

Reviewer Name	Chapter	From Page (start)	From Line (start)	To Page (end)	To Line (end)	Comment	Response
Cameron Colebatch	general					<p>The documents are good summaries, but what are the implications of the documents? What are the authors seeking policy makers to do with them?</p> <p>Suggest that (at the least) a dot point summary of the 'Recommendations and policy options' be provided at the beginning of each chapter to make this more prominent. If appropriate, it may also be worth preparing a 'summary for policy makers' (SPM) for each document as well.</p>	Thank you for the suggestion. An Executive Summary has been added to the chapter during the revision, and a separate SPM has been made. We tried this for the IPCC Asia chapter but got very little extra input for a huge amount of extra effort.
Li Qingfeng	general					1, The Report in overall is too academia, too detailed in scientific exploration and descriptions. In consideration of the principal aim "to facilitate the implementation of the National ... and the "inter-governmental" nature of the organization, the Report has to be more "publicly explicit", rather than "scientifically complicated". If the Report is to be read by the policy makers, and to draw attentions from the public, the content is to be simplified and the volume greatly reduced, one third is more than enough.	Thank you for the comment. However, like the IPCC reports, the IPBES output is targeted at governments, not the public. We hope to have made it more readable, as the FOD stage was largely data accumulation.
Ludwig Kammesheidt, IB	general					In some tropical countries in Asia the area designated to sustainable forestry ("forest reserves") exceeds the area under protection. Thus, the implementation of sustainable forest management systems in natural forests by applying FSC standards is essential for effective biodiversity conservation. In reference to conservation of nature it is of particular importance that these forest reserves are at least partly located in lowland areas where otherwise land has been already converted at large extent. The current assessment does not elaborate on this issue. Maybe you could include it in your further work.	Thank you. This is addressed in part in chapter 3 under protected area coverage and future trends and in chapter 6 under governance systems and policy options.
Ludwig Kammesheidt, IB & Uta von Witsch	general					Other knowledge-forms such as indigenous and local knowledge are well included throughout the assessment. Maybe you could additionally include a specific sub-section (e.g. in chapter 1) on the current status and use of indigenous and lokal knowledge in the Asia Pacific region (e.g. to what extent does it contribute to the academic knowledge base?; perhaps include some case studies, if available).	Thank you for the suggestion. It is very difficult to have this regional overview due to lack of data and literature.
Stefan Hotes	general					The way the IPBES conceptual framework is referenced in the text should be more stringent, and the IPBES guide on Assessments as well as the other IPBES deliverables including guides should be integrated more clearly. In electronic versions of the assessment, hyperlinks to these resources could be included.	Thank you. The formatting has been corrected accordingly.
Thomas Brooks (IUCN)	general					Congratulations to the authors for all their hard work in producing this FOD.	Thank you
Uta von Witsch	general					Please provide a degree of confidence for the main findings throughout the assessment as laid down in the 'Guide on the production and integration of assessments from and across all scales (IPBES deliverable 2a)' (see IPBES/4/INF/9, p. 60, Figure 4.1).	This has been included in the Executive Summary as per the common practice across assessments.
Uta von Witsch	general					A list of abbreviations and a glossary should be included for the whole assessment.	Thank you. This has been incorporated.
Uta von Witsch & Ludwig Kammesheidt, IB	general					We highly appreciate the case studies provided and the regional examples chosen for the assessment. They loosen up the text, and make it more colorful and better comprehensible. Please ensure, though, that they are distributed evenly between all sub-regions throughout the assessment in order to better reflect the different sub-regions and their expertise. Some sub-regions (and/or countries) seem a little under-represented at this stage. This especially holds true for the West Asian sub-region as well as some tropical countries with a particular high biodiversity such as the Philippines, Papua-New Guinea and countries in the subtropical and temperate zone of the Asia Pacific region like Iran and Mongolia.	Thank you. We have hopefully improved this in the revisions, but acknowledge the difficulty in ensuring even representation of all subregions due to lack of expertise or of data.
Uta von Witsch & Ludwig Kammesheidt, IB & Stefan Hotes	general					Congratulations and thanks to all who contributed to this first draft version which can serve as a valuable baseline study. Aspects such as SDGs and the Aichi targets, which are of importance also for the global assessment, are explicitly addressed. We therefore believe that this reg. assessment will also be highly useful for the global assessment. Furthermore, the text is well balanced (not biased) and not policy prescriptive (indications are made in the comments below should this not be the case). These aspects are very much welcomed.	Thank you.

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Uta von Witsch & Stefan Hotes	general					An executive summary at the beginning of the assessment as well as short abstracts/ introductions at the beginning of each chapter would be welcomed. This would, to our opinion, improve the readability of the assessment and also the harmonization between chapters (see also next comment on this aspect). The same applies to the conclusions (especially the key findings and the policy options) which - where already included in the assessment - are very helpful and highly appreciated. Furthermore, it would be welcomed if all main findings within the abovementioned sections could be linked explicitly to the different respective sections of the assessment which they are referring to.	An Executive Summary has been added to the chapter following the common format across assessments.
Uta von Witsch & Stefan Hotes	general					It might be a good idea for the different chapter-teams to interact more closely. This could help to harmonize the chapters, to keep up the common thread, and to avoid redundancies and unnecessary repetitions.	Thank you for the suggestion. This has been attempted in subsequent meetings.
Uta von Witsch & Stefan Hotes	general					All regional assessments should follow the same definitions and (e.g.) classifications of ecosystem services. These aspects are important for the comparability of the results, especially since they all provide input for the IPBES global assessment (see also next comment on this aspect). Please ensure this is the case by cross checking with the other reg. assessments. Furthermore, sections on classifications and terminology of biomes and ecosystems should make better use of the more stringent ones already compiled for applied purposes e.g. in the case of wetlands (Ramsar Convention).	Co-chairs and CLAs have tried to ensure this through the internal review of drafts and sharing across assessments
Uta von Witsch & Stefan Hotes	general					Sections addressing general aspects that are of (the same) importance to all reg. assessments - like e.g. "What is a value system" (section 2.2.1, p. 11, lines 425-436), "The concept of living in harmony with nature ..." (section 2.2.1.2, p. 11, lines 438-459) and "Factors affecting the change in value systems" (section 2.2.2.1, p. 13, line 557 to p. 15, line 628) - should be identical for all reg. assessments. This will ensure a common basis and is important for the comparability of the results. Please ensure this is the case by cross checking with the other reg. assessments. These general (and global) sections could furthermore be kept as short as necessary for their understanding within the reg. assessment. They seem a little over-emphasized at this stage. All in all, the assessment might focus more on the Asia-Pacific region.	Co-chairs and CLAs have tried to ensure this during the internal reviews, and also by incorporating into chapter 1 some introductory text which was standardised across all regional assessments.
Wang Changyong	general					Suggestion: discuss how to further collect data and information from most of Asia pacific countries. For instance, increasing contributing authors, using questionnaire to collect key data (eg status and trend) at national level	Thank you for the suggestion. We tried this for the IPCC Asia chapter but got very little extra input for a huge amount of extra effort.
Penny van Oosterzee	Chapter 3	0				I found the first 20 or so pages of this chapter frustrating to read because they are badly written, with sentences seemingly thrown together, and often repetitive. There is a stark disparity in quality compared, for instance, to the excellent third chapter of the Land Degradation theme. The second half of this chapter is good but the references need checking since many cited are not listed. The chapter promised future dynamics but this is largely missing.	Thank you. We have taken this into account in the chapter revisions.
Pifu CONG	Chapter 3	0				It is advised that in the last part of the chapter there should be a general conclusion of the whole APR, which summarizes the overall specific feature of biodiversity.	Thank you. We have restructured to have the synthesis in the executive summary with trace-back to the chapter sections.
Pifu CONG	Chapter 3	0				The structure of chapter 3 is loose. It is advised that chapter is firstly depicted according to 5 subregion, i.e. West Asia (WA), South Asia (SA), South East Asia (SEA), North Asia (NA) and Oceania. Then in every subregion, different ecosystems are introduced. In such organization, the geographic integrity of regions can be maintained as the whole. Moreover, the authors can easily understand the overall character of each region.	Thank you for the suggestion. This would be difficult to do, since subregions don't have natural ecological boundaries.
Pifu CONG	Chapter 3	0				It is advised that in every subregion a summary of the area should be given to characterize the biodiversity for the biodiversity differs in different geographical areas.	Thank you. We have taken this into account in the chapter revisions.

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Pifu CONG	Chapter 3		0			The title of chapter 3 is status, trend and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people. So the introduction should include features of the biodiversity and ecosystem in the past, at present and in the future. There should be analyses of time series. So the authors can see the evolution direction of the biodiversity and ecosystem in this region. There should be several examples. In this draft, the conclusion is only depicted as increase or decline. The data analyses underpinning the conclusion are not adequate. The title of chapter 3 is status, trend and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people. So the introduction should include features of the biodiversity and ecosystem in the past, at present and in the future. There should be analyses of time series. So the authors can see the evolution direction of the biodiversity and ecosystem in this region. There should be several examples. In this draft, the conclusion is only depicted as increase or decline. The data analyses underpinning the conclusion are not adequate.	Thank you. This is a fair point but a lot of the data needed for such time series does not exist. We are asked to assess current status and current trends, so this had to be our priority.	
Pifu CONG	Chapter 3		0			The biodiversity in Chapter 3 lacks description of spatial distribution. In fact, the spatial location is very important for biodiversity. For example, the biodiversity differs much in different geographic areas with different altitude, topography, vegetation cover and precipitation. So it is advised to add the spatial feature description of biodiversity.	Thank you. We have taken this into account in the chapter revisions and complemented where possible.	
Pifu CONG	Chapter 3		0			As the key means of conservation of biodiversity, the protected areas are mentioned, but it is not adequate. It is advised to depict the status and trend of the protected areas as well as the biodiversity in them in every part of the region.	Thank you. This has been incorporated.	
Wang Changyong	Chapter 3		0			In summary, It is necessary to collect more data and information to present status and trends of BD and BES in AP and to use more figure and tables to show them.	Thank you. This has been incorporated.	
Wang Changyong	Chapter 3		1	83	1	86	BES or BS ?	Biodiversity and Ecosystems
Pifu CONG	Chapter 3		2	42	2	42	It is not suitable that 3.3.1.7 Islands are categorized into Terrestrial Biomes. Islands mentioned here mainly refer to oceanic islands. So it is advised to put Islands into Marine or put it as one unique type.	Thank you for your suggestion. However, we have not reflected this because they are terrestrial by definition.
Hisatomo Taki	Chapter 3		4	100	4	101	It could be needed to mention that levels and taxonomic groups of biodiversity are not fully available, as well.	Thank you. This has been done.
Thomas Brooks (IUCN).	Chapter 3		4	110	4	123	Good. Add citations or URLs for each of these key sources listed here.	Thank you. This has been done.
Penny van Oosterzee	Chapter 3		5	133	5	133	Are you confirming that you are disregarding the majority of species?	True, when using IUCN red lists, but terrestrial vertebrates have almost all been assessed and a sampled Red List is available for plants.
Peter Buchanan	Chapter 3		5	133	5	137	Another mega-diverse kingdom of biodiversity (separate from plants and animals) is the Fungal Kingdom. I suggest that it also be included along with "invertebrates" in line 136.	Agree. The text has been rephrased to cover this aspect.
Penny van Oosterzee	Chapter 3		5	139	8	288	This section is poorly written, sometimes making no sense, and too generalized without any backup examples or even brief statistics. It is not referenced at all. I'm not sure of the value of it.	Thank you. We have improved this by restructuring and revising.
Wang Changyong	Chapter 3		5	139	8	288	suggesting that 3.2 part may be delete and then rewrite to place they in the Chpt summary.	Thank you. We have improved this by restructuring and revising.
Penny van Oosterzee	Chapter 3		5	147	5	147	Why "accordingly". Makes no sense.	This text has been revised.
Wang Changyong	Chapter 3		5	154	6	185	need to provide some data for loss of BES in forest,grassland and agroecosystems,including the following described ecosystems.	We have deleted this section.
Hisatomo Taki	Chapter 3		5	155	5	155	Delete "," after "Asia".	We have deleted this section.
Penny van Oosterzee	Chapter 3		5	158	5	158	"...which await conservation assessment". This is a separate topic and and sits awkwardly at the end of this sentence.	We have deleted this section.

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Ludwig Kammesheidt, IB	Chapter 3	6	180	6	180	Please add "... and impacting water resources e.g. through overfertilization and pesticides."	We have deleted this section.
Hisatomo Taki	Chapter 3	6	180	6	185	It could be possible to add information of the other parts of APR or simply to mention more general trends on APR with broader geographic range.	We have deleted this section.
Ludwig Kammesheidt, IB	Chapter 3	6	182	6	185	You might want to include the vast areas of alang-alang (Imperata grass) in upland areas, for example, in the dryer part of Kalimantan and the Philippines which constitute a fire-climax community (costly to get rid of).	We have deleted this section.
Penny van Oosterzee	Chapter 3	6	210	6	210	How is freshwater a hotspot?	We have deleted this section.
Cameron Colebatch	Chapter 3	6	282	6	284	Statement would benefit from a reference.	We have deleted this section.
Wang Changyong	Chapter 3	7	232	7	233	over 70% remains undescribed in coastal zone or thw whole marine ecosystem?	We have deleted this section.
Penny van Oosterzee	Chapter 3	7	233	7	233	how can this be relatively well understood if 70% is undescribed?	We have deleted this section.
Hisatomo Taki	Chapter 3	7	266	7	266	It would be helpful to indicate what sorts or groups of organisms are the "large predators".	We have deleted this section.
Uta von Witsch	Chapter 3	7	279	7	279	Please provide a definition on 'biocultural diversity' (in the context of this IPBES assessment) in the glossary (see also p. 38, lines 1665ff).	Thank you. This has been done.
Cameron Colebatch	Chapter 3	7	279	8	288	Biocultural diversity is not a broadly accepted term in the biological sciences. Suggest including a footnote like that inserted in the recent Summary for Policymakers on Pollinators	We have deleted this section. The main section includes an explanation.
Hisatomo Taki	Chapter 3	7	279	8	288	Is biocultural diversity equal only to linguistic diversity? If so, adding a sentence to mention that would be helpful.	We have deleted this section. The main section includes an explanation.
Penny van Oosterzee	Chapter 3	8	281	8	281	Trends in linguistic diversity are very similar....to what?	We have deleted this section.
Wang Changyong	Chapter 3	8	281	8	281	ethnic people may also need to mentioned for bioculture.	We have deleted this section.
Penny van Oosterzee	Chapter 3	8	290	8	290	The two are conflated in these sections. If there are clear trends then these need to be made clear and separated from status.	Thank you. We are asked to consider them together and we usually use the same data sources for both.
Uta von Witsch	Chapter 3	8	294	10	378	It might be helpful to loosen up this section by e.g. including figures. The section is currently rather difficult to read due to the many numbers included in the text.	Thank you. This has been done.
Penny van Oosterzee	Chapter 3	8	296	8	297	Following my comment on section 3.2 a couple of sentences here from the first two paragraphs of 3.2.1 would avoid bland statements and repetition.	We have indeed deleted section 3.2 to avoid repetition.
Wang Changyong	Chapter 3	8	299	8	300	may use a figure to show changes in forest cover for Table3.1	Thank you for the suggestion.
Hisatomo Taki	Chapter 3	8	300	8	341	If available, adding maps of forest distributions in APR with two different periods of time would be helpful.	Thank you for the suggestion.
Penny van Oosterzee	Chapter 3	8	313	8	313	Need to say what the extent of forests in these countries is to make sense of this.	Thank you. We have prioritised other sections under limitations of length.
Ludwig Kammesheidt, IB	Chapter 3	8	315	8	316	You might want to include more recent data on the forest cover of Indonesia (co-authored by M. Hansen) (see B. Arunarwati Margono et al. (2012): Environmental Research Letters, Volume 7).	Thank you. We have revised overall to include more recent sources.
Penny van Oosterzee	Chapter 3	8	321	8	321	The word"particularly" needs to be changed to 'also'. Otherwise it sounds like these islands are in the north-east	Thank you. The text has been revised.
Ludwig Kammesheidt, IB	Chapter 3	9	337	9	337	", ... and Indonesia (50.6%) ... " This figure would only be comprehensible if you counted oil palm plantations, and rubber and cocoa plantations as the other half of the "forest cover" (in tropical Asia, forestry plantations are limited in scale). This, in turn, would be of significant importance for the status of biodiversity in the country. Please elaborate.	Thank you for the comment. Indonesia reports 50.5% of its forest cover is primary. This does not include plantations. Oil palm is not 'forest' in the FAO definition so it is not included at all. This has been reworded for clarity, but these are the only region-wide estimates available.

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Ludwig Kammesheidt, IB	Chapter 3	9	369	9	370	Please include: "... if they are protected or sustainably managed for timber, applying selective logging, reduced-impact logging and long cutting cycles (60-100 years) ..." (See e.g. Glauner et al. (2003): Growth and yield of tropical moist forest for forest planning: an inquiry through modeling. Canadian Journal of Forest Research, 33 (3), 521 - 535.)	Thank you. However, even twice-logged forests with no proper management retain a lot of biodiversity. Please see the references cited.
Wang Changyong	Chapter 3	10	378	10	378	need to present ststus and trends of BS for ecosystem. Also same for other ecosystem because assessment of BS is one of its focues.	Thank you. This is addressed under chapter 2 and not 3.
Wang Changyong	Chapter 3	10	380	12	460	this part only presented general description for grassland, a lot of data need to present status and trend for BES of the system.	Thank you. We have revised to focus more on status and trends.
Ludwig Kammesheidt, IB	Chapter 3	10	393	10	393	At the beginning of this paragraph, you might want to mention that natural grasslands and savannas are common in the subtropical and temperate zones of the Asia Pacific region (whereas in the tropics only small areas in montane zones such as Mount Kinabalu and floodplains are covered by this vegetaion type). In the latter context, please also see Table 3.4, p. 12, lines 433-434: In Indonesia the cover of natural grassland is very limited; there rather are vast areas of anthropogenic along-alang (see comment in line 63). Please clarify in the Table.	Thank you for the comment. However, there are natural grasslands and savanna in tropical Australia, India, and on some islands in eastern Indonesia.
Penny van Oosterzee	Chapter 3	10	394	10	398	This is a messy sentence. Delete the "Nevertheless" that starts the next sentence because it makes no sense.	Thank you. The text has been revised.
Penny van Oosterzee	Chapter 3	10	403	10	403	But this misses one of the most interesting things about Australia's grasslands and that is that they are dominated by reptiles and have the highest lizard diversity in the world.	Thank you. The text has been revised.
Penny van Oosterzee	Chapter 3	10	412	10	418	This is an awful sentence. It's long and has terms included in brackets that are unexplained and meaningless.	Thank you. The text has been revised.
Penny van Oosterzee	Chapter 3	10	418	10	419	In contrast to what? Terms like "accordingly" and "in contrast" are being used incorrectly and they make the messages nonsensical.	Thank you. The text has been revised.
Wang Changyong	Chapter 3	10	422	11	342	The IVC is too academic for decision-makers, suggesting to delete it or place it as an appendix.	This has been deleted.
Wang Changyong	Chapter 3	12	433	12	435	Data in tab 3.4 needs to be updated.They may not reflect current status.	This has been deleted.
Penny van Oosterzee	Chapter 3	12	434	12	table 3.4	Table 4. the heading Current Status. Is it current at 2002 which is the reference date from which the table is extracted?	This has been deleted.
Penny van Oosterzee	Chapter 3	12	450	12	450	what does established but incomplete mean in reference to small mammal decline? There are much more recent references for these declines also. See this, but there are others too: Lawes, M. J., D. O. Fisher, C. N. Johnson, S. P. Blomberg, A. S. K. Frank, S. A. Fritz, H. McCallum, J. VanDerWal, B. N. Abbott, S. Legge, M. Letnic, C. R. Thomas, N. Thurgate, A. Fisher, I. J. Gordon, and A. Kutt. 2015. Correlates of Recent Declines of Rodents in Northern and Southern Australia: Habitat Structure Is Critical. PLoS ONE 10:e0130626.	Thank you. The text has been revised.
Penny van Oosterzee	Chapter 3	12	453	12	462	This paragraph is a jumble of ideas and messages. Perhaps it would be best to simply tabulate the information according to subregions.	This has been deleted.
Hisatomo Taki	Chapter 3	12	464	13	507	I just wonder if there are some overlaps of contents here and the previous section, 3.3.1.2 Grasslands & Savannas.	The text has been revised to have no overlap.
Wang Changyong	Chapter 3	12	464	13	507	need data to decribe changes of key species and ES.	Thank you. The text has been revised.
Wang Changyong	Chapter 3	12	464	20	507	It seems to me that Status, change and trends of agro-biodiversiyt do not present here, especially for local crops and key and special species inhabited in farmlands.	Thank you. The text has been revised.
Penny van Oosterzee	Chapter 3	14	521	14	521	Desertification as a land degradation issue appears suddenly without introduction in a paragraph that is about deserts as natural habitat.	Thank you. The text has been revised.
Penny van Oosterzee	Chapter 3	14	527	14	528	This is a trite sentence. The Land Degradation chapters provide much better explanations.	Thank you. The text has been revised.
Pifu CONG	Chapter 3	14	529	14	531	The figure 3.1 is not clear. It is a common problem in the whole report. It is advised to draw the figures clearly in the report again.	The figure has been replaced.
Penny van Oosterzee	Chapter 3	15	542	15	543	The confidence categories in this table are nonsensical and often complete rubbish.	The tables have been replaced.

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Penny van Oosterzee	Chapter 3	15	545	15	546	This table should be an embarrassment for IPBES. What does "Being remote most have surpassed the CBD Target for Protection" meant. It is nonsense. The second row has a statement about invasive grazers that misses out the chief exotic grazer: cattle. The third row 'there are no data in Australia of the status of these communities is wrong. There are, at the least, State of the Environment" reports and Biodiversity reports. The table claims nevertheless that the communities are in reasonable condition because they are remote. But these are the regions with the highest mammal extinctions in the world and this statement is based on some misguided and ill informed view of Australia. The extinctions are ongoing. The confidence level of 'speculative' is total rot. These tables need to be deleted. Start again.	The tables have been replaced.
Penny van Oosterzee	Chapter 3	17	562	20	766	Chapter 3 of Land Degradation does a really good job of 3.3.1.5.	Thank you for the suggestion.
Ludwig Kammesheidt, IB	Chapter 3	17	572	17	572	To our understanding, rice consumption is rather declining in the Asia Pacific region, particularly in East Asia. Please check the statement in line 572 on p. 17.	This has been deleted.
Ludwig Kammesheidt, IB	Chapter 3	17	577	17	581	To link the problem of hunger to the whole Asia Pacific region seems too broad. Hunger is of particular importance in South Asia. Please differentiate in more detail.	This has been deleted.
Hiroaki Ikeda	Chapter 3	17	607	19	670	I think cropland types are very important to assess agro-ecosystems in AP regions. Especially, upland crop fields and lowland rice fields should be distinguished, because the degree of agricultural intensification and ES are different between them. At least, the dependence of BES on cropland types should be mentioned.	Thank you for the suggestion. It has been difficult to accommodate this without literature based evidence.
Uta von Witsch	Chapter 3	17	607	19	670	You might want to have a look at the findings of the German research project LEGATO (Land-use intensity and Ecological Engineering – Assessment Tools for risks and Opportunities in irrigated rice based production systems) in this context; they might provide additional value. E.g.: "Settele, J., Spangenberg, J.H., Heong, K.L., Burkhard, B., Bustamante, J.V., Cab-bigat, J., Chien, H.V., Escalada, M., Grescho, V., Hai, L.H., Harpke, A., Horgan, F.G., Hotes, S., Jahn, R., Kühn, I., Marquez, L., Schädler, M., Tekken, V., Vetterlein, D., Villareal, S., Westphal, C., Wiemers, M. (2015): Agricultural landscapes and ecosystem services in South-East Asia—the LEGATO-Project. - Basic Appl. Ecol. 16 (8), 661 – 664. DOI: 10.1016/j.baee.2015.10.003". You could also contact the project coordinator Prof. Dr. Josef Settele: josef.settele@ufz.de. He is also one of the Lead Authors for chapter 4 of this assessment.	Thank you for the suggestion. We have consulted and included the material.
Hisatomo Taki	Chapter 3	17	607	20	726	It might be worth to introduce the trends of biodiversity on "pastures" too, although there may be cases to overlap in Grasslands.	Thank you. The text has been revised.
Hiroaki Ikeda	Chapter 3	18	639	18	643	The abbreviation "HYV" was used in the 1st sentence. Thus, the words "High Yielding Varieties" in the 2nd sentence should be moved into the 1st sentence.	Thank you. The text has been revised.
Ludwig Kammesheidt, IB	Chapter 3	19	674	19	692	You might want to include further examples of agroforestry. For Indonesia, e.g., these would be jungle rubber, rattan garden, damar garden, fruit-tree garden, dusuns, etc. For literature review see Kaya, M. et al. (2002): The forest garden system of Saparua island Central Maluku, Indonesia, and its role in maintaining tree species diversity. Agroforestry Systems, Volume 54, Issue 3, pp 225-234.	Thank you for the suggestion. We have consulted and included the material.
Peter Buchanan	Chapter 3	19	694	19	708	Biodiversity of soil has been severely affected by fertiliser and pesticide use, destroying the natural mycorrhizal fungal associates that normally assist plant growth by absorption of minerals and water. These fungi may also confer disease and drought resistance on host plants. The ecosystem services provided by mycorrhizal fungi are repeatedly overlooked in IPBES documentation, yet are vital in natural ecosystems and can significantly benefit agriculture when systems seek to maximise (rather than reduce) soil biodiversity.	Thank you. The text has been revised.
Peter Buchanan	Chapter 3	20	728	20	766	For Table 3.5, I suggest that relevant additions include uses of fungi by New Zealand indigenous Maori for fire-carrying, as a source of pigment for tattooing, as food and as medicine - Reference: Fuller, R; Buchanan, PK; Roberts, M. 2004. Maori knowledge of fungi / Matauranga o nga Harore. In: McKenzie, EHC (ed.) Introduction to Fungi of New Zealand. Fungi of New Zealand 1: 81-118.	This table has been deleted to avoid overlap in scope with chapter 2.

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Penny van Oosterzee	Chapter 3	22	848	22	848	There are tens of thousands of islands in these archipelagos. Not hundreds.	Thank you. The text has been revised.
Wang Changyong	Chapter 3	24	961	24	961	suggesting to delete the para because it is not relative to AP.	Thank you for your suggestion. However, we consider that a general introduction is useful.
Wang Changyong	Chapter 3	27	1085	28	1162	Change of main lakes in size may be presented AP.	Thank you. The text has been updated where possible.
Wang Changyong	Chapter 3	27	1237	30	1237	status and trends of ES in key lakes and rivers may be presented AP.eg fish production and flood regulation etc. Also status and trends of plant species in water ecosystem need to be given.	Thank you. The text has been updated where possible, but avoiding overlap in scope with chapter 2.
Cameron Colebatch	Chapter 3	29	1186	29	1186	Remove normative statement.	Thank you. The text has been revised.
Ludwig Kammesheidt, IB	Chapter 3	29	1191	29	1193	Dams are not only constructed, or are already operating, on tributaries of the Mekong but are partly put or planned to be put in the main course of the river as well. Please include this in your assessment.	Thank you. The text has been corrected.
Wang Changyong	Chapter 3	30	1239	30	1239	Note:Information under 3.3.2.3 inland wetland may be mixed and duplicated with that in lake and river ecosystems.	Thank you. We have not seen any duplication.
Dr. Santosh Kumar Mishra	Chapter 3	32	1339	32	1360	<p>Before start of 3.3.3.2 Other Intertidal habitats (page 32, line 1362), add following text:</p> <p>Case Study: Mangrove Ecosystems for Climate Change Adaptation & Livelihoods (MESCAL) Project:</p> <p>Pacific Islanders are at the forefront of climate change; experiencing its varying impacts on coastlines, biodiversity, economy and most importantly on livelihoods. The conservation of mangroves and associated ecosystems is a key natural adaptation strategy and mitigation measure to climate change. Mangrove ecosystems provide goods and services highly valued by the people of the Pacific. However, this unique ecosystem faces continuing threats from overharvesting, degradation and land reclamation. Protection of mangrove ecosystems will in turn safeguard the livelihoods of Pacific Island communities, especially for coastal dwellers. Weak governance, disconnect between formal and traditional management systems, limited baseline information, weakening traditional management, lack of awareness and limited capacity are the key challenges of mangrove management in the Pacific. With the Mangrove Ecosystems for Climate Change Adaptation & Livelihoods (MESCAL) project, IUCN (a membership Union uniquely composed of both government and civil society organizations) Oceania seeks to address the key challenges of mangrove management to increase the resilience of the Pacific people to climate change and improve livelihoods. Objectives of the MESCAL project include: Improve livelihoods and conserve biodiversity,</p> <p>a) Empower communities to make informed decisions related to mangrove management,</p> <p>b) Increase institutional and technical capacity for improved environmental governance at all levels,</p> <p>c) Promote community based actions on the ground in mangrove management for improved resilience to climate change,</p> <p>d) Improve baseline knowledge about biological, economic, social and cultural aspects of mangrove resources and uses in each country and the link between healthy mangroves and disaster risk reduction, for informed adaptation to climate change at national and community level,</p> <p>e) Increase awareness at all levels of the role of mangroves and associated ecosystems in providing resilience to the impacts of climate change, and</p> <p>f) Investigate the feasibility for obtaining carbon credits for mangrove protection and reforestation, in the context of REDD+, and participating in the global carbon markets.</p> <p>By working with five Pacific Island Countries (Fiji, Samoa, Solomon Islands, Vanuatu and Tonga), IUCN Oceania will promote an adaptive co-management approach as well as the restoration of mangrove ecosystems. Donor of this initiative is German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) under its International Climate Initiative (http://www.iucn.org/content/protecting-mangroves-future, accessed on June 11, 2016).</p> <p><i>Annotations: I find the above information useful (which can be incorporated as case study in the chapter.</i></p>	Thank you. The suggestion has been considered in balance with the rest
Wang Changyong	Chapter 3	32	1341	32	1359	Mangrove change in size and species may presented in AP. Managrove is well studied and thus with a lot of data and information for it.	Thank you. The suggestion has been considered in balance with the rest
Ludwig Kammesheidt, IB	Chapter 3	32	1341	32	1360	For recent deforestation rates of mangroves in SE Asia you might want to check: D. R. Richards, D. A. Fries (2016), Proceedings of the National Academy of Sciences of the United States of America, doi: 10.1073/pnas.1510272113.	Thank you for the suggestion. We have consulted and included the material.
Wang Changyong	Chapter 3	35	1480	35	1501	suggesting to delete the para because it is a driver of natural BS and inland watre and coastal cosystems,which may be presented in Chpt4.	Thank you. We have retained as there was no significant overlap with the flow of chapter 4.

Reviewer Name	Chapter	From Page (start)	From Line (start)	To Page (end)	To Line (end)	Comment	Response
Ludwig Kammesheidt, IB	Chapter 3	35	1503	38	1663	You might want to address the impacts of deep-sea mining on biodiversity in this section, particularly for the Pacific region.	Thank you. This suggestion has been incorporated.
Danesto B. Anacio	Chapter 3	36	1563	36	1563	Aside from shipwrecks, there are also other materials which are used as artificial reefs. Various studies have been made as to the impacts of such materials.	Thank you. The suggestion has been considered in balance with the rest
Cameron Colebatch	Chapter 3	37	1628	38	1663	Please see the following report for more up to date information on the state of dugongs in Australia - http://nesptropical.edu.au/index.php/round-1-projects/project-3-5/	Thank you. This suggestion has been considered
Hisatomo Taki	Chapter 3	38	1667	38	1667	There must be some cases that biodiversity, species or groups of organisms are used as symbols (e.g national frag of Papua New Guinea). Such facts, which may not be quantitative, but could be included here or in other parts of this chapter.	Thank you. The elaboration of this aspect is under chapter 2.
Hisatomo Taki	Chapter 3	39	1694	39	1694	Delete "(" before "Diaz".	Thank you. The text has been corrected.
Hisatomo Taki	Chapter 3	39	1700	39	1703	Adding a map to see the distributions of language families may be helpful.	Thank you. It has been difficult to find a map for the whole region.
Ludwig Kammesheidt, IB	Chapter 3	39	1729	39	1729	Please include the main criteria for the 'global biocultural diversity assessment', which you are referring to in this section.	Thank you. It is earlier in the text.
Ludwig Kammesheidt, IB	Chapter 3	40	1756	40	1757	Please provide an explanation for 'biocapacity'.	Thank you. This has been incorporated.
Peter Buchanan	Chapter 3	41	1808	41	1815	Reference could be considered to the Ethnobotanical Database for New Zealand accessible at: http://maoriplantuse.landcareresearch.co.nz/WebForms/default.aspx	Thank you. This suggestion has been considered
Uta von Witsch	Chapter 3	41	1833	41	1833	Please rephrase: " Future of Biodiversity and Ecosystems in the Asia Pacific region " since this is and should be the focus of this assessment.	Thank you. This would be redundant since the whole assessment is indeed about the Asia Pacific region.
Thomas Brooks (IUCN).	Chapter 3	42	1858	42	1861	The current draft is weak on species information; this seems to be the only place it is mentioned aside from a few specific references in the regional summaries, especially for Freshwater (Section 3.3.2). It would be wise to incorporate synthesis from the latest Red List data (www.iucnredlist.org). Brooks et al. (2016) Scientific Data (http://www.nature.com/articles/sdata20167) summarised these data (and others) according to the IPBES regions and sub-regions, and would be the easiest place for the authors to access this information. All of the underlying data are freely available in Data Dryad (http://datadryad.org/resource/doi:10.5061/dryad.6gb90.2). For a template of how this might be done, see the IPBES ECA assessment, Ch 3, Lines 328-338 and Lines 3206-3304. IUCN stands ready to help with synthesis or interpretation if useful: please feel free to contact me directly (t.brooks@iucn.org) if so.	Thank you. We have taken this into account in the chapter revisions and complemented where possible.
Thomas Brooks (IUCN).	Chapter 3	42	1864	42	1865	The current draft is weak on the extent to which important sites for biodiversity are protected. Brooks et al. (2016) Scientific Data (http://www.nature.com/articles/sdata20167) also summarise data on protected area coverage of important sites according to the IPBES regions and sub-regions - these would be highly relevant to include here. For a template of how this might be done, see the IPBES ECA assessment, Ch 3, Lines 151-157 and Lines 2562-2616. IUCN stands ready to help with synthesis or interpretation if useful: please feel free to contact me directly (t.brooks@iucn.org) if so. Alternatively, this material could be placed into Chapter 6 - but either way, it should be included.	Thank you. We have taken this into account in the chapter revisions and complemented where possible.
Hisatomo Taki	Chapter 3	42	1867	42	1870	Adding an appropriate reference would be helpful if there is.	Thank you. We have restructured to have the synthesis in the executive summary with trace-back to the chapter sections where the references are found.