Comment form for 2nd Review Phase of IPBES Deliverable 3c) Fast-track methodological assessment on scenarios and models Chapter 7 'Capacity Building'

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Reviewers:

Mahmood Yekeh Yazdandoost	German government	U.S. Government
Andrew Wade, UK Government	Diego Pacheco	Carolyn Armstrong
Jason Link	PS Bhatnagar	UK government
Derek Tittensor	Jens Mutke	Fátima Lopes Alves
Shane Orchard	Thomas Brooks	Marina Rosales Benites de Franco
Paula A Harrison	Lemessa Mergo Bulto	

№	Chapter	From page	From line	Till page	Till line	Comment	Reviewer Full Name	What was done with the comment
1	7	General				I would like to compliment the authors on producing an interesting and thought-provoking chapter. I think the key findings and recommendations are well supported by the evidence presented.	Andrew Wade, UK Government	Thank you. No action required.
2	7	General				Chapter 7 could be shortened notably.	Jason Link	While this reviewer makes no suggestions of content to remove, we have attempted to reduce size of the chapter while retaining key content.
3	7	General				Overall: Great chapter, essential material for wider context.	Shane Orchard	Thank you. No action required.
4	7	General				A web portal (open platform) know as "Oppla" is currently being developed by two EU-funded projects (OpenNESS and OPERAs) to provide a number of facilities to support communities of science, policy and practice in operationalising the concepts of ecosystem services and natural capital. It will include practical advice/helpdesk, guidance documents, tools/models, events, training courses, educational materials, example case studies, and networking opportunities.	Paula A Harrison	We have added reference to this platform in the networking section 7.2.3
5	7	General				The capacity issue basically falls into two parts. The first is the capacity to do the modelling. This is the focus of the 'building capacity' chapter. While this is	Carolyn Armstrong	The revised chapter structure included two

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						important, it is only the first part of the equation. The second part of the issue is the capacity to use the models and model results in decision making and policy. This type of capacity does not require the technical expertise to build models, but does require an understanding of what models do, their limitations, and how to interpret their results. Without this type of capacity among decision makers, there will always be a lag in the uptake and use of models to support decisions.		sections (7.1, 7.2) on developing models and data to support model development, and two sections on 'using' models.
6	7	General				**General:** A very important chapter about building capacity, with considerable emphasis on engagement of others, data sharing and using indigenous and local knowledge for the IPBES assessments and range of scales for application of the models and scenarios. One reviewer sent compliments to the authors on producing an interesting and thought-provoking chapter, stating that the key findings and recommendations are well supported by the evidence presented. Some of the Key Findings are more like recommendations, and must be related to the evidence presented. Recommendations must start with action words. As for other chapters, it would be good to indicate benefits for policy makers and stakeholder in participating, and include some findings and recommendations that will stimulate their interest. Throughout the text, there is a mixture of evidence and a recommendation is drawn- i.e. 'something should do this' here and there and very few lines to support this as to why it would bring benefits or what those might be. The page for page comments indicate where some recommendations and benefits have been made within text- these could perhaps be presented in a table at the end of the relevant sections, so the link with benefits is made, which in itself is capacity building. In places it is not clear whether capacity building is about providing access and guidance for others to do things for themselves, or whether IPBES will do the modelling and scenario development for them. P732 and 733 give very useful lists of what IPBES could do to develop capacity- which is good for IPBES to consider, but what are the implications of what stakeholders etc. would be required to do or could do? Without this type of consideration, the IPBES lists become wish lists. **Style Guide:** Use passive voice, delete most of uses of 'key', and delete all 'however' etc. words and any superfluous adjectives.	UK Government	Key findings and recommendations have been restructured and a new highlights structure has been added. Table 7.7 includes key capacity building activities for stakeholders. These are further detailed in text in section 7.5. We have also added a new table (now 7.2) that specifically discusses stakeholder group entry points.
7	7	701	12	702	11	I would suggest access to models and datasets for use by practioners needs to be improved along with access to model case studies so that practioners can seek to repeat the case studies themselves (with access to the same data and	Andrew Wade, UK Governme	This concept has been added to the recommendations and

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						models) to gain confidence in model applications before making their own model applications.	nt	further detailed in section 7.2 and 7.3.
8	7	701	12	702	11	One of the biggest challenges with a community approach to modelling is over-coming Intellectual Property Right issues for access to data and models. This point is made by the authors on page 710, but I would suggest it is key and needs to be highlighted in the key findings and recommendations.	Andrew Wade, UK Governme nt	We have added this concept in the key recommendations and provided further detail in section 7.2.1. Intellectual property is also included in Table 7.3
9	7	701	12	702	11	I also suggest that more emphasis needs to placed on providing open-access visualisation tools so that practioners can take the data generated from the models and explore this for their own purposes without recourse to the orginal model developers or those who applied the model. This would be more efficient.	Andrew Wade, UK Governme nt	We included a sentence on visualization tools, following the further detail on case studies in section 7.2.1.
10	7	701	12	702	11	Should we be using Cloud technologies so that practioners can run models with readily available data themselves even if they don't have powerful computers themselves?	Andrew Wade, UK Governme nt	Reference to cloud technology has been added to key recommendations and section 7.2.1.
11	7	701	21			change first 'capacity' to 'ability'	UK Governme nt	Changed as suggested
12	7	701	23		24	is a recommendation- pull out to list at end of section.	UK Governme nt	This text was moved from key findings to key recommendations.
13	7	701	29		30	change 'need to be addressed to optimise' to 'precludes optimal use'	UK Governme nt	Changed as suggested
14	7	701	33			is a recommendation- pull out to list at end of section.	UK Governme nt	This text was moved from key findings to key recommendations
15	7	701	35			is a recommendation, not a finding- pull out to list at end of section.	UK Governme nt	We have rephrased as a key finding.
16	7	702	21			MOOC [Massive Open Online Courses] should also be a mode to educate people and virtual universities should be encouraged to offer courses on scenario and modelling. It should be offered as formal and informal learning both i.e. AS LLL – life long learning.	PS Bhatnagar	Reference to MOOC has been added in section 7.2.2.
17	7	702	28			There may preferably be a summary in a few other major non-UN languages such as German, Hindi, Japanese and some major African continent languages).	PS Bhatnagar	Reference to non UN languages added in the recommendation section
18	7	702	Key	703		**Chapter 5, pg. 531-532, Figures 5.6., and 5.8:**	U.S.	These EPA models have

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			Findings			If one were to include analytical frameworks that meet specific objectives from the "Synthesis and Research Frontiers" on page 536, but that are not comprehensive ES assessment tools, then the EPA's FEGS-CS and NESCS would be placed with NESCS above FEGS-CS as high as possible in the intersection of all circles except Valuation in this Figure, i.e. in the full overlap space within the same color as only ARIES and EwE, but above ARIES. Thus a question for the authors is: are the objectives on page 536 more important, or is restricting the figure (and related tables and figures) to include only comprehensive ES assessment tools more important? Here the answer may hinge on whether one finds traction in the argument for the employment of modular tools within a larger ES assessment effort (to point again, the argument for a modular approach is supported directly at least by lines 7-14 on page 515). If the IPBES chapter author team were to decide that tools within a larger ES assessment effort did indicate unique modelling, then FEGS-CS and (separately) NESCS would fit between the INVEST and IMAGE LUTO boxes, linking from Supply and Demand up and to the left, but skirting the "Quantification and Valuation" boxes. FEGS-CS is designed to assist in quantification, and NESCS is designed to identify ES flows that will be affected by policy, thus also supporting identification necessary for dynamic modelling (for a possible arrow from the Supply and Demand box up and to the right). **Chapter 7, pg. 702-703, Key findings:** A similar argument would encourage caution in not excluding the US EPA ecosystem services classification models in work to fulfill key recommendations in Chapter 7, pp702-3.	Government	been included and discussed in Chapter 5. We do not include them in Chapter 7 as the models chosen in this chapter were to illustrate differences in accessibility and usability, not to be a comprehensive listing of all national and internationally available ES models.
19	7	702	6		10	Also read like recommendations	UK Government	We rephrased this sentence as a key finding.
20	7	703	21	703	36	Brooks et al. (2014) TREE explored the strategic rationale for why support to capacity building is so important for IPBES, and might be a useful citation here, if I may be so bold.	Thomas Brooks	Reference to Brooks et al. added.
21	7	703	22			Very IPBES focused, what about other users?	UK Government	Text rephrased, 'balance' removed.
22	7	703	35			Balance human resources? How?	UK Government	Rephrased.
23	7	703	7	703	9	I think this recommendation is apriority: "*Build capacity of indigenous and*	Marina	This concept has been

№	Chapter	From page	From line	Till page	Till line	Comment	Reviewer Full Name	What was done with the comment
						local knowledge networks through the identification of leadership and educational opportunities and mechanisms to enhance communication between indigenous organisations and local governments".	Rosales Benites de Franco	added to the recommendations.
24	7	704	21	704	21	Accessing reliable data, information and knowledge would be the greatest challenge of IPBES. For adaptation of the program, development of a Comprehensive Managerial Approach (CMA) would be considered as an urgent need in developing countries.	Mahmood Yekeh Yazdandoost	We agree that this is one of the IPBES key challenges. Data access is discussed in section 7.2 and 7.3 in more detail.
25	7	704	1	704	30	I think that the different models that are developed need to be conceptually consistent across scales.	Andrew Wade, UK Government	We refer the reviewer to scale which is discussed within Chapter 6.
26	7.1.1	704	11	704	11	You might add to 4): "and to evaluate quality and reliability of the data" – many of the easily accessible biodiversity datasets such as GBIF have important pitfalls and quality issues regarding, e.g., georeferenciation or species identification and taxonomy.	Jens Mutke	We discuss issues of data quality in more detail in 7.3.1.
27	7.1.1	705	Fig 7.1			The capacity building requirements include as well capacity and training for data providers and data curators like field ecologists, taxonomist etc.	Jens Mutke	We add a sentence to clarify the connection between data collection and developing scenarios and modelling in section 7.1.1, and add 'contribute to' in Figure 7.1 within the databases bullet point.
28	7	706	1	706	1	Whilst I agree with what is presented, I suggest that we also need to develop confidence in models in terms of how well they reproduce observed behaviours, how well they represent processes and how sensitive they are to different input datasets. I agree community participation in model development and application, and scenario development and application, is really important, but there is also a need to evaluate, in a robust way, model pedigree and performance so that practioners have a good idea of how well accepted a model is.	Andrew Wade, UK Government	We have created a new table to discuss capacity building necessary to use scenarios and models by practitioners and we include this suggestion there.
29	7	706				Useful table, but just how will IPBES achieve this? It is a wish list unless practicalities are considered. How do Goals match against the Key recommendations? Need consistency and avoid attacking arguments from different directions although the intention remains the same- be focused.	UK Government	Our summary and key recommendations are written to provide priorities and links between capacity building needs and potential funding institutions for capacity building.

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30	7	710	1	710	12	I agree we must enhance participation in scenario development and model application, but is there a danger we can become mired in the detail of scenario development. A sensitivity analysis might also provide useful information on the likely response to key drivers, or what a particular step change in air temperature or pollutant loading might mean, on overall ecosystem services and biodiversity without having to implement detailed scenarios each time.	Andrew Wade, UK Government	The issue of sensitivity analysis for scenarios is detailed discussed in section 4.6.2 in chapter 4.
31	7	710	1	710	12	There seems to be a bias towards ecology here, but we need better models of soil and water processes too so that we can better understand how soil degradation and flooding and water pollution might change (and I'm sure that there are other specific ecosystem services that need further consideration too).	Andrew Wade, UK Government	We have now used ecological processes which we believe is sufficient to include other processes such as soil degradation.
32	7	710	1	712	1	The whole section should refer to ecosystem functions and services and not only to ecosystem services.	Diego Pacheco	BES is broadly defined in this assessment and within IPBES to include ecosystem function within the term ecosystem services.
33	7	710	4	710	12	An excellent quantitative analysis of varying capacity among countries for BES work is Rodrigues et al. (2010) BioScience – useful to add a citation to this.	Thomas Brooks	We have added this citation.
34	7	710	30	712	1	I don't understand the need for this Table 7.1 here in Chapter 7. It simply duplicates material already presented in Chapter 5.	Thomas Brooks	We assume the reviewer to be referring to Table 7.3. We have harmonized content of this table with tables in Chapters 4 and 5 to reduce overlap and emphasise content on availability, accessibility, and usability in relation to capacity building needs.
35	7	710	4			Delete 'a key capacity for the' and 'is' change to ' It is important for the IPBES…'	UK Government	Changed as suggested
36	7	711	1	711	2	Many of the models seem to depend on using ArcGIS but this is an issue given the cost of a licence for ArcGIS and therefore worldwide access to use these models might be restricted.	Andrew Wade, UK Government	We provide further detail on intellectual property, open source and accessibility in section 7.2.1.
37	7	711				Table 7.3 replicates a fair amount of information from the table of ecosystem service models in Chapter 5. Suggest having a single table in one or other	Derek Tittensor	We have harmonized table 7.3 with content presented

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						chapter and both chapters referring to it, or, ensuring that the tables are harmonized and minimize information overlap. Alternatively, a single table could be put in an Appendix.		in chapters 4 and 5 to focus on availability and usability of software for undertaking modelling. We refer readers to similar but non-overlapping content in chapters 4 and 5.
38	7	713	1	713	12	Is it possible to be more specific about the training required? Should this training be generic regarding modelling or more specific in terms of training in **using particular models**, or should the training be providing a general understanding of ecosystem services and **data interpretation**, and an understanding of **model capability and robustness**? Should we also be looking to build the confidence of those who can enact change (e.g. **farmers**) in models and modelled output so that they are willing to change behaviours? Will the training proposed really reach those that can enact change?	Andrew Wade, UK Governme nt	We have added new Table 7.2 to provide more content on training courses and entry points for capacity building and have provided detail in text in section 7.2.2. Section 7.4 now includes further details on training courses in using and implementing models.
39	7.2.2	713	27	713	30	A study on capacity building for IPBES commissioned by the German IPBES Coordination Office indicates that it seems necessary to provide regional training courses in the most widely used language in a region to support the development of BES skills. This language may not automatically be a UN language. The above-mentioned study can be downloaded at: http://biodiv.de/fileadmin/user_upload/PDF/Projekte/StudieIPBES.pdf Another option would be, as mentioned in chapter 7.2.3. (lines 21-22), to develop a "train the trainer" programme to overcome language barriers.	Germany	Changed as suggested and this reference now included. Text also added to key recommendations.
40	7	713	4	713	4	Delete "Currently, only two major global programmes exist." This is not correct. There are many such programmes. See http://cmsdata.iucn.org/downloads/ipbes3_iucn_suggestions_for_work_progra mme.pdf (pages 4-6) for some examples.	Thomas Brooks	Changed as suggested
41	7	713	9	713	9	Add a sentence here regarding Red List training, along the lines of "The IUCN Species Survival Commission provides extensive capacity-building support for application of the Red List categories and criteria (http://www.iucnredlist.org/technical-documents/red-list-training), including a full online training course (https://www.conservationtraining.org/mod/page/view.php?id=3756&lang=en).	Thomas Brooks	IUCN Red List training has been added as suggested.
42	7	713	26		30	is a recommendation and should be listed at the end of the section, or somehow emphasised.	UK Governme nt	Sentence rephrased.

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43	7	714	1		2	is a recommendation and should be listed at the end of the section, or somehow emphasised.	UK Government	Sentence rephrased.
44	7	714	12		17	is a recommendation and should be listed at the end of the section, or somehow emphasised.	UK Government	Sentence rephrased.
45	7	714	29		30	Benefits- there need to be a link between evidence- recommendations-and benefits/advantages of these, otherwise the argument to take up the recommendation is weak.	UK Government	While unclear what the reviewer is asking for, as this comment does not appear to relate to this sentence, regardless we have removed this particular sentence as content is already provided earlier in this paragraph.
46	7	714	36			not 'strong', perhaps 'essential'?	UK Government	Changed as suggested
47	7	715	1	715	1	On acheivement of the 2010 target or lack thereof, add a clause reading "...although the rate of loss was significantly reduced to relative to backcast counterfactual of biodiversity loss in the absence of existing conservation efforts (Hoffmann et al. 2010 Science),...".	Thomas Brooks	Changed as suggested and reference added.
48	7	715	6	715	8	We explored the rationale for the importance of IPBES support for knowledge generation in Brooks et al. (2014) TREE, worth citing here.	Thomas Brooks	Cited as suggested.
49	7	715	6		7	Policies to protect BD is a benefit, and should be listed as such	UK Government	We add a clause of 'benefits of biodiversity for humans'.
50	7	716	6	716	8	Add reference to "IUCN Red List of Threatened Species (IUCN 2015)"; the citation is http://www.iucnredlist.org.	Thomas Brooks	Changed as suggested and reference added.
51	7	716	6	716	8	Add reference to "Key Biodiversity Areas, through the Integrated Biodiversity Assessment Tool (IBAT 2015)"; the citation is https://www.ibat-alliance.org/ibat-conservation/login.	Thomas Brooks	Changed as suggested and reference added.
52	7	716	8	716	10	Worth citing Hjarding et al. (2014) Oryx as an excellent example of application of GBIF data, and caveats to this.	Thomas Brooks	Cited as suggested.
53	7	716	2		9	Benefits could be listed together- why do we need to do capacity building? What would we gain for all this effort?	UK Government	We state that extensive and accessible data means it is more likely to be integrated into environmental assessments, thus improving robustness and

№	Chapter	From page	From line	Till page	Till line	Comment	Reviewer Full Name	What was done with the comment
								applicability of assessments.
54	7	717	29			Intellectual property rights? Commercial interests of data provision and use? Data ownership, collection and management is costly and often involves a fee to access it.	UK Government	We have provided five bullets all relating to different aspects of intellectual property from technical to legal and policy issues.
55	7	718	5	718	11	If IPBES begins adaptation with demarcation on reliable data collection, datasets fail complementarity status and trends.	Mahmood Yekeh Yazdandoost	We expand on data quality and robustness in section 7.3.1.
56	7	719	7		8	is a recommendation and should be listed at the end of the section, or somehow emphasised.	UK Government	Sentence removed.
57	7	719	13		14	is a recommendation and should be listed at the end of the section, or somehow emphasised.	UK Government	This text has been moved and directly linked to Table 7.6.
58	7	720	28	720	28	After mentioning almost all possible scenarios and models, now here mentioning "developing relevent BES scenarios and models". Probably chapters need better interlinkages to avoid of any confusion.	Mahmood Yekeh Yazdandoost	We clarify with the reviewer that this is one step suggested in a process to mainstream scenarios and models into the science-policy interface.
59	7	720	27	720	31	Building confidence in models and modelled outputs seems to be missing. I would suggest that one of the biggest barriers is that stakeholders, such as farmers, don't believe modelled output. Complex, dynamical models that simulate future ecosystem response, and the timescale of these, are often those many have the least confidence in. Assessing model pedigree and evaluating model performance is therefore essential, as is estimating the effect of input data uncertainty on modelled outputs.	Andrew Wade, UK Government	We have added a paragraph in section 7.5 to emphasise this concept.
60	7	722		724		Figure 7.5 appears twice	Shane Orchard	Error in reviewer download (not visible to us in our copy). Regardless, this will be fixed in final version.
61	7.4.2	723	38	723	38	Is it a differentiation between "western and traditional knowledge" or rather between academic and traditional knowledge?	Germany	We have modified wording to 'conventional'.
62	7	723	16	724	19-24	The authors provided a comprehensive explanation on the recognition of the interdependence of knowledge systems, including traditional knowledge, to inform biodiversity and ecosytem services models and scenarios. Despite thier	Lemessa Mergo Bulto	We have included reference to UNESCO Sacred Sites in section

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						cogent use of apt scholarly literatures they failed to incorporate UNESCO's more inforamtive work on the role of sacred natural sites for biodiversity conservation and management. This important scholarly tool is worth considering for it would enable IPBES to build capacity for developing, interpreting, and using more inclusibve models and scenarios. Actually, it could also have informative implications on the points raised on pages 725 (lines 1-39), 726 (lines 2-8), 731 (lines 31-38), 732 (lines 1-5), and 734 (lines 21-37). (Suggestion for the authors to garner more comprehensive understanding on indigenous knowledge from UNESCO's (2006) contribution on "The Role of Sacred Natural Sites and Natural Landscapes)		7.4.3 and section 7.5.4.
63	7	723	7		8	is about benefits- and should be summarised somewhere as such	UK Government	We have added 'benefits of biodiversity to humans' in text.
64	7	723	11		13	is about benefits- and should be summarised somewhere as such	UK Government	We have added 'benefits of biodiversity to humans' in text
65	7	723	28			epistemology- plain English will do- quest for knowledge and understanding?	UK Government	Replaced with 'knowledge systems'.
66	7	723	37		38	What compelling need? How compelling?	UK Government	Removed 'compelling'.
67	7	724	4		5	benefits, could be listed together- why do we need capacity building? What would we gain for all this effort? Will IPBES do the modelling etc., or will it empower others to do it for themselves?	UK Government	Unclear on reviewer intention. The new chapter structure provides key findings and recommendations in the context of building capacity to support IPBES sanctioned BES models and scenarios.
68	7	724	13			benefits, could be listed together- why do we need capacity building? What would we gain for all this effort? Will IPBES do the modelling etc., or will it empower others to do it for themselves?	UK Government	As above.
69	7	724	13		16	use passive voice	UK Government	This appears to be an incorrect line reference by reviewer. Regardless we have used passive voice as appropriate within the

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								chapter.
70	7	724	16			Figure is fuzzy on screen	UK Governme nt	This will be fixed by graphic designers in the final version of the chapter.
71	7.4.3	725	20	725	20	What does 'modern knowledge' include (e.g. also local knowledge, or only academic knowledge)? Is 'modern knowledge' similar to what is meant with 'conventional knowledge systems' (see 7.4.3, page 725, lines 6 to 7).	Germany	We have modified wording of 'modern' knowledge as 'conventional.'
72	7	727	1	727	1	Figure 7.6 is biased to ecosystem services and human well-being. If any should include also the relationship betwen ecosystem functins and the living-well in balance and harmony with Mother Earth.	Diego Pacheco	Living with harmony with Mother Earth is discussed in the conceptual model for IPBES and within Chapter 1 rather than within Chapter 7 on capacity building.
73	7	730	4	730	12	I think central to effective communication are data visualisation tools and the ability of practioners to access modelled outputs and use this themselves without recourse to the modellers.	Andrew Wade, UK Governme nt	Text on visualization tools added in section 7.2.1.
74	7	730	13	730	29	I would suggest that some of the 'products' to help translation are modelling case studies where practioners can access the models and data and re-run the case studies for themselves to evaluate if the models and scenarios are the right tools for them, and then take the data and models to develop their own applications. A repository of models, data and model runs plus an evaluation of their utility would help here.	Andrew Wade, UK Governme nt	Case study example text added in section 7.2.1.
75	7	730	30			Synthesis of traditional and local k owledge with modern knowledge also will be helpful in improving quality of life.	PS Bhatnagar	We agree. Integration and the complementary relationship between scientific and traditional and local knowledge is recognized and discussion in the IPBES framework is included in Chapter 7.
76	7	730	34	731	35	Recently, geovisualisation has assumed notable importance due to the increase in the need to explore more realistic environments, for more flexible data models that integrate added differentiated data and draw new scenarios in a diversified range of applications [2, 3], counterpointing the 2D representation of static maps. Following an approach of public participation that is active and effectively	Fátima Lopes Alves	We include reference to CommViz software in our discussion of visualization tools in section 7.2..1

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						comprehensive of real-time territorial, ecological and socio-economic change, one of the actual challenges is the use of tools and methodologies that should be technologically innovative, but more socially comprehensive. The example of CommunityViz software, having as a main goal the potential to explore new geovisualisation tools. These will enable a significant improvement in the exploration, acquisition and communication processes of the spatial phenomena [1] and of alternative scenarios, which actually constitute a requisite for the efficiency of planning and management.		
77	7	732	16	732	33	Why international forums only, I would suggest that it would be useful to have communities of practices at national and regional (within nation) scales too.	Andrew Wade, UK Government	We do suggest (line 4-5 on this page) the forming of local, regional and global scale networks.
78	7	732 onwards				Recommendations (Section 7.6) are given in a different form & style to most other chapters (and with considerably more detail than most). Suggest harmonizing.	Derek Tittensor	Key findings and key recommendations have been harmonized across chapters.
79	7	732	16			VERY useful lists of what IPBES could do- handy for discussions about what they will do- but very IPBES focused- what lists are there for what policy/ decision makers and stakeholders could do so that they can consider what they will do?	UK Government	We agree and think these key capacity building 'lists' are relevant to both IPBES objectives and to policy and decision making and stakeholders. They were provided as such to better allow linkages between capacity building organisations and key activities that we identified.
				733	19			
80	7	733	21			Traditional knowledge? Indigenous and local knowledge?	UK Government	Knowledge added.
81	7	734				7.6.5 Incorporating traditional knowledge?	Shane Orchard	Knowledge added.