from Africa and not EU or when luxury items (wine, cars or snorkelling) are mentioned before basic issues of survival. It may be worth glancing at <a href="https://catalogofbias.org/biases/">https://catalogofbias.org/biases/</a> and thinking critically about content, especially observer and perception bias. | Debra Roberts and Durban Team                                 | South Africa             | Noted. This has been done where possible.                                     |
| 34626  | 0         | 0         |         |         | At this point there is nearly no cross-referencing between chapters and therefore a lot of repeated information. Now that chapters have access to the FOD of other chapters, every chapter can evaluate the different topics that come up, and check where and how the topic comes up elsewhere in the report, and cross-reference rather than repeat information. In this way space can be freed up so that chapters can concentrate more on information relevant to their chapter, and add more text on adaptation and solutions. For example, Chapter 6 covers in detail how infrastructure gets affected, then other chapters can reference this information whenever they say something about infrastructure and simply mention the conclusion from Chapter 6, without needing to go into all the detail. TSU can assist by providing topic distribution analysis.  | Debra Roberts and Durban Team                                 | South Africa             | Noted. This has been done where possible.                                     |
| 22102  | 0         | 2         | 211     | 5       | This report is well written and I did not find anything (i.e. contextual or structural) that need to be corrected beside phraseological and typographical errors that as I understand should not be mentioned since those will be corrected.   | Motlole Chris Moseki  | South Africa             | Consistency will be increased during and throughout the drafting stages       |
| 564  | 1         | 0         | 3       | 70      | The tables of contents need to be revised in counting format since right now it is confusing for the readers. I understood the reasons for juxtaposing the Boxes and FAQs in the text; but in my opinion they are counted in a way that make issues for reader to find for example why Box 1.4 came under category of 1.3 instead of category of 1.4.<br>I think if we change the formatting of counting for Boxes and FAQs they would be more comprehensible. For example, I propose instead of current counting order: "Box 1.1, Box 1.2 or FAQ 1.1, FAQ 1.2..." we can change the format to "Box 1.a., Box 1.b of FAQ 1.a, FAQ 1.b..."<br>The main reason for this proposal is that wright now readers get confused by the numbers and cannot find the relations in the table of contents. Also, maybe, the counting order is mixed with the overal counting order for main titles such as 1.1, 1.1.1 , and so on...<br>A secound proposal is that we replace the place of all Boxes and FAQs to the end of every chapter and save the current rule of counting.  | Farzad Hosseini Hossein Abadi                                 | Iran                     | Consistency will be increased during and throughout the drafting stages       |
| 566  | 1         | 0         | 300     | 70      | If the editors decided to change the counting order to the new format like: "Box 1.a, FAQ 1.a,...: the relevant numbers in the text also need to be revised.   | Farzad Hosseini Hossein Abadi                                 | Iran                     | Consistency will be increased during and throughout the drafting stages       |
| 568  | 1         | 0         | 300     | 70      | Overall text needs to be justified in word format. Right now the text has not been justified and for a professional report I think it is better to make the shape text more nice in the eyes of the readers. It can be done using "Justify" bottemn in word software easily. I propose that all the text be justified using this tool.   | Farzad Hosseini Hossein Abadi                                 | Iran                     | Formatting issue  |
| 570  | 1         | 0         | 300     | 70      | I propose that with respect to making the text more nice in the eyes of the readers, every paragraph in the text starts after five spaces in the first line or using the Tab key once at the beginning the paragraph.  | Farzad Hosseini Hossein Abadi                                 | Iran                     | Formatting issue  |

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| 19500  | 1         | 1         | 76      | 70      | <p>It's good to see more attention to Indigenous Peoples and Indigenous knowledge in the chapters throughout the AR6 compared to previous IPCC assessments. However, after having provided extensive comments to the SROCC on the reference to and treatment of Indigenous Knowledge, both through the review process and as a contributing author, the Inuit Circumpolar Council is quite surprised and disappointed to see the first order draft of AR6 taking a significant step backwards by describing IK and LK together under one incorrect definition and referring to these distinct knowledge systems as one concept throughout the chapters using language that is unacceptable and also incorrect. The text should ALWAYS refer to Indigenous knowledge as separate from local knowledge and never use the term "Indigenous and local knowledge" let alone define them the same way. In Chapter 1, lines 5 and 6 on page 4 imply one definition for these terms and this is absolutely unacceptable and very disappointing after we have spent much time and effort in the SROCC process to provide explanation of the distinct difference between IK and LK. We do not like seeing IK consistently lumped with and referred to alongside LK. IK ties to the rights of Indigenous Peoples as outlined in UNDRIP whereas LK does not - the authors have made a large error in indicating that UNDRIP also applies to local knowledge in section 1.3.3. We would rather the complete removal of Indigenous knowledge than to see IK used and described in the report in this way. Ideally, there should be separate treatment for LK and IK.</p> <p>Also wondering how many Indigenous authors working on AR6 and if any are from the Arctic?</p> <p>We welcome the acknowledgement of the importance of IK as noted in Ch 1 section 1.3.3, we welcome the efforts to better address how IK is utilized in IPCC assessments, and we understand the intention behind it is well-meaning, but we remain very concerned about how IK is currently referred to and used in the assessment and do not support the publication of this in this current state.</p> <p>We are not able to provide further detailed comments at this time as our capacity is currently being completely dedicated to UNFCCC COP25. (In fact, we feel it was very inappropriate and unfortunate that the deadline for this review was set on the final day of COP). However, we would welcome the IPCC to contact us for further direction on the use and treatment of IK in AR6.</p> <p>(Also, note that many chapters are forgetting the s at the end of peoples after Indigenous).</p> | Joanna Petrasek Macdonald      | Canada                   | Dully noted and in complete agreement. Both in the breakout group discussions and in the cross-chapter box dedicated to the topic in Ch. 18, special attention has been placed to distinctively consider indigenous knowledge from local knowledge. This difference is now carefully considered in more recent versions of the report. In particular, Chap 1 now discusses IK and LK as separate and distinct knowledge systems. |
| 20158  | 1         | 1         | 106     | 1       | stop this report! It's a bunch of garbage. The IPCC GWP calculation is garbage, the simulations are garbage and the probability of lowering CO2 by emissions is only 50-66%. Its actually 0 percent because the minimum residence time of atmospheric CO2 is more than 200 years in your own reports! <a href="http://cctruth.org/expert_review_SR1.5_mitigation.pdf">cctruth.org/expert_review_SR1.5_mitigation.pdf</a> my review of your garbage chaptor two. I sent to 5000 scientists and the UN and the media. Also more than 100 reads on my Researchgate page  | Dave White                     | United States of America | The IPCC is committed to preparing reports that aim for the highest standards of scientific excellence, balance, and clarity, please see <a href="https://www.ipcc.ch/about/preparingreports">https://www.ipcc.ch/about/preparingreports</a>   |
| 20162  | 1         | 1         | 106     | 1       | This spreadsheet has all the data you should be considering <a href="http://cctruth.org/regression.xlsx">cctruth.org/regression.xlsx</a>  | Dave White                     | United States of America | The IPCC is committed to preparing reports that aim for the highest standards of scientific excellence, balance, and clarity, please see <a href="https://www.ipcc.ch/about/preparingreports/">https://www.ipcc.ch/about/preparingreports/</a>   |
| 20184  | 1         | 1         | 106     | 1       | There is zero reliability in the NOAA sea level data from the Jason-3 satellite. The tide gauges are correct and reliable. The global sea rise is 1.1 mm/yr. <a href="http://cctruth.org/index.php/ocean-data/">http://cctruth.org/index.php/ocean-data/</a>  | Dave White                     | United States of America | The IPCC is committed to preparing reports that aim for the highest standards of scientific excellence, balance, and clarity, please see <a href="https://www.ipcc.ch/about/preparingreports/">https://www.ipcc.ch/about/preparingreports/</a>   |
| 1044   | 1         | 2         | 3       | 3       | Review Comments provided by: Hans, Katja, Elvira and Stefanie   | Hans-Otto Pörtner and WGII TSU | Germany                  | Group Review Member list - For TSU   |
| 12542  | 30        | 43        | 30      | 43      | Somee nations have developed national action plans on SDGs, however, more synergya and coherence is required in conext of climate change  | Ranjay K Singh                 | India                    | Noted. IPCC assessments draw upon existing literature and must be policy relevant but not policy prescriptive.   |