

Comments from 1st Review Phase of Chapter 4. Deliverable 2b. Americas Assessment on Biodiversity and Ecosystem Services.

Review Editor: Pedro Laterra

Affiliation: CONICET

Address: Fundación Bariloche, Avenida Bustillo 9500, 8402 San Carlos de Bariloche, Río Negro, Argentina

Email address: pedrolaterra@gmail.com

Review Editor: Carlos Eduardo Young

Affiliation: Universidade Federal do Rio de Janeiro, Instituto de Economia Industrial

Address: Av. Pasteur 250, Botafogo, 22290240 - Rio de Janeiro, RJ - Brasil

Email address: carloseduardoyoung@gmail.com

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	General Comment				For each Chapter, a half-Page abstract related to the background, methodology and key findings would be helpful, particularly for new readers.	Thank for the comment. A introduction will be included as well as the Executive summary with the key findings
German IPBES Coordination Office and national scientists	General Comment				Some sections in Chapter 4 are addressing general (and or global relevant) aspects that are of (the same) importance to all Regional Assessments - this should be kept as short as necessary. Main focus should be on examples with special relevance for the Americas Regions.	Thank for the comment. Sections were rewritten to bring information on the subregions (North America, Meso America, Caribbean, South America)

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	General Comment				Please provide clear structure and titles of Chapters. Actually there are too many sections with own titles. Titles are not always self-explanatory (e.g. Page 38 "North America and Northern Mexico"?).	This will revise in the next version of the document.
German IPBES Coordination Office and national scientists	General Comment				Many sections throughout the whole Chapter 4 are written in a poor language. Please use a clear and scientific wording.	This will revise in the next version of the document.
German IPBES Coordination Office and national scientists	General Comment				Please reflect the contents and outline on Chapter 4 in IPBES/3/6/Add. 1 and provide related input and "address issues covered by the Aichi Targets under this goal (Aichi Targets 5,6,7,8,9 and 10)".	This will revise in the next version of the document.
German IPBES Coordination Office and national scientists	General Comment				Indicating the concrete Aichi Targets 5, 6, 7, 8, 9 and 10 (see previous comment) will be crucial and of utmost importance to link all the Regional Assessments (including Americas) directly with the upcoming Global Assessment under IPBES and the the planned GBO5 under CBD. So we would like to encourage the authors to quote relevant Aichi Targets linked with concrete issues and findings.	This will revise in the next version of the document.
German IPBES Coordination Office and national scientists	General Comment				Consider quoting and reference to Hill et al (2015): A social–ecological systems analysis of impediments to delivery of the Aichi 2020 Targets and potentially more effective pathways to the conservation of biodiversity. Global Environmental Change 43, 22-34.	This reference will be included

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	General Comment				Important hints concerning knowledge gaps are of utmost importance and the authors are therefore encouraged to outline major knowledge gaps more clearly with the end to include them in the upcoming SPM, in terms of capacity building needs and/or research needs at the regional/subregional and national levels. The authors are also encouraged to outline major regional discrepancy in available knowledge and knowledge gaps more clearly as their identification and classification are necessary contributions to support decisions, conservation and for ongoing and future assessments.	A section on Knowledge gaps is included in the outline and the major points will be included in the Executive summary
German IPBES Coordination Office and national scientists	General Comment				Please select certain relevant key messages for the upcoming SPM and add uncertainty statements or qualitative confidence levels to all of them to ensure the credibility of the assessment.	Executive summary will be included with key findings and confidence level according IPBES guidance
German IPBES Coordination Office and national scientists	General Comment				We greatly appreciate the well structured approach to choose the biomes most relevant for the Americas (see in Chapter 1, Line 536, Table 1) which are investigated and referred to in detail in all 6 Chapters. Please ensure that an order once agreed upon (which might be the one in Chapter 1, cited above) is maintained, as in the current sections of the document the order is very often mixed up and might complicate conclusions concerning certain biomes.(seeChapter 4 e.g. Line 261ff).	We will follow the presentation order of the biomes (units of analysis) defined by Chapter 1
German IPBES Coordination Office and national scientists	General Comment				The recently published WWF Amazonas Report 2016 might be considered as it offers some new findings and provides many relevant publications. The report draws heavily on research carried out by academics, independent	Thank for the reference.

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German IPBES Coordination Office and national scientists	General Comment				With reference to challenges and concerns on Islands we would like to suggest to include some more of the broad research results concerning Galapagos Islands (which until now are missing in nearly all of the Chapters), as it is not only of historical importance for global biological research but certainly might be one of the most investigated regions on earth, with a great amount of crucial findings concerning biological, socio-ecological and socio-economic perspectives. Channel Islands of California though might be an example representing North America.	Thank you for comment. We will try to bring more examples on Islands in the next version of the document.
German IPBES Coordination Office and national scientists	General Comment				One of the most exemplary cases of migration throughout Americas (North-to Mesoamericas) is that of the monarch butterfly ( <i>Danaus plexippus</i> ), which is not mentioned in any of the current Chapters. We would like to suggest reporting research results on this species, as this could serve as a Case Study, especially on some transboundary aspects and relationships of different biomes and threats.	Thank you for the comment. We will consider the suggestion in the revised version depending on the space limitation and other demands from external reviewers.
German IPBES Coordination Office and national scientists	General Comment				Case Study on Amazonas (Chapter 1, Page 21, Line 613 to 683) is focussing on global leakage effects, too. Leakage should be in the focus on (sub)regional AND on global level; please provide more relevant research data on leakage effects.	Leakege will be addressed in Chapter 6 as a consequence of governance and policies related to land use.
CONABIO	General Comment				Este capítulo nos parece demasiado largo y disperso. Se incluye mucha información redundante y otra que no es relevante. Se sugiere sintetizarlo y editarlo.	Next version will be shorter and revised to avoid redundancies
CONABIO	General Comment				Consideramos que este capítulo debe abordar a detalle el tema de uso sustentable, y debe contener mucho más detalles sobre minería particularmente en América Latina.	Impacts of mining will be included in the Pollution section
Fernando García-Préchac	Contents	32		33	The subject is duplicated	It was formating mistake and will be corrected.
Fernando García-Préchac	Executive Summary	180		181	This comment indicates a weakness of the report and should be emphasized	The comment is placeholder for a topic that will be covered in the coming versions.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	1	1	1	1	Please use the title agreed upon under Chapter 4 outline in IPBES/3/6/Add. 1 which is "Direct and indirect drivers of change in the context of different perspectives of quality of life".	Agreed. Title will be changed.
Royal Gardner	2	25	2	29	An organizational question: wouldn't it be better to start with direct anthropogenic drivers first?	Outline was defined by the plenary.
Orlando Rey	6	168	6	179	Executive Summary. Which is the level of confidence of this findings, based in the IPBES four-box model of confidence?	Level of confidence will be included for all the statements in the Executive Summary.
Liliana Bravo-Monroy	6		103		GENERAL COMMENTS: There would be useful to focus the contents of Chapter 4 on direct and indirect drivers and align them with key topics: status/current situation per sub-region, trends/indicators and impact of these drivers on ecosystems/ biomes. In this way, the interrelations of those drivers can be elicited afterwards. There would be helpful that Introduction describes what the authors hope to achieve and main objectives of the chapter.	Introduction will include a conceptual figure about the drivers that will be considered
Liliana Bravo-Monroy	6	162	6	179	It would be informative to mentioning concrete cases/examples of governance, institutions, economic growth, population growth etc. as drivers of change in particular regions of the Americas.	Due to space limitations, a table will be included with different cases of governance. This will be also crossreferences with Chapter 6.
Liliana Bravo-Monroy	6		12		In order to achieve a major impact on readers (e.g., decision-makers), there would be beneficial to firstly include the anthropogenic driver section and secondly, the direct natural driver section. On the other side, and given the relevance of the subject, the "Direct natural drivers" section appears to be short.	Outline and order of sections were defined by the plenary. Unfortunately due to page limit the Natural drivers section can not be extended unless we reduce other sections.
German IPBES Coordination Office and national scientists	6	162	6	181	Key introduction for this Chapter. Should be completed (direct drivers). Please provide congruent definitions for all Chapters in this assessment and avoid unnecessary redundance.	Agreed. Definitions will be checked with the different chapters for consistency.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	6	197	6	200	Please include the general role of disturbance on biodiversity see Turner et al.. Landscape Ecology Fig. 7.16 with relation of disturbance frequenz and area dimension on ecosystem stability.	Agreed. Reference and concept will be included.
Liliana Bravo-Monroy	7	215	7	219	It would be helpful to also including the geographical distribution of natural disasters by each sub-region of the Americas.	Need to check if such a figure is available
Liliana Bravo-Monroy	8	226	8	228	It would be useful to including some additional details of disasters in South America.	Information is now presented for the different subregions (including South America)
German IPBES Coordination Office and national scientists	8	222	8	224	Fig. 4.1 will be better with differentiation by Biomes or Countries, NOT by continents as this istoo general.	Agreed. Also due to space limitations, this figure will be deleted.
Liliana Bravo-Monroy	9	241	9	242	Box 4.1: El Niño and la Niña events are perhaps one of the most important climate phenomemon in the north of South Ameica (e.g., Colombia, Ecuador, Peru). Their effects have been strongly intensified by the effect of climate change with cycles from extreme drought to torreantial rains and floods. Thus, given the effects for the region, there would be useful to including further deatils of this unusual climate oscillation.	Agreed. This will include but not is an extensive way due to the page limit.
Liliana Bravo-Monroy	10	248	12	348	Given the importance of ecosystem responses to climate variability, it would be useful including ideas of cases/studies related to how specific or representative ecosystems in North, Central and South America have responded to disturbance regimes (Further to the cited cases of biomes in Chile, USA, and Canada).	Due to space limitations, comprehensive examples will be difficult to include.
Margot Hurlbert	10	250	10		to say that there is burgeoning literature on this, and thenonly have a reference from 1996 seems not substantial	Agreed. Addtional and more recent references will be included.
German IPBES Coordination Office and national scientists	10	260	10	260	Please use a clear and scientific wording.	The title of the section was agreed in the First LA Meeting in Bogota but it will be changed.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Liliana Bravo-Monroy	11	318	11	332	Useful information might be of interest, inter alia:	We thank the reviewer for the references. We will check for citation in this section.
Liliana Bravo-Monroy	11	318	11	332	<a href="http://www.mobot.org/mobot/research/paramo_ecosystem/introduction.shtml">http://www.mobot.org/mobot/research/paramo_ecosystem/introduction.shtml</a>	We thank the reviewer for the references. We will check for citation in this section.
Liliana Bravo-Monroy	11	318	11	332	Ruiz, V., Moreno, H. A., Gutiérrez, M. E., Zapata P. A. (2008). Changing climate and endangered high mountain ecosystems in Colombia. <i>Science of The Total Environment</i> , 398 (1-3): 122-132	We thank the reviewer for the references. We will check for citation in this section.
Liliana Bravo-Monroy	11	318	11	332	Velásquez-R., C. A., and Hooghiemstra, H. (2013). Pollen-based 17-kyr forest dynamics and climate change from the Western Cordillera of Colombia; no-analogue associations and temporarily lost biomes. <i>Review of Palaeobotany and Palynology</i> , 94: 38-49	We thank the reviewer for the references. We will check for citation in this section.
Joel Houdet	12		22		Indirect anthropogenic drivers should address in more depth two key topics: harmful subsidies and national + business accounting systems	OK. Covered with new text under Governance systems and institutions
Liliana Bravo-Monroy	12	351	12	362	Environmental Degradation: It would be interesting to including examples of two different sites with contrasting conditions e.g., high and low levels of conservation and their respective connection with the vulnerability to natural hazards.	Agreed. An example will be included (probably deforestation vs. Landslides or coastal protection).
Liliana Bravo-Monroy	12	372	12	372	INDIRECT ANTHROPOGENIC DRIVERS	
German IPBES Coordination Office and national scientists	12	349	12	349	Please provide scientific and clear language. This section should be elaborated in the context of SDGs.	The title of the section was agreed in the First LA Meeting in Bogota but it will be changed.
German IPBES Coordination Office and national scientists	12	372	12	372	Please consider changing order, reflecting first on "Direct anthropogenic drivers" (see Chapter 4.2.1.3, Page 22).	We thank the reviewer for the comment but we think that as indirect drivers have strong influence on direct drivers they should presented before.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Orlando Rey	13	388	13	391	What about, science, and cultural and religious belief as indirect drivers?. It seems to be useful to have a Box at the beginning of the Chapter (or in chapter 1) with the full relation of the drivers (direct and indirect), to be considered along the whole review. While going through the different chapters, some differences appear in the treatment of that issue. So to fix it since the beginning is useful as a matter of consistency.	Indeed values and governance are indirect drivers. Some examples on how values interact with environmental change and conservation will be included. Definitions will be checked among for consistency.
Liliana Bravo-Monroy	13	393	14	446	This section provides broad generalities. Given the impact of institutional and governance arrangements on biodiversity, ecosystem functions and ecosystem services, there would be valuable to including details or specific experiences/cases at community/local/national/sub-regional scales in North, Central and South America. It would be interesting to note how a particular governance scheme (formal and/or informal) contribute to the exercise of authority, management and access to natural resources through institutions, policies, traditions, cultures, and societal norms. Thus ensuring (or not) better living conditions for the human wellbeing and biodiversity. For instance, societies are shaped by powerful social norms and institutions; gender and age play a significant role in the livelihood strategies of the majority of households e.g., gender division of labour. On the other side, a sub-section could analyse the role of multinational companies in the implementation of agricultural commodities (e.g., biofuels).	Agreed. Due to space limitations, a table will be included with different cases of governance. This will be also crossreferences with Chapter 6.
Margot Hurlbert	13	403	13	404	governance failures result in resource crisis	Unfortunately the comment too vague to be addressed properly.
German IPBES Coordination Office and national scientists	13		14		The discussion on governance systems is appreciated.	Agreed. Due to space limitations, a table will be included with different cases of governance. This will be also crossreferences with Chapter 6.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Orlando Rey	14	148	14	148	On considering economic development pag.14 line 448, it may be useful to provide some information on the current debate of the “extractivism” in latin America and its impact on BES. Consider ECLAC as a source.	Cultural & religious belief is included in the last subsection of this section.
Liliana Bravo-Monroy	14	452	14	456	There would be useful to describe the argument with reasons/cases/statistical data in order to support the statement of a positive impact of economic growth on biodiversity conservation.	Good suggestion, but not possible to go into details or case studies due to space limit.
Liliana Bravo-Monroy	14	448	16	511	Economic development section: Information related to the ecological footprint is helpful and provides a broad context at continental and subregional scales. It would be also useful to including information about the interrelations between the status of particular ecosystems/biodiversity hotspots and the impact of specific economic activities/land-uses at multiple scales (local, national, subregional).	We agree that it would be interesting but the scale of economic indicators do not match well wiht the scale of biodiversity hotspots or specific ecosystems. The section of interactions between direct and indirect drivers can bring some cases if the scales of indicators are compatible.
Sophie Avila	14	448			The document presents negativa aspects of economic growth and just a few, I think the discussion needs to include the type of economic growht, there are several proposals on decoupling or degrowth that need to be mentioned.	Decoupling treated in Table 4.3. Not possible to go into details or case studies due to space limit.
German IPBES Coordination Office and national scientists	14	463	14	463	Please consider changing GDP into GHG.	OK. % of GHG added.
Magaly Ramos	14	439	14	443	The relevant aspects to reconcile in order to maximize the agricultural production and the environmental conservation, involves connecting production, information and people on a larger scale. To do so you only	Noted. We agree with the comment but policy options will be presented in more detail in

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Magaly Ramos	14	439	14	443	The issue is what the country choose?, how is governance and institutionalism?, does the will exist ?, How does the management unit defines "landscape" ?, How to translate the concept of landscape management so that i can be understood by the authority and the people who manage a territory ?. The issue is how to communicate the importance of maintaining the ecological vertical and horizontal integrity between different altitudinal floors, and in many cases it is the water the integrating element for agricultural, livestock activities and development of cities.	Noted. Partialy cover with new text added under Governance systems and institutions.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Magaly Ramos	14	439	14	443	<p>CASE: PRODERN Experience  <a href="http://prodern.minam.gob.pe/">http://prodern.minam.gob.pe/</a></p> <p>The Strengthening Capacities for Local Economic Development and Strategic Management Program - PRODERN, from the Ministry of Environment and financed by the Belgian Technical Cooperation, aims to reduce the poverty of men and women of the Andean regions (Ayacucho, Huancavelica, Junin, Pasco and Apurimac) through the conservation and sustainable use of natural resources and biodiversity.</p> <p>PRODERN seeks to support the implementation of the National Environmental Policy (NAP) in its axes: 1) Conservation and sustainable use of natural resources and biodiversity, and 3) Environmental Governance promoting its articulation with the National Environmental Management System (SNGA ) from institutional strengthening and development of intervention pilot experiences with regional and local actors its scope of intervention.</p> <p>The focus of intervention of PRODERN has been managing climate-smart multifunctional landscape, which aims to maintain the ecological integrity (representativeness, functionality, and connectivity) of the ecosystems and its scope of intervention, without altering the sustainable economic development and equitable set of different actors through their participation or consultation for decision-making. For this case the integrity is given by the water that supports agricultural and livestock activities in the area. In that sense PRODERN sought the facilitation of the articulation between the actors in the production chain and to do so it defined the strategy for scaling of the local to the regional aspect</p>	Noted, but not possible to go into details or case studies due to space limit.

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Liliana Bravo-Monroy	16	512	19	556	Trade & Finances section: A broad context is provided with useful financial data and economic indicators. However, it would be helpful to including information of cases/examples about their relations to nature that have brought deep changes in the ecosystems/landscapes in North, Central and South America. For instance, it would be interesting including in Table 4.6 one or two additional columns with info related to the impact of extractive activities (e.g., gold and coal mining, oil) on biodiversity and ecosystems; cases comparing and contrasting the percentage/representativeness of natural habitats/biodiversity measures in the progression from biodiversity rich areas to zones with loss of biodiversity. On the other hand, " <b>land grabbing</b> " has had a major impact on land use. It could be important to consider its effect in Latin American countries.	Impacts of mining will be considered in the pollution section. We will insert a cross reference to this section in the Economic Growth subsection.
German IPBES Coordination Office and national scientists	16	500	22	659	Quoting IPBES 3c and GBO4 is highly appreciated.	Thank you for the comment.
Violaine Brochier	16	496	16	511	I am not a specialist, sorry if my comment is not relevant. Concerning the ecological footprint results are given explain that carbon account for the main part of the total ecological footprint. Is it relevant to be based on ecological footprint ? Because by the methodology of ecological footprint, there are some biases that give more importance of carbon because it is well documented. And other aspects could have been taken into account (ie. other drivers?).	That's true. Ecological footprint analysis has limitations, but not alternative comprehensive analysis was found.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Liliana Bravo-Monroy	19	557	20	600	Technological development section: As stated above, a broad context is provided with useful information. However, it would be interesting to including information of cases/examples about their relations to their effect on particular ecosystems or biodiversity rich areas in the Americas. There would be interesting a panoramic view of cases with the interrelation between regional, subregional, national and local levels.	Reference added on agroecology & "biopiracy". Limited space to go into detailed case studies.
Sophie Avila	19	557			table tittle is nor linked with the information provided	New Column added to the Table with information on R&D/GDP.
Sophie Avila	19	557			There are may examples of clean technology that are not mentioned as solar energy	The focus was on the relationship between technology and BD.
Magaly Ramos	19	565	19	600	The speed of technological change leads to an ethical challenge to the elections on the economic and sustainable development of the country, particularly in mega-diverse countries. The choice of modes or production technologies in agriculture on natural ecosystems leads to reflections to which are "good agricultural practices in partner ecosystems (ecosystem in use), where ancestral knowledge, local or traditional practices can be appreciated as technology assets " since they results from adaptations of farming systems in the ecosystem.	Reference added on agroecology in this section.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Magaly Ramos	19	565	19	600	<p>On the other hand, the use of technology should look under the magnifying glass of the precautionary principle, due to genetic impacts "break of the evolutionary system" that bring as a consequence the standardization of species and the demand for a package of actions for the development of such technology.</p> <p>Therefore, in diverse countries the choice of modes of production has to be in balance or in accordance with the natural infrastructure, and as a result of them obtaining a portfolio of differentiated products accompanied by a national-regional-local scale. The question here is what the changes in governance and institutional conditions are to build the conditions and open the strategic path for agricultural development based on the natural preserved infrastructure, that gives a natural comparative advantage.</p>	Thank you for the comment.
Liliana Bravo-Monroy	20	602	21	622	Demographic trends section: As mentioned, a general context is provided. There would be helpful to also including explicit links between population fluctuations and land use changes. For instance, Geist and Lambin (2001) present empirical evidence from 152 sub-national case studies on deforestation, stating that population dynamics are the fifth-most important indirect driver of tropical deforestation.	Comments No. 64-66 are related. New text added using this source in the section on governance.
Liliana Bravo-Monroy	20	602	21	622	The following source might be of interest: Geist, H., Lambin, E. F. (2001). What Drives Tropical Deforestation? A Meta-Analysis Of Proximate And Underlying Causes Of Deforestation Based On Subnational Case Study Evidence. LUCC report series No. 4. Available on: [ <a href="http://www.pik-potsdam.de/~luedeke/lucc4.pdf">http://www.pik-potsdam.de/~luedeke/lucc4.pdf</a> ] Access date: 7 July 2016	Comments No. 64-66 are related. New text added using this source in the section on governance.
Liliana Bravo-Monroy	21	623	22	645	Welfare section: As cited, helpful generalities are provided. Nevertheless, evidence about the connection of biodiversity loss/deforestation to the economic indicators described would strengthen the contents of this section.	Comments No. 64-66 are related. New text added using this source in the section on governance.

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German IPBES Coordination Office and national scientists	21	623	21	659	Please provide scientific and clear language. This section should be elaborated in the context of SDGs.	Reference to SDGs added, as well as ILK text.
Liliana Bravo-Monroy	22	646	22	659	Broader societal factors: It would be interesting to describe those factors in detail through examples or particular cases for each subregion of the Americas. Given the richness in biological and cultural terms, it would be helpful to including cases or experiences that reflect successful experiences in biodiversity conservation, restoration and sustainable use, including those carried out by indigenous people and local communities.	Additional text on ILK included.
Liliana Bravo-Monroy	22	660	22	660	DIRECT ANTHROPOGENIC DRIVERS:A better resolution of the figures would welcome.	Agreed. Figures will be improved for the next version of the document.
German IPBES Coordination Office and national scientists	22	653	22	659	The correlation of biodiversity diversity loss and linguistic diversity loss remains very unclear. Capturing holisitc values should be elaborated in strong context with experts findings concerning Deliverable 3d (diverse conceptualization of values).	These topics should be addressed in Chapter 2 of the Regional Assessment
German IPBES Coordination Office and national scientists	22	660	22	660	Numbers of Chapters are quite unclear (4.2.1.3 without text....!?).	Agreed. A careful revision will be performed for the next version in terms of the format.
German IPBES Coordination Office and national scientists	22	661			Some sections in Chapter 4.2.1.4 are addressing very general (and or global relevant) aspects that are of (the same) importance to all Regional Assessments - this should be kept as short as necessary. Main focus should be on examples with special relevance for the Americas Regions. Please provide clear and scientific language.	Agreed. The text will be revised to provide more information on the regional aspects.
German IPBES Coordination Office and national scientists	23	696	23	701	Refer to Fig. 4.9; 4.2 to point out main regions degraded in America as NW-Argentina, Andes, NE-Brazil, mountain area in Mesoamerica, NW- and NE-Mexico.	Agreed. Comments on degradation in other regions and biomes will be included.

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German IPBES Coordination Office and national scientists	23	673	25	726	Please provide a clear definition of "forests" (source? FAO?) and clarify which data/numbers trends are based on. Definitions of "forest" concerning biodiversity and ecosystem services have a huge impact on conclusions and evidence (e.g. monocultural and planted forests are inconsistent to biodiversity richness and secondary forests have other impacts than primary forests). A forest area as such is not valid as indicator for its biodiversity. Furthermore different effects and impacts concerning afforestation with native versus non-native trees/species should be discussed.	Definitions of units of analysis will be provided in chapter 1 of the Regional Assessment.
Liliana Bravo-Monroy	27	756	27	758	It would be interesting to provide more details about the levels of urbanization in specific countries of Central and South America.	Urbanization will be discussed according to sub-regions (North America, Mesoamerica, Caribbean and South America).
Liliana Bravo-Monroy	27	760	27	772	It would be interesting to underpin those influences by including more details through particular cases/examples for each subregion of the Americas.	Examples for the different subregions will be included when available.
German IPBES Coordination Office and national scientists	27	758	27	758	Fig. 4.6: it would be helpful if a figure with urbanization development with countries in LAC could be included (not only on global scale).	Agreed. Due to space limitations, this figure will be deleted.
German IPBES Coordination Office and national scientists	27	762	27	767	The pure correlation of population growth and forest loss is not valid, it depends on time scale, time period and how much forest still exist (area).	Agreed. This will be revised.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Liliana Bravo-Monroy	28	779	29	810	Impacts of land degradation on biodiversity section: As mentioned above, generalities are provided. This section would gain a better understanding by including particular cases or evidence of impacts on typical/representative biodiversity from countries by each sub-region in the Americas e.g., In relation to land degradation and land changes, could agricultural activities and deforestation be considered as the most severe drivers of biodiversity loss in particular zones of the Americas? What measures of biodiversity loss? For instance, specific impacts on biodiversity indicators (e.g., abundance and distribution of selected species, coverage of protected areas).	Agreed. Comments on degradation in other regions and biomes will be include.
German IPBES Coordination Office and national scientists	28	779	28	794	The role of habitat size in relation to species areal home range should be discussed more into deep; fragmentation and size of protected area are critical for biodiversity.	We agree with the comment but unfortunately due to space limitation we will not be able to expand this topic substantially.
German IPBES Coordination Office and national scientists	28	797	28	800	One of the most exemplary cases of migration throughout Americas (North-to Mesoamericas) is that of the monarch butterfly ( <i>Danaus plexippus</i> ). We would like to suggest reporting research results on this species, as this could serve as a Case Study, especially on some transboundary aspects and relationships of different biomes and threats/drivers.	Thank you for the comment. Unfortunately we will have to limit the presentation of case studies in the chapter.
Liliana Bravo-Monroy	29	811	32	875	Impacts of land degradation on ecosystem services section: broad generalities are described. As suggested above, it would be also helpful including cases or evidence of impacts of land degradation on representative ecosystem services from countries by each sub-region in the Americas e.g., particular cases of land degradation (where/why there is loss of biological, biophysical, or economic productive capacity of the land) with their effects on the delivery of specific ecosystem services (cultural, provisioning, supporting, or regulating services).	Agreed. Comments on degradation in other regions and biomes will be included. Impacts on NCPs will be also presented in Chapter 2.
German IPBES Coordination Office and national scientists	29	811	34	894	Provide appropriate cross cutting of informations with experts working on Deliverable 3bi on Land degradation (e.g. Joint author meeting in Bonn, Germany (22-26 August 2016).	Noted.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	30	817	30	824	Please specify GHG-emissions and carbon decrease by land conversion not so much on global level, but on level of LAC; see: Brienen RJW et al. 2015: doi:10.1038/nature14283 and Don A. et al. 2011: Global Change Biology 17: 1658-1670.	Noted.
Liliana Bravo-Monroy	32	852	32	856	This paragraph might be controversial if we take account of cases such as the alarming increase in staple grain prices that occurred in 2007-08 by, among others, the diversion of grains to biofuel production at around the same time.	
Liliana Bravo-Monroy	32	876	33	894	Impacts of Restoration on Biodiversity and Ecosystem Services: I would suggest to include this section once the totality of drivers has been described.	Thank for the comment. We are following the outline defined by the scoping process.
German IPBES Coordination Office and national scientists	32	847	32	851	Please specify loss of soil organic carbon for LAC by reference Lal, R. et al. 2006: Carbon sequestration in soils of Latin America.	
Liliana Bravo-Monroy	33	891	33	894	It would be interesting to provide a few more details of rural residential land uses in Oregon.	Too specific considering all the topics to be covered in the chapter.
German IPBES Coordination Office and national scientists	33	885	33	888	Please focus on Americas with concrete numbers on regional level. Actually numbers are very global and might contribute to general aspects that are of (the same) importance to all Regional Assessments. These aspects might provide input for the IPBES global assessment.	New version of the document will present the information by subregion (Norh, Meso, Caribbean and South America) and then by unit of analysis if data are available.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Liliana Bravo-Monroy	34	895	42	1220	Biome-species summaries in selected subregions: This section presents current conditions of biomes and the impact of direct drivers on those conditions are briefly described. There would be helpful to organise information per each sub-region of the Americas by increasing and underlining links between direct drivers (e.g., land use and cover change, habitat conversion, land management practices, climate variability and change, pollution, etc.) and biodiversity loss per biome. In particular, it would be useful to using subtitles/subsections per each driver aimed at focusing on the connection between a driver and a biome within the respective sub-region (North America, Mesoamerica, the Caribbean and South America). Thus abundant and unnecessary information can be eliminated from the section.	New version of the document will present the information by subregion (Norh, Meso, Caribbean and South America) and then by unit of analysis if data are available.
Liliana Bravo-Monroy	34	910	34	920	The Andes Mountains: It would be also useful including information related to a high mountain biome: in the tropics of the Americas, high mountain ecosystems (Paramo ecosystems) are regulators of Andean hydrology and are among the most sensitive environments to changes in climatic conditions occurring on global, regional and local scales. It is concentrated in the northwest corner of South America, mostly in Colombia, Venezuela, and Ecuador.	Information on climate change impacts in high mountain ecosystems will be included.
German IPBES Coordination Office and national scientists	34	905	34	926	Development and change of drivers could be better and described more in detail - mainly for the Amazon see e.g. Nepstad et al. 2014: Science 344. 1118-1123.	Thanks for the reference. However due to space limitation it would be difficult to expand specific cases.
German IPBES Coordination Office and national scientists	34	912	35	922	These sections focussing on the issue of mountains might be shifted to or at least cross cutted with Chapter on Mountains on Page 72 (Chapter 4.2.1.7).	

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	35	928	35	966	For the tropical dry forests (TDF) the drivers and land use change (LUC) are very general described; look at colonization development and drivers with international companies for forest conversion with soy boom etc.; e.g. Redo et al. 2013 Journal of Land Use Sciences 8; 123-153; more detailed information on LUC in the Dry Chaco see Grau et al. Guest Editorial, part of a Special Feature on The influence of human demography and agriculture on natural systems in the Neotropics Globalization and Land-Use Transitions in Latin America. H. Ricardo Grau 1,2 and Mitchell Aide 3 Grau, H. R., N. I. Gasparri, and T. M. Aide. 2005. Agriculture expansion and deforestation in seasonally dry forests of northwest Argentina. Environmental Conservation 32:140–148.	Thanks for the reference. However due to space limitation it would be difficult to expand specific cases.
German IPBES Coordination Office and national scientists	36	968	36	968	Title is very confusing focussing on different biomes at the same time (grassland, woodland). Please provide some data on North American biomes as well (e.g. plains are missed completely in this section).	This will be revised.
German IPBES Coordination Office and national scientists	36	968	38	1091	Please consider quoting Bond, W. (2016), "Ancient grasslands at risk" in Science Vol 351; p.120-122 revealing striking differences in old-growth versus secondary grasslands and the challenges in replacing them by afforestation projects	Thank you for the reference. Afforestation risks in grass-dominated ecosystems will be mentioned.
German IPBES Coordination Office and national scientists	38	1068	38	1076	Provide more detailed information on LUC in the Dry Chaco; see Grau et al. Guest Editorial, part of a Special Feature on The influence of human demography and agriculture on natural systems in the Neotropics Globalization and Land-Use Transitions in Latin America. H. Ricardo Grau 1,2 and Mitchell Aide 3 Grau, H. R., N. I. Gasparri, and T. M. Aide. 2005. Agriculture expansion and deforestation in seasonally dry forests of northwest Argentina. Environmental Conservation 32:140–148.	Thank you for the reference. Deforestation in the Chaco will be included in the South America subsection on Habitat conversion.
German IPBES Coordination Office and national scientists	38	1092	38	1092	Title is very confusing focussing on a region and not addressing a biome. Please provide clear wording, structure and subdivision in Chapter 4.	This will be revised.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	38	1077	38	1091	More information for the Cerrado see Resck DVS, Vasconellos CA, Vilela L, Macedo MCM (2000) Impact of conversion of Brazilian Cerrados to cropland and pastureland on soil carbon pool and dynamics. In: Lal R et al (eds) Global climate change and tropical ecosystems. Adv Soil Sci, CRC Press, Boca Raton, Florida, pp 169-196.	Thank you for the reference. Deforestation in the Cerrado will be included in the South America subsection on Habitat conversion.
German IPBES Coordination Office and national scientists	41	1173	41	1182	Please provide cross cutting with the issue "dams in the Amazon region" (see Chapter 2, Page 15, Line 469-482 and Page 47, Line 1492-1496).	Impacts of dams in the Amazon will be included in the South America subsection on Habitat conversion.
German IPBES Coordination Office and national scientists	41	1173	41	1182	The recently published WWF Amazonas Report 2016 might be considered as it offers some new findings and provides many relevant publications. The report draws heavily on research carried out by academics, independent researchers and other NGOs. More than 300 key references and notes are given. (see: <a href="http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_living_amazon_report_2016_mid_res_spreads_1.pdf">http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_living_amazon_report_2016_mid_res_spreads_1.pdf</a> ).	Thank you for the reference.
Liliana Bravo-Monroy	42	1222	62	1627	Pollution: There would be useful to organise information according to the following categories: per each sub-region of the Americas (North America, Mesoamerica, the Caribbean and South America); per sources of pollution (e.g., fossil fuels, mining, agricultural activities and pesticides, industrial processes, deforestation); and considering the object of pollution (e.g., air, freshwater lakes/streams, oceans, land). Thus abundant and unnecessary information can be eliminated from the section.	In accordance with the decisions taken during the 2nd Authors Meeting in Aug. 2016, the drivers will be discussed per subregion and per biome.
Margot Hurlbert	42	1222	42	1221	4.2.1.6 appears twice	This will be corrected.
German IPBES Coordination Office and national scientists	42	1221	42	1222	Headline and number of Chapter are repeated (same in the Table of contents of the assessment).	This will be corrected.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	42	1221	57	1541	Chapter 4.2.1.6 remains totally general with maps and data worldwide and few pollution impacts for the USA with Gulf of Mexico and Great Lakes. Only box 4.3 for Mississippi and Gulf of Mexico and box 4.4. for the Amazon basin are more specific - missing specific description of other main basins in LAC as Rio de la Plata, Orinoco etc. Please provide more case studies and sources quoting examples in Americas regions (North and South) and try to avoid general and globally relevant descriptions and figures.	Agreed. The text will be revised to provide more information on the regional aspects.
Violaine Brochier	42	1225	42	1251	We can also add Plastic pollution (microplastic) is considered as the new major pollution of the XXI century in aquatic environment but also in terrestrial environment. Fate of plastic fragments in environment, trophic network is worrying	Thank you for the comment. This will be considered in SOD.
German IPBES Coordination Office and national scientists	50	1387	50	1388	Not only sediments but also the fluctuating water levels in (hidroelectric) reservoirs, for example, in the Sao Francisco river basin in Brazil with the largest such reservoir in Latin America (Sobradinho, also Itaparica), can contribute substantially to eutrophication processes in dam regulated river systems, see e.g.: Keitel J, Zak D, Hupfer M (2016): Water level fluctuations in a tropical reservoir: the impact of sediment drying, aquatic macrophyte dieback, and oxygen availability on phosphorus mobilization. Environmental Science and Pollution Research 23 (7), 6883–6894, DOI: 10.1007/s11356-015-5915-3. Another important driver for eutrophication in such river systems is aquaculture which might be highlighted as well, see e.g. Matta, E, Selge F, Gunkel G, Rossiter K, Jourieh A, Hinkelmann R (2016): Simulations of nutrient emissions from a net cage aquaculture system in a Brazilian bay. Water Science & Technology 73 (10), 2430-2435; DOI: 10.2166/wst.2016.092.	Thank you for the comment. This will be considered in SOD.
Royal Gardner	51	1409	51	1410	In Box 4.3, there seems to be an abrupt shift from the problems of the hypoxic zone in the Gulf of Mexico to a discussion about shorebirds.	This will be revised.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	52	1420	53	1447	Findings from the recently published IPBES report on pollination (3a) might be helpful for completion on genetically modified (GM) crops and the use of herbicides and pesticides.	Thank you for the suggestion.
German IPBES Coordination Office and national scientists	54	1449	57	1527	Section on impacts of mercury are very detailed and long. Provide focussing on Americas region (e.g. Fig. 4.25).	This will be revised and the next version of the document will be shorter.
German IPBES Coordination Office and national scientists	58	1542	62	1627	As knowledge on marine and antarctic issues and biological diversity in Open Oceans are essential for assessing global biodiversity (see IPBES/3/6/Para 11) we welcome concrete case studies. Where appropriate please refer to relevant results, but also to possible knowledge gaps in the World Oceans Assessment (WOA) (recently published in January 2016).	Thank you for the suggestion.
Liliana Bravo-Monroy	62	1629	65	1692	Climate change (CC): There would be helpful to significantly reduce or even remove these introductory sub-sections.	This will be revised and the next version of the document will be shorter.
German IPBES Coordination Office and national scientists	62	1628	62	1628	Climate change issue is reported on a very general and global level - not focussed on biodiversity and not specific for Americas (North and South).	Information is now presented for the different subregions in the Americas
German IPBES Coordination Office and national scientists	62	1628	75	2036	The issue of climate change as driver is very vast and extended (especially compared to other impacts). Provide more balance between different direct and indirect drivers.	This will be revised and the next version of the document will be shorter.
German IPBES Coordination Office and national scientists	62	1693	62	1693	Impacts on biodiversity and ecosystem services following IPCC report are only described on a very global level. Provide concrete reference to regional aspects.	This will be revised and the next version of the document will be shorter.
Liliana Bravo-Monroy	66				Impacts of CC on biodiversity and ecosystem services: From a reader perspective, there would be useful to get to the point and avoiding excessive/unnecessary information. Instead, it could be useful to include a list or brief summary of precise impacts according to Aichi Targets or specific ecosystems e.g., shift in geographic ranges, seasonal activities, migration patterns, abundances, and species interactions of terrestrial, freshwater and marine species in response to ongoing climate change; changing precipitation affecting quantity and quality of water resources; decreases in crop yields; etc.	This will be revised and the next version of the document will be shorter. Impacts of climate change on biodiversity will be presented in Chapter 3.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Liliana Bravo-Monroy	66	1694	68	1790	See for instance the manner of presenting information in the following report: <a href="https://www.cbd.int/climate/doc/biodiversity-ar5-brochure-en.pdf">https://www.cbd.int/climate/doc/biodiversity-ar5-brochure-en.pdf</a>	Thank you for the suggestion.
German IPBES Coordination Office and national scientists	66	1696	66	1697	"We choose the IPCC as the main source of information (add. on climate change) due to its long proved quality and robustness" should be used as an argument throughout all of the Chapters (and maybe for all Regional Assessments).	Thank you for the suggestion.
German IPBES Coordination Office and national scientists	67	1719	67	1736	Fig 4.36 and following section are very helpful and should be used to lead to some concrete case studies and examples on species in the Americas region (North and South).	Information is now presented for the different subregions in the Americas
German IPBES Coordination Office and national scientists	68	1768	68	1769	Context of dry years doesn't fit in the Amazon case - such dryness occurs only in some years; half of dry years occurs due to NAO (Northern Equatorial Atlantic Oscillation).	Thank you for the comment. This will be revised for the SOD.
German IPBES Coordination Office and national scientists	68	1787	68	1787	"those activities can reduce erosion" - is not correct ... it can also increase soil erosion.	Thank you for the comment. This will be revised for the SOD.
Liliana Bravo-Monroy	69	1792	69	1801	It would be useful to cite Table 4.14 within the text.	Thank you for the comment. This will be revised for the SOD.
German IPBES Coordination Office and national scientists	69	1794	69	1802	Table 4.14: It is not clear in which direction impacts increase or decrease; e.g. precipitation in South America increase and also decrease in relation to Biomes - therefore resulting also in non or positive effects on biodiversity.	Impacts are presenting in Chapter 3. We will add a cross-reference to guide the readers.
Liliana Bravo-Monroy	70	1803	75	2036	Impacts of CC on specific biomes: There would be beneficial to organise information according to the following categories: per each sub-region of the Americas (North America, Mesoamerica, the Caribbean and South America); per biome; and considering the type of impact (e.g., changing precipitation, changes in temperature and rainfall, climate-related extremes, heightened vulnerability to climate risks depending on social, economic, political circumstances, etc.)	Agreed. Discussions on drivers will be organized by sub-regions as major level and then present the biomes.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	70	1804	71	1858	Climate change effects in the Amazon are discussed well.	Thank you for the comment.
German IPBES Coordination Office and national scientists	70	1804	75	2036	We greatly appreciate the well structured approach to choose the biomes most relevant for the Americas (see in Chapter 1, Line 536, Table 1) which are investigated and referd to in detail in all 6 Chapters. Please ensure that an order once agreed upon (which might be the one in Chapter 1, cited above) is maintained, as in the current sections of the document the order is very often mixed up and might complicate conclusions concerning certain biomes.(see Chapter 4 e.g. Line 261ff).	Please see answer to the same comment above.
German IPBES Coordination Office and national scientists	70	1804	75	2036	Please provide more Americas species specific impacts of different drivers, quote sources and provide possible informations on knowledge gaps concerning certain biomes where possible.	Thank you for the comment. This will be revised for the SOD.
German IPBES Coordination Office and national scientists	72	1892	72	1911	Provide some sentences on the importance of Cloud Forest of the Andes and Mesoamerica concerning climate change.	Information is now presented for the different subregions (including South America)
German IPBES Coordination Office and national scientists	72	1925	72	1936	Only part of the Brazilian Cerrado is grassland (Cerrado limpio), most of it consits of tropical dry forest!! (Cerrado sensu strictu)	Cerrado examples will be presented under the title Grassland and Savannas. Cerrado stricto sensu is classified as savanna and not as Dry forest.
German IPBES Coordination Office and national scientists	72	1925	72	1936	Please consider quoting Bond, W. (2016), "Ancient grasslands at risk" in Science Vol 351; p.120-122 revealing striking differences in old-growth versus secondary grasslands and the challenges in replacing them by afforestation projects	Agreed. Thanks for the reference.
German IPBES Coordination Office and national scientists	72	1928	72	1928	Not correct: South American grassland, such as Cerrado (see above: Cerrado is tree savannah formation as biome with some smaller parts as grassland).	Cerrado examples will be presented under the title Grassland and Savannas. Cerrado stricto sensu is classified as savanna and not as Dry forest.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Bruno Paris	75	2046	75	2051	Same comment as above (Chap. 3): The authors may want to consider providing more information on invasive vs alien (non-native) species. For example: Approximately 1,229 (24%) of the 5,087 known plants in Canada are not native. Of these, 486 are considered weedy or invasive (Canadian Food Inspection Agency. 2008: <a href="http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf">http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf</a> ).	Additional information will be provided about North American region.
Bruno Paris	75	2062	75	2066	It would be interesting to have some information on the main pathways of introduction, in addition to the pathways of dispersal/spread. See for example: <a href="http://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf">http://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf</a>	Thank you for the comment. This will be revised for the SOD.
Bruno Paris	75	2066	76	2068	Climate change scenarios and IAS: <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3880863/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3880863/</a>	Thank you for the reference.
Liliana Bravo-Monroy	75	2037	92	2531	Invasive alien species (IAS) : As mentioned above, it would be better to getting to the point and avoiding excessive information. Instead, it could be useful to organise the text according to the following categories: what's the current status/problem of IAS per sub-region of the Americas (North America, Mesoamerica, the Caribbean and South America); taxonomic groups of IAS per biomes/ecosystems; and per type of impact (in economic terms; species extinctions; losses in biodiversity and ecosystem services). Boxes with case studies help to show the dimension of the problem.	This section will be revised and shortened. Part on the information will be presented in Chapter 3 (Status and trends on Biodiversity).
German IPBES Coordination Office and national scientists	75	2037	92	2531	Very good analysis on Invasive Species with many case studies and examples for Americas region. Please provide clear definiton on "Invasive species" / "Biological Invasions". Although a number of definitions of invasive species (IAS) are being debated, IPBES-4 decided to use the CBD definition of IAS (see Line 2083 to 2089". This definition should be used in all Chapters and all four Regional Assessments to avoid confusion. Compare especially with Box 4.6 (Definitions), Line 2191 and definitions Line 2282 to 2333.	Due to space limitations, a box with definition will be added as supplementary material.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	75	2037	92	2531	Considering EU policies on IAS might be helpful for further and better knowledge sharing (see EU strategies and legislation <a href="http://ec.europa.eu/environment/nature/invasivealien/index_en.htm">http://ec.europa.eu/environment/nature/invasivealien/index_en.htm</a> )	Thank you for the comment.
German IPBES Coordination Office and national scientists	75	2037	92	2531	To provide better and more visible informations more frequent use of boxes might be helpful to highlight some case studies on certain species and/or biomes and/or regions	We will bring some examples in text boxes.
Bruno Paris	76	2083	76	2089	This would not be the official definition as per CBD glossary: "Invasive alien species: An alien species whose introduction and/or spread threaten biological diversity" "Alien species : A species, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce" It is very important to always have the "introduced" concept in the definition ( by human activities). I also think that IPBES may have changed the definition used following 4th Plenary. From the Advance meeting report, annex III ( <a href="http://www.ipbes.net/sites/default/files/downloads/pdf/IPBES-4-4-19-Amended-Advance.pdf">http://www.ipbes.net/sites/default/files/downloads/pdf/IPBES-4-4-19-Amended-Advance.pdf</a> ) : 2. For purposes of the assessment, invasive alien species are defined as animals, plants or other organisms introduced directly or indirectly by people into places out of their natural range of distribution, where they have become established and dispersed, generating an impact on local ecosystems and species.	Due to space limitations, a box with definition will be added as supplementary material.
Bruno Paris	76	2092	77	2147	Should the authors want to show trends, origins, impacts of invasive plants, examples for Canada can be found in this report of the Canadian Food Inspection Agency: <a href="http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf">http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf</a> .	Thank you for the reference.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Bruno Paris	77	2134	77	2147	Examples of economic costs of IAS relevant for Canada: - <a href="http://www.pnas.org/content/113/15/4081.abstract">http://www.pnas.org/content/113/15/4081.abstract</a> - <a href="http://www.blue-economy.ca/sites/default/files/reports/resource/stdprod_086944.pdf">http://www.blue-economy.ca/sites/default/files/reports/resource/stdprod_086944.pdf</a> - <a href="http://link.springer.com/article/10.1007%2Fs10021-012-9522-6">http://link.springer.com/article/10.1007%2Fs10021-012-9522-6</a> - <a href="http://link.springer.com/article/10.1007/s10530-005-0236-y">http://link.springer.com/article/10.1007/s10530-005-0236-y</a>	Thank you for the reference.
German IPBES Coordination Office and national scientists	77	2141	77	2144	With reference to challenges and concerns on Islands we would like to suggest including some more of the broad research results concerning Galapagos Islands . Channel Islands of California might be another example representing North America.	see answer to the same comment above.
German IPBES Coordination Office and national scientists	78	2167	78	2170	Table 4.15: It might be helpful to extract only data on Americas and try to focus on country level if possible.	This will be revised.
Royal Gardner	80	2194	81	2196	As Ramsar National Focal Points are identified as a key audience of this assessment, it may be useful to note that Cienaga de Zapata is also a Ramsar Site.	Thank you for the comment. Unfortunately we will have to limit the presentation of case studies in the chapter.
German IPBES Coordination Office and national scientists	84	2278	85	2333	Compare with Chapter 4, Line 2037. Definitions are very general and focus should be on examples from Americas (North and South).	Information is now presented for the different subregions in the Americas

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Bruno Paris	87	2338	87	2338	Some examples of impacts can be found in "Canadian Biodiversity: Ecosystem Status and Trends 2010 - pp51-54 " ( <a href="http://www.biodivcanada.ca/default.asp?lang=En&amp;n=83A35E06-1">http://www.biodivcanada.ca/default.asp?lang=En&amp;n=83A35E06-1</a> ): native mussels decline in the Great Lakes, chytrid fungus of Amphibians. Other examples: - White-Nose Syndrome (see for example <a href="http://science.sciencemag.org/content/329/5992/679">http://science.sciencemag.org/content/329/5992/679</a> ) - Salamander disease (see: <a href="http://www.cwhc-rcsf.ca/docs/technical_reports/Salamander_Chlytrid_Threat_Assessment.pdf">http://www.cwhc-rcsf.ca/docs/technical_reports/Salamander_Chlytrid_Threat_Assessment.pdf</a> ) - Freshwater fauna at risk ( <a href="http://link.springer.com/article/10.1007/s10530-005-0232-2">http://link.springer.com/article/10.1007/s10530-005-0232-2</a> )	We thank the reviewer for the references. We will check for citation in this section.
German IPBES Coordination Office and national scientists	87	2357	91	2502	Well elaborated section on marine and aquatic species with specific and regional species and case studies. Concerning data on Lion fish (Line 1469 to Line 2502) please cross check and compare Chapter 1, Annex 1 (Case study on lionfish).	We thank the reviewer for the comment.
Liliana Bravo-Monroy	92	2533	103	2959	Overharvesting / overexploitation (?): As stated above, it could be useful to organise the text according to the following categories: what's the current status of overharvesting/overexploitation per sub-region of the Americas (North America, Mesoamerica, the Caribbean and South America); organisms that are object of overexploitation (e.g., wild fauna and flora, other taxonomic groups, vertebrate/invertebrate, etc.) in relation to terrestrial/ freshwater/marine habitats and at a biome/ecosystem level.	Information is now presented for the different subregions in the Americas
German IPBES Coordination Office and national scientists	92	2533	103	2959	Very good analysis on Harvesting/Overharvesting with many case studies and examples for Americas region. Findings should be kept in mind when realising Deliverable 3biii.	We thank the reviewer for the comment.
German IPBES Coordination Office and national scientists	92	2549	93	2551	Please add "ornamental purposes".	This will be revised.
Violaine Brochier	92	2533	103	2697	In this chapter (or in an other chapter) it is possible to talk about over agricultural production and the loss of organic matter in agricultural soils	Agreed.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Liz Nichols	93	2584	93	2584	This needs to be expressed as a rate (e.g. daily consumption, etc).	This will be revised.
German IPBES Coordination Office and national scientists	94	2631	95	2679	This case study might be presented in a box and should be underlined with concrete numbers and examples on species of the Amazonas. Where possible, trends should be figured out and shown clearly (in a diagram?) linking them with the drivers underneath. Recently published WWF Amazonas Report 2016 might be considered as it delivers some new findings and provides a high number of relevant publications which could be partly relevant for the case of the Amazon. The report draws heavily on research carried out by academics, independent researchers and other NGOs. More than 300 Key references and notes are given. (see: <a href="http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_living_amazon_report_2016_mid_res_spreads_1.pdf">http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_living_amazon_report_2016_mid_res_spreads_1.pdf</a> ).	Thank you for the comment. Unfortunately we will have to limit the presentation of case studies in the chapter.
German IPBES Coordination Office and national scientists	98	2761	98	2772	This case study might be presented in a box as it provides a representative case of water insecure areas in Americas.	Thank you for the comment. We will consider this in SOD after consultation with Chapter 2.
German IPBES Coordination Office and national scientists	99	2773	102	2928	As knowledge on marine and antarctic issues and biological diversity in Open Oceans are essential for assessing global biodiversity (see IPBES/3/6/Para 11) we welcome concrete case studies in this section. Where appropriate please refer to relevant results, but also to possible knowledge gaps in the World Oceans Assessment (WOA) (recently published in January 2016). Furthermore please take into account the ongoing work of the international legally binding instrument under the UN Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction (BBNJ) (lastly convened from 28 March – 8 April 2016).	see answer to the same comment above.
German IPBES Coordination Office and national scientists	102	2930	103	2959	This case study might be presented in a box as it provides a representative case.	Thank you for the comment. This will be considered for the SOD after evaluation of other potential case studies..

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	103	2961	103	2967	Chapter 4.3, 4.4 and 4.5 are expected to be essential for the completion. They should be elaborated focussing very specific on the Americas regions and with relevant outcome for the SOD.	Agreed.
German IPBES Coordination Office and national scientists	104	2970	129	4059	Please provide cross check and coherence of references with all sources mentioned in the text.	Agreed.
Marina Rosales Benites de Fr	2569	2630	93	94	The item of unsustainable use or overharvesting has subtitles that do not have order. There is a mistake S. macrophylla is in item invertabrates. On the other hand, I recomend you include the overharvesting S. macrophylla and Cedrela odorata case Peru. Information on bushmeat could find in these links: <a href="http://weberpub-org/wef/wef_176.pdf">http://weberpub-org/wef/wef_176.pdf</a> and <a href="http://weberpub-org/wesee/wesee_167.pdf">weberpub.org/wesee/wesee_167.pdf</a>	Thank you for the comment. This will be revised for the SOD.
Fernando García-Préchac	" and impacts	260		260	The subtitle seems to refer to RECOVERY, but it is written whitout the term and as an independent sentence doesn't make sense to me.	This will be revised.
Fernando García-Préchac	" and impacts	349		349	As the previous comment, the subtitle lacks of subject: "Factors that influence its intensity and impacts" ¿of who?.....natural drivers or natural disasters or something or somebody	This will be revised.
Fernando García-Préchac	" and impacts	363		371	According with the model used to predict climate change in the studies performed by the Analysis of transfrontier problems by the La Plata River Basin Intergubernmental Com., there will be important and cyclic changes of precipitation in the different sub-basins; this, if true, will impact droughts and floods occurrence, as well as it will change the hydric erosion risk. These studies are not yet published in media with pairs review, but are available to at least, make a mention to the environmental problem of increase erosion risk in some areas.	The assessment is mostly based on peer-reviewed and published literature. We will, however, try to complement the information for region
Fernando García-Préchac	" and impacts	445		445	The word "fail-ures" is failures	All typos will corrected.
Fernando García-Préchac	50 (Box 4.3)				At the very end of the before last parraph, "Paul Hartfield, Jackson, Mississippi." seems to be a citation and not a part of the text.	This will be corrected.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
German IPBES Coordination Office and national scientists	52; 56	1411 (Bo	52; 57	1411 (E	As far as the mercury contamination due to the presumably still expanding gold mining in the Amazon basin is concerned, there is an informative and worthwhile review for the Tapajos river basin (at the same time currently with major discourses due to planned and controversially debated new hydroelectric dams) available: Berzas Nevado, JJ, Rodríguez Martín-Doimeadios RC, Guzmán Bernardo, FJ, Jiménez Moreno M, Herculano AM, do Nascimento JLM, Crespo-López ME (2010): Mercury in the Tapajós River basin, Brazilian Amazon: A review. Environment International 36: 593-608.	Thank you for the reference.
Fernando García-Préchac	Drivers	193		193	In the first sentence, the second time that says "drivers" should be deleted.	This will be corrected.
Fernando García-Préchac	Drivers	670		670	Between brackets: it says "ative" and should be "active"	All typos will corrected.
Fernando García-Préchac	Drivers	683		684	The units "tonnes" are used. The units should be in the International systems. I wonder if "tonnes", in the present context, could refer to Mg and not to the English meaning of that term.	
Fernando García-Préchac	Drivers	738		738	Legend of Table 4.11; say "trends in fores ares" and should be "...forest areas"	All typos will corrected.
Fernando García-Préchac	Drivers	756		756	it says: "....., iln 2014" and should be "..., in 2014"	All typos will corrected.
Fernando García-Préchac	Drivers	796		796	The copies of figures used in the draft (the present is just one example) are of poor quality and it is not possible to clearly see and uderstand their data and, therefore, messages.	Agreed. Figures will be improved for the next version of the document.
Fernando García-Préchac	Drivers	948		948	There are lots of gramatical mistakes in the draft that I didn't pointed out, like in the present line: "thatreached".....That reached. The tools of the text processor being used should pick-up and help to solve these errors.	All typos will corrected.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Fernando García-Préchac	Drivers	981		982	It is said that "fertilizers and pesticides are added, changing soil composition". It is difficult to share this sentence. In the first place, I don't really know of data that confirms this for the case of pesticides; it can be said that the soil can be contaminated, but not that is changing composition. The concept can hold in the case of fertilizers, that increase the amount of total P in the soil and, only temporarily, the amount of N (it tends to be lost to the atmosphere and lixiviated to underground water or carried by runoff to surface waters).	Agreed. The sentence will be corrected.
Fernando García-Préchac	Drivers	1068		1071	There is text duplication.	This will be corrected.
Fernando García-Préchac	Drivers	1148		1148	The last word is missing a "c" at the beginning; it should be "currently" instead of "urrently". There are lots of spelling and grammatical errors in the text, that the present reviewer passed over, being confident that the whole text is going to be checked for its orthography and grammar with the text processor used.	All typos will be corrected.
Fernando García-Préchac	Drivers	1192		1192	"foods" should be "floods".	All typos will be corrected.
Fernando García-Préchac	Drivers	1282		1282	Figure 4.15 legend: "Nitrogen" should be "Nitrogen".	All typos will be corrected.
Fernando García-Préchac	Drivers	1313		1315	Figure 4.17 legend: it is needed to define abbreviations like "Nr" (that seems to stand for Reactive N), but was not explicitated previously.	Agreed. A definition will be included.
Fernando García-Préchac	Drivers	1376		1379	Several spelling and grammar errors in the legend of fig. 4.20.	All typos will be corrected.
Fernando García-Préchac	Drivers	1460		1461	Fig. 4.22 legend: "...coal fired power plants", is ".....power plants".	All typos will be corrected.
Fernando García-Préchac	Drivers	1475		1479	Fig. 4.23 Legend: (a)".....(watershed area)lake surface area)...", should be ".....(watershed area/lake surface area)".	All typos will be corrected.
Fernando García-Préchac	Drivers	1618		1619	.."	All typos will be corrected.
Fernando García-Préchac	Drivers	1733		1733	"....will change differentially", should be ".....will change differentially"	All typos will be corrected.
Fernando García-Préchac	Drivers	2197		2197	Box 4.8 legend: "introduced beavers in southern patagonia ans....."; could be "introduced-----southern.....and"	All typos will be corrected.
Fernando García-Préchac	Drivers	2367		2367	"Prata", could be "La Plata"?	All typos will be corrected.
Fernando García-Préchac	Drivers	2395		2396	Fig. 4.41 legend: should be translated.	The legend will be translated.
Fernando García-Préchac	Drivers	2430		2431	Fig. 4.43 legend: " " "	The legend will be translated.
Fernando García-Préchac	figure 4.13, pg 34				I cannot understand the figure and its message.	We will improve figure resolution and include more explanation in the text.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Fernando García-Préchac	figure 4.9,				From what it is possible to understand in this map, most of my country, Uruguay, is in red. Of course, I cannot agree with this in a place where almost 80% of the surface remains under natural grassland (of course, used under grazing, but still in very good shape).	We will verify this point but this is probably related to scale of the map.
Fernando García-Préchac	Table 4.2	466		468	The last column refers to DCs, but I couldn't find its definition.	Definition will be included.
Fernando García-Préchac	Table 4.5	539		540	"	Definition will be included.
Bruno Paris					Same comment as above (Chap. 3.): All Chapter (and other Chapters where relevant): the authors use "invasive species", "invasive non-native species" and "invasive alien species". I would suggest being consistent across the sections and chapters.	Chapter 3 and 4 are working together in order to get consistency in terms of definition and terminology.
Royal Gardner					Compliments to the authors and editors regarding this chapter's writing style. The shorter paragraphs more effectively convey the information to your audiences.	Thank you for comments. We will consider shorter paragraphs for the Second order draft.
CONABIO					Es necesario contextualizar este capítulo con una introducción sobre la importancia del ser humano y los impulsores (drivers) antropogénicos sobre la biodiversidad y SE. Se debe hacer referencia al contexto histórico y cultural que ha moldeado ecosistemas. La visión es muy occidental y economicista; hay que abordar más a profundidad diferentes visiones así como la bioculturalidad en éste y otros capítulos.	Agreed. We are trying to involve more Contributing authors that can help us to develop this topic.
CONABIO					Los impulsores de cambios no sólo son negativos, y en esta sección solamente se hace referencia a éstos. Sugerimos modificar el título y referirse a "impulsores de degradación o pérdida" y enfatizar en la definición que se trata de impactos negativos.	Agreed. We plan to include cases and references with positive examples and outcomes of good management options.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
CONABIO					La lógica del orden de los impulsores de cambio (drivers) no nos parece adecuada. Es conveniente dar mucho más énfasis a los “drivers” antropogénicos. En este sentido, la sección de desastres naturales al principio del capítulo nos parece fuera de lugar, ya que el ser humano no tiene ninguna injerencia sobre los mismos. Es necesario resumir esta sección y darle más contexto.	The section on Natural Drivers is shorter than the other section on Anthropogenic Drivers. As Natural Drivers have strong impacts for the region we would like keep this section pointing out that some of them have now important interactions with anthropogenic drivers.
CONABIO					Nos parece importante ahondar sobre los impactos de los metales pesados y químicos de origen industrial sobre la biodiversidad. La evaluación no refleja la necesidad de promover estudios para contar con datos precisos al respecto.	Need for more studies on this topic will be pointed out in the section on Gaps of Knowledge
CONABIO					Notamos que la elevación del nivel medio del mar es un aspecto que no se cubre a lo largo de la evaluación. Es necesario incluir este tema en éste o en el Capítulo 3 sobre Tendencias.	Change in sea level is mentioned in Climate Change section. This comment will be forward to CLAs of Chapter 3