

Comment form for 2nd Review Phase of the Deliverable 2b) Regional and subregional assessments of biodiversity and ecosystem services for Africa, Chapter 5 'Current and future interactions between nature and society'

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Reviewers:

CSIR BES
Diane Douglas (DD)
Edson Gandiwa (EG)
Ignela Sahondra Randriantsizafy (ISR)
Michael Olusegun Ogundele (MOO)

Neil Burgess (NB)
Rael Loon (RL)
South Africa (SA)
Susan Ringrose (SR)
Thomas Brooks (TB)

Comment #	Reviewer Name	From Page (start)	From Line (start)	To Page (end)	To Line (end)	Comment	How Addressed?
1	Neil Burgess (NB)	Author list				Lots of South Africa (SA)ns involved here	No issue to address
2	South Africa (SA)	1	1	74	2619	Overall this is an excellent chapter	No issue to address
3	Diane Douglas (DD)					Excellent chapter. No comments.	No issue to address
4	Diane Douglas (DD)					General text edit is required to remove text personification	The text was reviewed and personifications were removed
5	Susan Ringrose (SR)					Ch 5 This chapter is thoughtfully worked out and provides a degree of insight in terms of encapsulating the issues under consideration in this assessment. I originally thought that given the clarity and apparent objectivity of the scenario approach that this Chapter could be used as a back-bone from which all the other chapters could draw substantive information. However as the scenarios were developed (interpreted) apparent clarity was lost and it is far from clear in the end which are the key BES issues confronting Africa and where these issues are most problematic. I would suggest that a summary schematic be drawn up to clarify which transformations are likely to most significant in which regional area of the continent - possibly on a scenario by scenario basis so that we might know that for instance LULC change is the most important 'result' in	Efforts to provide a summary for each archetype have been done. Specific sections within the Chapter highlight case studies in relation to some scenarios. However, no specificity is provided in the Chapter highlight the review request in the context of Regional issues. For scenarios, considering that these are driven by various dynamics, the assessment endeavoured not to be so prescriptive but we believe that this request has been covered in the specific case studies that have a regional focus. The Chapter Authors did not choose to use the term "Archetypes" this was agreed upon after several consultative dialogues for all Regional Assessments, Africa included. As a

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						Central Africa leading to the loss of rain forest and that this is mainly driven by a) climate change and b) illegal logging etc It would be good too to avoid scenario archetype jargon which may be misleading.	result, authors endeavoured to describe what the term Archetype means at the beginning of the Chapter.
6	Neil Burgess (NB)	Overall				This is a good, short, clear and very sensible chapter. However, I would have liked to have seen some examples using scenario and modelling approaches (these exist for land use and climate change at African scale in a number of papers) and also for parts of Eastern Africa (various papers are already published). Also there is nothing in here on some of the more generic ideas of tipping points, planetary boundaries or similar ideas on ecological resilience and how much the African ecological systems can take before they collapse	Examples of scenarios and modeling approaches have been provided in the chapter especially from the case study snippets (Please see Case 5.4, 5.5, 5.6, 5.7 and 5.8). For example Box 5.4 offers a case with climate change while box 5.7 offers a case with land use changes in Tanzania. Ideas on tipping points and planetary boundaries have not been explicitly discussed in the Chapter however based on the content received from the Scoping Report, the Chapter addressed thresholds, trade-offs (See Section 5.8) and teleconnections which link to the within the link to the resilience concepts of the reviewer
7	Neil Burgess (NB)	Referncni og in the chapter				Spelling of Alcamo and Alkemade not consistent in the chapter and that needs fixing	changed the spelling of Alcoma to Alcamo

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8	Edson Gandiwa (EG)	General	General	General	General	General, attend to figures in the Chapter for clarity and completeness	Figures have been revised and updated
9	CSIR BES	4	79	6	163	Suggestion that the first Key Message be on the challenges that Africa will face in the coming 5 to 10 decades. These challenges should be extracted from the preceding chapters particularly chapter 4. I also believe that the scenarios developed for Africa highlighted some future challenges for Africa. All these challenges should be highlighted in the first Key Message. The following message could be on key targets adopted by Africa as a region, regional organizations and AfDB, and African countries (i.e. essentially Aichi targets 2020, AU Vision water 2025, SDG 2030, UNCCD neutral land degradation, UNFCCC 2oC commitment, AU 2063 with its milestones etc.) and linkages to good quality life. The following message could be on scenarios to assist policy- decision-makers in better designing ways and means to the targets. If existing scenarios have been regrouped under 5 alternatives, these alternatives could be part of this Key Message 3 or each alternative could become a Key Message. NB: Chapter 6 will have to consider these 5 alternatives, and develop and discuss	Based on Skype discussions with the Co-Authors, this comment has been addressed and the approach supersedes some of the comments raised previously. The team re-worked Tables 5.1, 5.3, 5.4 and 5.5 to address some of the remarks on possible alternatives

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						policy and governance options for each of the alternatives Current Key Message 10 can come here. A final Key Message could be on gaps in knowledge and [or another Key Message on] capacity building	
10	CSIR BES	4	85	4	87	Just add why/ for what reasons they were developed	Addressed and citation given
11	CSIR BES	4	86	4	87	Describe the 5 alternative trajectories and how they address the challenges Africa faces. In fact, description of each of the alternatives can constitute key messages i.e. characteristics and comments about each of the 5 alternatives with a key message describing each of the alternatives	This has been addressed in the SPM with specific reference to Sections D1, D3, and D4
12	CSIR BES	4	88	4	96	This key message could come towards the end of key messages, if we need to have it as key message. Or at the end of text under current key message 3	This has been addressed in the Key messages section of the Chapter and is now at the end of the KMs
13	CSIR BES	4	92	4	93	This text can be moved under Key message 1	This was incorporated as a component to Key Message 1
14	Rael Loon (RL)	4	96			Could add here the IUCN Programme on African Protected Areas an Conservation which aims to bridge the capacity development gap in Africa.	Added a statement to capture this ", such as the IUCN programme on African protected areas that aim at bridging the capacity development gap in Africa."
15	CSIR BES	4	106	4	108	This message should be split into 2, one on bias towards climate change and the other one on stakeholder participation	Section split into two paragraphs as requested

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16	CSIR BES	4	115	4	116	I believe that increase in population, urbanization and consumption is the normal (business as usual) situation in Africa in the coming 50 or likely 100 years, thus the baseline scenario (sorry, I am not a scenario specialist). Similarly climate change impacts will also increase in this case of 'business as usual.' Please let us know what investment, governance and natural resources use (and also other key elements) are in each of the 5 alternatives. I hope you can then guide us by doing some analysis of the likelihood of the scenarios in the different subregions or within some categories like LDC and the others, or North Africa and South Africa (SA) vs subSaharan Africa, or based on GDP etc.	The authors have addressed this concern through generating a summary table that highlights governance responses and emerging implications of each scenario archetype in the context of human wellbeing and ecological integrity (Please see Table 5.6)
17	CSIR BES	4	115	4	119	This message should come after key message 1, before current 2 to 4. But it is important the 5 alternatives are described first before this discussion about elements of the scenarios	This has been addressed and KM was moved accordingly
18	CSIR BES	5	120	5	124	Again, this can be used under key message 1 or a key message describing the 5 alternatives	Authors felt compelled to leave the KM as an independent one. This was geared towards portraying a clear standalone message.
19	CSIR BES	5	123	5	124	The way phrased, this is different from the interconnection	The phrasing has been revised (See KM5)

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20	CSIR BES	5	125	5	126	Only aquatic? I expect to have reduced functioning also in terrestrial ecosystems as well as habitat loss	The phrasing has been revised with addition of terrestrial ecosystems and habitat loss (See current KM 6)
21	CSIR BES	5	125	5	126	What changes?	the text has been modified accordingly
22	CSIR BES	5	140	5	154	Everything said under this key message should be used in key message explaining each of the 5 alternatives	This was not specifically addressed but was catered for from the summary table developed (Please see Table 5.6)
23	CSIR BES	5	152	5	154	We can have a message on gaps and knowledge	KMs 2,3,4 and 9 (lines 152-154) already point to gaps in knowledge without having a direct message addressing gaps specifically
24	Rael Loon (RL)	5	154			Could add reference to "The Poverty and Conservation Learning Group"	added a statement at end of LN 154 " For instance initiative by the Poverty and Conservation Learning Group (PCLG) to address poverty-conservation linkages in Uganda, Cameroon and Democratic Republic of Congo is heading in the right direction."
25	Susan Ringrose (SR)		125			What 'changes' specifically are you referring to here?	J Fanny
26	Susan Ringrose (SR)		133			Increasing trade-offs between which parameters?	between water, food and energy as mentioned
27	CSIR BES	General	General	General	General	Executive Summary – remember confidence language and sub section references – have a look at Chapter 3's.	The confidence terms have been provided

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						We also need to cross reference your updated chapter back into the SPM.	
28	CSIR BES	General	General	General	General	Maybe you could also cross refer to teleconnections 'cheap chicken' graphic in the SPM ?	All key messages substile revised, as well as SPM. Doesn't seem relevant anymore.
29	CSIR BES	General	General	General	General	NB – If you do touch on future trends, I would cross reference to other chapters key messages.	All key messages substantially revised to focus on key messages from this specific chapter.
30	CSIR BES					This message should be part of text under key message 1.	All key messages substantially revised
31	Neil Burgess (NB)	Key Messages	p4-5			Has the terminology been carefully checked against the IPBES deliverable 3c (Methodological assessment on scenarios and models)	Yes these have been checked
32	CSIR BES	8	214	8	224	I do not find these generalities important in the assessment text. You can summarize and have a box explaining scenarios and their role. But I do not support having these general descriptions in the core text. 5.2 should be on key issues as identified in chapter 4 (and 2 and 3) and in the scenarios developed for Africa	Have removed some of this text to shorten it as suggested. However, in discussing with the other lead authors on the assessment, we realized that it is really critical to give some background on scenarios at the start of this chapter, as there is clearly a lot of confusion about what scenarios are and how we have used them. Specifically, many of the lead authors seem to understand scenarios as a projection exercise based on trends identified in the previous chapters, which is a fundamental misunderstanding of

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							the approach and its goals, and this needs to be clarified upfront. Furthermore, some of the key terminology we introduce in this section (5.1.1) is central to understanding and interpreting the results of the systematic review in section 5.2 - eg the concepts of exploratory scenarios vs intervention scenarios, and also link directly to the confusion we picked up that many of the authors and readers have about what scenarios are (as some people for instance think they are purely policy screening tools). We therefore feel that it is important to keep this section. Several of the reviewers who are scenario experts did not suggest that we remove this.
33	CSIR BES	8	225	8	237	This can be added to the Box where scenario generalities will be given	See comment above. We do not feel that this text is simply an interesting aside, but rather that it is essential to readers understanding the assessment we have carried out and present in the remainder of the chapter. However, we have tried to

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							shorten the text where we feel it is perhaps not essential.
34	Rael Loon (RL)	9	264			Delete: 'but' they...	Deleted "but"
35	CSIR BES	10	280	10	288	This should be in the introduction. Please see chapter outline on page 2 above and what IPBES would like to see in the chapter; certainly not only an assessment of scenarios	Section has been reworked and most of the suggested text moved to the introduction.
36	Rael Loon (RL)	10	287			"...are also assessed (delete: 'are') in order to..."	Deleted "Are"
37	CSIR BES	General	General	General	General	Page 4 – I like the comment about the two time horizons. Link to the infographic?	Not clear what this comment refers to? Couldn't find the reference to time horizons. Possibly it was a reference to the spatial scale of the different types of assessment? Not sure this is useful to add to the figure 5.1 as it is a broad empirical trend at the global scale, rather than part of presenting the basic scenario typology that is the focus of this figure. In other words, this sentence refers to an empirical trend currently observed, but it would be incorrectly interpreted as saying that certain scenarios are fundamentally or conceptually more suited to certain scales, which I don't think we have a basis to claim at this stage.

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38	Neil Burgess (NB)	p9	line 264			Remove but after ,	But removed
39		7	184	7	184	"the future of in institutions.." correct	removed in
40		8	234	234	8	brackets missing in IPBES reference	added bracket (IPBES 2016)
41	CSIR BES	11	312	16	472	While I find the description of methods used very interesting and useful (to scientists), I strongly suggest we summarize 5.2.1 and 5.2.2 to 1.5 pages or maximum 2 pages including the graphs.	The text has been significantly shortened and only key figures have been retained. However, the results of the systematic review are an important part of the chapter, and thus the author team considers the length of the section appropriate.
42	CSIR BES	11	326	11	328	Did you also consider French reports/articles in the Web of Science database? And in the grey literature?	The French version of Google Scholar was used to identify both papers and reports in French. This is described in the first paragraph of section 5.2.1.
43	CSIR BES	11	331	11	335	Please just confirm: were the models from the work by UNEP-WCMC/PARCC project in West Africa considered here?	Yes, the PARCC project was included in the systematic review as a report, with the following citation: Belle E.M.S., Burgess N.D., Misrachi M., Arnell A., Masumbuko B., Somda J., Hartley A., Jones R., Janes T., McSweeney C., Mathison C., Buontempo C., Butchart S., Willis S.G., Baker D.J., Carr J., Hughes A., Foden W., Smith R.J., Smith J., Stolton S., Dudley N., Hockings M., Mulongoy

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							J., and Kingston N. 2016. Climate Change Impacts on Biodiversity and Protected Areas in West Africa, Summary of the main outputs of the PARCC project, Protected Areas Resilient to Climate Change in West Africa. UNEP-WCMC, Cambridge, UK.
44	CSIR BES	12	359	12	360	The UNEP/WCMC PARCC project was completed with "Regional strategy and policy recommendations for the planning and management of protected areas in the face of climate change"	This section has changed since the chapter was seen by reviewers. The classification of the studies has since been completed, and many policy screening studies were identified (17% of all studies). Therefore, there is no longer an issue to be addressed nor a specific study to be highlighted at this point.
45	South Africa (SA)	12	363	12	363	Any references for the data presented in Figures 5.2, 5.3, 5.4 etc	These are original figures derived from data collected from the systematic review. A list of all the papers and reports included in the systematic review is available in the appendix.
46	Ignela Sahondra Randriantsizafy (ISR)	14	394	14	397	Figure 5.5: Co-occurrence of issues addressed in the studies covered in the systematic review. a) Red shading indicates a greater number of studies covering a combination of themes,	The figure has been changed and the text has been updated to read:" Figure 5.4: Co-occurrence of themes addressed in the studies covered in the systematic

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						through to dark blue shading for low numbers of studies. Numbers indicate the percentage xxxx. b) xxx plot. Key issues that are plotted closer together are more frequently both addressed in specific studies. - 1 - Please replace the xxxx, and xxx by the real value	review. Red shading indicates a greater number of studies covering a combination of themes, through to dark blue shading for low numbers of studies. Numbers indicate the percentage similarity between themes for the selected studies."
47	CSIR BES	17	498	17	500	Every term in the Table needs explanation (in notes under the table . This is very important for readers.	Have clarified the caption and row labels to clarify that these characteristics refer to the global scale. Have also tried to clarify the wording where needed, and added extra clarification to the text. Defining each term specifically I think is not appropriate in the context of the role of this table in the chapter; it is simply to give a quick overview of the different archetypes and their characteristics, and is to be read together with Box 5.2. These are not detailed terms used in the rest of the chapter.
48	CSIR BES	17	506	17	508	What about the other biomes/units of analysis including agricultural lands and aquatic systems?	With rising population, the demand for water is also expected to increase; a consequence both of more people overall, and greater demand for water for

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							agricultural, industrial and urban domestic uses
49	CSIR BES	17	508	17	510	These are not the only problems coming with trade. We can also mention habitat fragmentation for roads, overharvesting, pollution from processing; impact of climate change	Added text " Exploitation of natural resources to satisfy trade demand leads to over-harvesting, habitat fragmentation e.g. road construction, pollution from processing of goods and increase impact of climate change "
50	CSIR BES	17	510	17	513	I thought it was weak decentralization, or you mean centralized governance that are weak or which are weak. Fast population growth and climate change can also be cited as factors that will exacerbate negative impact on rural/local communities	Unfortunately, we are cited here the results of WWF and UNEP results which are based on studies. However in the majority of countries decentralisation is not yet effective, weak and really constitute a barrier to sustainable use of natural resources.
51	CSIR BES	17	512	17	513	Not only from PAs but even from natural ecosystems like natural forests where NTFP can be collected for international trade	remove "from protected areas" and add "of natural resources whether in non-protected areas or in protected areas"
52	CSIR BES	19	582	19	583	Please name these Eastern countries	The Eastern countries concerned by this scenario are added
53	CSIR BES	Table 5.1				Does it make sense to consider low population growth when we know that population in Africa will increase at a fast rate? Does it mean that we cannot have Market Forces without 'high' population growth?	We have clarified that this table refers to overall trends at the global level under each archetype. The purpose of the table is to set the context for the assessment in the remainder of the chapter, which focuses specifically on

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							Africa. Sections 5.4-5.7 and Tables 5.3-5.6 summarize the findings from our assessment, specifically in regards to how different factors play out in Africa.
54	CSIR BES	Table 5.1				Is this globalization covering market regionalization because AU would like to promote exchanges within the region	Yes, in most cases it would, as highlighted in the detailed assessment we present in the following sections of the chapter.
55	CSIR BES	Table 5.1				It is important to explain how we should understand 'reactive' and 'proactive' environmental management	Have added text to the table to clarify this distinction.
56	CSIR BES	Table 5.1				What is 'strong national governments'?	Have modified descriptive text from several of the scenarios to be clearer
57	CSIR BES	General	General	General	General	It would be great to include some more regional specificity in the scenario analysis from the systematic review- especially in the section which looks at certain regional or global policies e.g. AU or SDGs- will different regions be able to meet the targets differently?	Regional specificity is addressed in each of the following chapter sections under the different themes (biodiversity, well-being, policy implications etc.). The aim of the systematic literature review was simply to highlight what kinds of studies have been done in Africa and where major research gaps can be identified. To go into the details of whether or not certain regions will be able to meet certain targets goes beyond the scope of this section.

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58	CSIR BES	General	General	General	General	It would be great to include some more regional specificity in the scenario analysis from the systematic review- especially in the section which looks at certain regional or global policies e.g. AU or SDGs- will different regions be able to meet the targets differently?	This comment is a duplicate of comment 75
59	Michael Olusegun Ogundele (MOO)	23	705	23	705	consider the statement for re-structuring	The section was revised to read:" Recent modelling using several partial and general equilibrium models indicates that the potential for Modelled studies indicate the potential for to increase in cropland ranges between 19% - 120% across Africa (Schmitz et al., 2014). Under Fortress World, on the other hand, low consumption is linked to poor economic growth (MA, 2005). Under this archetype Here, natural resource use is high increasing the and pressure on local systems is increased to provide sufficient food for dense rural communities. This expectation is similar under to the Local sustainability archetype but requires regional or global support is available to avoid these

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							pressures on the natural environment.
60	CSIR BES	23	707	23	714	This discussion is theoretical, almost away from the realities in Africa. It could have probably been useful to describe in details the categories/archetypes in light of what is going on and what is projected in Africa. I emphasize the importance of having a section at the beginning that summarizes well what is going on, where Africa would like to be in 2063, in 2100 and list/describe the challenges to reach the high-level targets/objectives (AU, SDGs etc.)	This comment will be addressed in two parts: Firstly, this section analyses the future direction of the underlying drivers as inferred from the storylines. As a result there may not be evidence for the storyline as yet. Secondly, while we agree that it would be have been useful to have a section detailing the current status, we feel it is beyond the scope of this assessment. The current status can be determined from chapter 3 and the desired futures from 6 No changes have been made to the text.
61	CSIR BES	24	763	24	765	This is said at the global level. Is it the same in Africa?	Yes this is the same for Africa. The sentence has been clarified and a new reference inserted. "These scenarios indicate surface warming and the likelihood of reduced annual runoff for southern Africa (Collins et al 2013)."
62	CSIR BES	General	General	General	General	Section 5.3 – Can you also link back to Chapter 4/SPM infographic on drivers?	Links have been made in the intro to section 5.3 and in the gaps and

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							uncertainties section of 5.3. A visual assessment was carried out to determine which drivers are not well represented by scenario studies. These are indicated in the gaps and uncertainties section of 5.3
63	CSIR BES	Table 5.3				I believe it will be very useful to consider each archetype and discuss the drivers under each one of them and the consequences of increases or decreases of the drivers (both direct and indirect). I believe that in the end, decision-makers should/could use the chapter and see what would happen under each of the scenarios. Then chapter 6 will give policy and governance options and other factors that allow the scenarios to lead to sustainable development / improved quality of life, and the cost implied for each option as well as the enabling environment for each option	This has been a major discussion point in our team. The manuscript was restructured to the current format as this presents the information in the most concise manner. No changes were made to the text as restructuring is to possible in the time available.
64	Susan Ringrose (SR)		759			Complete Visconti et al 2011	Changed to 2016
65	CSIR BES	26	805	27	861	In this section, I expected some discussion about Lake Chad, Sahel and Sahara for the Great Green Wall Initiative; also transboundary protected areas, co-management of the Congo Basin forest, of Lake Victoria and other	We are not able to add new literature sources - unless explicitly recommended by the reviewer - at this time. Our chapter was driven by the 'scenario' literature body and our

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						transboundary waters such as the Nile River, LMEs	systematic review - and we were unfortunately not aware of any sources that focussed on the GGW at the time. We agree that it would be valuable to include comment on this now - should there be scenario literature on this that we have omitted -, and if the reviewer recommends specific sources that we will then be able to capture, we will gladly revise our response here.
66	CSIR BES	26	831	26	835	We need maps showing these forests. Otherwise, difficult for readers to understand well. These maps should be in chapter 1.	La section présente les taux de réduction des écosystèmes et habitats dans les différents blocs forestiers de l'Afrique selon le scénario "Policy Reform". Cette carte peut se retrouver dans le chapitre I et non dans le chapitre 5
67	Michael Olusegun Ogundele (MOO)	26	832	26	832	"... a possible habitat loss..." instead of (an) possible habitat loss.	Deleted "n"
68	Rael Loon (RL)	26	832			Edit "an possible habitat loss..." to "a possible habitat loss..."	Deleted "n"
69	CSIR BES	27	838	27	840	Please specify whether increase or decrease	"changes"
70	CSIR BES	27	862	27	880	There is also the UNEP-WCMC PARCC project in West Africa	Added a reference "Belle et al. 2016", to highlight that climate

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						http://parcc.protectedplanet.net/en PARCC =protected areas resilient to climate change	impact on biodiversity and protected areas has been undertaken for West Africa region.
71	Thomas Brooks (TB)	28	894	28	902	Hole et al. (2009) Ecology Letters would be an important additional citation here	Reference added
72	Neil Burgess (NB)	5.4.2 Biodiversity: Species range shifts				As biodiversity is a core part of IPBES it would maybe be good to include more here. There is quite a lot of Africa wide modelling in a number of papers and perhaps these could have been summarised here (Foden, Baker,Garcia etc). A few maps would be good to include. There is also similar work on modelling land use change using scenarios - for example see http://dl.acm.org/citation.cfm?id=1972385	Added a reference "Baker et al. 2015" and Figure. Note figure is optional though recommended by the reviewer.
73	CSIR BES	31	1028	31	1029	More than what?	take out "more"
74	CSIR BES	32	1054	32	1055	How important would be the changes? And Does this have an impact on confidence levels?	changed text
75	Susan Ringrose (SR)		811			Africa is a continent, not a region	in the context of the Chapter, Africa is a region
76	Susan Ringrose (SR)		829			Isn't this because other populous regions of the world have already lost most of their 'natural' habitat?	concentrate on Africa and leave out other regions of the world
77	Neil Burgess (NB)	Figure 5.5				Figure and legend incomplete	Comment addressed: see comment 28

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78	CSIR BES	32	1081	32	1084	You need to highlight these in the discussion of the data in the Table. That discussion is important	These details are highlighted in sections 5.5.1 to 5.5.5 below
79	CSIR BES	32	1086	33	1092	This Table is important and worth discussing, all the arrows. Again, it is better to discuss by category of the scenario rather than the element of good quality of life. It will be necessary to repackage what you have here. In fact it can used as Table for each	The reviewer is suggesting a restructuring of the section to discuss HWB impacts per scenario archetype, instead of discussing scenario archetypes per HWB component. During the initial writing of this chapter, the author team considered and discussed different ways of structuring the sections of the chapter (including the structure suggested by the reviewer), and after much deliberation settled on the current format. Obviously, there are pros and cons for each format. But in the end, the approach chosen here seemed easiest to understand and mirrors the set-up of the regional assessment as a whole, which is also structured around the themes of drivers, NCPs, and well-being at the higher level, and then delves into detail under each of those headings. We therefore argue that the current structure should be maintained.

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80	CSIR BES	34	1130	34	1132	Is this a focus of the Market Forces? I know it is AU's, but I doubt that inequality will decrease	It says clearly in the text that decreases in inequality are suggested by the "Local Sustainability" archetype (specifically as described in the MA), not the "Market Forces" archetype.
81	CSIR BES	34	1145	34	1147	Why in policy Reform?	Our statement about air and water pollution in the Policy Reform archetype is based on the following section of text from the "Going Global" (i.e. Policy Reform equivalent) scenario description in the GEO6 Regional Assessment for Africa report, page 119, last paragraph of section 3.2.2: "However, the need for transporting goods over vast distances across the continent means that carbon emissions also increase, and industrialization decreases air quality and increases health expenses. In rural areas where most of the large-scale development is taking place, no progress is made towards increasing access to both clean air and water, although due to the emphasis on agriculture, the continent is now food secure".

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82	CSIR BES	35	1192	35	1194	In Africa?	Clarified by referring to Africa at the beginning of the paragraph, and by adding "globally" to the statement in question.
83	CSIR BES	36	1219	36	1221	But with market Forces in a globalized world, the strong determine the rules, commodity prices, demand. Do we still have freedom and choice? Thus I agree with next sentence. It is reality and not potential	Clarified by a minor addition
84	CSIR BES	37	1276	37	1279	cultural differences as well	Addressed by adding some wording around sub-regional differences
85	Susan Ringrose (SR)		1194			Similarly the development of robots will increase unemployment and therefore likely impact poverty levels	Some wording has been added to reflect this point, but in the "Material well-being and poverty reduction" section (5.5.1, first paragraph), where it is more appropriate to talk about unemployment and poverty.
86	Neil Burgess (NB)	5.5. Human well-being, poverty and inequality				Before this section it would have been good to have had one on ecosystem services as that's in the name of IPBES. But perhaps that is folded in here somehow. Would be good to make that clear	Ecosystem services are dealt with in detail in the previous section (5.4). This section on human well-being specifically deals with the human well-being trajectories under the different scenario archetypes.
87	CSIR BES	39	1347	39	1353	Additional possible challenges to list: terrorism; internal and regional conflicts; employment;	These additional items are not in the scoping report Del 2 c and were not issues we focussed on in

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						industrialization/technology acquisition; corruption, democracy, decentralization etc.	the assessment. They can be included as additional issues that require further exploration and should be included in the co-development of new scenarios
88	CSIR BES	40	1372	40	1376	what is good governance?	Clarified
89	CSIR BES	40	1381	40	1381	See in this document the linkages between Agenda 2063 and SDGs: http://www.un.org/en/africa/osaa/pdf/events/20160420/linkagesagenda2063sdg.pdf You can Agenda 2063 items	reference added
90	CSIR BES	40	1381	40	1381	This section is currently short. I believe we can find additional information in document "ELD Initiative & UNEP (2015). The Economics of Land Degradation in Africa: Benefits of Action Outweigh the Costs. Available from www.eld-initiative.org " Please explore.	This report is very informative but does not include a scenario assessment which is what the criteria was for inclusion
91	CSIR BES	40	1396	40	1398	Also in Cameroon; and it is used as sponge to remove oil in spillages (there is a company in Benin)	the water hyacinth in Benin is used to absorb the residue of oils and hydrocarbons by a company named "Green Keeper Africa"; This plant has indeed invaded all the watershed of Lake Chad and colonized all tributaries to the point of threatening to disappearance.
92	CSIR BES	41	1407	41	1409	"protected areas" and in buffer zones	add " buffer zones" see section 5.6.5

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93	CSIR BES	41	1434	41	1437	Words "good" and "strong" are too general	wording changed
94	Rael Loon (RL)	42	1452			This demonstrates how policies and decisions made in the East Arc Mountains might affect the various institutionalized protected areas differently. For example government reserves, forest reserves and private reserves (the new Kitulo Plateau has recently been proclaimed by the Tanzania Government) Despite the threats positive signs reported by the Critical Ecosystem Partnership Fund is the GEF-UNDP holistic conservation strategy. Also the University of Dar es Salaam, Nature Kenya and the Wildlife Conservation Society has identified Key Biodiversity Areas for the East Arc Mountains to ensure that investments targeted in the most appropriate places in Kenya.	Additional information, is tangential to the focus of this case study box. The final comment relates to the work captured within this case study box. No references is provided for expanding the scope of the box. Text has been slightly adjusted to reflect that various institutionalized protected areas are involved
95	Neil Burgess (NB)	Box 5.6 Scenario analyses for policy impact at national scale – The case for the Eastern				Good you are including this but you could also reference Swetnam et al 2011 or Fisher et al. 2011 as a source. There are also maps that could have been used	Both callouts of the suggested references (which are in the reference list) have been now included in the text box, and a map taken from Swednam has been included into the text box.

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		Arc Mountains,					
96	CSIR BES	General	General	General	General	General: The authors should look at the following reports and references to see whether they can include any of the information in their assessment: IPBES Core indicators V 1.0, especially for looking at how things may change over time linked to specific targets- they look at Aichi targets in the assessment and this could come up in the commentary on SDGs and Agenda 2063, http://www.sciencedirect.com/science/article/pii/S2212041617303303	All relevant reports have been considered in light of the focus of this section, which was to assess the SDGs, Agenda 2063 and Aichi targets in light of the priority issues outlined in the scoping report.
97	CSIR BES	General	General	General	General	General: The authors should look at the following reports and references to see whether they can include any of the information in their assessment: IPBES Core indicators V 1.0, especially for looking at how things may change over time linked to specific targets- they look at Aichi targets in the assessment and this could come up in the commentary on SDGs and Agenda 2063, http://www.sciencedirect.com/science/article/pii/S2212041617303303	This comment is a duplicate of comment 80
98	CSIR BES	43	1496	43	1496	You discussed only 4 of the 5 archetypes. It will help if you can illustrate with some examples from the region. That will make	Text added on the missing archetype to the Trade-offs, Thresholds and teleconnections

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						the discussion less theoretical but more relevant and concrete	sections. Examples added into the text here possible to provide some regional insights and to make the discussion less theoretical.
99	CSIR BES	43	1497	43	1498	EIA and SEA are totally ignored. Don't they apply for mines, new infrastructure etc.?	Policy processes such as EIA and SEA are not considered in this section. Here we focus on describing the potential expected trade-offs that area associated with each of the 5 Architype scenarios. We have added text to the start of this section to clarify this focus to this section.
100	CSIR BES	43	1501	43	1502	The assumption here is that there is a better life in cities; what is not always true, and in many instances we are encouraging people to go back to rural areas. Chinese e.g., do not build any infrastructure for local communities. So we cannot generalize.	We are not inferring here that urban is better we are simply reporting on the perported storyline laid out under this Architype. We see no value judgement and leave the text unchanged.
101	CSIR BES	44	1506	44	1507	Not sure this sentence is complete	This sentence was poorly written and missing a number of vital words. The sentence have been adjusted to better reflect the conflict between the development of export orientated industries and landscape ecological functioning.
102	CSIR BES	44	1528	44	1530	Note that this decline can reach the tipping point	Remains unchanged - The reviewer has not provided enough

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							information. We do not understand what the tipping points for air and water are. We leave the sentence as it is referring to thresholds and human safety standards for air and water.
103	CSIR BES	44	1543	44	1544	And lack of law enforcement or lack of regulation to protect resources. Should we add to this the question of poaching and illegal and unreported fishing for international trade?	Text has been added to reflect that both lack of regulation and law enforcement will further impact natural resources under this architype.
104	CSIR BES	45	1561	45	1575	I would add capacity building including mobilization of financial resources; training of human capacities including empowerment of local communities and women and youth, raising awareness and education; acquisition and adaptation of technology; and legal institution and legislation/regulation and means for enforcement.	This has been addressed but has been put in the last sentence of the conclusion considering that the chapter has undergone major changes