

Comments from 2nd Review Phase of Chapter2. Deliverable 2b. Americas Assessment on Biodiversity and Ecosystem Services.

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Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Tom Christensen	0	0	0	0	The Arctic Biodiversity Assessment (CAFF 2013) should be consulted and referenced. Especially chapter Chapter 18n Provisioning and Cultural Services, include several aspects relevant for this Chapter	While we were not able to include this reference, there are multiple citations of cases and sites in the Arctic.
Virginia Meléndez Ramírez	0	0	0	0	There are many examples of Mexico's successful work towards conservation and sustainable use of biodiversity and ecosystems services through the participation of government, society and scientists, but they are not cited in this assessment. The authors of this chapter should look into the report by Carabias, J., Sarukhán, J., de la Maza, J., & Galindo, C. (2010), titled "Patrimonio natural de México. Cien casos de éxito"	While we were not able to include this reference, there are multiple citations of works in Mexico.
Virginia Meléndez Ramírez	0	0	0	0	This chapter is too long and repetitive, it is not clear how this chapter links to other chapters, it needs better structure and organization, there are also issues of punctuation, grammar and spelling	In attending to the comments in the final version of the document, we hope that this comment was addressed.
consensus	0	0	0	0	This chapter is too long and repetitive, it is not clear how this chapter links to other chapters, it needs better structure and organization, there are also issues of punctuation, grammar and spelling	In attending to the comments in the final version of the document, we hope that this comment was addressed.
Elva Escobar	0	0	0	0	There should be a better balance between marine topics and fresh water topics and the interaction between the 2	The final version of the chapter enhanced references from marine ecosystems.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Elva Escobar and Virginia Melendez	0	0	0	0	There are many examples of Mexico's successful work towards conservation and sustainable use of biodiversity and ecosystems services through the participation of government, society and scientists, but they are not cited in this assessment. The authors of this chapter should look into the report by Carabias, J., Sarukhán, J., de la Maza, J., & Galindo, C. (2010), titled "Patrimonio natural de México. Cien casos de éxito"	We did not include this citation, but we have numerous others that deal with such issues.
Patricia Balvanera	0	0	0	0	There is a general lack of information being mentioned from sources of ethnobiology, anthropology or sociology. Please take a look at these recent syntheses (1) Lira, R. A. Casas y J. Blancas (Eds.). 2016. Ethnobotany of Mexico. Interactions of peoples and plants in Mesoamerica. Springer, Utrecht, Holanda. ISBN 978-1-4614-6669-7, DOI 10.1007/978-1-4614-6669-7 (7) Moreno Calles, A. I.; A. Casas; M. Vallejo y V. M. Toledo (Ed.). 2016. Etnoagroforestería en México. UNAM, México. ISBN 978-607-02-8164-8 (8) Casas, A.; J. Torres-Guevara y F. Parra (Eds.). 2016. Domesticación en el Continente Americano. Volumen 1. Manejo de biodiversidad y evolución dirigida por las culturas del Nuevo mundo. Universidad Nacional Autónoma de México /Universidad Nacional Agraria La Molina. ISBN: 978-612-4147-59-3 (9) Casas, A.; J. Torres-Guevara y F. Parra (Eds.). 2017. Domesticación en el Continente Americano: Volumen 2. Perspectivas de investigación y manejo sustentable de recursos genéticos en el Nuevo Mundo. Universidad Nacional Autónoma de México /Universidad Nacional Agraria La Molina, CONACYT, Morelia, Michoacán, México. ISBN: 978-607-02-9334-4, Moreno Calles et al. Botanical Sciences 91 (4): 375-398, 2013. Moreno Calles et al 2016 Ethnoagroforestry: integration of biocultural diversity for food sovereignty in Mexico Journal of ethnobiology and ethnomedicine 12 (1): 54	We did not include all these citations, but have numerous others that deal with similar issues.

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Patricia Balvanera	0	0	0	0	Take into account the National Reports presented by CBD Parties, which are not being considered in this assessment and could provide important inputs.	While we did not do a formal analysis to compare this study with the national reports, we believe this information is complementary. It exceeded our capacity to make a detailed comparison of every country's national reports.
Patricia Balvanera	0	0	0	0	Analyze the consequences of regional assessments previous to this IPBES assessment.	We are unclear which regional reports are being suggested.
Patricia Balvanera	0	0	0	0	Consider the Millenium Ecosystem Assessment and the Global Biodiversity Outlook of the CBD, and compare the situation assessed: How have things changed? What is new?	We did not make a formal comparison, we understand that our information is complementary to these reports. Hence,
Patricia Balvanera	0	0	0	0	Improve the links with the IPCC - coordination.	Where appropriate we improved such link
Patricia Balvanera	0	0	0	0	When approved, IPBES members agreed that regional assessments would include the thematic assessments as part of the regional diagnose and key messages. However, this assessment seems to lack information on sustainable use.	Throughout the chapter there are numerous mentions to efforts towards sustainability.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	General Comments. Provisioning ecosystem services or NCPs have been addressed from a very monistic perspective, either from the biophysical or monetary approach, very western perspective centered and does not include the different conceptualizations of nature. These diverse values are more adequately addressed as the chapter moves to regulating and non-tangible NCPs, and provides an interesting cross cutting discussion towards the end but it comes in too late	We have attempted to review the available literature. Due to knowledge gaps, there is a bias towards biophysical and monetary evaluations in terms of the available quantitative studies. However, there are other socio-cultural and health values throughout the chapter. We have made a new synthesis table to help highlight these and bring them to the forefront.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	The environmental paradox paper (Bioscience) is centered on one very materialistic western and instrumental perspective of well-being and under a western perspective of development and does not include different dimensions of well-being	We agree that this paper is one perspective, but the whole point of using it is to point out that something is not being accounted for in the assessments. Therefore, this is part of the justification precisely of the IPBES multiple values approach.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	It is OK to be explicit that some sections of the the text addresses NCPs and good quality of life from a scientific perspective but rather it is important to explore what are the implications of not including other perspectives (e.g. ILK) of NCPs. It would be important to include also these other dimensions	We recognize such limitations and attempt to overcome them precisely by using the IPBES methodology. We have tried to improve the text accordingly.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	Further editing of the text is needed Some sections of the document seem to lack congruence with the IPBES conceptual framework and the Values Guide. This is reflected by a narrow perspective of well-being focused on a material perspective, an economic perspective on the valuation of ecosystem services, a western centered perspective of development that does not include IPLCs . This will also allow more integration of key concepts and a more consistent treatment of key issues as well as a reorganization of the whole chapter. It would also allow to have more consistent tone and rithm of the chapter. More consistency accross subsections in terms of key topics to be addressed within each of them. Also some parragraphs or topics need to be weaved into the narrative	We enhanced the valuation tradeoffs section to help make more exlicit the multiple values that are dispersed throughout the chapter.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	The NCP document starts from a conceptual discussion of NCPs and the different dimensions and conceptualizations and starts with regulating NCPs. We suggest using this approach to allow for a more integrated reading of the chapter	Considering that this document is targeted primarily to governments and other stakeholders, and not to scientists, in order to catch the attention of the large audience, we decided to present first the material NCP, then the non-material NCP, and finally the regulating, which is well understood by scientists but not so much for the large public.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	The executive summary reads as separate items. We suggest using the cross-cutting messages developed towards the end of the document to knit a narrative that is very policy relevant and that would then be based on the evidence presented in more detail, and to provide a better structure for the whole chapter	The executive summary was completely rewritten in consonance with the SPM. It therefore is now much more cross-cutting and synthetic.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	This document is clearly the result of a huge effort and provides a very interesting perspective of the knowledge on the topic. The amount of data and detail is huge, and there is an effort to be inclusive and plural. This second order draft is clearly much stronger and wider and we would like to congratulate the authors for their huge effort	We appreciate the comment and hope that a similar amount of improvement is seen in the final version
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	The temperate biomes of North America and the tropical biomes of South America stand out but more is needed to provide a wider representation	As much time and space permitted we try to improve this issue. Chapter 2 focus is on NCP, while Chapters 3 and 4 focused more on the biomes.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	More consistency is needed in the Executive Summary on how teased apart the specific quantitative data is presented. Sometimes its summarized for the whole regions, sometimes per regions, but sometimes the more detailed data is available. Also, clarification on which section of the continent is referred to is needed.	This section was re-written in consonance also with the SPM, which allowed for more synthetic oconclusions.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	Too many study cases are based in Canada, and a more diverse representation of the diversity across the americas is needed. While we understand the limitations in data the rich cultural diversity of the americas has been widely documented by ethnographic and ethnoecological literature. The same for the case of the diversity within each country as in Mexico the emphasis is put only in the Maya culture	We have attempted to be represnetative of all places. During the TAM one LA took the time to tabulate all of the examples to make sure there was an balanced distribution.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	We would like to suggest a systematic revision of how the different dimensions, regions or topics are addressed across the document to enrich the current version	See above. This was done as an internal exercise, but due to space limitations was not formalized or presented in the chapter.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	Agrobiodiversity and ILK associated to diverse agricultural systems are not clearly presented in the food section nor in its impacts on regulatng services nor in the different types of agriculture and productive systems	Therre is na entire section 2.4 dedicated to ILK and its contribution to agrobiodiveristy. We also try to improve reference on ILK at the food sections and NCP valuation section (2.5.1).

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	0	0	0	0	It would be very interesting to include more success stories related to NCPs	The main objective of this initiative is to provide an assessment and indeed includes positive and negative trends in selected NCPs.
Sophie Ávila	0	0	0	0	Sources of information such as local knowledge are not less valuable than scientific knowledge, but even if it's harder to work with because it is not published, it should be considered and included in this assessment	While we agree, our mandate is to summarize documented information. By explicitly recognizing that the information in question is "unpublished" the comment itself loses validity, since we can only incorporate information that has been validated in the literature, the media or through IPBES processes.
Sophie Ávila	0	0	0	0	There are works that include examples for Mexico. One of the authors that has worked with this for long is Alejandro Lopez-Feldman. More of his works regarding examples for Mexico could be reviewed and included for this assessment (for example: "Natural resource dependence in rural Mexico")	Mexico gets equal treatment in the text per our tabulation of the cases.
Lucía Pérez Volkow	1	1	1	1	At the beginning of each chapter there should be a list of acronyms to facilitate the reading.	This issue will be dealt with systematically by the TSU
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	1	1	1	1	At the beginning of each chapter there should be a list of acronyms to facilitate the reading.	This issue will be dealt with systematically by the TSU

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Virginia Meléndez Ramírez	212	6	229	6	The assessment should also include information on the implications or impacts caused in Latin America by the demands of agricultural products for global markets	Throughout the chapter there is an explicit recognition of global markets. Deeper treatment of markets can be found in Chapter 4, but in this chapter global markets are explicitly recognized in food and feed NCP, as well as Fiber.
Virginia Melendez	212	6	229	6	The assessment should also include information on the implications or impacts caused in Latin America by the demands of agricultural products for global markets	Throughout the chapter there is an explicit recognition of global markets. Deeper treatment of markets can be
Diego Pacheco	6	18	124	3032	This section needs to be shortened. It is too long, and needs more balance. I suggest the following: Introduction (3 pages), Status and trends (30 pages), Effects of trends (20 pages), Contributions of ILK (15 pages), Other issues (10 pages). Also, I suggest changes in the structure of the first section about NCPs. The NCP should have a more NCP scenario approach (land, forest, water, biodiversity, etc.) and avoid the sectoral approach (food, agriculture, livestock, timber, etc.). The discussion of ILK needs to be incorporated in each of the NCP scenarios, and not isolated in one section.	Thank you for your comment. The chapter has already been 100% restructured according to guidance received from MEP/Bureau members during the Second Authors' meeting. Given that the assessment is about NCP providing quality of life to ALL American people and not only to indigenous people, we understand that the <u>treatment we gave to all values and</u>
Elva Escobar	844	27	854	28	The assessment should also mention the negative impact that aquaculture has on the environment	Correct. We added the following: but at the same time this production often comes at environmental costs
WWF Mexico	4	104	4	104	Present real-life experiences of extinctions of marine species by anthropogenic reasons in the Americas (e.g. Vaquita in Mexico), unfortunately demonstrate the contrary: governments keep on attempting to react, only at the last minute, instead of making timely and wise preventive investments.	This is addressed in Chapter 3.
José Luis Echeverría/ César Azurdia/ Melisa Ojeda	2987	122		122	La pregunta fue respondida pobraevemente, debería mejorarse el contenido	It is unclear what the comment means.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	6	190	12	457	There is a general problem in this chapter, which is trying to explain the differences between the regions. I suggest to introduce in the first chapter the main socio-economic, environmental, and other differences among the regions, and to go into specifics later on (sch as in chapter 2).	Chapter 1 was enhanced with regards to this suggestion and some information was moved from 2 to 1.
Sophie Ávila	6	190	12	457	There is no clear message for policy makers. It is important for the evaluation to reach general messages that reflects the different views from different visions and from different scales and regions.	In the new executive summary, we have achieved better integration and synthesis between sections to achieve more concrete conclusosn and recommendations.
Sophie Ávila Wolke Tobón	6	190	12	457	The summary should include recommendations for policy makers specific for each context, region, country or by the priorities that have already been stablished by country or region	In the new executive summary, we have achieved better integration and synthesis between sections to achieve more concrete conclusosn and recommendations.
Alejandra Tauro	6	191	6	191	la diversidad cultural amenazada por qué? Bajo amenaza de qué? Por qué no se nombran esas amenazas? Por la globalización, el modelo de desarrollo, el mercado? La degradación de la tierra? El cambio climático? Todo eso?	It was not possible to rigorously explain this mechanisms. Instead or task was to explain the status and trends, and this particular case is used as a background information to discuss more directly the issues related to NCP and Quality of Life.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
David González	6	191	6	196	Why begin with cultural diversity? If the focus of the chapter is nature's contributions to people and GQL. I would suggest to move this paragraph later and also make explicit the relationship between languages and loss of languages with nature. Some authors suggest that language is a representation of the way people interact with nature. Multiple languages have different words to represent their realities (worldviews), as they are lost we also loose knowledge and interactions between people and nature, especially those coming from ILK worldviews.	Cultural diversity is used here in the context of setting up the human/nature relationship and setting the stage to explain how both are not only inter-related, but being affected by drivers of extinction and homogenization. It is not trivial and it is not as well understood by the general public that cultural diversity is even more threatened that biodiversity. This is an explicit way to make the reader start from this base that we are talking about how peopel and nature relate.
Diego Pacheco	6	191	6	196	This interpretation is very biased. There is the need to consider jointly IPLC (indigenous peoples and local communities). Also, need to mention that IPLC in some countries are a vast majority, and that in some cases IP are weak because of the colonization policies of countries and because colonial and republic policies promoted the slaughters of entire indigenous populations.	Chpater 2 contributed data to Chapter 1 showing that indigenous people are the majority in some countries.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	6	191	6	191	What are the threats for cultural diversity? What is threatening it? Why are those threats not mentioned? Globalization, the development model, the market, land degradation, climate change? All of the above?	It was not possible to rigorously explain this mechanisms. Instead or task was to explain the status and trends, and this particular case is used as a background information to discuss more directly the issues related to NCP and Quality of Life.
Diego Pacheco	6	197	6	211	There is not a clear linkage between food insecurity and NCP. If any, there is important to highlight problems of bad nutrition in North America and in the entire region.	We have now included information on poor nutrition and also obesity.
Krista Locs	6	200	6	203	The "federal poverty line" should be defined here. Is it based on an average?	Added (US \$ 24,600 a year for a family of 4 in 2017)

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sonia Canavelli	6	203	6	205	If possible, I will suggest separating Latin America from the Caribbean because, otherwise, the decrease on the % of undernourished people is confusing.	Where possible LAC was separated, but in some cases the information is provided as a unit. However, in the case of nutrition and food security this was separated.
Diego Pacheco	6	212	6	229	The same with agriculture. It is necessary to create the linkages between NPC and agriculture, maybe through soil fertility and protection. The direct connection of agriculture with commodities production (agrobusiness for export), does not create room for reflection of other venues of developing agricultural production through small-scale production systems, which are very much based on ecological production, agrobiodiversity and mixed production systems. Also, the issue of the linkages between agriculture and forest, agroforestry (very important in the region) is completely missing and ignored.	The section is about food and feed as material NCP, regulating NCP and Non-Material NCP related to food are presented elsewhere in the chapter. The chapter was not organized by ecosystem or landscape.
Sonia Canavelli	6	212	6	213	I would suggest not to reduce agriculture to the production of only one benefit (I assume it is economic benefit for farmer), because agriculture also brings other benefits for farmers (e.g., cultural identity, sense of progress, economic security, personal satisfaction for the accomplished work, social recognition, etc.). Additionally, it brings economic benefits, food, and work opportunities for people living far away from the field.	We agree. In the text it says to fewer benefits or to fewer actors. It is indeed true that one actor can receive multiple benefits, but the overall is less. This clarification should address the concern, which we understand.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	7	230	7	243	It is important to highlight here, how much of the areas can be converted without problems of desertification and unsustainable management and how much is authorized for conversion in order to increase agricultural and livestock production. Also, creates the connection in this paragraph of livestock production and NCP. The discussion of natural habitat conversion and land use change is important in the region since it has an important amount of tropical trees. It is important to highlight the connections but there is no need to go into specifics (number of camelids, or cattle, or beef production). The main distinctions in the region should go to a map or table. This topic is very relevant and should show up the trends of deforestation in the region and the potential benefits and disbenefits.	Trends in deforestation is dealt with in chapter 3 (status and trends of biodiversity) and chapter 4 (drivers of change in nature).
Giselda Durigan	7	238	7	238	In Amazon, at most, carbon sequestration is near zero if biological emissions are discounted. Carbon storage, however, is extremely high in the Amazon.	Thank you for your comment.
United States Government	7	244	7	254	If there is supporting data, consider including a discussion that provides additional insight into trends (e.g. fish products exported to Asia vs. kept "local").	We lack space to discuss each commodity in detail but we mention the
Adriana C. Flores-Díaz	6	244	6	254	Wetland and freshwater biodiversity are endangered in a 5:1 proportion in comparison with terrestrial biodiversity. Please indicate that these ecosystems in particular, have priority in conservation and restoration efforts, given their status. Nilsson C, Svedmark M. Basic principles and ecological consequences of changing water regimes: riparian plant communities. Environ Manage. 2002, 30(4):468-80.	This is addressed in Chapter 3.
Elva Escobar	7	244	7	254	Wetlands provide more services than just fisheries and water, they provide different services depending on their surroundings, they provide different services to urban development, agriculture or livestock production	We agree, but an executive summary presents only a selection of important issue.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Elva Escobar	7	244	7	254	<p>Temporary water bodies and small lakes should also be mentioned within freshwater ecosystem, they also play an important role in food security and they present high levels of endemic species.</p> <p>1. Davies B. R., J. Biggs, P. J. Williams, J. T. Lee, S. Thompson. 2008. A comparison of the catchment sizes of rivers, streams, ponds, ditches and lakes: implications for protecting aquatic biodiversity in an agricultural landscape. <i>Hydrobiologia</i> 597:7–17 DOI 10.1007/s10750-007-9227-6</p> <p>2. Downing, J. A. 2010. Emerging global role of small lakes and ponds: little things mean a lot. <i>Limnetica</i>, 29 (1): 9-24</p> <p>3. Scheffer, M., G. J. Van Geest, K. Zimmer, E. Jeppesen, M. Søndergaard, M. G. Butler, M. A. Hanson, S. Declerck, L. De Meester. 2006. Small habitat size and isolation can promote species richness: second-order effects on biodiversity in shallow lakes and ponds. <i>Oikos</i> 112 (1): 227–231</p> <p>4. Youn, S-J, W. W. Taylor, A. J. Lynch, I. G. Cowx, T. D. Beard Jr., D. Bartley, F. Wue. 2014. Inland capture fishery contributions to global food security and threats to their future. <i>Global Food Security</i> 3 (3–4): 147-148</p>	We agree, but an executive summary presents only a selection of important issue.
Elva Escobar	7	244	7	254	Who are the main consumers of fisheries?	Many categories of consumers may exist, and it was outside the scope of this assessment to assess this issue at regional and sub-regional level.
Elva Escobar	7	244	7	254	This section should mention the shift in extraction methods that have had a negative impact on fisheries such as factory boats or fishing down the food webs	Drivers of change (including technology) is dealt with in Chapter 4.
Margarita N. Lavides	7	252	7	252	Correct: '3014' to 2014??	Corrected.
Diego Pacheco	7	255	7	264	It is important the reference to wildgame and indigenous peoples. But there is not the only livelihood of indigenous peoples, and therefore should be contextualized with the other activities that indigenous peoples are developing in their daily lives. Also, the reference to the articulation of wild game and culture is more complex to what is described, which is very simplistic.	There are multiple ways IPLC interact with nature and these are explained throughout the chapter. But an executive summary presents only a selection of important issue.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lilian Painter	7	255	7	264	The use of wildlife by indigenous people is also one of the main arguments to justify their land use claims, since their dependence on this resource differentiates them from agriculturalists. <a href="http://www.fao.org/3/a-i4670s.pdf">http://www.fao.org/3/a-i4670s.pdf</a>	Thank you for your comment.
Diego Pacheco	7	265	8	284	I think that the discussion of energy security is not highly relevant in the discussion of NCP and GQL, unless their impacts of genetation in biodiversity. However, I think that the information that most cars in Brazil can run on ethanol is not relevant or the biomass in Brazil, unless an information of how much biodiversity is loss because of the biomass projects in Brazil. This paragraph needs to be rephrased entirely, and provide better connections between energy sources and NCP.	The entire Executive Summary has been restructure.
Margarita N. Lavides	7	265	8	284	Coal is considered by far the 'dirtiest of energy sources' and had and has been affecting biodiversity, ecosystems and local communties of other countries of other regions. It woud be good to mention here in this section the percent use and trends of coal as a source of energy in Americas or in some Americas countries.	The scope of the chapter only refer to energy derived from biodiversity or water resources
Elda Tancredi	7	266	6	267	Paraguay energy source: 57% hydropower, 27% biomass, 16% hydrocarbon. Surce: <a href="http://www.ssme.gov.py/vmme/index.php?option=com_content&amp;view=article&amp;id=1628&amp;Itemid=747">http://www.ssme.gov.py/vmme/index.php?option=com_content&amp;view=article&amp;id=1628&amp;Itemid=747</a>	The data presented regarded eletric power and not all energy consumed. The text was corrected. Our sources are: Total energy consumption from World Bank (2017) World Development Indicators. Indicator: Energy Use Per Capita. <a href="https://data.worldbank.org/indicator">https://data.worldbank.org/indicator</a> (Energy & Mining – Energy use).. Pecertange of electricity from EIA (2016) during 2012, except USA (data from2014) and Argentina (data from 2015).

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Diana Patricia Alvarado-Solano	8	272	8	274	This is especially true for rural communities where different factors produces difficulties to establish a connection with the national interconnected electric system. In Colombia, those areas are known as Non-Interconnected Zones (Plan Indicativo de Expansión de la Cobertura de Energía Eléctrica. Unidad de Planeación Minero Energética. Available at: <a href="http://www.siel.gov.co/Inicio/CoberturaDelSistemaInterconectadoNacional/Publicaciones/tabid/83/Default.aspx">www.siel.gov.co/Inicio/CoberturaDelSistemaInterconectadoNacional/Publicaciones/tabid/83/Default.aspx</a>	Thank you for your comment.
Diego Pacheco	8	285	8	302	This paragraph should be referred to NCP stemming from forests, and not only be focus on timber and fiber. Therefore, a more holistic understanding of forestry and NCP is needed, including carbon sequestration, soil protection, water regulation, medicinal plants, and other sources of livelihoods for indigenous peoples and local communities, including timber and fiber. Also no need to go into specifics, move specificities to graphs, maps or tables.	The way the executive summary was initially organized was by NCP and not by landscape systems (as forests). It has been reorganized according to securities.
Ederson A Zanetti	8	285	8	302	There should be mention to timber species used, at least ammount of native and introduced used for construction and energy	Details are presented in Section 2.2.2.1
Ederson A Zanetti	8	285	8	302	There should be mention to % of wood houses around Americas. Wood housing is a source of carbon sequestration and biodiveristy cultivation, and use of concrete and iron in south america urbanization process is the second most important source of GHG emissions	This was not possible to be assessed at regional or sub-regional level.
United States Government	8	293	8	294	Might want to distinguish between fuel wood and wood fuel.	Indeed. Corrected.
Diego Pacheco	8	303	9	319	I do not agree to discuss only the role of indigenous peoples regarding use of medicinal plants and animals. They have an holistic management and use of NCP for their GQL. Althoug this is important, I prefer not to introduce all ILK discussion in this paragraph. It is alsoimportant to discuss here the contribution of America to the pharmacological industry because of the presence of medicinal plants in the local biodiversity. Also, the specific references to the number of records are not needed in a SPM, which is more political.	The assessment is about ALL American people, and there is not enough space in the executive summary to address for each of the NCP or Securities the contributions of each particular group of people. We do recognize though the importance of Indigenous People and Local Community in conserving and procuding biodiversity.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Luis Ubaldo Castruita Esparza	8	305	8	310	There should be more specific numeric information for other countries such as Mexico, Guatemala, Nicaragua, Colombia, Venezuela, Ecuador, Brazil, Bolivia, Peru and others related to the use of medicinal plants	We use numerical values for many countries. Please see section 2.2.4.
Krista Locs	8	306	8	306	Change "Aboriginal peoples" to "Indigenous peoples"	Done.
DPG/Sbio/MMA	8	309	8	310	The Brazilian population traditionally uses several medicinal plants. There is still no consolidated data on the amount of medicinal plants used in Brazilian territory. However, data from studies of ethnobotany bring regional perspectives on the use of medicinal plants. This data of 290 herbal remedies is a great example, but we must point out that it refers only to a study carried out with the urban and rural population of three cities in the state of São Paulo, southeastern Brazil.  An example in the central-western region of Brazil is the Pharmacopoeia Popular do Cerrado, a 2010 publication of Articulação Pacari, a socio-environmental network formed by community groups practicing traditional medicine in the Cerrado biome. During the elaboration of the Folk Pharmacopoeia of the Cerrado, they identified 264 Cerrado plants used by traditional communities for medicinal purposes.	We incorporate regional examples from Brazil.
Lilian Painter	9	320	9	335	Although agricultural use currently dominates water use it is estimated that in the next 35 years water use for energy generation will increase in Latin America by 550% <a href="http://www.bancomundial.org/es/news/feature/2014/08/11/america-latina-agua-energia-generacion-electricidad">http://www.bancomundial.org/es/news/feature/2014/08/11/america-latina-agua-energia-generacion-electricidad</a>	Thank you for your comment
Margarita N. Lavides	9	321	9	323	I suggest the following instead: In Meso-America, South America, and the Caribbean, about 74% of freshwater is used for agriculture. Meanwhile, domestic use is the second largest consumer in these subregions.	Thank you for your suggestion.
Diana Patricia Alvarado-Solano	9	322	9	323	In Colombia, for example, the official statistics places the water uses as follows: agriculture, energy production, domestic (Estudio Nacional del Agua, 2014. IDEAM. Available at: <a href="http://documentacion.ideam.gov.co/openbiblio/bvirtual/023080/ENA_2014.pdf">documentacion.ideam.gov.co/openbiblio/bvirtual/023080/ENA_2014.pdf</a>	Thank you for your comment. Our analysis here is per subregion.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	9	323	9	325	While the paragraph uses "withdrawal" and "consumption" as separate terms, it may not be clear to the reader the difference between the two. For example, though the US industry is the largest withdrawal use, agriculture is the largest consumptive user. Consider clarifying.	Thank you for your suggestion. This is better explained in the Section 2.3.2
Krista Locs	9	330	9	331	Suggest the "State of the Great Lakes 2017 Highlights Report" for a reference on trends in Great Lakes Water Quality in Canada and the US. Available at: <a href="https://binational.net/wp-content/uploads/2017/06/SOGL_17-EN.pdf">https://binational.net/wp-content/uploads/2017/06/SOGL_17-EN.pdf</a> . The State of the Great Lakes 2017 Highlights Report indicates that "Overall, the Great Lakes are assessed as Fair and Unchanging. While progress to restore and protect the Great Lakes has been made, including the reduction of toxic chemicals, challenges remain with issues such as invasive species and nutrients."	Thanks for the comment. This topic is addressed in. Section 2.2.11. Space limitations in the key finding limit our ability to add details here.
Adriana C. Flores-Díaz	9	336	9	348	Wetland and freshwater biodiversity are endangered in a 5:1 proportion in comparison with terrestrial biodiversity. Please indicate that these ecosystems in particular, have priority in conservation and restoration efforts, given their status. Nilsson C, Svedmark M. Basic principles and ecological consequences of changing water regimes: riparian plant communities. Environ Manage. 2002, 30(4):468-80.	This is a subject of Chapter 3.
Diego Pacheco	9	349	10	364	I prefer not to discuss the differences between monetarization and non monetarization, because this is a very sensitive issue for many countries in the region. Although there is the need to remove a prescriptive language, for example saying that monetarization led to powerful insights in the values of nature. Also, I disagree with the conclusion that little is know about the non-material NCP. There is many anthropological literature (case-based) showing how non-material NCP are delivered in the context of indigenous peoples.	The argument posed is that "little is known about the MECHANISM by which non-material NCP is delivered" not that "little is known about non-material NCP". There is a huge difference among the two statements.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	10	361	10	362	This sentence notes the monetization of one ecosystem service; however, there are a number of other ways that nature's benefits can also be captured (e.g., avoided cost, hedonic valuation). Consider including such a discussion, perhaps regarding how much governments are spending on conservation efforts or restoration-based activities.	Thank you for your comment. There is a new section on the chapter on values and valuation.
Krista Locs	10	365	9	376	Suggest the following reference "Canadian protected areas status report 2012-2015": <a href="http://publications.gc.ca/site/eng/9.820957/publication.html">http://publications.gc.ca/site/eng/9.820957/publication.html</a>	Thank you for your suggestion.
David González	10	365	10	365	Correct 'Setting aside areas of land or water is a commonly used...' Theres a comma missing and there's an extre 'or'	The paragraphs were re-written
WWF Mexico	10	365	10	376	There should mentioned , in sake of objectiveness, that MPAs in the Americas are, unfortunately, mostly "paper areas", without adequate management and without adequate surveillance and monitoring. Prosecution of environmental crimes inside those protected areas is usually missing and administrative penalties are the rule. Hence, IUU is common in MPAs.	It is not the chapter scope to assess the effectiveness of MPAs. Chapter 6 address governance issues.
Sol Guerrero	10	367	10	369	The information regarding percentage of protected areas should continue to use the regional division of North America, Meso-America, Caribbean and South America. There are countries in Latin America that have more than 23.3% of protected areas, such is the case of Costa Rica that has about 26% of its territory under	The data was presented agragated: World Bank Database: <a href="http://data.worldbank.org/indicator/ER.LND.PTLD.ZS">http://data.worldbank.org/indicator/ER.LND.PTLD.ZS</a>
Brenda McAfee	10	373	10	376	Section 2.2.8 speaksan array of options to protect biodiversity and maintain natures contributions to people. The reference for this statement is a paper that is not yet published.	In the assessment we can only used published information.
Diego Pacheco	10	377	10	391	The consideration of this issue needs to be less technical and more political. It is not easily understandable and the key message is missing.	The paragraphs were re-written
Ederson A Zanetti	10	381	10	381	There should be mention to HWP consumption as critical component of climate regulation	Thank you for your suggestion.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	11	392	12	409	Trends in biodiversity by sector (fishers, forestry, etc.) should be considered in each of the previous paragraph when discussing each of the NCPs. There is no need to introduce a new paragraph only for trends.	The entire Executive Summary has been restructure.
Ederson A Zanetti	11	392	11	409	there should be mention and figures regarding relevance of timber construction and wood energy sectors	Details are presented in Section 2.2.2.1
WWF Mexico	10	392	11	403	There should provide more information because it gives facts but explanations are not offered. In one hand, imported seafood provides 90% of seafood consumptions in the USA (this explains the decrease in USA fishers); in the other hand, demographic trends in Americas have crowded coasts and governments made of fisheries a palliative for poverty. Since access to fisheries is open, the poorest fractions of society shift to that activity (formally or as poachers).	Details are discussed in the section 2.2.1.
WWF Mexico	10	392	11	403	There should include and consider: Additional dimensions of artisanal fisheries are missed; such as entities of almost impossible control by governments avoiding the required investment for the adequate management and surveillance; entities with tolerated continued growth serving as pressure valves for social issues, instead of efficient productive units and relevant sources of threats for marine and coastal biodiversity, due to the prevalence of irresponsible fishing.	Drivers of change is dealt with in Chapter 4. Governance is dealt with in Chapter 6.
David González	11	396	10	396	fish famers' to 'fish farmers'	Corrected.
Diego Pacheco	11	410	11	428	I do not understand the context and concept of conservation refugees. Since this is not widely accepted in the region I prefer to delete it.	We deleted from the executive summary.
WWF Mexico	11	410	11	428	There should mention that: Illegal, unreported and unregulated fishing (IUU) has been recently recognized as a major international issue, causing significant damage to biodiversity, among other damages. Commercial embargos and export prohibitions have become into common tools aiming to eliminate IUU.	Drivers of change is dealt with in Chapter 4. Governance is dealt with in Chapter 6.
Krista Locs	11	414	11	414	Suggest avoiding the use of the "IPLC" acronym and using the full text "Indigenous peoples and local communities".	This is a commonly used acronym in IPBES.
Giselda Durigan	12	423	12	424	Why indirect water use for people, such as irrigation, hidroelectricity and industry are not considered?	Details are presented in sections 2.2.10 e 2.2.11

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	11	429	11	443	I think that this is a very relevant paragraph since is introducing the ILK discussion into the SPM. However, I prefer not going into one single example (the darks oils in amazonia). There is the need to introduce more examples from different biomas. I also, suggeset to introduce the conservation of agrobiodiversity in the Andes region as an important example of ILK in the region, which is also connected with the holistic perspective of NCP as highlighted in the line 40 of this document. If there are difficulties in introducing examples of different biomas I prefer not going into the very specific examples.	Examples may be given from different system from the Artic to the Patagonia. But, there is no space in the executive summary to provide examples for each biome.
Giselda Durigan	13	431	13	436	The concept of ecosystem services was replaced by NCP. However, when productive systems are also recognized by providing "contributions to people" (and I totally agree), and are included in this table, that means crops and timber plantations are also understood as "Nature". The problem, thus, is that no difference exists among natural and managed or productive ecosystems. It seems to be inconsistent with the definition mentioned at Page 20: "Nature here refers to the natural world, with an emphasis on <u>biodiversity and ecosystems</u> ".	The definition is consistent with the IPBES conceptual framework used in this chapter. Crops and timber plantation are products of nature managed by humans. They are not artificial.
The Biodiversity Indicators Partnership (BIP)	11	433	11	433	I think that "help to maintain" would be preferable to the jargon-y and debateable "continue to enhance and co-produce"	There are studies showing that management practices shape the creation of new varieties of crops and have shaped landscape (see section 2.4).
Thomas Brooks	11	433	11	433	I think that "help to maintain" would be preferable to the jargon-y and debateable "continue to enhance and co-produce"	There are studies showing that management practices shape the creation of new varieties of crops and have shaped landscape (see section 2.4).
United States Government	11	433	11	433	To "co-produce" biodiversity is confusing in this context; please clarify or delete.	There are studies showing that management practices shape the creation of new varieties of crops and have shaped landscape (see section 2.4).

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Ederson A Zanetti	12	455	12	457	review of setence, it suggests biodiversity and ecosystem services in latin america can be used to compensate impacts on some place else	We disagree. The sentence is about biocapacity and not impact compensation.
Diego Pacheco	13	458	13	497	The introduction should reflect the specifics of Latin America regarding the interactions between nature and human beings, and therefore explore the different worldviews, particularly those of ILK. The section should open the question about the benefits of NCP for GQL.	This issue is addressed in Chapter 1.
Daniel P Faith		459		459	The first sentence gives a too narrow perspective “that humans and ecosystems are inextricably and intricately linked” the statement should include “biodiversity” to avoid reinforcing the common misconception that biodiversity only matters within ecosystems as a basis for services. In accord with option values as described in the conceptual framework and with NCP18, biodiversity provides this global contribution to people; for a review see Faith 2017 reference and the other comments below.	This issue is addressed in Chapter 1.
Brenda McAfee	13	462	13	462	Telecoupling is an important concept that occurs throughout the report. Early in the report there should be a discussion of telecoupling and teleconnections.	Key definitions are included in the Glossary
United States Government	13	462	13	462	Definition of "telecoupling" would be helpful.	Key definitions are included in the Glossary
Alejandra Tauro	13	466	13	470	seria importante aclarar que la paradoja ambiental entre el incremento del bienestar humano a costa de la degradación de ecosistemas se da bajo un modelo de desarrollo determinado (basado en la economía extractivista, el libre mercado y la industria). Que aumente el bienestar global en términos económicos, no quiere decir que este acompañado de un aumento en el bienestar individual y subjetivo a escala global. En Ch 1, lineas 209-215 se menciona que el bienestar medido económicamente en PBI no incluye externalidades que afectan la perdida de bienestar de la gente	First part of this comments is addressed in the Chapter. It is clarified that economic growth (ie. current and predominant development model) is increasing but ES are decreasing.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	13	466	13	470	It would be important to clarify that the environmental paradox between increased human wellbeing at the cost of ecosystem degradation happens under a specific development model (based on extractive economy, free markets and industry). Just because it increases global wellbeing on economic terms, doesn't mean that it also increases subjective individual wellbeing at a global scale. In Ch. 1, lines 209-215 It is mentioned that the well-being measured economically in GDP does not include externalities that affect the loss of wellbeing for the people	First part of this comments is addressed in the Chapter. It is clarified that economic growth (ie. current and predominant development model) is increasing but ES are decreasing.
Adriana C. Flores-Díaz	13	468	13	470	This phrase do not help to understand the complex problems we have, about nature degradation and poverty. In real terms, do not nature utilization neither market rules have solved poverty and inequalities. So, please try to give information and alerts to decision makers, avoiding to promote a misinterpretation for the status of their countries. It is so relevant to admit that poverty reduction strategies have failed in America, as has reported CEPAL. MA assessment is from 2005 and CEPAL 2011 and later <a href="http://www.cepal.org/en/pressreleases/eclac-calls-redoubling-efforts-combat-poverty-and-inequality-scenario-deceleration">http://www.cepal.org/en/pressreleases/eclac-calls-redoubling-efforts-combat-poverty-and-inequality-scenario-deceleration</a>	Noted and completed
Adriana Flores	13	468	13	470	The following statement: "while the world's biodiversity and ecosystem services are degrading, in the aggregate human well-being has actually increased", is a hard one to make, we do not agree fully on the idea that human well-being has increased	The statement was removed during chapter revisions.
Ederson A Zanetti	13	470	13	470	sounds too negative. There should be mention to those species that are gaining, increasing their presence with the increase on population, such as fisheries, cattle, potato, pine and others. IN Brazil mico leao dourado preservation project increased the population in a small area, taking species out of extinction threat	Wording has been improved.
Alwin Dornelly	13	471	13	482	Paragraph need references to support the assertions being made	Citations have been added
Francillia N. Solomon		471		475	Provide examples of human beings' reliance on nature.	We could not add more length to make these kinds of details, but we hope that the examples that are provided later on make this explicit.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Francillia N. Solomon		475		480	Provide an example of your assertion	These examples are what the entire chapter is about.
Diego Pacheco	13	498	17	574	This section is not clear about its focus. Since most of the discussion is about indigenous populations. Also, there is a missing issue which is the introduction of local communities. Therefore, a global assessment of IPLC is reflected.	Indigenous issues are addressed in Chapter 1, we have made a brief mention of it here to put the discussion of NCPs in context.
Margarita N. Lavides	14	498	14	501	I think one of the reasons why there is so much divide between environmental and conservation sector and extractive industries like mining for example is that we tend to be exclusive to biotic components only and exclude abiotic components like fossil fuels, deep aquifers, underground minerals, winds tides which in fact provide Ecosystem Services and provides Nature's Contribution to People. And yet we in the environment and conservation sector claim that we should be in harmony with nature and ecosystems. Meanwhile, nature and ecosystems consists of both biotic and abiotic components. We are so excited and passionate about socio-ecological systems yet within the bounds of what we call 'Nature', 'ecological', 'ecosystems' is a wide divide between what is greatly affecting each other, the biotic and abiotic components and the sectors working for in each of them. We claim to be cross sectoral and cross disciplinary yet those of us working within the bounds of 'Nature' are fragmented. I do not mean to change IPBES CF at this point but if we are truly to aim to achieve great gains in biodiversity conservation and sustainable development, the great divide between sectors within the 'Nature'/'ecological' realm should be reduced if not removed. This comment may not only apply to this Chapter but for the Americas, other regions and IPBES in general	Thank you for this comment.
Daniel P Faith		510		510	For NCP18 "linked to a place" is too narrow. The contributions are often global. These ideas on maintenance of options could be expanded and clarified.	This has been clarified in the text and the phrase "linked to a place" removed.
Daniel P Faith		511		514	this does not make sense? ecosystem services do not produce NCP18	This has been clarified in the text.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alwin Dornelly	14	516	14	528	Can a relationship be made between the paragraph and NCP and QoL	Noted and completed
Ederson A Zanetti	14	516	14	528	there should be mention and figures on economic benefits, or economic data	Benefits and economic data are presented in different sections of this
Francillia N. Solomon	14	516	14	528	Establish relationship between NCP and QoL	Noted and completed
Sol Guerrero	14	516	14	528	According to www.ethnologue.com, the Americas have 1061 living languages (almost 15% of the total of 7099 known living languages of the world). Within this context, only 12 countries hold about 54% of the worlds languages: Papua New Guinea, Indonesia, Nigeria, India, Australia, Mexico, Cameroon, Brazil, Zaire, Philippines, United States and Vanuatu. Likewise, there are 12 countries that hold the highest numbers of species (including endemic species), these are considered mega diverse countries: Brazil, Indonesia, Colombia, Australia, Mexico, Madagascar, Peru, China, Philippines, Ecuador and Venezuela. We find countries from the Americas in both lists. With this in mind, a first correlation between cultural diversity and biological diversity shows in these statistics, since 9 of the 12 main centers for cultural diversity (in terms of living languages) are also considered mega diverse countries for biological diversity. In summary, the very high correlation between the areas of high biological diversity and indigenous peoples has given rise to the concept of a "biocultural axiom". In this axiom, biological diversity and cultural diversity are reciprocally dependent and geographically overlapped. This constitutes a key principal for the theory of integrative and interdisciplinary conservation efforts. For more information: Toledo, V.M. (coord). 2010. La biodiversidad de México: Inventarios, manejos, usos, informática, conservación e importancia cultural. Conaculta	This comment is not relevant to our chapter scope



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
DPG/Sbio/MMA	14	517	14	524	Currently it is possible to find 253 indigenous peoples in Brazil, speaking more than 150 different languages. According to the 2010 IBGE Census, 896,917 brazilians are indigenous. Of these, 324,834 live in cities and 572,083 in rural areas, which corresponds to approximately 0.47% of the country's total population. Most of this population is distributed through thousands of villages, located in the interior of 704 Indigenous Lands, from north to south of the national territory.	Thank you for this comment, but no reference were added.
Giselda Durigan	16	518	16	534	The importance of water regulation for energy suply has been invariably neglected and must be reinforced in this paragraph. For Brazil it is particularly relevant, since 61.5% of the electricity used in the country comes from hydroelectricity (Source: <a href="http://www2.aneel.gov.br/aplicacoes/capacidadebrasil/OperacaoCapacidadeBrasil.cfm">http://www2.aneel.gov.br/aplicacoes/capacidadebrasil/OperacaoCapacidadeBrasil.cfm</a> ), making industry and the whole society strongly dependent on the ecosystem service of water regulation.	The page number does not confers with the content of the comment. In any case the issue raised is dealt with in section 2.2.4.
Francillia N. Solomon		524		525	What are the threats to linguistic diversity? Any links to biodiversity?	The same places of linguistic diversity are also the same places as biodiversity. However, the drivers seem to be different. This is much to complex to simply explain as part of a background sentence here (see Sutherland 2003).
Sol Guerrero	15	530	15	531	Table 2.1. There is more recent data about indigenous population in Mexico than the one published in 2010. INEGI has already published results for 2015 regarding population, this data needs to be updated. <a href="http://www.beta.inegi.org.mx/proyectos/enchogares/especiales/intercensal/">http://www.beta.inegi.org.mx/proyectos/enchogares/especiales/intercensal/</a>	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MAYDS- Argentina	16	547	16	553	El trabajo citado (McKinnon et al. 2016) no incluye en los métodos la búsqueda de bibliografía con palabras clave como “uso sustentable”, que se considera un factor clave para evaluar lo que el estudio se propone. También una limitación es que se basa únicamente en bibliografía en inglés. Por otra parte, en el artículo que se cita se toma como criterio de análisis ser o no miembro de la OCDE. Se considera que la inferencia “no miembro de la OCDE” como “país en desarrollo” y “miembro de la OCDE” como “país desarrollado” puede llevar a conclusiones erróneas.	Thank you. The study is just used as a reference for a general statement.
MAYDS- Argentina	16	547	16	553	Sumado a estos aspectos, en el trabajo citado la conclusión es que no se tiene muy clara la interacción entre la conservación y el bienestar humano: “although there is relative consensus in the literature that NCPs are important for QoL, it is often difficult to discern the status and trends in the ways the constituent parts interact”. El mismo documento destaca después que existe más información cualitativa, dando cuenta de todas las interacciones que hay entre la biodiversidad y el bienestar. Es por estos motivos que se considera que el párrafo en cuestión (líneas 547 a 553) no agrega información sustantiva para el análisis sobre cómo la naturaleza contribuye al bienestar humano y se recomienda buscar otra bibliografía para aportar a este apartado.	Thank you. The study is just used as a reference for a general statement that some components of human well being are less studied than others.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MAYDS- Argentina	16	547	16	553	Se sugiere la siguiente bibliografía para que aborda la interacción entre la contribución de la naturaleza y la calidad de vida: 1) Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC; 2) INTA.2011. Valoración de servicios ecosistémicos: conceptos, herramientas y aplicaciones para el ordenamiento territorial/editores:Pedro Laterra, Esteban G. Jobbágy, Jose M. Paruelo.- Buenos Aires: 720p; 3) Garibaldi, L., Carvalheiro, L., Vaissiere, B., Gemmill-Herren, B., Hipolito, J., Freitas, B. et al. 2016. Mutually beneficial pollinator diversity and crop yield outcomes in small and large farms. Science, 351, 388–391; 4) Sandifer PA, Sutton-Grier AE, Ward BP. 2015 Exploring connections among nature, biodiversity, ecosystem services, and human health and well-being: opportunities to enhance health and biodiversity conservation. Ecosyst. Serv. 12, 1–15. (doi:10.1016/j.ecoser.2014.12.007); 5) Álvarez J, Shany N. 2012 Una experiencia de gestión participativa de la biodiversidad con comunidades amazónicas. Rev. peru. biol. 19(2): 223 – 232; 5) Altrichter, M. 2006. Interacciones entre la gente y la fauna en el Chaco Argentino. Dir. Fauna Silvestre. Bs. As. Argentina. 76 pp	Thank you. The links regarding nature's contribution to people and quality of life is fully developed in section 2.2.
José Luis Echeverría/ César Azurdia/ Melisa Ojeda	16	552	16	553	Sería importante revisar alguna literatura gris debido a que en países en desarrollo existe mas información sobre este tema, lo cual como ya se ha visto, es difícil encontrarlo en bibliografía revisada por pares	Thank you for this comment
José Luis Echeverría/ César Azurdia/ Melisa Ojeda	17	558	17	560	Hay muchos ejemplos importantes en Mesoamérica sobre este tema. Vale la pena citar algunos dado la importancia de la región como centro de diversidad y origen así como de riqueza cultural	Thank you for this comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	17	567	17	574	Consider including the UN-SESYNC-WAVES working group that is looking to establish national environmental-economic statistical accounts for land and water across countries. Natural Capital Accounting and continuing global efforts could contribute tremendously to having standardized national datasets linking environmental stocks & flows to economic assets and industrial development.	Thank you for this comment
Giselda Durigan	17	569	17	573	Here the problem is with the misunderstanding that only forest ecosystems are important "for their role in regulating freshwater quality and their provision to downstream users". It is a huge mistake, considering that grasslands and savannas can equally protect quality and can be more efficient than forest vegetation in water yield (Sources: (1) Jackson RB et al. 2005 Trading water for carbon with biological carbon sequestration. Science 30, 1944–1947. (doi:10.1126/science.1119282); (2) Honda, E. A., & Durigan, G. (2016). Woody encroachment and its consequences on hydrological processes in the savannah. Phil. Trans. R. Soc. B, 371(1703), 20150313. (3) Honda, E.A. & Durigan, G. 2017. A restauração de ecossistemas e a produção de água. Hoehnea 44(3): 316-328, <a href="http://dx.doi.org/10.1590/2236-8906-82/2016">http://dx.doi.org/10.1590/2236-8906-82/2016</a>	The page numbers do not confers with the comment made, but the authors agree that many ecosystems are important for water regulation.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	13	575	18	605	<p>This section do not land in the diversity of values and knowledge. It has general discussion very broad, general, and about instruments, but avoid the core of the issue, which is highlight values and knowledge. I expect here a consideration of the views of Living-Well and Mother Earth. For example, the criteria of willingness to pay is not a general framework for assessing values and knowledges. The introduction needs to be broad and talk about diversity of worldviews and multiple values in the Americas. I do not understand why the TEEB and WAVES is introduced here. The analysis here needs to be broader and strongly related to worldviews and not about instruments how to evaluate these worldviews. These are two different things. For example: the holistic view of nature (Mother Earth) as an organic system where people and nature are a unique living system, and the view of nature separated from human beings. This is the case of the holisitc interpretation of NCP regarding ILK. For example: In the Andean region the presence of the two way and dynamic relationships between people and nature as a system of life makes difficult to differentiate the nature contributions to people as regulatory, material and non-material, therefore the need to understand those in a holistic perspective . The gifts of Pachamama (Mother Earth), either as goods or bads, depends on the interrelationship between time and space, the connection of different spheres of the world, and the positive or negative interaction between peoples, nature and the spiritual world. In the cosmogony of the Andean region the Pachamama, usually denoted as Mother Earth, is the conjunction of time and space, which means that peoples and nature are part of an integrated living entity in a specific time and space (Laymi 2001; Torrez and Yampara 1994). The Pachamama represents the micro and macro-cosmos. which is</p>	<p>This section was significantly edited. I could not find the citations mentioned by the reviewer. However, I did find a work that would be appropriate to introduce the worldview issue, specifically using the example of Andean cosmovision.</p>

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	17	580	17	585	Local peoples have a different way of thinking about nature. Perhaps low income and illiteracy are related to the willingness to pay for ES, but they are not reasons to not do that. There are cultural factors ignored in this statements. Local valuation of ES is highly understood by cultural groups and the world conception among the social group. <a href="https://www.researchgate.net/publication/313471221_ESQUEMA_DE_PSA_EN_TIERRAS_DE_PROPIEDAD_PRIVADA_Y_SOCIAL_EN_MENDOZA_ARGENTINA_Y_CHIAPAS_MEXICO">https://www.researchgate.net/publication/313471221_ESQUEMA_DE_PSA_EN_TIERRAS_DE_PROPIEDAD_PRIVADA_Y_SOCIAL_EN_MENDOZA_ARGENTINA_Y_CHIAPAS_MEXICO</a>	Good point. The editions now reflect that individual characteristics are one issue (e.g. iteracy levels), but there are also group values and worldviews that are shared and which also affect not just perceptions, but the construction of the concepts of nature and well-being themselves.
David González	17	586	17	587	Incorrect citation, the right one is IPBES/4/INF/13	OK. Fixed.
David González	17	592	17	592	The concept was developed in the field of environmental economics, not ecological economics. It is not the same thing and both Daily and Constanza belong to the environmental economics school which actually draws on neoclasical economics to approach the ecological crisis. Often trying to put a price on nature.	Changed this sentence to read "economics" and then took out Daily and Costanza and added a Gomez-Baggethun et al. 2010 review of the ES concept in economics overall.
David González	18	599	18	599	Incorrect citation, the right one is IPBES/4/INF/13 (check the whole document, also the citation is not included in the reference list)	Fixed in text. Need to add to the reference list.
Diego Pacheco	18	606	18	622	Instead of moving into conflicts as a say to assess different values, is important to highlight the different values and its potential for understanding the interactions between nature and human beings.	This new edition has been extensively reworked and should now better address the issue of interactions, while still using the "conflicts" as an expression of what happens when these issues are not included in decision-making.
Daniel P Faith		632		639	the text says that in the following sections, "an assessment is presented of the status and trends regarding NCPs" The issue for NCP18 re status/trends is how much biodiversity there is (because this is what is continuing to maintain options). a later section is to do this but....it seems to be mostly about PAs – we need more on how much biodiversity is extant or lost...so much of the red list status reporting in chap 3 should be linked to NCP18....	This reference to Chapter 3 is added in the "options" section.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alejandra Tauro	19	635	20	638	Acuerdo con explicitar desde donde uno interpreta la realidad... pero hablar desde la ciencia que implica? Quienes quedan fuera y que podría significar este conocimiento que no se tiene en cuenta acá para entender las relaciones NCP con QoL? Quizás se pueda tomar como reflexión final...	Thanks for this comment.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	19	635	20	638	I agree with making it explicit from where one interprets reality... but what does it imply? Who is left out and what could this knowledge mean that is not being taken into account to understand the relations between NCP and QoL?	The last paragraph was modified to attend to this comment. Rather than explicitly saying what it "means" to have natural scientists leading this assessment, I have instead prioritized a) the recognition of the bias, b) the use of the IPBES methodology to "limit" the bias and c) at the same time "not forgetting" the bias in the interpretation of results.
Diego Pacheco	19	639	36	996	This section is too long and needs to be summarized, using more maps and infographics to display the differences between regions. There is the need to create the linkages between food and NCP (soil fertility, water irrigation, soil protection), etc. This section should be about land NCPs and not about sectors (agriculture, livestock, etc.). As it is, does not help in the discussion of NCP and GQL in the context of agricultural production, because is only about agricultural and livestock production and no more. The approach with fisheries is the same. Also, this section has a view of commodities in agriculture, livestock and fisheries, with a very business approach. It needs to be more general, including the contribution of small-scale producers to food production. In this section seems to be that agricultural producers are the same, but in reality they are very distinctive. As it is, the section has a very agrobusiness approach. Even the organic production, which is much related to small-scale producers has a very market oriented perspective.	The section is about food and feed as material NCP, regulating NCP and Non-Material NCP related to food are presented elsewhere in the chapter.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow	19	649	24	748	My general feeling is that this section is incomplete and it is completely diverted towards productivity. Information is missing regarding the consumption of agrochemicals and how they are related to productivity and environmental depletion. So Canada and EUA may be highly productive, but at what cost??? Also I do not see information upon how much of the food that is produced is actually consumed by the human population and doesn't go to the production of bioenergy of livestock breeding. Als,o agriculture is a very broad term. It seems that this section is monopolized by a monoculture type of agriculture, but what about traditional management in the Americas? There is a long list of authors who have studied this. For example in Mexico Javier Caballero, José Blancas, Ana Isabel Morelia, Alejandro Casas. In all Latin America <u>Miguel Altieri is a very interesting reference</u>	Thank you very much for your comment. The issue here is certainly based on crop production, but will add about agrochemicals and environmental depletion for Canada and EUA. The whole chapter refers to the benefits for people. And thank you for your suggestion for including other type of agriculture which will be added.
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	19	649	24	748	My general feeling is that this section is incomplete and it is completely diverted towards productivity. Information is missing regarding the consumption of agrochemicals and how they are related to productivity and environmental depletion. So Canada and EUA may be highly productive, but at what cost??? Also I do not see information upon how much of the food that is produced is actually consumed by the human population and doesn't go to the production of bioenergy of livestock breeding. Als,o agriculture is a very broad term. It seems that this section is monopolized by a monoculture type of agriculture, but what about traditional management in the Americas? There is a long list of authors who have studied this. For example in Mexico Javier Caballero, José Blancas, Ana Isabel Morelia, Alejandro Casas. In all Latin America <u>Miguel Altieri is a very interesting reference</u>	Thank you very much for your comment. The issue here is certainly based on crop production, but will add about agrochemicals and environmental depletion for Canada and EUA. The whole chapter refers to the benefits for people. And thank you for your suggestion for including other type of agriculture which will be added.
Lucía Pérez Volkow	19	650	19	661	This paragraph has too many ideas (agriculture occupying surface, important source of livelihoods). Since it is the introduction to a very important section of the assessment I would recommend to make it clearer and choose one or two main ideas	Thank you for your comment. But this is only an introduction which involve food sources in general.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	19	650	19	661	This paragraph has too many ideas (agriculture occupying surface, important source of livelihoods). Since it is the introduction to a very important section of the assessment I would recommend to make it clearer and choose one or two main ideas	Thank you for your comment. But this is only an introduction which involve food sources in general.
David González	19	652	19	652	correct '82% e 88%' for '82% to 88%'	Done! Thanks
United States Government	19	653			Is the definition of "family farmer" consistent across countries? Consider including a definition in the context of this assessment to clarify.	Have added FAO's definition and changed the word to familiar agriculture: Most farms are owned by the families that exploit them; are small and found in rural areas of developing countries. Many of these small family producers are poor, food insecure and have limited access to markets and services. Their options are limited, but they cultivate their own land and produce food for a substantial proportion of the world's population. In addition to agriculture, they engage in many other (often informal) economic activities to supplement their reduced incomes.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
DPG/Sbio/MMA	19	667	19	669	In 2016, sugar production in Brazil reached an annual record of 28.93 million tons (20.5% more than 2015). The data was released by the Secretary of International Relations of Agribusiness (SRI) of the Ministry of Agriculture, Livestock and Supply.	Thank you very much for this updated data, will add it but have not found any other comparative source for the other countries as it is shown measured following the AAV: For example Brazil has shown an increase of 20.5 % more than in 2015 (SRI-Ministry of Agriculture, Livestock and Supply, 2016).
United States Government	20	676	20	676	"PIB" should be defined before it is used.	Yes, agreed. Will suggest to have it defined in chapter 1 to GDP.
Francillia N. Solomon		679			Translate Countries graphed into English	Yes, agreed and sorry for it. We decided to exclude this figure as we have improved recent information in next topics.
Brenda McAfee	20	684	20	685	Is there an explanation for the decrease in sugar cane in Cuba and increase in the rest of Mesoamerica?	Yes, it is: On the one hand, the US economic blockade, then the problems of commercial insertion at the international level, the monoproduction of a competitive product in other regions and the work of unpaid personnel, besides the Russian subsidy for a short period and a high economic dependence in Cuba For this product (FAO, 1997). While in Mesoamerica it was mainly due to changes in trade policies with a tendency to deregulate domestic markets and reduce trade barriers.
United States Government	21	692	21	692	Please recheck data for the North America crop production graph - maize (corn) is very likely one of the top 10 crops in NA.	I appreciate this terrible mistake, thank you! And solved with another graph with updated info for 2017 and included harvested area, production and yield!

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	23	724	23	726	This fact is not only occurring in the Americas as a lack of coherence between climatic and soil conditions, and crop growing but in terms of the market forces. As an example is the case of avocado in Michoacan, Mexico, occupying places where there is not enough rain for growing it, and it is beginning a groundwater over utilization, declining water availability for the forest and the people. Land use change is advancing and decision makers are promoting or tolerating it. <a href="http://semarnacc.michoacan.gob.mx/operativos-contra-huertas-ilegales-son-un-esfuerzo-para-contener-el-cambio-climatico/">http://semarnacc.michoacan.gob.mx/operativos-contra-huertas-ilegales-son-un-esfuerzo-para-contener-el-cambio-climatico/</a>	Thank you very much for your comment. As for its importance, will deliver to chapter 6 which deals with policies and national strategies, alright?
Lucía Pérez Volkow	23	734	23	734	Before talking about the extinction of different varieties or natural cultivars I think it is important to talk about the amazing diversity of crops that America offers the world. Even though this is mentioned in another section it it should at least be mentioned	Yes indeed! In section 2.4, but nice suggestion to refer to this point here and mention the place where this issue is treated: The American continent is considered among scenarios with important richness in crops and useful plants that historically were naturalized and diversified based on the production of cultivars and varieties' selection according to certain properties of interest and value for local communities: weight, volume and nutritional qualities.
Adriana C. Flores-Díaz	23	734	24	748	This is a very important matter and it is the reason to exist of IPBES. Local biodiversity which used to provide food becomes extinct. The cases expressed in the paragraph are interesting but, it is important to inform .. What else? Who was eating this food? What is happening to users and providers of this food? Is something happening with the ecological relationship with other species? Why are these species disappearing? Genomic resources are at risk, too, since all these species are the source of varieties and food possibilities, adapted to local habitats and feed ways.	Most causes for the lost of wild relatives is the destruction of natural landscapes and a high rate of deforestation in the Americas.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	23	734	23	734	Before talking about the extinction of different varieties or natural cultivars I think it is important to talk about the amazing diversity of crops that America offers the world. Even though this is mentioned in another section it it should at least be mentioned	Yes indeed! In section 2.4, but nice suggestion to refer to this point here and mention the place where this issue is treated: The American continent is considered among scenarios with important richness in crops and useful plants that historically were naturalized and diversified based on the production of cultivars and varieties' selection according to certain properties of interest and value for local communities: weight, volume and nutritional qualities.
José Luis Echeverría/ César Azurdia/ Melisa Ojeda	23	736	23	737	No todas las especies de teosinte pueden hibridarse con el maiz y a la vez, producir descendencia fertil. La única que está comprobada a nivel de campo es Zea mays subs. parviglumis.	Thank you very much for citing this specific data: Will mention instead of teosinte: Zea mays subs. parviglumis
United States Government	23	738	24	748	Might want to elaborate on why those crop species at risk of extinction or genetic vulnerability would have significant societal impact. Which groups would be disproportionately affected? How have they come to rely on the cassava root or Andean potato?	Thanks for your suggestion. Here are only three examples in order to show different treatments. According to FAO (1999), since the 1900s, some 75 percent of plant genetic diversity has been lost as farmers worldwide have left their multiple local varieties and landraces for genetically uniform, high-yielding varieties; in addition wild populations that can be genetically stronger and with better resistance conditions also disappear or are no longer used to improve cultivated plants and reduce their diversity.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana Flores	24	749	27	835	This section should farther describe negative impacts that livestock production has on the ecosystems	Chapter 2 actually is not the place where impacts are to be presented or discussed. However, we improved the wording in section 2.2.1.2., in particular in the first part, to make the expansion of livestock production and the possible negative impacts clearer.
Margarita N. Lavides	24	768	24	768	Correct: 'let' to led	The wording has been improved
Diana Patricia Alvarado-Solano	24	770	24	771	<p>The exotic animals that are now the base for livestock production in Meso and SouthAmerica where introduced by Spaniards during the colonization. Its important to mention this in a way to make notice about the time frame in which the different ecosystems has been under land use conversion. Also, is important to present the statistics for the LAC the cover extent and porcentage of TDF under protection (Sánchez-Azofeifa et al. 2005. Research priorities for neotropical dry forests. Biotropica. DOI: 10.1111/j.1744-7429.2005.00066.x; Sánchez-Cuervo et al. 2012. Land Cover Change in Colombia: Surprising Forest Recovery Trends between 2001 and 2010. PlosOne. doi:10.1371/journal.pone.0043943; Romero-Duque et al. 2007. Structure and diversity of secondary tropical dry forests in Mexico, differing in their prior land-use history. Forest Ecology and Management. DOI: doi:10.1016/j.foreco.2007.07.002; Quesada et al. 2009. Succession and management of tropical dry forests in the Americas: Review and new perspectives. Forest Ecology and Management. doi:10.1016/j.foreco.2009.06.023; Alvarado-Solano &amp; Otero. 2017. Natural areas of tropical dry forest in Valle del Cauca, Colombia: an opportunity for restoration. DOI: 10.21068/c2017.v18s01a01; Pizano &amp; García. 2014. El Bosque Seco Tropical en Colombia. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH). Available at: <a href="http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia">http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia</a></p>	Mentioned but not in detail. Information on the origin of the domesticated animals and the time frame was included, so that the time frame becomes clear.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow	25	778	25	778	I think it is important to add here the percentage of the American territory that is grassland.	Noted and completed
MAYDS- Argentina	25	778	25	782	Se acuerda con el párrafo. Se sugiere incorporar bibliografía sobre conservación de los pastizales del Cono Sur y su biodiversidad a través de prácticas ganaderas sustentables y la ceruficación de carne de pastizal: PARERA, A.; CARRIQUIRY, E.2014.Manual de prácticas rurales asociadas al índice de conservación de pastizales naturales del Cono Sur de Sudamérica. Buenos Aires: Aves Uruguay. ( <a href="http://www.alianzadelpastizal.org/publicacion/manual-de-practicas-rurales-icp/">http://www.alianzadelpastizal.org/publicacion/manual-de-practicas-rurales-icp/</a> ) Se considera una experiencia de alta replicabilidad para ser incluida en la evaluación.	Noted and completed. We cited the mentioned work.
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	25	778	25	778	I think it is important to add here the percentage of the American territory that is grassland.	Noted and completed
United States Government	26	799	26	799	"livestock not created in natural ecosystems" is not clear. Is that meant to indicate species that did not evolve in natural ecosystems? Please clarify.	The wording has been improved. This was to make clear that production was not done in natural ecosystems

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diana Patricia Alvarado-Solano	26	806	26	807	<p>The exotic animals that are now the base for livestock production in Meso and SouthAmerica where introduced by Spaniards during the colonization. Its important to mention this in a way to make notice about the time frame in which the different ecosystems has been under land use conversion. Also, is important to present the statistics for the LAC the cover extent and percentage of TDF under protection (Sánchez-Azofeifa et al. 2005. Research priorities for neotropical dry forests. Biotropica. DOI: 10.1111/j.1744-7429.2005.00066.x; Sánchez-Cuervo et al. 2012. Land Cover Change in Colombia: Surprising Forest Recovery Trends between 2001 and 2010. PlosOne. doi:10.1371/journal.pone.0043943; Romero-Duque et al. 2007. Structure and diversity of secondary tropical dry forests in Mexico, differing in their prior land-use history. Forest Ecology and Management. DOI: doi:10.1016/j.foreco.2007.07.002; Quesada et al. 2009. Succession and management of tropical dry forests in the Americas: Review and new perspectives. Forest Ecology and Management. doi:10.1016/j.foreco.2009.06.023; Alvarado-Solano &amp; Otero. 2017. Natural areas of tropical dry forest in Valle del Cauca, Colombia: an opportunity for restoration. DOI: 10.21068/c2017.v18s01a01; Pizano &amp; García. 2014. El Bosque Seco Tropical en Colombia. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH). Available at: <a href="http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia">http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia</a></p>	Mentioned but not in detail, due to lack of space. We understand and agree with the comment on TDFs, but the question of pressures is not the main focus of Chapter 2. Information on the origin of the domesticated animals and the time frame was included, so that the time frame becomes clear.
Adriana C. Flores-Díaz	26	806	26	814	<p>It is important to emphasize the need for a sub-national characterization of livestock production, trends, and changes. Livestock production is largely responsible for environmental degradation in America. This section should farther describe negative impacts that livestock production has on the ecosystems. Please see Hernandez L. 2001. Historia ambiental de la ganadería en México. INECOL, Institute de recherche pour le développement, and FAO documents like this: <a href="http://www.fao.org/3/a-a0262s.pdf">http://www.fao.org/3/a-a0262s.pdf</a></p>	Thank you for this comment. While we agree, this topic is not the main scope of this chapter. However, we did improve the wording in this section to make this part clearer.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diana Patricia Alvarado-Solano	24	807	24	808	Dam construction is also related with displacement of human communities whose homes where located in the influence of the inundation area ( <a href="http://www.environmentalmigration.iom.int/state-environmental-migration-2014-review-2013">http://www.environmentalmigration.iom.int/state-environmental-migration-2014-review-2013</a> ; <a href="https://www.internationalrivers.org/human-impacts-of-dams">https://www.internationalrivers.org/human-impacts-of-dams</a> ; <a href="http://www.internal-displacement.org/">http://www.internal-displacement.org/</a> )	comment seems misplaced.
United States Government	27	819	27	824	This assessment indicates that natural grasslands have the capacity to withstand this type of land use, but increasing demand could place a strain on those systems without proper BMPs - fertilizer runoff, sedimentation, animal waste, etc. Please acknowledge that NCPs can hit a threshold of sustainable productivity per hectare and expand on the detrimental impact of extensive livestock grazing and deforestation.	Noted and completed



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diana Patricia Alvarado-Solano	27	826	27	835	<p>The exotic animals that are now the base for livestock production in Meso and South America where introduced by Spaniards during the colonization. It's important to mention this in a way to make notice about the time frame in which the different ecosystems have been under land use conversion. Also, it's important to present the statistics for the LAC the cover extent and percentage of TDF under protection (Sánchez-Azofeifa et al. 2005. Research priorities for neotropical dry forests. <i>Biotropica</i>. DOI: 10.1111/j.1744-7429.2005.00066.x; Sánchez-Cuervo et al. 2012. Land Cover Change in Colombia: Surprising Forest Recovery Trends between 2001 and 2010. <i>PlosOne</i>. doi:10.1371/journal.pone.0043943; Romero-Duque et al. 2007. Structure and diversity of secondary tropical dry forests in Mexico, differing in their prior land-use history. <i>Forest Ecology and Management</i>. DOI: doi:10.1016/j.foreco.2007.07.002; Quesada et al. 2009. Succession and management of tropical dry forests in the Americas: Review and new perspectives. <i>Forest Ecology and Management</i>. doi:10.1016/j.foreco.2009.06.023; Alvarado-Solano &amp; Otero. 2017. Natural areas of tropical dry forest in Valle del Cauca, Colombia: an opportunity for restoration. DOI: 10.21068/c2017.v18s01a01; Pizano &amp; García. 2014. El Bosque Seco Tropical en Colombia. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH). Available at: <a href="http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia">http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia</a></p>	Mentioned but not in detail

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Volpedo, Alejandra Vanina	27	836	27	842	<p>Pollutions problems (elements trace and organic compounds) occurs in many commercial species such as Prochilodus lienatus y Odontesthes bonariensis in South America. This problem brings about problems of health and risk for the local population that so consumes them as in the countries where are exported (Puntoriero et al., 2014 a, b; Avigliano et al., 2015, Vázquez et al., 2015; Volpeod et al., 2015; Avigliano et al., 2016). This issue should be considered in the report • Puntoriero, M.L.; Volpedo, A. y Fernández Cirelli, A. 2014 Riesgo para la población rural en zonas con alto contenido de arsénico. Acta Toxicológica Argentina 22(1)15-22</p> <ul style="list-style-type: none"> <li>• Puntoriero,ML., A. Fernandez-Cirelli, A.V. Volpedo. 2014. Biotransferencia de fluor a pejerreyes (Odontesthes bonariensis). Biología Acuática. 30: 309-313.</li> <li>• Avigliano, E.; N F Schenone; A.V Volpedo; W.Goessler; A. Fernández Cirelli. 2015 a. Heavy metals and trace elements in muscle of Silverside (Odontesthes bonariensis) and water from different environments (Argentina): Aquatic pollution and consumption effect approach. Science of the Total Environment 506-507:102-108</li> <li>• Vazquez, F.J; F. A Arellano; A. V.Volpedo; A. Fernández-Cirelli. 2015. Monitoring trace elements in Silverside (Odontesthes bonariensis) Organs from pampasic ponds, Argentina. Microchemical Journal 120: 1-5. IF.3.583 Q1 10.1016/j.microc.2014.12.007</li> <li>• Volpedo Alejandra V. Esteban Avigliano y Alicia Fernández Cirelli. 2015. Presence of trace elements in fishes from the Chaco-Pampeana plain (Argentina). Sustainability, Agri, Food and Environmental Research 3(2), 2015: 1-12</li> <li>• Avigliano, E.; C. Lozano; R.R Plá; A.V.Volpedo. 2016. Toxic element determination in fish from Paraná River Delta (Argentina) by Neutron Activation Analysis: tissue distribution and accumulation and health</li> </ul>	Mentioned but not in detail
Virginia Meléndez Ramírez	27	836	31	919	<p>This section should also reference the problem of access to resources by indigenous groups or human local communities:  <a href="ftp://ftp.fao.org/docrep/fao/009/a0874e/a0874e07.pdf">ftp://ftp.fao.org/docrep/fao/009/a0874e/a0874e07.pdf</a> Negative impacts of aquaculture</p>	Access, benefits sharing and values is dealt with in section 2.5

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Elva Escobar	27	836	31	919	This section should consider the work of GEOBON and Oceans and cryosphere. 1. GI-07: Ocean and society - Blue Planet 1pp. <a href="https://www.earthobservations.org/activity.php?id=40">https://www.earthobservations.org/activity.php?id=40</a> 2. GEO BON Structure Towards 2020: Working Groups and Biodiversity Observation Networks. Version 2.0, 29.09.2016. 5pp. 3. Intergovernmental Panel on Climate Change. 2017. Sixth Assessment Report (AR6) Products Forty-Fifth Session of the IPCC. Decision and Outline of the Special report on climate change and oceans and the cryosphere. 4pp.	We agree a better link is needed between this assessment and other. We have done our best to attend this type of comment (here and elsewhere), but it will be necessary in future work to make these comparisons more formal and explicit.
Elva Escobar	27	836	31	919	This section should include reference to "The First Global Integrated Marine Assessment" auspiced by the United Nations General Assembly and published in 2016. It provides information on fisheries and other important ecosystems that will improve the analysis presented in the assessment	Citation has been added.
Elva Escobar	27	836	31	919	This section should consider the importance of the geographical classification on the oceans, mention how political boundries do not apply to water currents and species distribution	We cannot do this here for reasons of space
Elva Escobar	27	836	31	919	Gender issues and the role that women play in fisheries should be mentioned in this section of the assessment	We cannot do this here for reasons of space
Virginia Melendez	27	836	31	919	This section should also reference the problem of access to resources by indigenous groups or local communities	Has general applicaction addressed elsewhere in chapter

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
WWF Mexico	27	837	27	854	There should include: Coastal areas tend to concentrate important proportions of human population, with continued immigration rates and high fecundity rates. Productive activities along coasts are intense and create sectorial conflicts. On the other hand, increased populations demand increased space and food. All those factors lead to reduced extensions of coastal habitats and increased pollution. Additionally, the absence of access rights for most of the natural coastal resources cause their depletion. Hence, the ordination of consumptive activities in coastal areas is difficult. All the previous elements indicate that costal natural habitats are in continuous reduction and deterioration. They are also more and more fragile to extreme climate variability. In consequence, coastal fisheries and aquaculture are becoming more fragile.	Thank you for this comment
United States Government	27	840	27	841	This sentence states that fish as a protein is “compromised by the contamination of fish flesh in some locations and species.” This is not discussed further and no data is provided to back up this statement; please elaborate to clarify.	Citations were added
The Biodiversity Indicators Partnership (BIP)	28	846			Units of production that are expressed as imperial units “tons” rather than the metric units “tonnes”. Since all FAO data ( and I presume , almost all other data, except that from the USA) is in “tonnes” this should be corrected throughout.	Noted. Tonnes is appropriate throughout.
The Biodiversity Indicators Partnership (BIP)	28	846			There is no reference to recreational fisheries in the Americas (especially north America) which are perhaps the most important of the fisheries. These have strong implications for both conservation of biodiversity as well as the management of water and issues related to introductions and movements.	Agreed, but this section is on food. Recreation/tourism is addressed in another section.
WWF Mexico	28	850	28	863	There should include or review information such as: Unfortunately, the reduction of minor pelagic fishes (sardines, anchovies) and their associated bycatch into fishmeal, for feeding cattle and aquaculture shrimp, represents the waist of important sources of protein for humans and keystone components of marine food webs. This is a common practice along the Americas.	Thank you for the comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Margarita N. Lavides	28	855	28	863	A comparison of export and import of fishery and fishery products, both for wild capture and aquaculture, at least for major fishery products in volume or percent through the years or decades, would be useful here to give insights, for example on, but not limited to the self-sufficiency for fish and fisheries in the Americas or its subregions . Also ' coral reef fisheries footprint' for Americas, or at least for Caribbean is suggested to be mentioned in this section. The following is a good reference for the latter: Newton, K., Cote, I.M., Pilling, G.M., Jennings, S. & Dulvy, N.K. (2007) Current and future sustainability of island coral reef fisheries. Current Biology 17: 655–658.	This comment is only marginally relevant to natural services addressed in this chapter.
United States Government	28	881	28	882	This sentence says world commercial fisheries yield increased until around 1990 then plateaued “in response to sustainable limits (Pauly 2002)”. While Pauly does show an increase in yield until late 1980s, the plateau is not due to implementing sustainable limits. In fact, many of the world fisheries are not managed by sustainable limits. Please revise the sentence to include such a discussion, and also consider FAO SOIFA 2016 as it also includes information on this issue.	Noted and modified to clarify the meaning.
WWF Mexico	28	881	29	892	There should include information of: Overfishing is as a major issue for marine biodiversity, not only in the Caribbean, but also along the Pacific coast. This is widely accepted by regional academia and conservationists and relates to limited poor fisheries management, limited law enforcement capacities and marginal monitoring of industrial and artisanal fleets. At the present, several national fisheries management entities believe aquaculture is the solution for depending on depleted wild fish stocks.	Thank you for the comment. Biodiversity condition and threats are treated in Chapter 3.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	29	887	29	890	Overfishing is not the only responsible for the decline in coral reefs, since this ecosystem has been threatened by wastewater and the lack of watershed management plans. Coasts are treated as isolated places, disconnected from the rest of the basin land, and rivers are treated as waste disposal sites. All these causes coral reef "whitening". Thiais has consequences on the whole food chain, in fisheries and tourism activities, at regional scales. Then, consequences go to fishermen families. There are some experiences about stop overfishing and protect coral reefs and marine habitats, which lead the recovery of fish biomas in around 400%, at Cabo Pulmo, Baja california. México. file:///C:/Users/Adriana/Downloads/aburto_2011_cabo_pulmo.pdf	Thank you for the comment
United States Government	29	890	29	892	Although the MSC certifies catch as sustainable, it is unclear how that connects to "legal origin;" please clarify.	Mentioned but not in detail
Alejandra Tauro	29	902	29	910	cómo las personas están "adaptándose" a estos cambios en tecnología versus disminución del empleo? Si bien se describe el fenómeno de la tecnología entorno a la pesca, supongo que algo así va pasando también en otras practicas como puede ser la ganadería o cultivos frutales con cierta tecnología que prescindida de la mano de obra. Pienso que entre los vinculos NCP y QoL se halla como las personas trabajan la tierra como parte de su modo de vida, estas respuestas humanas a cambios en políticas de desarrollo se tendrían que abordar como parte de alguna reflexión o problemática dentro de este cap. O esto corresponde a otro capitulo (eg. Drivers).	Thank you for the comment
Rosa María Chávez Dagostino	29	902			There says: The main drivers of future impacts on natural services is increased demand for fish... May be should be clarified that the fish demand is centered in few commercial species like tunna, shrimps, snappers, marlin, octopus, mahi-mahi, marlin...	Thank you for the comment. Biodiversity condition and threats are treated in Chapter 3.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	29	902	29	910	How are people "adapting" to the changes in technology versus the loss of jobs? While the phenomenon of technology surrounding fishing is described, I suppose that something like this is also happening in other practices like livestock production or fruit cultivation with certain technology that does well without the manual workforce. I think that the bonds between NCP and QoL are found in the way that people work the lands as part of their livelihoods. These changes in human responses to changes in development policies, should be addressed as part of some final considerations or reflections within this chapter. Or this corresponds to another chapter (drivers)	Not in the scope of this chapter
Lucía Pérez Volkow	29	903	29	903	"The main drivers of future impacts on natural services is increased demand for fish, which is a function of population number and per capita consumption" Is this so?? What about the modes of production?	Noted and modified.
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	29	903	29	903	"The main drivers of future impacts on natural services is increased demand for fish, which is a function of population number and per capita consumption" Is this so?? What about the modes of production?	noted and modified.
David González	30	916	30	916	Economic value, not valuing	Agreed and modified
United States Government	30	916	31	918	Are the annual per hectare monetary values derived from ecosystem contributions from fisheries specifically, or are other values (flood mitigation, property value, etc.) embedded in those numbers? How are fisheries economic benefits specifically teased out?	Title modied to clarify that these are fisheries contributions alone except where noted otherwise.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Marco Keijzer	30	916	31	918	Expressing economic value of NCP (or ecosystem services) in annual per hectare monetary values can also be used in <i>value mapping</i> . This represents the value of services spatially (using GIS) of a specific region. This has been done in TEEB studies of Saba and St. Eustatius. Source: Saba - <a href="http://www.wolfscompany.com/wp-content/uploads/2014/06/R14-14-Value-mapping-of-nature-on-Saba.pdf">http://www.wolfscompany.com/wp-content/uploads/2014/06/R14-14-Value-mapping-of-nature-on-Saba.pdf</a> - St. Eustatius: <a href="http://www.wolfscompany.com/wp-content/uploads/2014/07/R14-13-Value-mapping-of-nature-on-St-Eustatius.pdf">http://www.wolfscompany.com/wp-content/uploads/2014/07/R14-13-Value-mapping-of-nature-on-St-Eustatius.pdf</a> -	Agreed but marginal to section and not enough space to address it.
Marco Keijzer	30	916	31	920	I would like to propose an addition in box 2.2, based on a TEEB study of Bonaire. In Bonaire the aggregate worth of valued ecosystem services is estimated at \$105 million annually. To put this into perspective; Bonaire's GDP is \$224 million (2008), meaning the welfare of Bonaire derived (in-)directly from ecosystems is almost half of Bonaire's economy. In this study, a significant share is based on a non-financial value; the willingness to pay of citizens in the mainland of the Netherlands and of Bonaire, for the islands' nature. A third, \$37 million, is traceable in the financial accounts of the economy: tourism (majority), fisheries, amenity, coastal protection, agriculture & livestock, medicinal & pharmaceutical, carbon sequestration, research value and art value. Source: <a href="http://www.wolfscompany.com/sem-porta-mollis-parturient/">http://www.wolfscompany.com/sem-porta-mollis-parturient/</a> (complete study TEEB Bonaire)	Thank you for the comment but the section is space limited and point is already addressed adequately
Marco Keijzer (Wolfs Company)	30	916	31	918	Expressing economic value of NCP (or ecosystem services) in annual per hectare monetary values can also be used in <i>value mapping</i> . This represents the value of services spatially (using GIS) of a specific region. This has been done in TEEB studies of Saba and St. Eustatius. Source: Saba - <a href="http://www.wolfscompany.com/wp-content/uploads/2014/06/R14-14-Value-mapping-of-nature-on-Saba.pdf">http://www.wolfscompany.com/wp-content/uploads/2014/06/R14-14-Value-mapping-of-nature-on-Saba.pdf</a> - St. Eustatius: <a href="http://www.wolfscompany.com/wp-content/uploads/2014/07/R14-13-Value-mapping-of-nature-on-St-Eustatius.pdf">http://www.wolfscompany.com/wp-content/uploads/2014/07/R14-13-Value-mapping-of-nature-on-St-Eustatius.pdf</a> -	Addressed above



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Marco Keijzer (Wolfs Company)	30	916	31	920	I would like to propose an addition in box 2.2, based on a TEEB study of Bonaire, conducted by Wolfs Company. In Bonaire the aggregate worth of valued ecosystem services is estimated at \$105 million annually. To put this into perspective; Bonaire's GDP is \$224 million (2008), meaning the welfare of Bonaire derived (in-)directly from ecosystems is almost half of Bonaire's economy. In this study, a significant share is based on a non-financial value; the willingness to pay of citizens in the mainland of the Netherlands and of Bonaire, for the islands' nature. A third, \$37 million, is traceable in the financial accounts of the economy: tourism (majority), fisheries, amenity, coastal protection, agriculture & livestock, medicinal & pharmaceutical, carbon sequestration, research value and art value. Source: <a href="http://www.wolfscompany.com/sem-porta-mollis-narturient/">http://www.wolfscompany.com/sem-porta-mollis-narturient/</a> (complete study TEEB Bonaire)	Addressed above
Gloria de las Mercedes Gómez Pais	30	917	31	917	Box 2.1. Economic valuing of nature's contribution to human quality of life via fishery. Line 917. Insert, at the end of the Box, the following example from Cuba: "In Cuba, the mangroves contribution to fish capture, according to studies in the Sabana Camagüey ecosystem, was estimated in 229.0 dollars/ha/year (Gómez P. G, 2007)".	Thanks for the comment but the section is space limited and the point is adequately addressed.
Gloria de las Mercedes Gómez Pais	31	919	31	919	Box 2.2. Caribbean coral reefs contribution to fisheries and QoL. Insert, at the end of the Box, the following example from Cuba: "In Cuba, according to studies in the Guanahacabibes National Park, the coral reefs contribution to tourism development in this area was estimated in 17 847,68 dollars/ha/year (Ferro A. H et al, 2014)".	Thanks for the comment but the section is space limited and the point is adequately addressed.
MAYDS- Argentina	32	920	35	985	En este apartado se considera importante diferenciar cuando se refiere a la caza de subsistencia respecto a cuando se refiere a otro tipo de caza.	thank you for this comment
David González	32	930	32	937	The paragraph refers to values (as importance) through the ILK lens, this could be made explicit to showcase the value of wildlife beyond economic values (as a measure).	The wording has been improved

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MAYDS- Argentina	32	930	32	947	Debe evitarse poner en el mismo nivel de análisis a los "consumidores de subsistencia" y a la "caza deportiva" (párrafo que inicia en línea 930 y párrafo que inicia en línea 940). Por otra parte, se sugiere que se haga hincapie en que el consumo de subsistencia, gestionado con un Plan de Manejo y aprovechamiento a nivel predial a partir de estudios realizados con la comunidad, es una herramienta de conservación de la biodiversidad.	The wordingt has been improved
Elizabeth Hess	33	940	33	947	In addition to retail, there are huge conservation benefits from the sale of hunting permits. In Canada, the revenue that is generated from the sale of \$8.50 habitat conservation stamp that is affixed to the migratory game birds permit go towards habitat conservation projects. Since 1985, over \$50 million has supported 1,500 habitat conservation projects across Canada. See : <a href="http://www.ec.gc.ca/rcom-mbhr/default.asp?lang=En&amp;n=182D8E96-1">http://www.ec.gc.ca/rcom-mbhr/default.asp?lang=En&amp;n=182D8E96-1</a> )	citations have been added
Adriana C. Flores-Díaz	33	940	33	947	Wildlife animals are used in common lands as a common use resource, with a different organization for hunting activities, and sometimes there is no a payment for hunting for external people, but an exchange of external merchandise. An example is in the region of Tlaxcala in Mexico. <a href="https://www.researchgate.net/publication/289540349_LA_VIDA_SILVESTRE_MANEJADA_COMO_RECURSOS_DE_USO_COMUN_ESTUDIO_DE_CASO_EN_MEXICO_MANAGING_WILDLIFE_AS_COMMONS_A_CASE_STUDY_IN_MEXICO">https://www.researchgate.net/publication/289540349_LA_VIDA_SILVESTRE_MANEJADA_COMO_RECURSOS_DE_USO_COMUN_ESTUDIO_DE_CASO_EN_MEXICO_MANAGING_WILDLIFE_AS_COMMONS_A_CASE_STUDY_IN_MEXICO</a>	citations have been added
Krista Locs	33	941	33	950	Suggest using the 2012 Canadian Nature Survey as a reference for Canadian statistics on hunting and wildlife use: <a href="http://biodivcanada.ca/2A0569A9-77BE-4E16-B2A4-C0A64C2B9843/2012_Canadian_Nature_Survey_Report%28accessible_opt%29.pdf">http://biodivcanada.ca/2A0569A9-77BE-4E16-B2A4-C0A64C2B9843/2012_Canadian_Nature_Survey_Report%28accessible_opt%29.pdf</a>	citations have been added

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
M. en C. Jessica Bravo Cadena	34	951	34	951	Wildlife Management Units (WMUs), which has been underway in Mexico since 1997. Actually 37% of municipalities of Mexico have eWMUs, where 417 species have been recorded, with an average of 8.28 species <a href="http://www.biodiversidad.gob.mx/usos/UMAs.html">http://www.biodiversidad.gob.mx/usos/UMAs.html</a> Gómez-Aíza, L., Martínez-Ballesté, A., Álvarez-Balderas, L., Lombardero-Goldaracena, A., García-Meneses, P. M., Caso-Chávez, M., & Conde-Álvarez, C. (2017). Can wildlife management units reduce land use/land cover change and climate change vulnerability? Conditions to encourage this capacity in Mexican municipalities. Land Use Policy, 64, 317-326.	citations have been added
Adriana C. Flores-Díaz	34	962	34	962	In Mexico there is a national mechanism to take care and growth wildlife, which is endangered or in risk, and it is necessary to encourage the reproduction of the local population. Wildlife Management Units (UMA in Spanish) are able to be combined with economical activities, such as sales of animals or hunting. These UMAs can be part of the community activities, as well as take place in private lands. <a href="http://www.biodiversidad.gob.mx/usos/UMAs.html">http://www.biodiversidad.gob.mx/usos/UMAs.html</a>	citations have been added

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MAYDS- Argentina	35	976	35	976	<p>Se sugiere agregar la siguiente bibliografía en la línea 976: Altrichter, M. 2006. Interacciones entre la gente y la fauna en el Chaco Argentino. Dir. Fauna Silvestre. Bs. As. Argentina. 76 pp.</p> <p>Fragoso J. M., R. E. Bodmer and K. M. Silvius. 2004. Wildlife Conservation and Management in South and Central America: multiple pressures and innovative solutions. En: Silvius K.M., Bodmer R.E. and Fragoso J.M.V. (Eds.) People in Nature: Wildlife Conservation in the Neotropics. Columbia University Press, New York, USA.</p> <p>Townsend, W. 2010. La fauna silvestre: seguridad alimentaria para los pueblos indígenas de tierras bajas en Bolivia. En: Gómez, H. y A. Llobert (Eds). Experiencias de Manejo de Fauna Silvestre en Bolivia. Editorial FAN. Santa Cruz. 93 p.</p> <p>Álvarez J, Shany N. 2012 Una experiencia de gestión participativa de la biodiversidad con comunidades amazónicas. Rev. peru. biol. 19(2): 223 – 232.</p>	citations have been added
Lucía Pérez Volkow	35	986	35	986	The section "organic foods" is incomplete.. What is the relationship with organic food and its producers? Are big industries changing their paradigm or is it coming from smaller farmers? What are the political implications of this type of production ? What is the environmental impact of its production?	This section was improved.
Adriana C. Flores-Díaz	35	986	35	993	The Mexican coffee experience is very interesting since it has been certified as an organic product for several farms. It is a very interesting option for local and indigenous communities, and they have gotten a good organization to maintain the coffee offer for the organic market, and combine organic and handmade production.	Thank you for the suggestion

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	35	986	35	986	The section "organic foods" is incomplete.. What is the relationship with organic food and its producers? Are big industries changing their paradigm or is it coming from smaller farmers? What are the political implications of this type of production ? What is the environmental impact of its production?	This section was improved.
Ederson A Zanetti	36-40	996	36-40	1075	There should be details on species used and cultivated. FAOSTAT has data on species used.	Thank you for the suggestion.
Ederson A Zanetti	36-40	996	36-40	1075	There should be mention about silvicultural treatments used for each kind of species	The scope of the chapter was to elaborate on the links of NCP to QoL. Another IPBES assessment is planned to assess sustainable use and management practices.
Ederson A Zanetti	36-40	996	36-40	1075	There should be mention to mutual recognition of forest certification system	The scope of the chapter was to elaborate on the links of NCP to QoL. Another IPBES assessment is planned to assess sustainable use and management practices.
United States Government	36	997	36	1005	In addition to reporting on the demand for these resources as they pertain to QoL, consider also discussing how biodiversity of these landscapes ensures sustainable productivity.	The scope of the chapter was to elaborate on the links of NCP to QoL. Another IPBES assessment is planned to assess sustainable use.
Diego Pacheco	36	1006	45	1165	The discussion in this section should be about forest in general, and then highlighting the NCP from forests (carbon sequestration, soil regulation, medicines, etc.) and not about products obtained from forests, such as timber, fiber, etc. There is the need to change the approach shifting from the sectoral approach (timber, fiber, etc.) to the NCP approach. Then, the discussion should be more oriented to discuss the benefits of NCP into the GQL. Also, introduce here elements of ILK and NCP.	This section is about Material and Assistance as in material NCP classification of IPBES. Other non-material and regulating NCP are addressed elsewhere in the chapter. The chapter was not organized per biomes or landscape.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow	36	1006	36	1006	I think there is interesting information missing. How much timber is left in America? Are there sustainable ways of exploiting timber? Who owns most of the timber in the continent? Private property? Communal property?	Indeed this is a very important point, but we were unable to create this new analysis in the time and space limitations we had.
Lucía Pérez Volkow	36	1006	36	1006	I think there is interesting information missing. How much timber is left in America? Are there sustainable ways of exploiting timber? Who owns most of the timber in the continent? Private property? Communal property?	Indeed this is a very important point, but we were unable to create this new analysis in the time and space limitations we had.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	36	1006	36	1006	I think there is interesting information missing. How much timber is left in America? Are there sustainable ways of exploiting timber? Who owns most of the timber in the continent? Private property? Communal property?	Indeed this is a very important point, but we were unable to create this new analysis in the time and space limitations we had.
Sonia Canavelli	36	1013	36	1015	Fig. 2.13. Legend not clear. Please, clarify the meaning of uppercase letter: C=Caribbean ,MA=Mesoamerica, NA=North America	Figure removed/improved. We added a new figure that shows production, imports and exports of sawnwood by
Ederson A Zanetti	39	1044	39	1044	there should not be direct mention to any particular forest certification system	omitted from the text, but the graph was kept for now, in case it is decided to
The Biodiversity Indicators Partnership (BIP)	39	1046			See PEFC data.xlsx for PEFC data (attached to email)	could not locate the mentioned datasets/attachments

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MAYDS- Argentina	39	1063	39	1065	<p>Se acuerda con el párrafo se sugiere incorporar la experiencia de la Argentina en relación a este propuesta. En la Argentina se avanzó en una mirada integral del Estado frente al desarrollo agroproductivo bajo las premisas de la sustentabilidad de los sistemas. Sobre esta base el Ministerio de Agroindustria y el Ministerio de Ambiente y Desarrollo Sustentable han articulado acciones, mediante la firma de un convenio (Documento disponible en: <a href="http://www.ambiente.gob.ar/archivos/web/AreaVinControl/file/convenio%20_03-06.pdf">http://www.ambiente.gob.ar/archivos/web/AreaVinControl/file/convenio%20_03-06.pdf</a> ) con el fin de establecer el marco general y los principales lineamientos para que las actividades ganaderas en zonas de Bosques Nativos, en adelante "Manejo de Bosques con Ganadería Integrada" (MBGI), cumplan pilares básicos del desarrollo sostenible y los presupuestos mínimos según la Ley N° 26.331.</p>	<p>El enlace proporcionado del convenio no funciona, por lo que no fue posible conocer bien el caso y como se podría incorporar. Sin embargo, esta sección hace una síntesis general de los "drivers", por lo que evita centrarse en detalles de casos específicos, también por restricciones de espacio.</p>
United States Government	40	1066	40	1075	<p>Although timber extraction can lead to biodiversity loss, active forestry (including some brush removal to restore dense, overcrowded fire-prone areas) can be critical for keeping areas in forest rather than conversion to other uses, and is critical for providing economic opportunity. Please revise this section to include such a discussion.</p>	<p>About a sentence mentioning the potential role of certain SFM practices in improving ecological conditions of forests was included. We want to note again, however, the issue of space restrictions. Condensing the drivers of timber extraction in the Americas in a few paragraphs is a difficult task, so we had to decide which were the most important aspects to consider in the context of this publication. For instance, we did not mention NTFPs either, even though it is also critical for livelihoods for millions of people in many parts of the world.</p>

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
José Luis Echeverría/ César Azurdia/ Melisa Ojeda	40	1075	1075	40	En esta sección se podría comentar el sistema de concesiones forestales de Petén, el cual es de reconocimiento mundial	Similar a algunos comentarios anteriores, lo que se pretende es hacer una síntesis general de los "drivers", a nivel regional, por lo que evita centrarse en detalles de casos específicos salvo algunos casos ilustrativos. Sin embargo, se puso al menos la referencia del caso de las concesiones, la de Radachowsky et al 2012.
United States Government	43	1118	43	1123	Should "silk raw" and "wool greasy" be raw silk and greasy wool?	Fixed.
Lucía Pérez Volkow	45	1166	45	1166	This section does not include information regarding charcoal which is an important woodfuel in the continent	The section was improved. See table 2.7 on Charcoal production per sub-region.
Adriana C. Flores-Díaz	45	1166	45	1184	Energy-water links need to be explored in terms not only about the status of the production, and the problems arising from it, but about the perspectives and trends. In spite of being part of major basins of Mexico, the Grijalva-Usumacinta system presents a high level of azolve, and an important base flow reduction. These facts indicate that it is at risk, and in addition, it lacks a Watershed Management Plan. Hydropower caused damage at multiple aquatic ecosystems and displacement of diverse local and indigenous peoples. In spite of these facts, hydropower is considered "clean energy", so decision makers need to know the importance of investment in new forms of energy generation, avoiding in the most possible, this type of infrastructure. Some studies indicate hydropower dams put at risk the sustainability options in Mexico: <a href="http://www.inecc.gob.mx/descargas/cuencas/cong_nal_06/tema_04/06_mario_gomez.pdf">http://www.inecc.gob.mx/descargas/cuencas/cong_nal_06/tema_04/06_mario_gomez.pdf</a>	Thank you for your comment. Related discussion is found in the Water Security and Energy security section.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	45	1166	45	1166	This section does not include information regarding charcoal which is an important woodfuel in the continent	The section was improved. See table 2.7 on Charcoal production per sub-region.
Diego Pacheco	45	1167	47	1221	The discussion of energy also should be integrated into the discussion of the NCP (for example, water for energy provision). The discussion of energy as itself is not appropriate in the context of the analysis of NCP and its contributions to good quality of life. It does not make sense to discuss the energy sector in this context.	We agree that this is an important issue
United States Government	46	1200	46	1200	"energetic" should be "energy"	Thank you for this comment., this paragraph has been edited.
DPG/Sbio/MMA	46	1214	47	1218	Vehicles that exclusively use alcohol as fuel stopped being manufactured in 2006. However, Brazil has a large number of flex-fuel vehicles, that are able to use both gasoline and alcohol as fuel. In 2006 alone, sales of flex-fuel cars surpassed 77% of sales of light vehicles in Brazil. In 2016, flex vehicles accounted for almost 59.8% of the total fleet, and gasoline vehicles, 29.4%. Together, they reach almost 90% of all circulating automotive engines. The alcohol-only fleet has been declining every year, reaching less than 1% in 2016. The diesel vehicles have been maintaining around 9.8% of the total that circulates in the country. <a href="http://www.ufjf.br/poseconomia/files/2010/01/td_012_2007.pdf">http://www.ufjf.br/poseconomia/files/2010/01/td_012_2007.pdf</a> <a href="http://www.sindipecas.org.br/sindinews/Economia/2017/R_Frota_Circulante_2017.pdf">http://www.sindipecas.org.br/sindinews/Economia/2017/R_Frota_Circulante_2017.pdf</a>	Thank you for your comment.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MINAM	47	1219	47	1219	<p>In Figure 2.25. Use of wood for energy in the Americas. The graph does not have an index or explanation of the acronyms used in the graph. The x and y axes should specify the units used. Millions should be used to abbreviate the data on the graph.</p> <p>En la figura 2.25. Uso de madera para energía en las Américas. El gráfico no presenta índice o explicación de las siglas en el gráfico, asimismo los ejes x e y no cuentan con unidades y deberían utilizar millones para abreviar los datos del gráfico.</p>	Thank you for this comment. The figure was reformatted.
Diego Pacheco	47	1222	49	1274	Also, the same approach for the discussion of medicine, biochemical and genetic resources. This should be discussed in the context of forests or other NCP as well, in the context of the discussion of biodiversity. Also, introduce here discussion of ILK and NCP.	The wording has been improved
Peter Giovannini	47	1233	47	1233	<p>I would say that about 25_30% of modern medicines are derived from natural products (not only plants) , see The world medicines situation 2011 by WHO:  <a href="http://digicollection.org/hss/documents/s18063en/s18063en.pdf">http://digicollection.org/hss/documents/s18063en/s18063en.pdf</a></p>	citation added

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Peter Giovannini	48	1245	48	1262	<p>This paragraph fails to give a good overview of medicinal plant knowledge and use in the Americas. Rather than giving figures about medicinal plants used to treat a single conditions/disease, I think it would be more appropriate to give an overview of the importance of medicinal species used for any condition across different countries relatively to the whole flora. Good estimates of the number of medicinal plants are available for few countries in the Americas: Argentina (Barboza et al 2009. ), Mexico (Caballero et al 1998), Colombia (Fonnegra 2007), Ecuador (De la Torre 2008) and USA (Moerman 1996 ; Moerman 1998). References:</p> <p>Barboza, G. E., Cantero, J. J., Núñez, C., Pacciaroni, A., &amp; Ariza Espinar, L. (2009). Medicinal plants: A general review and a phytochemical and ethnopharmacological screening of the native Argentine Flora. <i>Kurtziana</i>, 34(1-2), 7-365.</p> <p>Caballero, J., Casas, A., Cortés, L., &amp; Mapes, C. (1998). Patrones en el conocimiento, uso y manejo de plantas en pueblos indígenas de México. <i>Estudios Atacameños</i>, 181-195.. Fonnegra, F. G. (2007). <i>Plantas medicinales aprobadas en Colombia</i>. Universidad de Antioquia.</p> <p>Moerman, D.E. (1998). Native North American food and medicinal plants: epistemological considerations. In: <i>Plants for food and medicine. Proceedings of the joint conference of the Society for Economic Botany and the International Society for Ethnopharmacology</i>, London. Prendergast, H.D.V, Etkin, N.L., Harris, D.R. and Houghton, P.J. (Eds). Moerman, D. E. (1996). <i>An analysis of the food plants and drug plants of native North America</i>. <i>Journal of ethnopharmacology</i>, 52(1), 1-22.</p> <p>De la Torre, L., Navarrete, H., Muriel, M. P., Macia, M. J., &amp; Balslev, H. (2008). <i>Enciclopedia de las Plantas Útiles del Ecuador</i>. Quito &amp;</p>	citations have been added
DPG/Sbio/MMA	48	1259	48	1262	<p>This data of 290 herbal remedies is a great example, but we must point out that it refers only to a study carried out with the urban and rural population of three cities in the state of São Paulo, southeastern Brazil.</p>	The wording has been improved

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Gloria de las Mercedes Gómez Pais	48	1267	48	1267	2.2.4 Medicinal, biochemical and genetic resources. Insert, at the end of line 1267, the following text: "In a study developed in the Cuban ecological reserve La Coca (1400 ha), the economic value of medicinal plants was estimated in 2 461.64 dollars/ha/year (Rangel C. R et al, 2013)".	citation added but full Citation was not found
Adriana C. Flores-Díaz	49	1270	49	1274	The use of wildlife as medicine represents not only an economic benefit from sales or for saving money for families, but it represents valued knowledge, and it is tied to inheritance, belonging, and identity. History of peoples in Latin America is tied to the land, water, and wildlife, as many authors recognize. <a href="http://era-mx.org/biblio/Toledo-_y_Barrera_2008.pdf">http://era-mx.org/biblio/Toledo-_y_Barrera_2008.pdf</a>	citations have been added
Peter Giovannini	50	1291	50	1296	I would add "culturall appropriate health care" , see for example: Vandebroek, I. (2013). Intercultural health and ethnobotany: How to improve healthcare for underserved and minority communities?. Journal of ethnopharmacology, 148(3), 746-754.	citation added
Virginia Meléndez Ramírez	51	1298	51	1298	Add example: <a href="http://www.biodiversidad.gob.mx/Biodiversitas/Articulos/biodiv62art3.pdf">http://www.biodiversidad.gob.mx/Biodiversitas/Articulos/biodiv62art3.pdf</a>	While we acknowledge there are many other examples of learning and experience through ecosystem services, in order to be concise, we give only examples concerning environmental statutes in the United States (box).
Krista Locs	51	1299	53	1350	Section 2.2.5 Learning and inspiration, should refer to the Canadian Nature Survey for information and statistics on the value of nature to Canadians <a href="http://biodivcanada.ca/2A0569A9-77BE-4E16-B2A4-C0A64C2B9843/2012_Canadian_Nature_Survey_Report%28accessible_opt%29.pdf">http://biodivcanada.ca/2A0569A9-77BE-4E16-B2A4-C0A64C2B9843/2012_Canadian_Nature_Survey_Report%28accessible_opt%29.pdf</a>	While we acknowledge there are many other examples of institutional relational values, in efforts to make a concise point and in the absence of more space, we chose to focus the message only on U.S federal law and institutions (box).

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Ena Mata	51	1299	53	1350	This section should better emphasize the contribution of ecosystem services to science and knowledge	Learning and experience do not necessarily relate to western ideals of knowledge and science, in this case, these terms refer to human wellbeing, living in balance with nature, and spiritual fulfillment.
United States Government	52	1341	52	1342	Consider including other ways to assess institutional relational values, including through conservation programs meant to set aside and acquire tracts of land for water, cultural importance, or unique species. Examples include U.S. Forest Service programs like Forest Legacy and Community Forestry, and there may be other examples in Central and South America to reference as well.	The institutional relational values we mention in this section (box) specifically relate to those protected by environmental statutes in the U.S. While we acknowledge there are many other examples of institutional relational values, in efforts to be concise and in the absence of more space, we chose to focus the message only on U.S federal law and institutions.
Adriana Flores	53	1351	54	1415	Important intangible areas for protection of biodiversity and local culture should be mentioned in this section. -Important intangible areas for protection of biodiversity and local culture should be mentioned in this section. Ecuador has declared the "Intangible Areas" (like the Tagaeri Taromenane of Yasuni), that are great portions of the territory where the biodiversity is the highest in the world and in which indigenous peoples want to be isolated from the occidental culture. This is one of the best examples in the consideration about nature and society relations, inside legal frameworks actually working. <a href="http://wrm.org.uy/es/articulos-del-boletin-wrm/seccion1/ecuador-la-zona-intangible-tagaeeri-taromenane-del-yasuni/">http://wrm.org.uy/es/articulos-del-boletin-wrm/seccion1/ecuador-la-zona-intangible-tagaeeri-taromenane-del-yasuni/</a>	noted and completes
Diego Pacheco	53	1374	53	1375	This is very subjective and it depends on the context. I suggest to delete very prescriptive statements about commodification of nature. I would say the same for rights-based approaches, that are more powerful to the monetarization of ecosystem services.	The wording has been improved

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Margarita N. Lavidés	53	1377	53	1380	The sentence is suggested to read as follows: Recent approaches to integrate social and ecological factors which can help to identify the instrumental, intrinsic and relational values of nature could improve attention to cultural and identity in the long term (Chan et al. 2012).	noted and completed
David González	53	1378	53	1378	Can help identify the instrumental - change for - Can help identify	noted and completed
Krista Locs	54	1416	57	1471	Information on nature-related activity expenditures in Canada is available in the Canadian Nature Survey: <a href="http://biodivcanada.ca/2A0569A9-77BE-4E16-B2A4-C0A64C2B9843/2012_Canadian_Nature_Survey_Report%28accessible_opt%29.pdf">http://biodivcanada.ca/2A0569A9-77BE-4E16-B2A4-C0A64C2B9843/2012_Canadian_Nature_Survey_Report%28accessible_opt%29.pdf</a>	Thanks for this interesting reference. Added in line 1432
Diego Pacheco	55	1422	55	1433	Delete this figure since is not clear and cohesive with the overall text.	deleted
Sonia Canavelli	55	1436	55	1438	Not clear... If 50% of the studies were from NA, and none were from other sub-regions, from where were the other 50% of studies?. All around the world?. Please, clarify.	Re-written: The number of studies on the benefits people receive from Nature has a bias towards Western developed nations; one major review found that 79% of such publications were from North America and Europe with none from South America and Africa (Keniger et al. 2013).

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl	56	1446	56	1452	<p>In this paragraph you stated that in tropical countries there is a lack of appreciation of natural areas and nature. This happens even though most tropical countries of the Americas have a rich background of cultural and indigenous connection with nature. I would find it interesting if in this section you could elaborate more about the reasons of this loss of connection. For example, the culture imposed by conquest and the differences between North America and South America. Maybe making a relationship between British heritage and their view of wildlife as a natural resource very important for noblemen...and how this appreciation of wildlife as a commodity was adopted in North America, leading to a better management and appreciation. In most of South America and Spanish conquered countries, such appreciation of wildlife did not prevail. Look at the history of the term "wildlife" in the Americas and its general absence or very recent history of the term in Spanish speaking countries. Rubiano, L. J. (2011). La investigación en torno a la concepción de vida silvestre: Una aproximación al estado del arte en el contexto educativo. Pág 51-87. Bio-grafia, 4(6), 51-87. Decker, D. J., Riley, S. J., &amp; Siemer, W. F. (Eds.). (2012). Human dimensions of wildlife management. IHI Press</p>	Thank you for this comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	56	1446	56	1452	<p>In this paragraph you stated that in tropical countries there is a lack of appreciation of natural areas and nature. This happens even though most tropical countries of the Americas have a rich background of cultural and indigenous connection with nature. I would find it interestig if in this section you could elaborate more about the reasons of this loss of connection. For example, the culture imposed by conquest and the differences between North America and South America. Maybe making a relationship between British heritage and their view of wildlife as a natural resource very important for noblemen...and how this appreciation of wildlife as a commodity was adopted in North America, leading to a better management and appreciation. In most of South America and Spaniard conquered countries, such appreciaton of wildilfe did not prevailed. Look at the history of the term "wildlife" in the Americas and its general absence or very recent history of the term in spanish speaking countries.</p> <p>-Rubiano, L. J. (2011). La investigación en torno a la concepción de vida silvestre: Una aproximación al estado del arte en el contexto educativo. Pág 51-87. Bio-grafia, 4(6), 51-87.</p> <p>-Decker, D. J., Riley, S. J., &amp; Siemer, W. F. (Eds.). (2012). <i>Human dimensions of wildlife management</i>. IHI Press</p>	Thank you for this comment
Sol Guerrero	56	1461	56	1466	<p>The assessment mentions that: "Several of the crown jewels of America's national park system are located in the Rocky Mountains, e.g. Yellowstone, Grand Teton, Glacier, and Rocky Mountain National Parks, as well as Bandelier National Monument". All of the national parks mentioned are from the United States. It would be appropriate to mention other national parks from other countries in the Americas; areas could even be mentioned by subregion (North America, Meso-America, Caribbean and South America)</p>	This is a good point. We have added more examples.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl	57	1471	57	1472	I believe there should be information of the economic valuation of the nature-related tourism sector of Mexico and Ecuador (specially the Galapagos Islands). Both have very strong examples of nature related tourism. López-Espinosa de los Monteros, R. (2002). Evaluating ecotourism in natural protected areas of La Paz Bay, Baja California Sur, Mexico: ecotourism or nature-based tourism?. Biodiversity and Conservation, 11(9), 1539-1550. Adger, N., Brown, K., Cervigni, R., & Moran, D. (1994). Towards Estimating the Total Economic Value of Forests in Mexico. Centre for Social and Economic Research on the Global Environment. Taylor, J. E., Dyer, G. A., Stewart, M., Yunez-Naude, A., & Ardila, S. (2003). The economics of ecotourism: A Galápagos Islands economy-wide perspective. Economic Development and Cultural Change, 51(4), 977-997. Foucat, V. A. (2002). Community-based ecotourism management moving towards sustainability, in Ventanilla, Oaxaca, Mexico. Ocean & Coastal Management. 45(8). 511-529.	We cannot do this here for reasons of space. However Table 2,12 include 9 examples of economic valuation of nature tourism sector
United States Government	57	1471	57	1471	First line in table: "skyng" should be "skiing."	Thank you for this comment. This has been fixed.
Adriana C. Flores-Díaz	57	1471	57	1471	Table 2.12. Contribution with information about Cabo Pulmo. A) Tourism at the Cabo Pulmo Marine Reserve, to visit the coral reefs and marine fauna habitats. B) US\$590,000 / yr, C) CONANP - Wildcoast - Cabo Pulmo National Park.	We cannot do this here for reasons of space.
Adriana Flores	57	1471	57	1472	There is an example in Mexico that refers to Cabo Pulmo National Park and the monetary gain from ecotourism, it should be mentioned in table 2.12. Economic valuation for Cabo Pulmo is documented at <a href="http://blogs.eluniversal.com.mx/weblogs_detalle17890.html">http://blogs.eluniversal.com.mx/weblogs_detalle17890.html</a>	We cannot do this here for reasons of space.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	57	1471	57	1472	<p>I believe there should be information of the economic valuation of the nature-related tourism sector of Mexico and Ecuador (specially the Galapagos Islands). Both have very strong examples of nature related tourism.</p> <p>-López-Espinosa de los Monteros, R. (2002). Evaluating ecotourism in natural protected areas of La Paz Bay, Baja California Sur, Mexico: ecotourism or nature-based tourism?. <i>Biodiversity and Conservation</i>, 11(9), 1539-1550.</p> <p>-Adger, N., Brown, K., Cervigni, R., &amp; Moran, D. (1994). Towards Estimating the Total Economic Value of Forests in Mexico. Centre for Social and Economic Research on the Global Environment.</p> <p>-Taylor, J. E., Dyer, G. A., Stewart, M., Yunez-Naude, A., &amp; Ardila, S. (2003). The economics of ecotourism: A Galápagos Islands economy-wide perspective. <i>Economic Development and Cultural Change</i>, 51(4), 977-997.</p> <p>-Foucat, V. A. (2002). Community-based ecotourism management moving towards sustainability, in Ventanilla, Oaxaca, Mexico. <i>Ocean &amp; Coastal Management</i> 45(8) 511-529</p>	We cannot do this here for reasons of space.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Giselda Durigan	54	1482	54	1487	The importance of the savannas are poorly described here, especially in the context of ecosystem services. We could say that: Occupying the highest altitudes of central Brazil, the Cerrado (savanna) comprises a series of vegetation types with variable structure and biomass, ranging from open grasslands to forest vegetation, being the highly diverse savanna in the world. More than half of its area was already converted for pastures, crops and silviculture. Soils in the Cerrado are mostly very deep and well drained, with high infiltration and therefore efficient groundwater recharge. The Cerrado is the moistest savannah in the world, with precipitation higher than evapotranspiration. The favourable climate and soil conditions in the majority of the Brazilian savanna have provided perennial rivers that supply eight of the 12 largest watersheds and most of hydroelectric power plants of Brazil, in spite of the long dry season, which ranges from three to seven months. (Source: Honda, E. A., & Durigan, G. (2016). Woody encroachment and its consequences on hydrological processes in the savannah. Phil. Trans. R. Soc. B, 371(1703), 20150313.)	We agree with this comment and savannas are mentioned in three other sections of this chapter accordingly

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl	57	1486	58	1495	<p>In the topic "Maintenance of options" it is stated that the loss of biodiversity and NCPs will affect future generations quality of life. Then it goes on describing the measures and protected areas that have been established for such purposes. Before that, I suggest there's a recall of NCPs that were under pressure and degradation in the past and are not longer available for younger generations in the present. Expose how some NCPs have been reduced or changed for communities and people in the Americas; circumstances where a NCPs was lost, it lead to changes in the communities and maybe even led to new paradigms of natural resource management. Such an example is Cabo Pulmo in the Gulf of Cortés, Baja California Sur, México. Two or three generations ago (<math>\geq 20</math> years ago), the local community main source of livelihood was fishing. With time and demand, the area suffered overfishing and faced severe shortage. The community came together and decided to stop fishing alltogether. Years went by, and the prohibition allowed the coastal ecosystem to recover. Communities changed their livelihoods from fishing to tourism. Cabo Pulmo National Park was created in 1995 and has a widespread support from the local community which has lead to significant economic benefits and sustainable coastal development. Aburto-Oropeza, O., Erisman, B., Galland, G. R., Mascareñas-Osorio, I., Sala, E., &amp; Ezcurra, E. (2011). Large recovery of fish biomass in a no-take marine reserve. <i>PLoS One</i>, 6(8), e23601.</p>	We cannot do this here for reasons of space
Daniel P Faith		1486		1490	This wrongly ties maintaining options only to ecosystem services provision, but global biodiversity itself provides option value.	We do not understand this comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	57	1486	58	1495	<p>In the topic "Maintenance of options" it is stated that the loss of biodiversity and NCPs will affect future generations quality of life. Then it goes on describing the measures and protected areas that have been established for such purposes. Before that, I suggest there's a recall of NCPs that were under pressure and degradation in the past and are not longer available for younger generations in the present. Expose how some NCPs have been reduced or changed for communities and people in the Americas; circumstances where a NCPs was lost, it lead to changes in the communities and maybe even led to new paradigms of natural resource management. Such an example is Cabo Pulmo in the Gulf of Cortés, Baja California Sur, México. Two or three generations ago (<math>\geq 20</math> years ago), the local community main source of livelihood was fishing. With time and demand, the area suffered overfishing and faced severe shortage. The community came together and decided to stop fishing altogether. Years went by, and the prohibition allowed the coastal ecosystem to recover. Communities changed their livelihoods from fishing to tourism. Cabo Pulmo National Park was created in 1995 and has a widespread support from the local community which has lead to significant economic benefits and sustainable coastal development.</p> <p>-Aburto-Oropeza, O., Erisman, B., Galland, G. R., Mascareñas-Osorio, I., Sala, E., &amp; Ezcurra, E. (2011). Large recovery of fish biomass in a no-take marine reserve. PLoS One, 6(8), e23601.</p>	Thanks for this comment. We could not develop this further due to lack of space.
Diego Pacheco	57	1487	58	1495	<p>this is not coherent with the IPBES conceptual framework, which is about NCP and not about ecosystem services. If you want to highlight ecosystem services there is also the need nature's gifts, to be consistent with the IPBES conceptual framework. This apply for the entire chapter.</p>	Wording has been adjusted.
Krista Locs	58	1491	61	1569	<p>Suggest the following reference for information on and examples of protected areas in Canada. "Canadian protected areas status report 2012-2015":  <a href="http://publications.gc.ca/site/eng/9.820957/publication.html">http://publications.gc.ca/site/eng/9.820957/publication.html</a></p>	Thanks for this suggestion.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Antonio Carlos Marques	58	1498	1501	58	A protected area may be used for specific reasons,, therefore the label protected does not mean untouchable in the sense used by many governments. Maybe this should be more clear in this part?	We have tried to clarify this issue.
Sol Guerrero	58	1498	58	1501	The information regarding percentage of protected areas should continue to use the regional division of North America, Meso-America, Caribbean and South America. There are countries in Latin America that have more than 23.3% of protected areas, such is the case of Costa Rica that has about 26% of its territory under protection	Thanks. We follow the IPBES conceptual framework for data reporting.
Royal Gardner	58	1504	58	1510	Ensure that the discussion on the Ramsar Convention is consistent with the Global Assessment. See 3.4.3 of FOD of Global Assessment which questions the effectiveness of the conservation and management of the Ramsar site network	Thanks for this comment. We could not develop this further due to lack of space.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diana Patricia Alvarado-Solano	58	1511	58	1514	<p>The exotic animals that are now the base for livestock production in Meso and SouthAmerica where introduced by Spaniards during the colonization. Its important to mention this in a way to make notice about the time frame in which the different ecosystems has been under land use conversion. Also, is important to present the statistics for the LAC the cover extent and percentage of TDF under protection (Sánchez-Azofeifa et al. 2005. Research priorities for neotropical dry forests. Biotropica. DOI: 10.1111/j.1744-7429.2005.00066.x; Sánchez-Cuervo et al. 2012. Land Cover Change in Colombia: Surprising Forest Recovery Trends between 2001 and 2010. PlosOne. doi:10.1371/journal.pone.0043943; Romero-Duque et al. 2007. Structure and diversity of secondary tropical dry forests in Mexico, differing in their prior land-use history. Forest Ecology and Management. DOI: doi:10.1016/j.foreco.2007.07.002; Quesada et al. 2009. Succession and management of tropical dry forests in the Americas: Review and new perspectives. Forest Ecology and Management. doi:10.1016/j.foreco.2009.06.023; Alvarado-Solano &amp; Otero. 2017. Natural areas of tropical dry forest in Valle del Cauca, Colombia: an opportunity for restoration. DOI: 10.21068/c2017.v18s01a01; Pizano &amp; García. 2014. El Bosque Seco Tropical en Colombia. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH). Available at: <a href="http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia">http://www.humboldt.org.co/es/component/k2/item/529-el-bosque-seco-tropical-en-colombia</a></p>	Thank you for the suggestion, but space is limits what can be included.
The Biodiversity Indicators Partnership (BIP)	59	1535	59	1544	Excellent use of these data on protected area coverage of key biodiversity areas. This text and figure 2.28 makes a valuable contribution to Section 2.2.8 - important to retain.	Thank you for the positive comment.
Thomas Brooks	59	1535	59	1544	Excellent use of these data on protected area coverage of key biodiversity areas. This text and figure 2.28 makes a valuable contribution to Section 2.2.8 - important to retain.	Thanks again

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	59	1539	59	1540	Consider rephrasing. Marine protection is a slightly larger share than terrestrial protection in the Caribbean and North America? Or marine protection is slightly larger share than marine protection in Latin America but still considerably less than terrestrial protection?	Noted and modified
The Biodiversity Indicators Partnership (BIP)	60	1545	60	1551	Excellent use of these data on protected area coverage. Figures 2.29 and 2.30 make a valuable contribution to Section 2.2.8 - important to retain.	Thanks again again.
Thomas Brooks	60	1545	60	1551	Excellent use of these data on protected area coverage. Figures 2.29 and 2.30 make a valuable contribution to Section 2.2.8 - important to retain.	Thanks again again again
Thomas Brooks	60	1552	61	1569	There is much other evidence of protected area impact and benefit in the Americas that could be drawn from to strengthen this text. Some key references include Nelson & Chomitz (2011 PLoS ONE <a href="http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0022722">http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0022722</a> ) and Andam et al. (2008 PNAS <a href="http://www.pnas.org/content/105/42/16089">http://www.pnas.org/content/105/42/16089</a> ) on impacts and Ferraro & Hanauer (2014 PNAS <a href="http://www.pnas.org/content/111/11/4332.full">http://www.pnas.org/content/111/11/4332.full</a> ) on benefits.	Thank you for the comment.
Anna Yusa (Health Canada)	61	1570	64	1651	Propose incorporating discussion of biodiversity in the context of climate change adaptation; propose incorporating discussion of biodiversity in urban settings as part of the climate change and climate regulation discussion--> Link to section 2.2.12 on "Regulation of hazards and extreme events"	We cannot do this here for reasons of space
Anna Yusa (Health Canada)	61	1570	64	1651	Propose incorporating a stronger regional perspective with additional information / examples from the Americas here; the current section seems broad and global.	We cannot do this here for reasons of space
Diego Pacheco	61	1570	64	1653	This needs to be summarized and to have a more different wording. It is very technical and therefore very unclear.	Thank you, we have endeavoured to make the language more acceptable to a wide audience and clarified terminology
Ederson A Zanetti	61	1579	61	1579	There should be figure on HWP consumption as critical component of climate regulation	We cannot do this here for reasons of space



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Anna Yusa (Health Canada)	61	1580	61	1590	Propose that this section on human health and climate also include discussion of extreme temperatures anticipated with climate change and how biodiversity can modify exposure and impacts as this is of much concern in the Americas from a public health perspective; propose touching also on the link between climate regulation, aeroallergens and health (see p77); propose providing examples of extreme events that will drive human migration and "climate refugees" e.g. flooding, wildfires and considering what implications will be for countries in the Americas both sending out and receiving "climate refugees"; propose drawing the link between these changes and mental health impacts;	We do not understand this comment
Elva Escobar	61	1580	61	1590	The potential shift in species distribution at a latitudinal scale should also be mentioned in this section	This is a subject primarily for chapter and chapter 4. However we have addressed this here, particularly its implications for human quality of life.
Alwin Dornelly	61	1587	61	1588	Sentence suggest that climate change will pose a threat to extreme events that will drive human migration. Is this correct?	This sentence has been revised for clarity.
Francillia N. Solomon	61	1587	61	1588	Does climate change will pose a threat to events that will drive human migration? Please clarify if true.	Thanks for pointing out this confusion . The text has been clarified.
Luis Ubaldo Castruita Esparza	8	1592	61	1593	The revision should be updated because it is possible that CO2 does not have the same fertilising effect in controlled environments as in an open forest ecosystem	We're not entirely clear about this comments. This reference was to the effects of increasing nitrogen and its link with plant growth, and the general ability of forests to store CO2 over long time periods.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Elizabeth Hess	62	1609	62	1611	The following is from a recent (Feb 2017 statement by the North American Wetlands Conservation Council (Canada) that could be included to demonstrate the carbon storage capacity of wetlands. Wetlands trap and hold vast amounts of atmospheric carbon. Despite significant losses of wetlands since the 1970s, Canada still is home to 25% of the world's wetlands, much of it high density wetlands that continue to play a critical carbon capture role. However, Canada continues to lose 32 Ha of wetlands daily which results in a carbon release equivalent to putting an additional 2,247 more cars on the road every day. Wetland protection is critical to prevent further loss of habitat and release of carbon. Protection of wetlands will help Canada meet its international greenhouse gas emission targets, while providing additional ecological benefits to Canadians. Citation: NAWCC (Canada). 2017. CANADA'S NORTH AMERICAN WETLANDS CONSERVATION COUNCIL'S STATEMENT ON WETLAND CONSERVATION AND CLIMATE CHANGE	This is a good suggestion and the information, along with the citation, has been added to the chapter text.
Elva Escobar	63	1634	63	1646	When talking about the impacts of climate change, there is a report specific for Mexico called "Reporte Mexicano de Cambio Climático" published in 2015. It is a 3 volume report: I) Scientific bases and models; II) Impacts, vulnerability and adaption; III) Emissions and mitigation on green house gases. This publication should be revised and relevant contents should be included in the assessment	Thank you, we have information about this but due to limitations of space were not able to expand the discussion.
Ederson A Zanetti	63	1647	63	1647	There should be a paragraph on HWP consumption as critical component of climate regulation	We cannot do this here for reasons of space
Adriana C. Flores-Díaz	63	1647	63	1647	Please explain to decision makers that Climate Change influence health, disease transmission by vectors, change agriculture land capacity and water balance. <a href="https://centromariomolina.org/cambio-climatico/">https://centromariomolina.org/cambio-climatico/</a>	We have done our best to make these links clear given the space available.
Diego Pacheco	64	1653	69	1790	This section needs to be summarized and go directly in to the key messages and findings.	Thanks for the comment but the section is space limited and the point is adequately addressed.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Elva Escobar	64	1653	69	1790	Water should be considered as a transversal topic since it is also a source of biodiversity	Thank you for the comment
Patricia S. Vazquez	64	1654	66	1700	Figure 2. 33. Inland waters and wetlands of the Americas. There is no precise definition of the methods or logarithms used for the detection of wetlands in the figure. In the case that remote sensors are used, it is not possible to explain which sensors, the processing of that image, the algorithm used to obtain this result about the wetlands of America.	Thank you for the comment
Giselda Durigan	64	1667	64	1670	Here it should be: Vegetation and soils interact with the geophysical capacities of watersheds to intercept rainfall in the canopies (Carlyle-Moses & Gash 2011), intercept surface flows, store groundwater, and discharge it more uniformly into surface flows (Brooks et al. 2014). Removal of native vegetation as well as afforestation over grasslands or savannas (Jackson et al 2005) alters the patterns of water delivery (Mueller et al. 2013). (Sources: (1) Carlyle-Moses DE, Gash JH. 2011 Rainfall interception loss by forest canopies. In Forest hydrology and biogeochemistry (eds DF Levia, D Carlyle-Moses, T Ttanaka), pp. 407–423, Dordrecht, The Netherlands: Springer). (2) Jackson RB et al. 2005 Trading water for carbon with biological carbon sequestration. Science 30, 1944–1947. (doi:10.1126/science.1119282)	Noted and modified.
WWF Mexico	64	1670	64	1670	There should be remarked after "alters the patterns of water delivery (Mueller et al. 2013)".... In order to conserve the natural regime of rivers, Mexico has issued the National Water Reserves Program based on the environmental flows and water allocation for nature. That is an innovated way for climate change adaption and achieve a water security condition. This Program considers 189 hydrological basins (23% of national surface) and contributes to preservation of 97 natural protected areas and 55 Ramsar wetlands ( <a href="https://publications.iadb.org/handle/11319/7316">https://publications.iadb.org/handle/11319/7316</a> ).	Thank you for your suggestion.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Giselda Durigan	65	1676	65	1680	It must be included here that: Woody encroachment (Honda & Durigan 2016) or afforestation (Jackson et al 2005) increase rain interception and evapotranspiration, reducing groundwater recharge and river flow, jeopardizing water supply especially in regions with seasonal rainfall.	Noted and modified with citation added
David González	65	1681	65	1689	Values are not only economic. What is the relational value of water, what is the relevance of water quality to health, what is the socio-cultural importance of water quality and quantity, how does water quantity (stationality) defines management practices.....?	Thank you for your questions but space is limiting.
Diana Patricia Alvarado-Solano	65	1681	65	1689	For example, In Colombia, National Parks made a study entitled "Economic Importance of the Water Regulation and Regulation of the National Natural Parks of Colombia for the country's economic sectors" (Importancia Económica de la provisión y regulación hídrica de los Parques Nacionales Naturales de Colombia para los sectores económicos del País) in 2014. In 2009, FAO and other institutes presented a document entitled Payment for Ecosystem Services in Latin America (Pago por Servicios Ambientales en Áreas Protegidas en América Latina). In the content is possible to find a diagnosis of the state at that time. Recently, the Ministry of Environment and Sustainable Development of Colombia issued a specific regulation in this subject through the disposition "Decreto 953" in 2013 which is related with the protection of the mountain ecosystems to ensure to provision and maintenance of water resources.	Thank you for your comment
Adriana C. Flores-Díaz	65	1681	65	1689	The data presented here are not for freshwater supply since this water is still at the ecosystem (in a wetland). Calculating of water supply economic value, need to take in account all the process from the wetland to every supply system or home.	It contributes to the supply and that contribution is measured.
Adriana Flores	65	1681	65	1689	The economic valuation of freshwater supply is hard to understand since it doesn't clearly explain what units the measurements are in	Thank you for the comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Margarita N. Lavidés	65	1686	65	1689	The importance of water to support biodiversity is absolutely extreme. No water no life, no biodiversity. No water, no ecological structure and function. While it requires some transdisciplinary approach and questions on environmental ethics, but not to be able to value water viz a viz loss of ecological functions, for example, at various levels of biodiversity, is tantamount to ignoring huge information useful for policy and practice towards sustainable development. Maybe an an example of this kind of valuation can be mentioned here, even smal-scale or local example, if no country or sub-regional level is available, iust to illustrate the point.	This is addressed in another chapter and elsewhere in this chapter
Elizabeth Hess	66	1691	66	1691	Box 2.5. Last sentence reading "reflecting their values, nearly 650,000 km(2) of wetlands are protected by the Ramsar Convention in the Americas" should be modified. There are 408 sites totaling 658,752 km (2) in the Americas so the nearly 650,000 should be updated. Also, suggest not using the word "protected". Protection is not tied to the designation of a wetland as a Ramsar site. Rather, protection of Ramsar sites is dependent on country laws/ policies. Could indicate something like this taken from the Ramsar website. The inclusion of a wetland in the Ramsar list of important wetlands embodies the government's commitment to take the steps necessary to ensure that its ecological character is maintained.	Noted and modified
Giselda Durigan	66	1691	66	1691	Figure 2.33. Unfortunately, the extremelly important wetlands of the Cerrado - the so-called "Veredas" (wet and flooded grasslands), are not included in this figure and not recognized as RAMSAR sites.	Thank you for the comment.
United States Government	67	1703	67	1716	Include discussion of overdraft of groundwater resources in US to address recent drought conditions, and potential impact on long-term resiliency.	The issue is adrressed elsewhere in the chapter
Alwin Dornelly	67	1721	67	1722	I suggest changing ... conversion of natural ecosystems in the Americas is decreasing... to degradation of natural ecosystems. Or conversion of natural ecosystems to whatever it is that they're being converted to.	Noted and modified
Francillia N. Solomon	67	1721	67	1722	Rephrase sentence.	Noted and modified

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	68	1727	68	1731	These efforts need to be assessed in terms of the ecosystem recovery as well as the society present values.	Thank you for the comment.
WWF Mexico	68	1739	68	1740	Riparian ecosystems are also well known for their capacity to regulate water quality. I suggest to include it as follows: "The greater capacity of undisturbed terrestrial, riparian and aquatic ecosystems to regulate water quality is well documented"	Thi has been noted and the text modified to include riparian zones
Giselda Durigan	68	1743	68	1743	Why "particularly forests"??? Savannas and grasslands can be equally effective in protecting water quality and are more effective than forests in water yield.	Thi has been noted and the text modified to address grasslands
Margarita N. Lavides	68	1743	68	1747	The sentence is lacking some linking verb to make a complete sentence.	This has been edited for clarity.
Giselda Durigan	68	1752	68	1752	Table 2.13. Why other ecosystems such as grasslands and savannas are not included?	The focus of this table is on wetlands and forest for which numerous studies exist.
United States Government	69	1755	69	1765	Paragraph appears to conflate water quality and water borne diseases with water as habitat for vectors of disease. Mosquitoes are vectors of disease and depend upon water (clean or otherwise) to reproduce; however, the diseases which they transmit are not water borne. Please revise to clarify this distinction.	This is a good point. The paragraph has been modified to make this distinction clear.
Adriana C. Flores-Díaz	69	1755	69	1758	World Health Organization (WHO 2016) reports guiding the indicators: In 2016, WHO established that by reducing 15 min the time that kids spend in bringing water home, it can reduce kids mortality by 15%.	Thank you for your comment but space is limiting.
Ederson A Zanetti	69	1765	69	1765	There should be mention to relationships between water quality and vegetation, trees, fisheries, animals, birds, reptiles and so on. There should be some figures on level of contamination of wild species	Thank you for your comment, we addressed this as best we could but space is limiting.
Margarita N. Lavides	69	1770	69	1771	This sentence should be supported and followed by an example.	Thank you for your comment, we addressed this as best we could but space is limiting.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	69	1770	69	1771	Please complete de information: Water quality degradation in developing countries is tied to water regulations in the developed coutrines. Low enforcement of the law in developing countries and corruption are responsible for water pollution in basins where industrial activities are prevalent. Some news about Río Santiago in Jalisco, México: <a href="http://interactive.fusion.net/river-of-death/">http://interactive.fusion.net/river-of-death/</a>	The text has been modified as suggested.
Adriana C. Flores-Díaz	69	1770	69	1771	In addition, the cost for water treatment is so high in technologies which are high electricity needed. This cost is not considered when the treatment plants are built, resulting in a great propotion in plants and infrastructure that are unuseful, and are abandoned.	Thank you for your comment, we addressed this as best we could but space is limiting.
Adriana C. Flores-Díaz	69	1777	69	1777	Dead zone in the Gulf is highly responsible of agricultural zone of Mississipi river. Recently we have had the British Petroleum drill at this zone, increasing the evironmental degradation at this.	Thank you for the comment
Lucía Almeida-Leñero	69	1786	69	1790		
Margarita N. Lavides	69	1786	69	1788	Although this document (IPBES Americas) is well written, but there are still some grammatical errors and misspelled words, as in this sentence. Just a reminder, for correction.	Thanks for this comment. We have addressed these issues.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	69	1786	69	1790	<p>When talking about water supply and tendencies in the Americas is important to adress population growth, economic growth, the link they share, and the ever-growing demand they impose. This must take into consideraton also the industrial water demand. You mention such points at the end of the paragraph but maybe they could be more developed. Population growth and economic growth can not be delinked from water supply, and since it plays a mayor role, it must be emphasized.</p> <p>Vörösmarty, C. J., Green, P., Salisbury, J., &amp; Lammers, R. B. (2000). Global water resources: vulnerability from climate change and population growth. <i>science</i>, 289(5477), 284-288.</p> <p>Engelman, R., LeRoy, P., Harrison, P., Ehrlich, P. R., Ehrlich, A. H., &amp; Daily, G. C. (1993). Sustaining water. Population and the future of renewable water supplies. <i>POPULATION AND DEVELOPMENT REVIEW</i>, 19(1), 1-32.</p> <p>-Gleick, P. H. (2010). Roadmap for sustainable water resources in southwestern North America. <i>Proceedings of the National Academy of Sciences</i>, 107(50), 21300-21305.</p> <p>-Alcamo, J., Flörke, M., &amp; Märker, M. (2007). Future long-term changes in global water resources driven by socio-economic and climatic changes. <i>Hydrological Sciences Journal</i>, 52(2), 247-275.</p> <p>-Zimmerer, K. S. (2000). Rescaling irrigation in Latin America: the cultural images and political ecology of water resources. <i>Ecumene</i>, 7(2), 150-175.</p> <p>-Gleick, P. H. (1993). Water and conflict: Fresh water resources and international security. <i>International security</i>, 18(1), 79-112.</p>	Thanks for this comment. We have addressed this issues as much as possible given the constraints of space.
Adriana C. Flores-Díaz	69	1790	69	1790	<p>Most developing countries lack measuring or gauging of basins, which are important to model and forecast the water behavior, availability and response to climatic and land use changes. This is an important suggestion for decision makers, to increase the budget for research and monitoring water, by means of instrumenting basins.</p>	This is a good point and is covered in chapter 6



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	69	1790	69	1790	In this subsection, there is a lack of analysis about water - energy relations in terms of the energy generation, and the environmental costs of it. Energy is a major issue for decision makers, and this document should try to put this matter on the table.	We have addressed this as best we could given the constraints of space.
						Below is regulation of hazardous and extreme events
Anna Yusa (Health Canada)	70	1791			This section overall: propose building on some of the examples to speak to both urban and rural environments especially for the section beginning on line 1815 given the links to urban heat island effects and mitigation through greening; other sections do speak to this in different contexts (e.g. section 2.2.13)	We have addressed this as best we could given the constraints of space.
Carolina Ziehl	70	1815	70	1820	In this paragraph it should be clarify that although fire dynamics can be natural disturbances and even an important element in some pyrophilic ecosystems which are present in all the Americas, a poor management of such ecosystems and fire dynamics can lead to natural disasters. In the past, and even currently, a misunderstanding of pyrophilic ecosystems has led to extreme wildfires in California for example. So fire, can be a natural disaster, but prescribed fire and controlled events in some cases, are part of natural dynamics and can prevent disastrous events. Yoder, J., Engle, D., & Fuhlendorf, S. (2004). Liability, incentives, and prescribed fire for ecosystem management. <i>Frontiers in Ecology and the Environment</i> , 2(7), 361-366. Pausas, J. G. (2015). Alternative fire-driven vegetation states. <i>Journal of Vegetation Science</i> , 26(1), 4-6. Myers, R. L., & Rodríguez-Trejo, D. A. (2009). Fire in tropical pine ecosystems. In <i>Tropical Fire Ecology</i> (pp. 557-605). Springer Berlin Heidelberg.	Thanks for this comment. We have addressed these issues as best we could give the space available.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	70	1815	70	1820	Ecosystems usually evolve in concert with natural hazards and extreme events - so the threat to ecosystems is usually in the context of disrupted services to humans. To the extent that human influences have exacerbated natural events, there is an increased threat to ecosystem function and survival. The IPBES document stresses the human-ecological connection, particularly as an argument about why we should care about biodiversity. However, please take care to make a clear distinguishment between cycles that ecosystems naturally deal with versus the effects on humans from those cycles.	Thanks for this comment. We have addressed these issues as best we could give the space available.
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	70	1815	70	1820	In this paragraph it should be clarify that although fire dynamics can be natural disturbances and even an important element in some pyrophilic ecosystems which are present in all the Americas, a poor management of such ecosystems and fire dynamics can lead to natural disasters. In the past, and even currently, a misunderstandig of pyrophilic ecosystems has led to extreme wildfires in California for example. So fire, can be a natural disaster, but prescribed fire and controled events in some cases, are part of natural dinamics and can prevent disastrous events. -Yoder, J., Engle, D., & Fuhlendorf, S. (2004). Liability, incentives, and prescribed fire for ecosystem management. <i>Frontiers in Ecology and the Environment</i> , 2(7), 361-366. -Pausas, J. G. (2015). Alternative fire-driven vegetation states. <i>Journal of Vegetation Science</i> , 26(1), 4-6. -Myers, R. L., & Rodríguez-Trejo, D. A. (2009). Fire in tropical pine ecosystems. In <i>Tropical Fire Ecology</i> (pp. 557-605). Springer Berlin Heidelberg	Thanks for this comment. We have addressed this issues as much as possible given the contraits of space.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	71	1836	71	1847	Biodiversity and healthy resilient watersheds can buffer against both storms/floods, as well as reduce risk of wildfire ignition and post-fire water release. Consider also including a discussion on using natural infrastructure as a buffer against wildfire destruction, both for post-fire as well as reducing the risk of ignition through forest thinning of overcrowded tree stands and vegetation. Further, consider including a mention of the avoided cost of wildlife damage, as it a significant justification for Payments for Ecosystem Services programs leveraging local monies.	Thanks for this comment. We have addressed this issues as much as possible given the constraints of space. Payment for ecosystem services is addressed elsewhere in the chapter.
DPG/Sbio/MMA	72	1871	72	1874	Cerrado is described as Amazonian savannas in the reference to 35% of Legal Reserve. The name "Cerrado" is already mentioned in other parts of the text, as well as brazilian savannas.	The 35% rule is not valid for Cerrado but only for savannas situated in the region considered to be Legal Amazon region. This part was slightly reformulated, to make it clearer, and the law was added as reference.
Lucía Almeida-Leñero	72	1887	72	1887	Regarding the Bonn Challenge, it could be stated in the text that the U.S. and Mexico are the countries with the highest number of acres, and maybe add how many acres have been restored to date.	The countries with the highest commitments under the Bonn Challenge are actually US and Brazil, not US and Mexico. Data on restoration progress is not available on a country base (the Bonn Challenge Barometer is not yet implemented, apparently).
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	72	1887	72	1887	Regarding the Bonn Challenge, it could be stated in the text that the U.S. and Mexico are the countries with the highest number of acres, and maybe add how many acres have been restored to date.	The countries with the highest commitments under the Bonn Challenge are actually US and Brazil, not US and Mexico. Data on restoration progress is not available on a country base (the Bonn Challenge Barometer is not yet implemented, apparently).
Giselda Durigan	72	1892	72	1895	Thank you for citing this paper. It is related to all my comments on this report.	You're welcome. This is certainly a key paper.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	72	1894	72	1895	As climate change effects indicate that restoring ecosystems to the characteristics of the original one may be an impossible goal, consider revising to include such a mention or discussion.	We totally agree with the comment, but we do not think that at this point revision is necessary, as it is not stated here that the original system needs to be the goal of restoration.
United States Government	72	1899	72	1900	Please delete or revise reference to California as a monoculture, as California is not a monoculture; rather, there are more than 400 different agricultural commodities produced, and many of the agricultural production systems afford habitat. Further, consider discussion of use of rice fields as habitat to support migratory shore birds.	This part was revised in a way that it becomes clear that California is not a monoculture. In fact, the focus here was on the natural systems.
Margarita N. Lavides	72	1901	72	1904	This sentence is too long and winding. I suggest the following: The conservation and maintenance of contiguous natural areas in agricultural landscapes provide the improvement of other ecological functions such as biological pest control through insects, birds and bats (Steele et al. 2017). Also, it can provide for space for pollinators that rely on floral resources both inside and in the surrounding of crops (Viers et al. 2013).	This information was inserted into the second paragraph of the section, where it is more appropriate.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero	74	1929	74	1934	In this paragraph it is stated that "indigenous and local management practices can contribute to enhance NCPs" but the whole document lacks examples of such practices, specially in the Food and Feed section. Examples of such practices should be presented as they also represent indigenous and traditional knowledge systems. Some good examples are water management in arid regions by perubian people, traditional agricultural systems in Perú or México and Central America (chinanpas, milpa, others). Wilken, G. C. (1990). Good farmers: Traditional agricultural resource management in Mexico and Central America. Univ of California Press. Moreno-Calles, A. I., Toledo, V. M., & Casas, A. (2013). Los sistemas agroforestales tradicionales de México: una aproximación biocultural. Botanical Sciences, 91(4), 375-398. Amaroli, P., & Dull, R. (1998). Milpas prehispánicas en El Salvador. In XII Simposio de Investigaciones Arqueológicas en Guatemala (pp. 562-572). Hatch, J. K. (1976). The corn farmers of Motupe: A study of traditional farming practices in northern coastal Peru. The corn farmers of Motupe: A study of traditional farming practices in northern coastal Peru.	Thank you for this comment. In part, we used these references in the table on valuing systems and NCPs.
Adriana C. Flores-Díaz	74	1929	74	1934	There are examples in Mexico, for community-based natural resources management, like this: <a href="https://pdfs.semanticscholar.org/5bc9/76e5ceb894aa9e71f8d5849bd0eb62a0f1a.pdf">https://pdfs.semanticscholar.org/5bc9/76e5ceb894aa9e71f8d5849bd0eb62a0f1a.pdf</a>	Thank you for this example. However it fits better in the Chapter on policy.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	74	1929	74	1934	<p>In this paragraph it is stated that "indigenous and local management practices can contribute to enhance NCPs" but the whole document lacks examples of such practices, specially in the Food and Feed section. Examples of such practices should be presented as they also represent indigenous and traditional knowledge systems. Some good examples are water management in arid regions by perubian people, traditional agricultural systems in Perú or México and Central America (chinanpas, milpa, others).</p> <p>-Wilken, G. C. (1990). Good farmers: Traditional agricultural resource management in Mexico and Central America. Univ of California Press.</p> <p>-Moreno-Calles, A. I., Toledo, V. M., &amp; Casas, A. (2013). Los sistemas agroforestales tradicionales de México: una aproximación biocultural. Botanical Sciences, 91(4), 375-398.</p> <p>-Amaroli, P., &amp; Dull, R. (1998). Milpas prehispánicas en El Salvador. In XII Simposio de Investigaciones Arqueológicas en Guatemala (pp. 562-572).</p> <p>-Hatch, J. K. (1976). The corn farmers of Motupe: A study of traditional farming practices in northern coastal Peru. The corn farmers of Motupe: A study of traditional farming practices in northern coastal Peru.</p>	Thank you for this comment. In part, we used these references in the table on valuing systems and NCPs.
Virginia Meléndez Ramírez	74	1933	74	1933	Add an innovation example <a href="http://www.altiplano.uvg.edu.gt/articulos/doc/no_quema_agricola_razas_FAO.pdf">http://www.altiplano.uvg.edu.gt/articulos/doc/no_quema_agricola_razas_FAO.pdf</a>	We cannot do this here for reasons of space
Ederson A Zanetti	74	1934	74	1934	There should be mention to the area cultivate with diferent tree species for construction and energy use in the region	We cannot do this here for reasons of space
Sonia Canavelli	74	1936	74	1951	Review this paragraph. I would suggest to place statements from line 1939 to 1951 on a separate paragrhap, because they refer to a different issue, more related to the third paragraph (Line 1957 in advance). Also, I would sugget relating sentences 1952 to 1956 to the first statements (Lines 1936 to 1938)	Thank you for the suggestion.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sonia Canavelli	74	1938	74	1939	Not clear this statement here. It is not self-explicative, because there are not examples of precursos plants can emit. Also, after this phrase, the narrative goes back to positive effects. I would suggest moving this statement to other paragrph, focused on negative effects.	Thank you for the suggestion.
Margarita N. Lavides	76	2002	76	2010	The scholarship of this part can be improved by referring to relevant published articles in the journal Lancet Planetary Health including from its inaugural issue in April 2017.	Added relevant references: Jones, K. E., N. G. Patel, M. A. Levy, A. Storeygard, D. Balk, J. L. Gittleman, and P. Daszak. 2008. Global trends in emerging infectious diseases. Nature 451:990–993.
Virginia Meléndez Ramírez	76	2010	76	2010	Mentioning about biodiversity and human health, see World Health Organization and Secretariat of the Convention on Biological Diversity 2015: <a href="https://www.cbd.int/health/SOK-biodiversity-en.pdf">https://www.cbd.int/health/SOK-biodiversity-en.pdf</a>	Added new reference: Romanelli, C.; Cooper, D.; Campbell-Lendrum, D.; Maiero, M.; Karesh, W.B.; Hunter, D.; Golden, C.D. (2015) Connecting global priorities: biodiversity and human health: a state of knowledge review. WHO/CBD 344p. ISBN 978 92 4 150853 7. Also to note that the examples presented in this section are also highlighted in the above reference.
United States Government	76	2035	76	2035	Might also want to include domestication/release of wild animals as pets. In the southeastern U.S., feral hogs and Burmese pythons have become rampant problems.	Unclear comment are these example threats towards human health or to other biodiversity (i.e. invasive species)

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl	77	2049	77	2057	<p>When talking about alteration of species diversity dynamics that can affect infectious disease transmission maybe it could be mention the example of dillution effect and tick bourne diseases in North America. This is a good example of such effects. Ostfeld, R. S. (2009). Biodiversity loss and the rise of zoonotic pathogens. <i>Clinical Microbiology and Infection</i>, 15, 40-43. Perkins, S. E., Cattadori, I. M., Tagliapietra, V., Rizzoli, A. P., &amp; Hudson, P. J. (2006). Localized deer absence leads to tick amplification. <i>Ecology</i>, 87(8), 1981-1986. Ostfeld, R. S., &amp; Keesing, F. (2000). Biodiversity and disease risk: the case of Lyme disease. <i>Conservation Biology</i>, 14(3), 722-728. Levi, T., Keesing, F., Holt, R. D., Barfield, M., &amp; Ostfeld, R. S. (2016). Quantifying dilution and amplification in a community of hosts for tick-borne pathogens. <i>Ecological Applications</i>, 26(2), 484-498. Zargar, U. R., Chishti, M. Z., Ahmad, F., &amp; Rather, M. I. (2015). Does alteration in biodiversity really affect disease outcome?—A debate is brewing. <i>Saudi journal of biological sciences</i>. 22(1). 14-18.</p>	Included section on dilution effect hypothesis and relevant current references
Adriana C. Flores-Díaz	77	2049	77	2057	<p>Some authors are aleted about vector diseases changes with climate at Mexico and tropical zones, like: DOI: 10.3201/eid0202.960210, <a href="http://www.eolss.net/sample-chapters/c20/e6-142-tpe-07.pdf">http://www.eolss.net/sample-chapters/c20/e6-142-tpe-07.pdf</a></p>	Added importance of tropical zones under climate change. Plus reference.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	77	2049	77	2057	<p>When talking about alteration of species diversity dynamics that can affect infectious disease transmission maybe it could be mention the example of dillution effect and tick bourne diseases in North America. This is a good example of such effects.</p> <p>-Ostfeld, R. S. (2009). Biodiversity loss and the rise of zoonotic pathogens. <i>Clinical Microbiology and Infection</i>, 15, 40-43.</p> <p>-Perkins, S. E., Cattadori, I. M., Tagliapietra, V., Rizzoli, A. P., &amp; Hudson, P. J. (2006). Localized deer absence leads to tick amplification. <i>Ecology</i>, 87(8), 1981-1986. Ostfeld, R. S., &amp; Keesing, F. (2000). Biodiversity and disease risk: the case of Lyme disease. <i>Conservation Biology</i>, 14(3), 722-728.</p> <p>-Levi, T., Keesing, F., Holt, R. D., Barfield, M., &amp; Ostfeld, R. S. (2016). Quantifying dilution and amplification in a community of hosts for tick-borne pathogens. <i>Ecological Applications</i>, 26(2), 484-498.</p> <p>-Zargar, U. R., Chishti, M. Z., Ahmad, F., &amp; Rather, M. I. (2015). Does alteration in biodiversity really affect disease outcome?—A debate is brewing. <i>Saudi journal of biological sciences</i>, 22(1), 14-18.</p>	Included section on dilution effect hypothesis and relevant current references
Sonia Canavelli	77	2055	77	2057	I think the creation of "novel species interactions" is not, per-se, a negative aspect of changes to species migration. Some of them could even be positive, either for wild species or for humans. I would sugget indicating you refer to novel speices interactions with negative effect on biodiversity and humans.	updated based on this comment
Elva Escobar	78	2082	78	2095	There are examples of sea grasses that are pollinated by marine invertebrate such as crustaceans, annelids and polychaetes. These examples could also be mentioned in this section.	Noted and completed.
Virginia Meléndez Ramírez	78	2083	78	2083	<i>Apis mellifera</i> is an introduces species in America, it's impact on the displacement of native bees specie should be mentioned: <a href="http://www2.fiu.edu/~brayd/Cairns%20et.%20al%20biotropica.pdf">http://www2.fiu.edu/~brayd/Cairns%20et.%20al%20biotropica.pdf</a> and Pinkus, R. M. Parra, T.V. y Meléndez, R. V. 2005. Floral resources, use and interaction between <i>Apis mellifera</i> and native bees. <i>The Canadian Entomologist</i> . 137(4): 441-449.	Noted and completed. Reference added

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sonia Canavelli	78	2087	78	2088	Rewrite: "Native bees and other insects, birds and bats. Also, delete "native species of animals", because it is already mentioned on the previous part of the sentence. Re-written, both statement will look like: Crops in the Americas are pollinated by wild species, which includes native bees and other insects, birds and bats. In some cases, pollination also comes from colonies of introduced honey bees ( <i>Apis mellifera</i> ).	Noted and completed
David González	79	2096	79	2096	Valuation is the process of eliciting value, in this table the value has already been elicited, thus the right title for the table is - Economic Value - and not - Economic valuation - . This is consistent with definitions the IPBES Guide on multiple conceptualizations of value	The wording has been improved
Virginia Meléndez Ramírez	79	2096	79	2096	Table 2016: Add stingless bee pollination: Meléndez RV, Ayala BR and Delfín GH. 2017. Crop pollination by stingless bees. In: Vit P, Silvia RMP y Roubik DW (eds): Pot- Pollen in Stingless Bee Melittology. Springer. New York. In press.	We cannot do this here for reasons of space
Virginia Meléndez Ramírez	79	2097	79	2097	Correct: <i>A. mellifera</i> , an exotic species for America, is managed primarily as a pollinator in the USA.	
Diana Patricia Alvarado-Solano	80	2113	80	2120	For dry forest orchids, the dependence in the availability of pollinators has been recognized as one the constraints for the orchids migration and adaptation (Reina-Rodríguez et al. 2016. patial distribution of dry forest orchids in the Cauca River Valley and Dagua Canyon: Towards a conservation strategy to climate change. <a href="https://doi.org/10.1016/j.jnc.2016.01.004">https://doi.org/10.1016/j.jnc.2016.01.004</a> )	Thanks for the comment however here we are talking about constraints for pollinators not plant species that are constrained by pollination declines.
Virginia Melendez	80	2113	80	2120	<i>Apis mellifera</i> is an introduces species, it's impact on the displacement of native bees specie used to pollinate should be mentioned	We have highlighted that point clearly now.
Elva Escobar	81	2122	81	2141	Ocean acidification is not the only problem that marine and costal ecosystems face; hypoxia, climate change and freshwater inputs (runoffs) and eutrophication, can also have a very negative impact, specially on fisheries. These topics should also be mentioned in this section	This comment is not relevant to our chapter scope, this should be covered in Chp 3

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Pomerleau, C.	81	2123	81	2125	Can you add a sentence explaining how atmospheric CO <sub>2</sub> is lowering seawater pH?	Noted and completed
United States Government	81	2134	81	2135	Should describe what other biota are affected if it is "not just marine biota directly dependent on calcium carbonate for physical structure."	Noted and completed
United States Government	81	2137	81	2137	Please change "ability as carbon sinks" to "function as carbon sinks."	Noted and completed
United States Government	81	2140	81	2140	Important to note that coastal acidification is different than ocean acidification. Should also define coastal acidification and indicate that macroalgae and mangroves may impact coastal acidification locally, but not ocean acidification regionally nor globally.	We cannot do this here for reasons of space. This section deals specifically with ocean acidification
United States Government	81	2141	81	2141	Consider also including a mention that coastal ecosystems (coral reefs, mangroves) can mitigate storm surge and provide natural fortification.	We cannot do this here for reasons of space. This section deals specifically with ocean acidification
Alwin Dornelly	82	2163	82	2166	Paragraph needs referencing; Also line 2163 reads as if a decrease in the human population is among the causes of soil loss; Perhaps it can be said soil loss is as a result of anthropogenic reasons, giving examples of thos reasons.	Citations have been added and We cannot do this here for reasons of space
Francillia N. Solomon	82	2163	82	2166	Provide Reference.	Citations have been added
United States Government	83	2177	83	2179	As mentioned in an earlier chapter, please include a qualifier that soil carbon stocks increase when converting from forest to pasture is a phenomenon of humid forests.	Noted and completed
Diana Patricia Alvarado-Solano	83	2180	83	2180	It would be important to mención the components of the soil biodiversity and the various ways that the different taxas are been affected by anthropogenic activities.	Thank you for this comment. The components of th soil biodiversity and how it's affected by antropogenic activities is detailed in chapter 3 and 4
Alwin Dornelly	83	2185	83	2185	Provide some examples of good soil biodiveristy management for a clearer understanding of the concept.	Noted and completed
Francillia N. Solomon	83	2185	83	2185	Provide examples and clarify.	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	84	2194	85	2213	This is completely subjective and I suggest not to include this, because is based in the chapter lead authors. The analysis must be baed in other sources and ILK and not based on authors own ideas. Also, the discussion should be reoriented to a more NCP scenario (water, scenario, biodiversity, etc..). Therefore, the need to move from the sectoral approach (energy, food, etc.) to the NCP scenario approach.	Thanks for this comment. The new structure of the chapter hopefully makes this clearer
Anna Yusa (Health Canada)	84	2200	84	2205	Would be helpful to clarify whether the 11 experts engaged to carry out the scoring of the links between the NCP areas and elements of quality of life had expertise in the quality of life areas, and if so, what that experience was. This could help interpret the results as only 11 individuals were involved.	The composition of the authors is addressed in section 2.1.2. We are sensitive to this comment, which is why we address our limitations and approach in the introduction.
Alejandra Tauro		2209		2216	Felicidades por este trabajo de la tabla. Sería muy interesate extenderlo a otros actores sociales.	Estamos de acuerdo. Es solo un primer diagnostico y seria bueno extenderlo
Daniel P Faith		2209		2209	table 2: this linking to well-being, based on only 11 authors opinions, is weak. What is missing?	We appreciate the reviewer's value judgement of this table as being "weak." As per our methodology, we have sought to make explicit how we did this assessment, and indeed the conformation of the working groups involved in IPBES are part of that recognition, which is why we made that explicit in the introduction (section 2.1.2). We believe that be being transparent in this way the readers can make their own value judgements regarding the quality.
Diego Pacheco	86	2216	93	2324	Food security is not itself an NCP. It is the producdt of a bundle of NCPs (water provision or irrigation, soil fertility, climate change) etc. Therefore, food security needs to be discussed in that context.	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Ricardo Castro-Díaz	86	2216	96	2324	As far as noticeable, the food security matter is not described in the full concept they introduce: "The concept of food security is determined by three factors: 1) availability, supplied through 2217 domestic production or imports; 2) access to adequate resources or entitlements; and 3) utilization 2218 of food through adequate diet (FAO, 2006)". In fact the path as described falls into a GMO and nutrition facts, leaving apart a sequential horizon in the text. I would suggest to include some paragraphs as done in other similars under the title: "Natures Contributions Food Security" as a way to be more integrated.	Noted and completed
MINAM	86	2217	86	2228	Within the sub-chapter on food security, some causes which should be highlighted include: water scarcity and reduced precipitation due to climatic variability. The availability of water as well as reduction of solar hours, translates into a decrease in the production of crops. Therefore, climate change is an important aspect of this subchapter, as it could aggravate the provision of food as a ecosystem service. Dentro del subcapítulo de seguridad alimentaria sería bueno resaltar que las causas del problema incluyen la escasez de agua y la reducción de la precipitación debido a la variabilidad climática. La disponibilidad de agua así como la reducción de horas solares se traduce en la disminución en la producción de los cultivos, por lo que el cambio climático debe ser parte de este subcapítulo, como una de las causas que podrían agravar la provisión de alimentos como servicio ecosistémico.	We cannot do this here for reasons of space

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Patricia S. Vazquez	87	2229	87	2248	Seeing that at this point the soybean crop increase is analyzed, in Argentina, specifically in the Pampean Region, the following transformations in the change of land use are observed from remote sensors and indicators of sustentabilidad, due to the double Annual crop (wheat / soybeans), a process known as agriculturizacion with a high degree of intensification and implementation of technological packages, Denominated this process like sojizacion or agriculturizacion: 1) Vazquez, P., Zulaica, L. y Benavidez, B. 2017. Agriculturización e impactos ambientales en el partido de Necochea, provincia de Buenos Aires, Argentina. Raega - O Espaço Geográfico em Análise . Vol 39 (en Prensa). 2) Vazquez, P., Zulaica, L. y Requesens, E. 2016. Análisis ambiental de los cambios en el uso de las tierras en el partido de Azul (Centro Bonaerense). Revista Agriscientia. Vol. 33, Nro. 1., p. 1-12, <a href="http://www.agriscientia.unc.edu.ar/volumenes/">http://www.agriscientia.unc.edu.ar/volumenes/</a> . 3) Sequeira, N., Vazquez, P. y Zulaica, L. 2015. Consecuencias ambientales de la expansión agrícola en el Partido de Benito Juárez (Buenos Aires, Argentina), en el período 2003-2011. Revista Geoaraguaia. vol.5, nro.2, 27-49pp. 4) Vazquez, P. y Zulaica, L. 2014. Agriculturization and impacts in a representative area of the Ecoregion of the Pampas, Argentina. Brazilian Geographical Journal: Geosciences and Humanities research medium, Ituiutaba, v. 5, n. 1, p. 20-45. <a href="http://revistaseug.ugr.es/index.php/cuadgeo/index">http://revistaseug.ugr.es/index.php/cuadgeo/index</a> 5) Vazquez, P.; Sacido, M. y Zulaica, L. 2012. Transformaciones agroproductivas e indicadores de sustentabilidad en la Cuenca del río Quequén Grande (Provincia de Buenos Aires, Argentina) durante los periodos 1988-1998 y 1998-2008. Revista Cuadernos Geográficos de la Universidad de Granada, n. 50, p. 88-119; Among other works carried out by my work group, as well as several other authors present this situation: 1)	We cannot do this here for reasons of space, but we will suggest the "cites" within the text
Sonia Canavelli	86	2245	86	2245	Specify which aspect	Thank you for this comment
United States Government	87	2248	87	2248	Need a legend on the x axis - percent.	Thank you for this comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alejandra Tauro		2271		2283	la disminución de la desnutrición en ALC que tan sostenibles es si se debe a protección social y a un BUEN momento económico del país que esta sujeto a políticas de comercio internacional?? En vez de deberse a un mejor ingreso en los hogares por trabajo de los jefes de hogares. Me alegra ver las estadísticas que muestran la disminución en desnutrición, pero las razones de fondo son lábiles, y ese punto de 5 aun en linea de desnutrición es criticable aun si no se fortalece la SOBERANIA alimentaria, mas que el subsidio alimentario... Llegamos a un punto donde es necesario profundizar críticamente la razones de fondo de la desnutrición... el vinculo NCP – QoL desde el alimento implica cuestiones culturales y de políticas culturales, que quizás competan a otro capitulo, pero que acá se pueden notar...	We cannot do this here for reasons of space. We agree with this comment but this point would be better to include in chapter 6. However, we added a sentence that address this slightly.
Brenda McAfee	89	2278	89	2278	Does 5 points refer to the Food Security Index? If so, this needs to be indicated. Or should this be five per cent?	Noted and completed. 5 points refers to the percent. Thank you, it was clarified in the text.
Sonia Canavelli	89	2282	89	2283	Shoud this sentence be: "Causes of progres in the region related with a decrease in PoU (insted of "with PoU")..."?.	The wording has been improved
Sonia Canavelli	89	2286	89	2288	Review this sentence. If I well understand, it implies that, with high dependence on agriculture for economic growht and export earnings, hunger is higher. Is this correct?.	The wording has been improved
Alejandra Tauro		2287		2287	porque no hablar sobre FORTALECER LAS ECONOMIAS RURALES??	We cannot do this here for reasons of space

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl	89	2288	89	2289	<p>In the last line of this paragraph it is stated that raising the productivity of agriculture is fundamental for economic growth, reducing poverty and food security. However, in many cases in the Americas, intensifying agriculture and yields has lead to land degradation, the loss of traditional methods of agriculture (and agrodiversity), and loss of NCPs. Furthermore, modern agriculture practices harm food sovereignty which is indispensable for food security in rural areas. This paragraph and statement is very contradictory to what you established in Chapter 5 of the Land degradation assessment concernig food security and food sovereignty where it is stated that food sovereignty is "recognized as the right of peoples to define their own strategies for sustainable production, distribution (...) with respect for their own cultures (...) and is considered to be a precondition for food security." Likewise, economic growth does not always reduce poverty; it depends on how economic growth is defined (Adams, 2004) and there are both cases where economic growth help the poor and others in which it does not (Donaldson, 2008). Moreover some studies have found that income growth has been the major driving force behind both the declines and increases in poverty, and high levels of inequality (like in the Americas) limit the effectiveness of growth in reducing poverty while growing inequality increases poverty directly for a given level of growth (Fosu, 2017). Also, there are limited effects of growth and inequalit reducing policies in low-income countries (Fosu, 2017). This statement and paragraph should be reconsidered and modified for it to include these considerations. Adams, R. H. (2004). Economic growth, inequality and poverty: estimating the growth elasticity of poverty. World Development, 32(12), 1989-2014. Donaldson, J. A. (2008). Growth is good for whom, when, how? Economic growth and</p>	<p>Of course income distribution is crucial for poverty reduction and inequality as pointed by Fosu (2017), but there is also evidence that agriculture intensification leads to poverty reduction. We modified the paragraph in order to include the importance of sustainable and traditional agriculture for poverty reduction and improve natural resource management.</p>



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	89	2288	89	2289	<p>In the last line of this paragraph it is stated that raising the productivity of agriculture is fundamental for economic growth, reducing poverty and food security. However, in many cases in the Americas, intensifying agriculture and yields has lead to land degradation, the loss of traditional methods of agriculture (and agrodiversity), and loss of NCPs. Furthermore, modern agriculture practices harm food sovereignty which is indispensable for food security in rural areas. This paragraph and statement is very contradictory to what you established in Chapter 5 of the Land degradation assessment concernig food security and food sovereignty where it is stated that food sovereignty is "recognized as the right of peoples to define their own strategies for sustainable production, distribution (...) with respect for their own cultures (...) and is considered to be a precondition for food security." Likewise, economic growth does not always reduce poverty; it depends on how economic growth is defined (Adams, 2004) and there are both cases where economic growth help the poor and others in which it does not (Donaldson, 2008). Moreover some studies have found that income growth has been the major driving force behind both the declines and increases in poverty, and high levels of inequality (like in the Americas) limit the effectiveness of growth in reducing poverty while growing inequality increases poverty directly for a given level of growth (Fosu, 2017). Also, there are limited effects of growth and inequalit reducing policies in low-income countries (Fosu, 2017). This statement and paragraph should be reconsidered and modified for it to include these considerations.</p> <p>-Adams, R. H. (2004). Economic growth, inequality and poverty: estimating the growth elasticity of poverty. World Development, 32(12). 1989-2014.</p>	The same as above

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero	90	2290	90	2291	In the table it is said that between 2014 and 2016 Venezuela's prevalence of undernourishment is <5.0. ¿What data and sources are you using? For a couple of years now, Venezuela has suffered food shortage and a general economic crisis. How come is it possible then that they show such a low undernourishment prevalence? The IPBES should provide reliable and current information.	We get the data from "The State of Food Insecurity in the World " report ( <a href="http://www.fao.org/3/a-i4646e.pdf">http://www.fao.org/3/a-i4646e.pdf</a> ) which is an official source. A column with the number of people undernourished was added and for the last two periods the ns (not statistically significant number) label is assigned for Venezuela.
United States Government	89	2290	90	2291	Although undernourishment and health is a high priority and should be a concern of national governments, there may not be a clear linkage between natural productivity of the ecosystem and capacity to nourish marginalized people. Further, it may be beyond the scope of this assessment to address this issue; consider revising or deletion.	As mentioned in the assessment, food security is linked to agricultural productivity, but also in many developing countries and indigenous communities, many people depends on the natural productivity of the ecosystem ( wild edible plants, <u>intercropping systems</u> ).
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	90	2290	90	2291	In the table it is said that between 2014 and 2016 Venezuela's prevalence of undernourishment is <5.0. ¿What data and sources are you using? For a couple of years now, Venezuela has suffered food shortage and a general economic crisis. How come is it possible then that they show such a low undernourishment prevalence? The IPBES should provide reliable and current information.	Same as the comment 90 above

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alejandra Tauro		2303		2312	totalmente! Entonces no es solo la contribución de alimentos como NCP al bienestar a través de consumo de calorías (vacías), sino de la calidad de los alimentos o la calidad de la nutrición. Esto e una idea de nutrir el cuerpo como forma de nutrir el espíritu, la salud integral del ser humano... Siento que puede estar reducido Q of L a la alimentación que llena el estomago y se aísla de procesos de bienestar mas integrales, donde la panza llena saludablemente, en relación a decidir el mejor alimento, informado, da satisfacción y alegría... esto no se ha mostrado... los hábitos de la alimentación, como culturales y educación no están explícitos ...	We do not undestand this comment
Sonia Canavelli	91	2309	91	2310	It is not clear for me how "greater population growth leads to increased purchasing power". In fact, I would think it is quite the reverse: countries with high population growth have lower purchasing power. Could you please provide a reference to support the statement?.	Thank you for this comment. The wording has been improved
José Luis Echeverría/ César Azurdía/ Melisa Ojeda	92	2316	92	2320	El análisis referente a GMOs y biodiversidad es bastante pobre, especialmente si se analiza la situación actual en centros de origen y diversidad de cultivos	This is no doubt a sensitive issue, but there is no space to elaborate in detail
Margarita N. Lavides	92	2316	92	2317	Correct: Genetic Modifies Organism (GMO) to Genetically Modified Organism (GMO)	Noted
Diana Patricia Alvarado-Solano	92	2316	92	2320	This subject desserve more discussion. Especially because has been producing social and economic conflicts between family farmers and Governments generated by the promulgation of policies that apparently benefits more the multinationals that sells the GMO seeds, reducing the freedom of the family farmers an also the indigenous communities to store and keep their own seeds and their traditions and ways of life ( <a href="https://www.leyesdesemillas.com/colombia/comercio-de-semillas/">https://www.leyesdesemillas.com/colombia/comercio-de-semillas/</a> ; <a href="http://semillas.org.co/es/revista/la-resoluci">http://semillas.org.co/es/revista/la-resoluci</a> )	This is no doubt a sensitive issue, but there is no space to elaborate in detail

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Virginia Meléndez Ramírez	92	2316	92	2320	There is more information on the impact of GMO crops in Latin America. <a href="http://www.fao.org/docrep/015/i2490e/i2490e04d.pdf">http://www.fao.org/docrep/015/i2490e/i2490e04d.pdf</a> See text page 312 Argentina, Brazil, China and India are the largest developing-country producers of transgenic crops. Adoption of GM technologies has also evoked a range of social and ethical concerns about restricting access to genetic resources and new technologies, loss of traditions (such as saving seeds), private sector monopoly and loss of income of resource-poor farmers. Public perceptions about GMOs in food and agriculture are divided with a tendency toward avoiding GM food and products in many developed and developing countries. See map 67 and page 314.	This is no doubt a sensitive issue, but there is no space to elaborate in detail
Sol Guerrero	92	2316	92	2320	There is more information on the production of GMO crops in Latin America. The International Service for the Acquisition of Agri-biotech Applications, on its "Global Status of Commercialized Biotech/GM Crops: 2016" report, presents Country Chapters for the United States of America, Brazil, Argentina, Canada, Uruguay, Bolivia, Mexico, Colombia, Honduras, Chile and Costa Rica	This is no doubt a sensitive issue, but there is no space to elaborate in detail
Virginia Melendez	92	2316	92	2320	There is more information on the impact of GMO crops in Latin America. Sugerir bibliografía <a href="http://www.biodiversidad.gob.mx/pais/pdf/CapNatMex/Vol%20II/I107_La%20bioseguridad%20en%20Mexico%20y%20los%20organismos%20geneticame.pdf">http://www.biodiversidad.gob.mx/pais/pdf/CapNatMex/Vol%20II/I107_La%20bioseguridad%20en%20Mexico%20y%20los%20organismos%20geneticame.pdf</a> <a href="http://www.biodiversidad.gob.mx/genes/plantas_vargen.html">http://www.biodiversidad.gob.mx/genes/plantas_vargen.html</a> <a href="http://www.conabio.gob.mx/.../Impactos_a_la_Biodiversidad_Elledi_Huerta.ppt">www.conabio.gob.mx/.../Impactos_a_la_Biodiversidad_Elledi_Huerta.ppt</a>	This is no doubt a sensitive issue, but there is no space to elaborate in detail

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero	92	2317	92	2320	<p>Regarding GMOs, it should be emphasized that their use lacks scientific consensus on safety, and attempt against food sovereignty, traditional knowledge, and creates dependence upon GMO's monocultures and other negative effects. E.g. For Mexico, this kind of problems are very important since it is the biogeographic origin of many crop species and the domestication center of many plants. The 15% of the species consumed as food worldwide have their origin in Mexico (Conabio, 2009). The scientific community and environmental organizations as well, argue that the introduction of genetically modified crops, as corn, attempts against agroecosystems sustainability, produces genetic erosion, and limit the access to seeds, that will be controlled by agro biotechnological multinational companies (Massieu-Trigo et al., 2009). Another example is the case of cotton in Mexico; D&amp;PL in cooperation with Monsanto introduced transgenic varieties of cotton (Bt), forcing Mexican farmers to sign contracts that forbid the seed storage for next seasons and to have to demonstrate that the seeds they're using is certified by Monsanto (FAO, 2003-04); this practice is clearly attempting against food sovereignty, genetic variability in traditional crops and cultural practices in agroecosystems, like seed storage. FAO. 2003-04. El Estado Mundial de la Agricultura y la Alimentación. [En línea]. Massieu-Trigo, Y., et al. 2000. Consecuencias de la biotecnología en México: el caso de los cultivos transgénicos. Universidad Autónoma Metropolitana. [En línea]. Massieu Trigo, Y. C. (2009). Cultivos y alimentos transgénicos en México: el debate, los actores y las fuerzas sociopolíticas. Argumentos (México, DF), 22(59), 217-243. Sarukhán, J., Koleff, P., Carabias, J., Soberón, J., Dirzo, R., Llorente-Bousquets, J., ... &amp; Anta, S. (2009). Capital natural de México. Síntesis: conocimiento actual, evaluación y perspectivas de sustentabilidad.</p>	This is no doubt a sensitive issue, but there is no space to elaborate in detail

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	92	2317	92	2320	<p>Regarding GMOs, it should be emphasized that their use lacks scientific consensus on safety, and attempt against food sovereignty, traditional knowledge, and creates dependence upon GMO's monocultures and other negative effects. E.g. For Mexico, this kind of problems are very important since it is the biogeographic origin of many crop species and the domestication center of many plants. The 15% of the species consumed as food worldwide have their origin in Mexico (Conabio, 2009). The scientific community and environmental organizations as well, argue that the introduction of genetically modified crops, as corn, attempts against agroecosystems sustainability, produces genetic erosion, and limit the access to seeds, that will be controlled by agro biotechnological multinational companies (Massieu-Trigo et al., 2009). Another example is the case of cotton in Mexico; D&amp;PL in cooperation with Monsanto introduced transgenic varieties of cotton (Bt), forcing Mexican farmers to sign contracts that forbid the seed storage for next seasons and to have to demonstrate that the seeds they're using is certified by Monsanto (FAO, 2003-04); this practice is clearly attempting against food sovereignty, genetic variability in traditional crops and cultural practices in agroecosystems, like seed storage.</p> <p>-FAO. 2003-04. El Estado Mundial de la Agricultura y la Alimentación. [En línea].</p> <p>-Massieu-Trigo, Y., et al. 2000. Consecuencias de la biotecnología en México: el caso de los cultivos transgénicos. Universidad Autónoma Metropolitana. [En línea].</p> <p>-Massieu Trigo, Y. C. (2009). Cultivos y alimentos transgénicos en México: el debate, los actores y las fuerzas sociopolíticas. Argumentos (México, DF), 22(59), 217-243.</p> <p>-Sarukhán, J., Koleff, P., Carabias, J., Soberón, J., Dirzo, R., Illorente-</p>	This is no doubt a sensitive issue, but there is no space to elaborate in detail
Brenda McAfee	92	2319	92	2320	<p>It should be noted that there is <i>public</i> concern about the safety...</p>	This is no doubt a sensitive issue, but there is no space to elaborate in detail

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
United States Government	92	2319	92	2320	The National Academies of Sciences, Engineering and Medicine released a 2016 study reviewing the science on GM crops that specifically addresses the issue, and provides a consensus opinion that may provide additional and useful context.	This is no doubt a sensitive issue, but there is no space to elaborate in detail
United States Government	92	2319	92	2320	Multiple peer reviewed studies have indicated that biotech crops are safe, including studies by the US National Academy of Sciences (NASEM - see "GE Crop Study: Experiences and Prospects" (2016) and "The Impact of Genetically Engineered Crops on Farm Sustainability in the United States" (2011)); please revise the text to reflect that.	This is no doubt a sensitive issue, but there is no space to elaborate in detail

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sol Guerrero	92	2320	92	2320	<p>The European Union published in 2010 "A decade of EU-funded GMO research (2001 - 2010)", in page 17 they state that: "The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are not per se more risky than e.g. conventional plant breeding technologies". A survey published in 2015 by Pew Research Center, titled "Public and Scientists' Views on Science and Society", states that 88% of scientists from the American Association for the Advancement of Science say it is generally safe to eat genetically modified (GM) foods. Another publication from 2015, titled "Conflict of interests and evidence base for GM crops food/feed safety research", where the author analyzed 698 reports, found that the reports conclude that GM crops have been extensively evaluated for potential risks and that genetic modification technologies based on recombinant DNA do not carry a greater risk than other types of genetic modification. There are also professional scientific and/or medical bodies with a generally positive published opinion on the safety of GMOs such as: U.S. National Academy of Sciences, Brazil National Academy of Sciences, Mexican Academy of Sciences, Europe Food Safety Authority, The American Medical Association, The World Health Organization, the Food and Agriculture Organization, Royal Society (London), The U.S. National Research Council, the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, the American Society of Plant Biology, the U.S. Food and Drug Administration, the Third World Academy of Sciences, among other institutions. There is also the case of the letter signed by 124 Nobel Prize Laureates <u>Supporting Precision Agriculture (GMOs). With all this evidence in</u></p>	This is no doubt a sensitive issue, but there is no space to elaborate in detail



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	93	2325	100	2478	The discussion of water security is good, and this should guide other NCPs from the forests, soils, etc. However, there is the need to summarize this section to the key findings. Also, I suggest to delete the example from Costa Rica. If any, examples must not be related to policy instruments, which should move to chapter 6. This is chapter focus on explicitly in trends.	Thank you, this has been done.
Alwin Dornelly	93	2328	93	2330	In the sentence which starts with The availability of water ... identifies positive impacts of water on human lives, but the later part of the sentence identifies extreme events such as floods and droughts which have negative impacts on human lives. I suggest deleting the later part so that the focus remains solely on the positive aspects of water. Also the entire paragraph speaks about positive impacts of water.	Noted and completed
Francillia N. Solomon	93	2328	93	2330	Sentence confusion, rephrase entirely.	Noted and completed
Margarita N. Lavides	93	2334	93	2337	This comment should be true to all Chapters for this Region and also to other Regional Assessments: The idea of specific Sustainable Development Goals being mentioned as relevant to section topics as in this section Sustainable Development Goal 6 and what it addresses as it is relevant to section 2.3.2 Water Security provides the reader especially the policy makers immediate connection to both specific SDG and the specific element of a Good Quality of Life. The authors can take it further by also mentioning the linkage of these two to specific Aichi Biodiversity Targets. For example, as indicated in the Technical Note Biodiversity and the 2030 Agenda for Sustainable Development (CBD-FAO-The World Bank-UNEP-UNDP): SDG 6 is linked or relevant to ABT 8,11, 14, 15 and which both refer to Water Security as an element of Quality of Life.	This is a good comment and has been completed.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Margarita N. Lavidés	93	2342	93	2342	The loss of indigenous knowledge systems in Nunavut, Canada as it relates to alteration of water quality and affecting availability should be further elaborated. This is because the other factors e.g. climate change, population growth etc. and its relation to altered water quality and effects inits availability can be easily understood whereas for many of us, notions of indigenous knowledge systems are largely not understood.	Thanks for this comment; we addressed this as best we could given the limited space available.
Alejandra Tauro		2349		2351	totalmente de acuerdo! Esta mirada critica se puede hacer también sobre la alimentación	Thank you for this comment.
Carolina Ziehl	94	2349	94	2351	It is stated that engineering solutions to replace NCPs can be effective but expensive and may produce false security. One example of this are desalination plants in Mexico (Northwest and Yucatán peninsula). Both regions have problems of water availability due to different factors, but has lead to widespread use of desalination plants even though this solutions also have high environmental impacts and related policies are under developed and not enforced. Environmental impacts in surroundig ecosistemas and marine ecosystems can also lead to irreversible ecological disruptions which also decreases coastal productivity and the livelihoods of many local communities (fishermen) Cortés, F. I. A., Pérez, M. L., & Mogollón, H. M. (2012). Mexico's Water challenges for the 21st century. In Water Resources in Mexico (pp. 21-38). Springer Berlin Heidelberg. Correa Díaz, F. (2007). Evaluación de la sustentabilidad en la instalación de plantas desaladoras, de agua de mar, en la región noroeste de México. GONZÁLEZ, E., León, K. N., Dévora, G. E., & Mendoza, A. G. (2009). Funcionamiento y contaminación generada por plantas desalinizadoras ubicadas en las zonas del mar de Cortés y mar Caribe: un estudio para el desarrollo de normatividad ambiental acuática. Revista Latinoamericana de Recursos Naturales, 5(2), 186-197.	Same as comment below.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Carolina Ziehl Quirós - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	94	2349	94	2351	<p>It is stated that engineering solutions to replace NCPs can be effective but expensive and may produce false security. One example of this are desalination plants in Mexico (Northwest and Yucatán peninsula). Both regions have problems of water availability due to different factors, but has lead to widespread use of desalination plants even though this solutions also have high environmental impacts and related policies are under developed and not enforced. Environmental impacts in surroundig ecosistemas and marine ecosystems can also lead to irreversible ecological disruptions which also decreases coastal productivity and the livelihoods of many local communities (fishermen)</p> <p>-Cortés, F. I. A., Pérez, M. L., &amp; Mogollón, H. M. (2012). Mexico's Water challenges for the 21st century. In Water Resources in Mexico (pp. 21-38). Springer Berlin Heidelberg.</p> <p>-Correa Díaz, F. (2007). Evaluación de la sustentabilidad en la instalación de plantas desaladoras, de agua de mar, en la región noroeste de México.</p> <p>-GONZÁLEZ, E., León, K. N., Dévora, G. E., &amp; Mendoza, A. G. (2009). Funcionamiento y contaminación generada por plantas desalinizadoras ubicadas en las zonas del mar de Cortés y mar Caribe: un estudio para el desarrollo de normatividad ambiental acuática. Revista Latinoamericana de Recursos Naturales, 5(2), 186-197.</p>	<p>Thanks for this comment; we were not</p> <p>Thanks for this comment; we attempted to address this as best we could given the limited space available.</p>

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana C. Flores-Díaz	94	2365	94	2369	Water and sanitation are both human rights ( <a href="http://www.un.org/waterforlifedecade/human_right_to_water.shtml">http://www.un.org/waterforlifedecade/human_right_to_water.shtml</a> ). Please indicate it as a human right since decision makers can understand the importance they have. If there are 2.4 billion people lacking sanitation services, where are all those waste waters? Please indicate that this is not an isolated issue and there are consequences for human health as well as for ecosystem integrity. Please guide to decision makers to the consequences of the data you are setting in the paragraph.	This is a good comment and has been completed.
Diana Patricia Alvarado-Solano	95	2370	95	2372	In Colombia, for example, the official statistics places the water uses as follows: agriculture, energy production, domestic (Estudio Nacional del Agua, 2014. IDEAM. Available at: <a href="http://documentacion.ideam.gov.co/openbiblio/bvirtual/023080/ENA_2014.pdf">documentacion.ideam.gov.co/openbiblio/bvirtual/023080/ENA_2014.pdf</a>	Noted and completed thanks for the link
United States Government	95	2372	95	2374	This description appears inaccurate and should be clarified to reflect the difference between withdrawal and consumption. For example, power generation is typically not included in industry; industry accounts for approximately 5% of water use according to USGS (2014). Power plants are the primary user of water in North America (45 percent); however, the majority of water withdrawn is not consumptively used, but rather returned to the environment for reuse. Agriculture is the largest consumptive use of water.	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diana Patricia Alvarado-Solano	95	2392	95	2393	It has been recognized the socio ecological effects of dam construction, among them we can find displacement of communities, lost of sense of belonging, lost of farmland ( <a href="https://www.internationalrivers.org/human-impacts-of-dams">https://www.internationalrivers.org/human-impacts-of-dams</a> ; <a href="http://www.edwardgoldsmith.org/books/the-social-and-environmental-effects-of-large-dams/">http://www.edwardgoldsmith.org/books/the-social-and-environmental-effects-of-large-dams/</a> ; Gwazani et al. 2012. THE SOCIO-ECOLOGICAL IMPACTS OF MUSHANDIKE DAM, MASVINGO, ZIMBABWE. Journal of Sustainable Development in Africa. Volume 14, No.6, 2012; Tucker et al. 2016. A social-ecological database to advance research on infrastructure development impacts in the Brazilian Amazon. Nature. SCIENTIFIC DATA   3:160071   DOI: 10.1038/sdata.2016.71	Noted and completed
Adriana C. Flores-Díaz	95	2392	95	2393	The consequences of dam construction and operation are well understood, and the complaints are not new ( <a href="https://link.springer.com/article/10.1007/BF01205969">https://link.springer.com/article/10.1007/BF01205969</a> ). These consequences are not only on biophysical systems but on social ones, since there have been several peoples displaced by dam constructions. This paper analyses a case from 1970's <a href="http://mobilizationjournal.org/doi/abs/10.17813/mai.4.1.g588363602261h2?code=hjdm-site">http://mobilizationjournal.org/doi/abs/10.17813/mai.4.1.g588363602261h2?code=hjdm-site</a> , <a href="https://search.proquest.com/openview/405b79db7277fde5d39a39a928ec76c2/1?pq-origsite=gscholar&amp;cbl=1136336">https://search.proquest.com/openview/405b79db7277fde5d39a39a928ec76c2/1?pq-origsite=gscholar&amp;cbl=1136336</a> . Please provide true information to decision makers, since this is a very sensible issue for society in America.	Noted and completed as best we could given the space available
Elva Escobar	96	2408	96	2413	The assessment should improve its analysis on other imports/exports besides virtual water or specify what crops virtual water comes from	Adding information on other imports/exports did not seem relevant to our section given the space constraints. Information on crop imports and exports can be found in Section 2.2.1.
Sonia Canavelli	97	2417	97	2422	Fig. 2.47. Add references for black bars on the Figure legend.	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Giselda Durigan	97	2432	97	2433	Why savannas and grasslands are not included? All natural ecosystems "help to maintain water quality through filtration, groundwater renewal and maintenance of natural flows." And low biomass vegetation is more efficient than forests in the maintenance of natural flows, because they have lower interception by the canopies and lower evapotranspiration (Honda & Durigan 2016)	Noted and completed
Giselda Durigan	97	2434	97	2434	It should be: "The loss of natural ecosystems reduces their benefits..."	Noted and completed
Diana Patricia Alvarado-Solano	98	2437	98	2438	For example, In Colombia, National Parks made a study entitled "Economic Importance of the Water Regulation and Regulation of the National Natural Parks of Colombia for the country's economic sectors" (Importancia Económica de la provisión y regulación hídrica de los Parques Nacionales Naturales de Colombia para los sectores económicos del País) in 2014. In 2009, FAO and other institutes presented a document entitled Payment for Ecosystem Services in Latin America (Pago por Servicios Ambientales en Áreas Protegidas en América Latina). In the content is possible to find a diagnosis of the state at that time. Recently, the Ministry of Environment and Sustainable Development of Colombia issued a specific regulation in this subject through the disposition "Decreto 953" in 2013 which is related with the protection of the mountain ecosystems to ensure to provision and maintenance of water resources.	This idea represented but there is limited room for details
Adriana C. Flores-Díaz	98	2442	98	2444	Other example is Coatepec in Veracruz, Mexico. People and local govern began a Fund (ABC Fund) to take care about the forest around the city and the water resources in it. <a href="https://search.proquest.com/openview/4458adf1bdb6b742d43cab69f3d0cb3e/1?pq-origsite=gscholar&amp;cbl=18750&amp;diss=y">https://search.proquest.com/openview/4458adf1bdb6b742d43cab69f3d0cb3e/1?pq-origsite=gscholar&amp;cbl=18750&amp;diss=y</a>	This idea represented but there is limited room for details
Giselda Durigan	98	2463	99	2474	It is not about this report. But I want to reinforce the inexistence of RAMSAR sites in the Cerrado biome. The Cerrado wetlands (Veredas) are extremely important for regulation of water flow of most rivers in Brazil.	Good example, we have added this to the chapter.
Royal Gardner	98	2463	98	2474	Same comment regarding Ramsar protection.	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Thomas Brooks	98	2463	99	2474	Excellent use of these data on Ramsar sites. This text and figure 2.49 makes a valuable contribution to Section 2.3.2 - important to retain.	Thank you! This has been moved to protected areas/ maintain options where the data fit better
Giselda Durigan	98	2465	98	2465	Please, correct the link: <a href="http://www.ramsar.org">www.ramsar.org</a>	Noted and completed
Ramsar Secretariat	98	2465	98	2465	The link to Ramsar is misspelled. It should be: <a href="http://www.ramsar.org">www.ramsar.org</a> , It said "ramar" instead.	Noted and completed
Ramsar Secretariat	98	2466	98	2466	As Contracting Parties under the Convention designate new Ramsar Sites on a permanent basis, we recommend to include the date the data were taken (e.g Km2 have been protected in the Americas by "date").	Good point. This has been completed (data were accessed in March 2017).
Ramsar Secretariat	98	2466	98	2466	Is important to note that not all Ramsar Sites are protected areas so recommend to use "have been designated as Wetlands of International Importance"	The wording has been improved
WWF Mexico	98	2470	98	2470	There should be remarked after "cultural traditions and income generation (Horwitz et al. 2012)"... For this reason, Mexico proposed and Ramsar Convention accepted in its COP 12 (Uruguay, 2015) the Resolution XII.12 for ensuring and protecting the freshwater incomes to wetlands and so conserving benefits provided to society, at the present and the future ( <a href="http://www.ramsar.org/sites/default/files/documents/library/cop12_res12_water_requirements_e.pdf">http://www.ramsar.org/sites/default/files/documents/library/cop12_res12_water_requirements_e.pdf</a> ) .	Good example, Noted and completed
Ramsar Secretariat	99	2471	99	2474	Please note that Ramsar regionalization for the Americas is: Latin America and the Caribbean and North America. In this regard Mexico is included in North America and not in LAC. As the data used are from the Convention we suggest to include the data from Mexico in North America or put a footnote making the clarification.	Good point. We noticed this and reorganized the data (for the sake of this report) to represent the IPBES subregions.
Adriana C. Flores-Díaz	99	2477	99	2477	Communities are increasing their capabilities, since they are learning new forms of governance and getting new tools as water monitoring. An example is Global Water Watch, Mexico: <a href="http://mexico.globalwaterwatch.org/">http://mexico.globalwaterwatch.org/</a>	Thank you for this example.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Adriana Flores	99	2478	99	2478	There are many successful examples of Water Funds in Mexico, specially in Chiapas and Coatepec, some of these could also be mentioned	Noted and completed
Diego Pacheco	100	2479	109	2735	Energy security is not following a NCP approach, because is very much based in the analysis of the resource than in the NCP. I suggest to change the approach, and concentrate in the energy from NCP benefits (example: water provision). This comment also apply for the health section, sustainable livelihood, and the following sections.	The section was changed considerably.
United States Government	100	2494	101	2496	Determining what the energy security of the Americas should be conceived of seems speculative and beyond the scope of this assessment; please revise or delete.	We revised the txt.
Adriana Flores	101	2499	101	2503	The assessment presents some data on international trade of items from biodiversity such as medicinal plants, but it doesn't estimate value to families, local communities or rural areas. <a href="https://www.bgci.org/garden.php?id=3161">https://www.bgci.org/garden.php?id=3161</a> , <a href="https://ethnobiology.org/sites/default/files/pdfs/JoE/10-2/McClungDeTapia.pdf">https://ethnobiology.org/sites/default/files/pdfs/JoE/10-2/McClungDeTapia.pdf</a> , <a href="https://www.uv.mx/ethnobotany/caballero_files/Lira%20&amp;%20Caballero%20EtnobcucsMexico.pdf">https://www.uv.mx/ethnobotany/caballero_files/Lira%20&amp;%20Caballero%20EtnobcucsMexico.pdf</a>	We cannot do this here for reasons of space
Adriana Flores	101	2499	101	2503	There are published examples with information regarding fuelwood use in Mexico, the should be mentioned in this assessment. <a href="http://redd.ciga.unam.mx/files/FernandezAna.pdf">http://redd.ciga.unam.mx/files/FernandezAna.pdf</a> , <a href="http://s3.amazonaws.com/academia.edu.documents/46555697/A_GIS-based_methodology_for_highlighting20160616-26339-1v1hiqi.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&amp;Expires=1500624234&amp;Signature=KeJVSa4YX7Gi%2B85aPA1TRtXrJRM%3D&amp;response-content-disposition=inline%3B%20filename%3DA_GIS-based_methodology_for_highlighting.pdf">http://s3.amazonaws.com/academia.edu.documents/46555697/A_GIS-based_methodology_for_highlighting20160616-26339-1v1hiqi.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&amp;Expires=1500624234&amp;Signature=KeJVSa4YX7Gi%2B85aPA1TRtXrJRM%3D&amp;response-content-disposition=inline%3B%20filename%3DA_GIS-based_methodology_for_highlighting.pdf</a>	We cannot do this here for reasons of space
United States Government	101	2504	101	2509	Consider also including a discussion on the benefit of diverse industrial demand and market sectors in addition to diversified environmental portfolio assets, all of which contribute to a resilient economy.	We cannot do this here for reasons of space



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sonia Canavelli	101	2506	101	2509	Please, refer to Table 2.23 at the end of the statements, for the reader to see the source of the statement.	Noted and completed
Diana Patricia Alvarado-Solano	101	2510	101	2520	It has been recognized the socio ecological effects of dam construction, among them we can find displacement of communities, lost of sense of belonging, lost of farmland ( <a href="https://www.internationalrivers.org/human-impacts-of-dams">https://www.internationalrivers.org/human-impacts-of-dams</a> ; <a href="http://www.edwardgoldsmith.org/books/the-social-and-environmental-effects-of-large-dams/">http://www.edwardgoldsmith.org/books/the-social-and-environmental-effects-of-large-dams/</a> ;; Gwazani et al. 2012. THE SOCIO-ECOLOGICAL IMPACTS OF MUSHANDIKE DAM, MASVINGO, ZIMBABWE. Journal of Sustainable Development in Africa. Volume 14, No.6, 2012;Tucker et al. 2016. A social-ecological database to advance research on infrastructure development impacts in the Brazilian Amazon. Nature. SCIENTIFIC DATA   3:160071   DOI: 10.1038/sdata.2016.71	Thank you for your comment.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MINAM	101	2510	101	2511	<p>The text states that hydropower is a renewable source of energy, but may cause adverse impacts on the environment and social groups. However, there are various ways of producing hydraulic energy and their impact on the environment and social groups varies. For example, there are reservoirs of water, which exert pressure on the environment by having to flood large tracts of land. On the other hand, run-of-river hydroelectric plants diverts water from a river and captures the energy of the fall and later re-incorporate the water downstream, without exerting the aforementioned adverse effects. Therefore, it is important to specify that the it is hydroelectric power plants that use water dams, which cause adverse effects and which sustainability is in debate, and not all means of hydropower.</p> <p>El texto establece que la energía hidráulica es renovable pero causa impactos adversos en el ambiente y en grupos sociales. No obstante, hay diversas formas de producir energía hidráulica y son las centrales de agua embalsada, las que ejercen presión sobre el ambiente al tener que inundar grandes extensiones de terreno, sin embargo las centrales hidroeléctricas de pasada o "run of river" desvían el agua del torrente de un río, captan la energía de la caída y vuelve a reincorporar el agua río abajo, sin ejercer los efectos adversos antes mencionados. En conclusión, hay que especificar que las centrales hidroeléctricas de agua embalsada, causan dichos daños y se encuentra en debate su sostenibilidad.</p>	Thank you for your comment.
United States Government	101	2523	101	2523	"concur" is confusing in this context; consider another term, perhaps "co-exist."	Thank you for your suggestion
Sonia Canavelli	102	2529	103	2531	I would suggest simplifying Table 2.22, grouping countries with the same values.	Table deleted.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Anna Yusa (Health Canada)	103	2534	106	2600	Although this section on health is part of the broader section 2.3 on "Effects of Trends in Nature's Contribution to People on Quality of Life", most of this section does not seem to speak to the impact of these trends on health. Instead, the sections seem to identify some impacts on health related to the NCPs ranked high in the delphi process and provide some examples from the Americas. Understanding that this is a brief section and not possible to provide in-depth discussion around the links between Biodiversity and health, it could help to link to the report published by UNEP, the CBD and WHO: "Connecting Global Priorities: Biodiversity and Human Health A State of Knowledge Review".	Noted and completed. We added and linked to information/discussion about the UNEP, CBD and WHO report.
Anna Yusa (Health Canada)	103	2534	106	2600	This section on health as part of "Effects of Trends in Nature's Contribution to People on Quality of Life" also seems like an appropriate section to bring in the discussion around climate regulation and the effect of (trends in) climate change on health; some of this is touched on in section 2.2.9	We cannot do this here for reasons of space.
Virginia Meléndez Ramírez	103	2534	104	2542	The assessment should take into account the importance of biodiversity in human health and the concept of "One Health" since it recognizes that the health of people is connected to the health of animals and the environment. The goal of One Health is to encourage the collaborative efforts of multiple disciplines-working locally, nationally, and globally- to achieve the best health for people, animals, and our environment	We cannot do this here for reasons of space.
Virginia Melendez	103	2534	104	2542	The assessment should take into account the importance of biodiversity in human health and the concept of "One Health" since it recognizes that the health of people is connected to the health of animals and the environment. The goal of One Health is to encourage the collaborative efforts of multiple disciplines-working locally, nationally, and globally- to achieve the best health for people, animals, and our environment	We cannot do this here for reasons of space.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alejandra Tauro		2543		2551	podría la percepción sobre los alimentos orgánicos saludables provenir de ideas implícitas sobre la producción de estos alimentos en contraste con los convencionales... el hecho que se hagan a baja escala, sin pesticidas derivados de combustible fósil, que tenga un manejo leve de la tierra, la participación de tecnología amigable, puede sumar a la percepción de ser mejores alimentos, mas allá del valor nutricional... es decir que en esta percepción hay una idea de salud que no es solo la biología del humano, sino la ecología, el ecosistema, una salud basada en una ética... claro que hay todo un mercado que promueve el consumo por moda, y puede que haya consumidores poco conscientes de esto, y que coman orgánico pero consuman muchos productos que generen impactos ambientales en otros sentidos (ropa, tecnología , etc)	We do not understand this comment
Margarita N. Lavides	104	2549	104	2549	Correct: Genetic Modified Organism to Genetically Modified Organism	This section/parragraph has been deleted
United States Government	104	2549	104	2551	Multiple peer reviewed studies have indicated that biotech crops are safe, including studies by the US National Academy of Sciences (NASEM); please revise text to reflect that.	This section/parragraph has been deleted

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sol Guerrero	104	2549	104	2551	<p>The European Union published in 2010 "A decade of EU-funded GMO research (2001 - 2010)", in page 17 they state that: "The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are not per se more risky than e.g. conventional plant breeding technologies". A survey published in 2015 by Pew Research Center, titled "Public and Scientists' Views on Science and Society", states that 88% of scientists from the American Association for the Advancement of Science say it is generally safe to eat genetically modified (GM) foods. Another publication from 2015, titled "Conflict of interests and evidence base for GM crops food/feed safety research", where the author analyzed 698 reports, found that the reports conclude that GM crops have been extensively evaluated for potential risks and that genetic modification technologies based on recombinant DNA do not carry a greater risk than other types of genetic modification. There are also professional scientific and/or medical bodies with a generally positive published opinion on the safety of GMOs such as: U.S. National Academy of Sciences, Brazil National Academy of Sciences, Mexican Academy of Sciences, Europe Food Safety Authority, The American Medical Association, The World Health Organization, the Food and Agriculture Organization, Royal Society (London), The U.S. National Research Council, the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, the American Society of Plant Biology, the U.S. Food and Drug Administration, the Third World Academy of Sciences, among other institutions. There is also the case of the letter signed by 124 Nobel Prize Laureates <u>Supporting Precision Agriculture (GMOs). With all this evidence in</u></p>	Noted and completed
Adriana C. Flores-Díaz	104	2563	104	2563	<p>It is important to encourage the understanding about the freshwater wetlands, as riparian zones, since they work as filters for toxic and pathogens, as <i>Escherichia coli</i>.  <a href="http://www.sciencedirect.com/science/article/pii/S0043135403006249">http://www.sciencedirect.com/science/article/pii/S0043135403006249</a></p>	Noted and completed

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Sonia Canavelli	104	2566	104	2566	Eliminate duplicated word "access"	Noted and completed
Sonia Canavelli	105	2589	105	2590	Please, review this statement, because the asseveration does not correspond with Figura 2.52.	Noted and completed. The reference to the figure has been deleted.
Adriana C. Flores-Díaz	105	2593	105	2593	Please indicate that all Nature Contributions to People are linked to HEALTH. It is a direct relation between both of them. In the other hand, HEALTH is intimately tied to the cosmovision the peoples have.	Noted and completed. The link has been mentioned now in the text.
United States Government	105	2594	105	2594	Biodiversity buffers against risk of natural disaster - should be embedded and characterized more explicitly in the narrative around Health.	Noted and completed. A paragraph was added dicussing the importance of biodiversity as a buffer against extreme events.
Sonia Canavelli	106	2598	106	2600	Plase, clarify on the graph the meaning of %. I.e, which is the basis of comparison, which are the other death causes and their %'s?.	Figure removed/improved.
United States Government	106	2601	107	2666	Corporate sustainability and private sector environmental and biodiversity commitments cannot be overstated in this era. Companies are committing to going water- or carbon- neutral not only for branding, but because in many cases they are directly mitigating their supply chain risk. More and more we are seeing global companies invest for long-term sustainability. This should also be highlighted in the narrative on Sustainable Livelihood.	This is a good point, but I have not been able to find scholarly works that support this. However, I think it is possible to bring this up in the conclusion. Please see the last paragraph in the editions.
Alwin Dornelly	106	2602	106	2604	Provide some examples of the broader socio-cultural aspects that livelihoods depend upon, for greater clarity	The broader socio-cultural aspects are clarified at the end of the sentence "via cultural identity, sense of place, and social cohesion"

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Brenda McAfee	106	2615	106	2617	Is there a more recent report? If the reference is from 2008, it is not possible to refer to the last ten years but rather during the period 1998-2008.	I do not have newer data for this affirmation, but I simply took out the "last decade" part, which does not really change anything in the meaning... but it is necessary, as the reviewer points out, to not state this as something in the last decade based on a citation from 2008.
WWF Mexico	106	2620	106	2666	There additional aspects are required to be mentioned, for providing a more complete perspective: - Fisheries in the Americas are frequently undertaken at biodiversity hotspots. Environmental costs related to mortalities associated to bycatch and discards are frequently missed, but they can easily overpass the value of the catch. - Most of the America's fisheries are feasible, only due to public subsidies provided by governments (fishing gears, fuel, boats, and engines). If fisheries should have to carry on their net production costs, significant proportions of the total effort would be out of business. Assignations of subsidies to fisheries are frequently related to political/electoral ends and not as incentives to responsible fishing operations or true production incentives.	This information would be valuable if it were supported with documentation. As provided it is just a general suggestion, but would require a large amount of work to substantiate each of these general affirmations.
Alejandra Tauro		2685		2685	no solo cuanto espacio verde disfrutar... sino como vivir y acceder a ese espacio... en muchas ciudades los espacios verdes pueden estar asociados con inseguridad, una ciudad con espacios verdes necesita también una cultura de apreciación y conexión con la naturaleza, para cuidar el espacio verde desde la acción ciudadana-publica y para disfrutarlo impactando al bienestar de manera positiva	Thank you for the comment.
Elizabeth Hess	108	2690	108	2699	Canada has a couple Connecting Canadians to Nature initiatives (see: <a href="http://www.parks-parcs.ca/english/ConnectingCanadians-English_web.pdf">http://www.parks-parcs.ca/english/ConnectingCanadians-English_web.pdf</a> ; and <a href="https://www.ec.gc.ca/ap-pa/default.asp?lang=En&amp;n=E1B7D252-1">https://www.ec.gc.ca/ap-pa/default.asp?lang=En&amp;n=E1B7D252-1</a> ) that could be referenced.	We have revised the section in accordance with these suggestions.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
The Biodiversity Indicators Partnership (BIP)	109	2713	109	2721	Useful paragraph on protected areas - important to retain.	We appreciate the positive feedback.
Thomas Brooks	109	2713	109	2721	Useful paragraph on protected areas - important to retain.	We appreciate the positive feedback.
Diana Patricia Alvarado-Solano	109	2725	109	2727	For a better understanding of a broader audience and also, to recognize the displacement that the indigenous communities faced in that moment, is fair to change "Colombus' time" for "colonization", which in fact, that was what happened, the indigenous communities in Colombia still remember those time as it is.	We have attempted to be sensitive to this issue, but the use of pre-Colombian is broadly understood and is a simpler way of saying "pre-European colonization". We cannot say "pre-colonization" as suggested by the reviewer, because the Americas was also "colonized" by every other group as well, including the first nations etc.
Ederson A Zanetti	109	2735	109	2735	there should be a subchapter with a couple of paragraphs on tree security for materials supply on construction and energy, with estimates on number of trees per inhabitant and tendency with increasing population	Thank you for the suggestion.



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	109	2736	114	2819	<p>I would prefer a more integrated discussion of ILK and NCP in each of the previous sections referred to the benefits of NCPs to a good quality of life. This will provide the discussion with more context and more insights in each of the specific analysis (water management, forest management, soil management, etc.). That disussion should be expanded in this specific section.</p> <p>It is absent the discussion of the ILK on forests. There is a lot of emphasis on agriculture, but less in water and forest is missing. Also, the relationship between agriculture and forestry (agroforestry) is not considered at all, which is very important for indigenous peoples. Finally, a consideration of holistic production systems needs to be introduced, since IPLC have an integrated knowledge of ecosystems. Finally, the discussion of production must be related to spiritual and non-material ends, particularly on indigenous peoples. Also, the issue of the management of natural resources collectively needs to be highlighted, including some technologies developed by indigenous groups (for example: camellones in the Andes region and in the tropical areas; managemenet of multiple ecological systems in the andes region; the collective rotation of parcels in the Andes, etc., etc )</p>	<p>I totally agree and moreover, most of this 2.3 section belonged to crops! We have decided to include case studies on productive systems. Thank you!</p>

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Ena Mata	109	2736	114	2819	<p>This section could also mention examples from Mexico and the relation of crops with culture. Besides the classical milpa example, the culture around cocoa plantations in Tabasco or the culture around coffee plantations in Chiapas should be mentioned.</p> <p>-Cruz-Coutiño A. (2014) Cacao Soconusco Apuntes sobre Chiapas, México y Centromérica. México. UNICACH.115 p.</p> <p>-De Beenhouwer, M., Aerts, R., &amp; Honnay, O. 2013. A global meta-analysis of the biodiversity and ecosystem service benefits of coffee and cacao agroforestry. Agriculture, ecosystems and environment, 175, 1-7.</p> <p>-González de la V., M., 2004. Cacao. 1500 años en Tabasco. En: Grandes Culturas de Tabasco (Varios autores). Arqueología mexicana-Gobierno del Estado. 74-77</p> <p>-Govea Ek, A. (2016). La construcción simbólica del territorio a partir de la religiosidad. El caso de las fiestas patronales de la Chontalpa, Tabasco, México. Revista Cultura y Religión, 10(2).</p> <p>-Ibarra S. (2003) El Chocolate es cacao: Herencia de México al mundo. InfoAcerca.</p> <p>-Manson, R. H. (Ed.). (2008). Agroecosistemas cafetaleros de Veracruz: biodiversidad, manejo y conservación. Instituto Nacional de Ecología.</p> <p>-Naranjo G. J. A. (2011). Caracterización de productos tradicionales y no tradicionales derivados de cacao (Theobroma cacao L.) en el estado de Tabasco, México. Tesis de Maestría. Colegio de Postgraduados. 60 p</p> <p>-Tornés, J. S., &amp; Sánchez, L. Y. H. (2015). Cacao, una aportación de México al mundo. Revista Ciencia, 32-39</p> <p>-Valenzuela-Córdova, B., Mata-Zayas, E. E., Pacheco-Figueroa, C. J., Chávez-Gordillo, F. L., Díaz-López, H. M., Gama, L., &amp; Valdez-Leal, J. D.</p>	Thank you very much for adding references! We will include a paragraph on this milpa example, which will be included in section "Crops"

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Rafael Calderón-Contreras	109	2736	121	2934	Having a section of Indigenous people and local communities contribution without having the same approach to the contribution of cities to Biodiversity and NCP is not balanced. This chapter takes the issue of the presence of biodiversity in cities, and the importance of cities for innovation and knowledge hubs in a rather superficial fashion. It is necessary to highlight the relevance and role of cities for improving biodiversity and conservation.	Thank you for your comment.
Virginia Meléndez Ramírez	109	2738	111	2762	The importance of maize is lightly mentioned but not the importance of the Milpa traditional crop system used mainly in Mexico but also in other countries of Mesoamerica. A source of information that should be reviewed for more information on the milpa system is: Terán, S., Heilskov Rasmussen, C., & Silvia Terán, C. H. R. (1994). La milpa de los mayas: la agricultura de los mayas prehispánicos y actuales en el noreste de Yucatán (No. F 1435.3. A37. T47)	Thank you. The Milpa example will be included in "crops" section.
Virginia Melendez	109	2738	111	2762	The importance of maize is lightly mentioned but not the importance of the Milpa traditional crop system used mainly in Mexico but also in other countries of Mesoamerica. A source of information that should be reviewed for more information on the milpa system is: Terán, S., Heilskov Rasmussen, C., & Silvia Terán, C. H. R. (1994). La milpa de los mayas: la agricultura de los mayas prehispánicos y actuales en el noreste de Yucatán (No. F 1435.3. A37. T47)	repetitive
Margarita N. Lavidés	110	2768	110	2768	Add: 'at' as in ".....pointed out at least 83 Amazonian native species....."	Ok, thank you for making this clearer.
United States Government	111	2774	111	2775	Meaning of sentence is unclear; recommend rephrasing.	Noted and completed.
José Luis Echeverría/ César Azurdia/ Melisa Ojeda	112	2780	112		El frijol lima ( <i>Phaseolus lunatus</i> ) y el frijol común ( <i>Phaseolus vulgaris</i> ) tienen al menos dos centros de origen, Mesoamérica y la región Andina. No solo la región Andina. Así mismo, <i>Capsicum annuum</i> fue domesticado en Mesoamérica, no en Sur América	Ok gracias por la aclaración que será considerada.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alejandra Tauro		2809		2819	Si! esto tiene mucho sentido para vincular cuando en 2287 se habla de las economías rurales... mantener modos de vida y visiones y conocimientos... como hacer para incorporarse a un mercado justo, social, ético, responsable y respetuoso? Que aquello que hacen estas personas, desde sus conocimientos, pueda llegar a otros interesados en consumirlo? Quizás esto va en capítulo sobre políticas	Exactamente, tiene mejor sentido que pase a Ch 6.
Lucía Almeida-Leñero	114	2809	114	2819	example in mexico- The settlements and chinampas created in the area of the Lake, show a complete adaptation to the conditions that imposed the lacustrine zone. Due to the high performance of the chinampero system, the amount of natural resources provided by the lake and surrounding areas can be added.	Thank you very much. This system will be included in "crops" section.
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	114	2809	114	2819	Example in mexico- The settlements and chinampas created in the area of the Lake, show a complete adaptation to the conditions that imposed the lacustrine zone. Due to the high performance of the chinampero system, the amount of natural resources provided by the lake and surrounding areas can be added.	Thank you very much. This system will be included in "crops" section.
Ederson A Zanetti	114	2819	114	2819	There should be a paragraph on tree species cultivated to construction, fiber and energy by first nations and indigenous people all over the Americas	Thank you very much. I agree that those issues are missing. Will include under "crops"
Adriana C. Flores-Díaz	114	2819	114	2819	You can mention the Ethnobotany studies from different countries along America. See <a href="http://www.sciencedirect.com/science/article/pii/S1360138517300018">http://www.sciencedirect.com/science/article/pii/S1360138517300018</a>	Yes, thank you very much for including this link which will be considered and taken into account in other sections.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
David González	114	2820	115	2877	The whole section is interesting but the issue of values is not explicitly addressed, perhaps a better title for the section would be Access, benefit sharing and equity or the section could address more explicitly the types of values that are in conflict within the cases and examples provided	Thank you for your suggestion. Will balance them. Values and value systems was more explicitly related to the issue that conflicts are not just disputes over uses or interests, but also values and value systems. See editions.
Diego Pacheco	114	2820	117	2878	The discussion of equity to NCP should consider first the access of peoples to natural resources. How much of land and forests is in hands of small-scale producers and of private companies is important to know in order to understanding who is under control of the different NCPs. Therefore, establishing clarity in the forestland tenure systems is a very key condition in order to understand the issue of equity.	The text reflects this general issue, but we did not find quantitative data that the reviewer suggested (i.e. how much land is in different land tenure systems).
Diana Patricia Alvarado-Solano	115	2829	115	2866	For example, In Colombia, National Parks made a study entitled "Economic Importance of the Water Regulation and Regulation of the National Natural Parks of Colombia for the country's economic sectors" (Importancia Económica de la provisión y regulación hídrica de los Parques Nacionales Naturales de Colombia para los sectores económicos del País) in 2014. In 2009, FAO and other institutes presented a document entitled Payment for Ecosystem Services in Latin America (Pago por Servicios Ambientales en Áreas Protegidas en América Latina). In the content is possible to find a diagnosis of the state at that time. Recently, the Ministry of Environment and Sustainable Development of Colombia issued a specific regulation in this subject through the disposition "Decreto 953" in 2013 which is related with the protection of the mountain ecosystems to ensurance to provision and maintenance of water resources.	Added example of Decree 953/13 and also the Figueroa et al. 2009 citation regarding the FAO/Latin American PA PES.
Margarita N. Lavides	115	2834	115	2834	Correct: 'compares' to comparisons	Fixed.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Alejandra Tauro		2836		2839	entre los conflictos no se nombra el cambio de uso del suelo, por ej de producción rural a tierras urbanas, o de tierras cultivas a infraestructura grandes como represas, tendidos de gasoductos, oleductos, parques eólicos, plantas industriales, de áreas protegidas de dominio comunal a desarrollos turisticos o desarrollos petroleros	Added: Therefore, while PES has received significant attention from academics and governmental institutions, other proposals are also needed, including ecotourism development models, land use zoning and informed consent for development projects (see Chapter 6 for a full discussion on policy).
Lilian Painter	115	2836	115	2836	One of the main sources of conflict is the development of infrastructure projects (Dams, Roads) without prior and informed consent. <a href="http://www.dplf.org/sites/default/files/1301596126.pdf">http://www.dplf.org/sites/default/files/1301596126.pdf</a>	See above.
Adriana C. Flores-Díaz	95	2836	95	2836	It is important to indicate the problems that are arising from fracking. There are several consequences for freshwater, aquifers and ecosystems in general, and there is a poor understanding about consequences on human health: <a href="http://www.annualreviews.org/doi/abs/10.1146/annurev-environ-031113-144051">http://www.annualreviews.org/doi/abs/10.1146/annurev-environ-031113-144051</a>	This will go in Chapter 4.
Margarita N. Lavides	115	2848	115	2848	Delete: 'only' as in ".....territories, 18% of which are caused by mining". As it is with inclusion of 'but only 18% are caused by mining' sounded downplaying the impacts of mining, where in fact its more than half of the 30% of socio-environmental conflicts. Whereas if its presented without the word 'only', its presented as a matter of fact.	Done.
Alejandra Tauro		2857		2870	ademas de PES porque no se mencionan otras estrategias que promueven la equidad, por ejemplo el movimiento sobre DECRECIMIENTO ... como vivir mejor con menos... <a href="https://www.degrowth.info/en/">https://www.degrowth.info/en/</a>	This was not mentioned, but did add other examples. See above.
Diego Pacheco	114	2867	115	2876	I disagree with the idea of highlighting PES as the one mechanism to achieve Aichi target 3. This needs of more context and discussion of different alternatives based on payments and alternative to payments.	See above.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Almeida-Leñero	115	2867	116	2876		
Lucía Almeida-Leñero - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar	115	2867	116	2876	While financial and logistical support to promote conservation in rural and indigenous communities' increase, academic literature on community-based ecotourism —which is one of its most prominent strategies—is plenty of contradictions and assumptions lacking empirical support. Particularly in regard to long term changes in social and ecological relationships. To analyse such issues, socio-political transformations driven by ecotourism in La Ventanilla were identified and assessed. This destination is located on the coast of Oaxaca, México, and is frequently cited as an exemplary case because it's social and environmental balanced approach to ecotourism. This article presents the political ecology of La Ventanilla at different geographic scales and over time. The results contrast with those optimistic versions lacking of diachronic vision. Rather, it illustrates an "institutional train wreck" that makes local ecology more vulnerable: decreasing social cohesion, reciprocity, sense of community and mutual trust, while promoting processes like land speculation and inequality. Consequently, the intervention of outsiders, however well intentioned, has exacerbated socioeconomic inequalities and weakened local institutions. (Community based ecotourism and environmental conservation in Mexico: the experience of La Ventanilla, Oaxaca (David Vargas del Río* Ludger Brenner **))	See above.
Diego Pacheco	116	2877	117	2878	the discussion of institutions mediating the access to NCPs must be outside the box, and be considered in the main text of the document.	I do not understand what distinction is being made here? Why would information be more or less relevant by being in a box or not? I will defer to the CLAs about why this was included as a box. I assume it is a CA contribution?

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Patricia Balvanera	117	2878	117	2903	This section is confusing and the data on ecological footprint and biocapacity is hard to understand and it's not well explained	There is a now a new introductory paragraph focused on explaining this accounting method. Much of the text was taken from the suggestion from the next review comment.
The Biodiversity Indicators Partnership (BIP)	117	2879	117	2882	Suggest rephrasing the text to read "Ecological footprint accounting was developed to assess how much people demand from the planet, compared to what the planet's ecosystems are able to renew. Many human activities place demands on the planet's regenerative capacity, including the provision and processing of food, the construction and maintenance of housing, transportation, and the consumption of goods and services. Since these demands compete for biologically productive space, both demand on and availability of regenerative capacity can be approximated by adding up the mutually exclusive biologically productive areas for providing these services. By comparing the amount of capacity demanded with the amount of capacity available, Ecological Footprint accounting can measure the extent to which human demands on the biosphere exceed the biosphere's capacity to meet those demands. If human economies take more than what ecosystems renew, this inevitably puts stress on ecosystems and their biodiversity. Living within the means of what ecosystems can renew is a necessary, but not sufficient condition for biodiversity preservation and successful conservation strategies." Perhaps a bit too long. But more accurate.	We have used much of this suggested wording in the new text.
The Biodiversity Indicators Partnership (BIP)	117	2883	117	2884	A very old reference is cited here. Data provided to IPBES goes up to year 2012 and could be used here instead of this old 2006 citation. The footprint data provided to IPBES are the same included in the LPR 2016, which states that, by 2012, the global ecological footprint exceeded the biocapacity of Earth's resources by approximately 64%	This new reference was incorporated. However, in WWF (2016), I cannot find the reference to 64%. I do find "1.6" planets... which I interpret as 60%?



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
The Biodiversity Indicators Partnership (BIP)	117	2889	117	2897	For NFA 2016 data year 2012: Different numbers seem to correspond to different choices for what represents 'world' values: Either our world values for pop/EF/BC or the sum of those across the IPBES countries in the regional correspondence list. The first number, 22.8% (% of footprint coming from the Americas), is correct when using 'World' EF from our dataset in 2012. So I'll use that (and 'World' BC) for the numbers from here on out. Population is 13.5% of world (so 14% rounded). Americas per capita is 169% that of world per capita in that case, not 171%. Americas BC is 40.3% of world total, and per capita is 298% greater than world average (fine if this is rounded).	I updated the data in the file. By changing the values to two decimals places, I got the same first value as the reviewer (169%). However, all the rest are very slightly different. I cannot find the origin of the small differences, but in no case does it change the conclusions. I would suggest we use the values that our table shows, which are 169%, 40.5% and 299.4%. I cannot find the origin of the small differences with the calculations provided by the reviewer?
The Biodiversity Indicators Partnership (BIP)	117	2892	117	2892	Text should read "which is 171% higher than the global average"	Done.
The Biodiversity Indicators Partnership (BIP)	117	2899	117	2899	Text should read "North America has a 2.7, 4.1 and 4.6 times greater per capita ecological footprint than..."	Done.
Sonia Canavelli	117	2901	117	2903	Explain this relationship is based on the comparison of both variables/graphs. For example, in SA, the biocapacity is high and the ecological footprint is lower than. For this reason, "only SA retains a "reserve" of biocapacity for futuer use".	Added: , due to its relative low ecological footprint and extremely high biocapacity
The Biodiversity Indicators Partnership (BIP)	117	2902	117	2903	Text should read "to renew the resources and services that contribute to human well-being"	Now reads: ability to renew the resources and services that contribute to human well-being.
Adriana C. Flores-Díaz	117	2903	117	2903	I think it is important to address the issue about how our human societies resilient? Are there resilience and adaptation experiences? <a href="http://ciat.cgiar.org/publications/publication-details/?handle1=10568&amp;handle2=80810">http://ciat.cgiar.org/publications/publication-details/?handle1=10568&amp;handle2=80810</a>	Resilience as a topic is very germane to this assessment, but it is probably best developed in Chapter 6 (i.e. policies that affect resilience). Here, we are trying to look for trends (i.e. EF goes up, but BC stays the same).

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
MAYDS- Argentina	118	2905	118	2906	Figure 2.54.a. Biocapacity of the Americas per subregion. Regarding this Figure Argentina requests the inclusion of a foot note where Americas' countries and overseas territories are expressly mentioned.	Our chapter did not develop figure 2.54a and b. These were done by the IPBES indicators group. However, I can add countries to the legend of Figure 2.55.
Rosa María Chávez Dagostino	120	2912		2916	What about Cuba? It was considered in 1997 the only sustainable country in the world consuming within the planetary biocapacity and with a high HDI	I do not know the data from 1997 (20 years ago), but today Cuba is in deficit.
Sonia Canavelli	120	2912	120	2916	I think this paragraph opens a question about the utility of these measurement (biocapacity and ecological footprint) for understanding the role of NCP on sustainable development. Probably, it would be good to include a closing reference on this section 2.6, mentioning the limitations of these measurements (clearly stated on the section).	We agree that the relationship of exactly how nature/development is not clear from these figures. However, we do believe it is an important message to policy makers to state and show data that "more extraction does not mean more development. It is true also that precisely "what to do" is not clear, but it opens that discussion, which we think is important. We have added greater clarity in that regard in the final paragraph. The reviewer's comment help greatly in making this more clear.
Anna Yusa (Health Canada)	121	2935			Agree it is important to consider how activities that impact the ecosystem interact with each other. It may be important to link the language on "Trade-offs and Nature's Contribution to People (NCPs)" to the language around "co-benefits" for NCPs related to various activities, including those for health. For example, some of the different land-use regimes in Figure 3 refer to the positive "co-benefits" rather than simply "trade-offs" which denote loss. Further, this allows linking to the broader "co-benefits" language which is currently being used in the context of ecosystem adaptation efforts.	Noted and modified as suggested

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	121	2935	124	3018	The issue of the trade-offs and NCP should be considered since the perspective of the different worldviews. As I have mentioned there are at least two worldviews: i) those in which nature and humanbeings are the same system of life, interaction one with the other; and ii) those in which the humanbeings are divorced from nature. Therefore the discussion of the trade-offs is very different in each of these worldviews. I suggest to focus the discussion of the trade-ofofs on these different worldviews. There is no need to introduce the set of questions, which is very distracting of the main issue of discussion.	Noted and modified
David González	121	2956	121	2963	This is quite contrasting with IPBES approach to vaalues, which actually talks also about the tradeofss between different types of values such as economic monetary values vs. Socio-cultural or health related values for example. Or values as measures vs. values as principles or preferences. The idea of putting all values into one unit of measure (monetary currency) is actually against the idea of the plurality of values which is further discussed in the guide on values and the paper (Pascual et al., 2017) which should be used to complement this idea. Make sure to understand that this involves not only quantitative assessment of values but also qualitative assessments of values.	This point is covered but clarified.
United States Government	121	2963	121	2969	Human development/urbanization and provision of ecosystem services are not mutually exclusive, and usually long-term environmental sustainably can be coupled with economic growth; consider revising to indicate that it often times is not a zero-sum game in the long-run.	Noted and modified to clarify that cobenefits can be generated for maximum benefit.
Giselda Durigan	121	2970	122	3004	I would add: What are the trade-offs between afforestation for carbon sequestration and water/hydroelectricity supply?	Thank you for the suggestion.
Adriana C. Flores-Díaz	122	2997	122	2997	In the question of "what are the consequences for protecting or restoring landscapes...? I suggest to include "who pays?"	Noted and text modified to include this consideration

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Diego Pacheco	123	3014	123	3014	The conceptual framework introduced in figure 2.56 is not clear and is not needed. If needed needs more explanation in the main text.	This is addressed in the text, which is linked more clearly now to the figure.
Sonia Canavelli	124	3019	124	3031	I think in this section is very important and useful for politicians and researchers. I would suggest to expand it, summarizing other knowledge gaps manifested on the previous section. For example, "lack of understanding about the rol and ways in wiich power relationships among social groups and institutions shape environmental outcomes and access to benefits"; "how institutions regulate accessibility of NCP to varios social groups", etc. (Section 2.5). Additionally, I would include other knowlege gaps, such as the feasibility of applying some of these approaches (ej: tradeoff analysis) when most land is private and not public (ej: different situation in North America vs South America); the relationship among ecololgical footprint/biicapactiy; Human Well-Being; and NCP; How these concepts could be useful to guide political decision making; etc. Finally, I would stress some of the questions listed on the previous point (Section 2.7) the authors consider not completely answered on the chapter, due to knowledge gaps.	Thank you for your suggestion
United States Government	124	3019	124	3031	The knowledge gap section seems very brief relative to all other data issues identified in this chapter; consider expanding this discussion.	Thanks for this comment. We could addressed partially, since we have restrictions in space.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Marco Keijzer	124	3019	124	3031	Section 2.8 discusses difficulties in quantifying and valuing less tangible NCPs. I would like to propose research from van Beukering, Botzen and Wolfs (2012) conducted at the IVM (Institute for Environmental Studies), Vrije Universiteit, assessing non-use values based on stated preference. In the Dutch Caribbean they applied contingent valuation method and choice experiments on residents in the Netherlands and Caribbean. It explicitly states that these values depend on the emotional mindset of the respondents towards nature and has been used to determine the willingness to pay (WTP) for ecosystem services and biodiversity. Finally, this WTP can be included in economic valuation studies to give frameworks such as, TEEB, a more holistic character. Source: <a href="http://www.ivm.vu.nl.vu-nl.idm.oclc.org/en/projects/Projects/economics/Bonaire/">http://www.ivm.vu.nl.vu-nl.idm.oclc.org/en/projects/Projects/economics/Bonaire/</a>	Thank you for your suggestion
Marco Keijzer (Wolfs Company)	124	3019	124	3031	Section 2.8 discusses difficulties in quantifying and valuing less tangible NCPs. I would like to propose research from van Beukering, Botzen and Wolfs (2012) conducted at the IVM (Institute for Environmental Studies), Vrije Universiteit, assessing non-use values based on stated preference. In the Dutch Caribbean they applied contingent valuation method and choice experiments on residents in the Netherlands and Caribbean. It explicitly states that these values depend on the emotional mindset of the respondents towards nature and has been used to determine the willingness to pay (WTP) for ecosystem services and biodiversity. Finally, this WTP can be included in economic valuation studies to give frameworks such as, TEEB, a more holistic character. Source: <a href="http://www.ivm.vu.nl.vu-nl.idm.oclc.org/en/projects/Projects/economics/Bonaire/">http://www.ivm.vu.nl.vu-nl.idm.oclc.org/en/projects/Projects/economics/Bonaire/</a>	Thank you for your suggestion
Brenda McAfee	124	3026	124	3029	This section needs attention. What is well change in the ocean? Are the less tangible NCPs <i>more</i> amenable to the standization of monetary values via market mechanisms?	We do not undestand this comment

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Gloria de las Mercedes Gómez Pais	140	3540	140	3544	Insert the references in alphabetical order: Ferro A. H et al (2014). Evaluación económica ambiental de los vínculos entre los servicios ecosistémicos marino costeros del Parque Nacional Guanahacabibes y la comunidad La Bajada. In H. Ferro et al (Eds) Áreas Protegidas y comunidades humanas. Una mirada desde el Sur. Ministerio de Ciencia, Tecnología y Medio Ambiente, Cuba. Chapter 2, 65-117 pp.	Thanks for this comment.
Gloria de las Mercedes Gómez Pais	143	3657	143	3660	Insert the references in alphabetical order: Gómez P.G (2007) Análisis económico de las funciones ambientales del manglar en el ecosistema Sabana Camagüey. In P. Alcolado et al (Eds) Proyecto PNUD/GEF CUB/98/G32, CUB/99/G81. Editorial Academia. Chapter 21, 159-163 pp.	Thanks for this comment.
Gloria de las Mercedes Gómez Pais	161	4247	161	4251	Insert the references in alphabetical order: Rangel C. R et al (2013). Valoración económico-ambiental de recursos naturales seleccionados en la cuenca del río Guanabo. In Revista Iberoamericana de Economía Ecológica. Vol. 20:45-55. URL: <a href="http://www.redibec.org/IVO/IV_ASAUEE_04.pdf">http://www.redibec.org/IVO/IV_ASAUEE_04.pdf</a> .	Thanks for this comment.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
DPG/Sbio/MMA	51	1298 (Box 2.3)	51	1298 (Box 2.3)	<p>This box is a reference about the "Farmacopéia Popular do Cerrado", a 2010 publication of Articulação Pacari, a socio-environmental network formed by community groups practicing traditional medicine in the Cerrado biome. This publication is a work of a long popular research conducted by raizeiras. It is an innovative work of great relevance for research on Brazilian medicinal plants and knowledge about traditional uses by communities.</p> <p>The IPBES report should contain express and direct reference to the "Farmacopéia Popular do Cerrado", not just some cross-reference. The text is not clear about who did the studies in this research and contains only an academic reference. It is necessary to recognize the value of the work done by raizeiras in the elaboration of this "Farmacopéia Popular do Cerrado".</p> <p>In addition, Law 13123/2015 ensures that:  "Article 10. Indigenous peoples, traditional communities and traditional farmers who create, develop, retain or conserve associated traditional knowledge shall be guaranteed the rights of:  I - have recognized their contribution to the development and conservation of genetic heritage, in any form of publication, use, exploitation and dissemination;  II - have indicated the origin of access to associated traditional knowledge in all publications, uses, holdings and disclosures; "</p> <p>It is imperative to mention the process and the actors involved in the elaboration of the "Farmacopéia Popular do Cerrado". This right of holders of associated traditional knowledge is guaranteed in national legislation as well as in Articles 8j and 10c of the Convention on Biological Diversity.</p>	Dias and Laureano (2017) are the coordinators of Articulação Pacari. We acknowledge the work of Raizeiras through the publications by Dias and Laureano.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Royal Gardner	66	1691 (Box 2.5)	66	1691 (Box 2.5)	All wetlands are covered by the Ramsar Convention, which provides a framework for protection. Thus, rather than saying that 650,000 km <sup>2</sup> of wetlands are "protected by the Ramsar Convention" it is more accurate to say that 650,000 km <sup>2</sup> "have been designated as Wetlands of International Importance under the Ramsar Convention."	Noted.
David González	30	Box 2.1	30	Box 2.1	Line four - But is complicated because of the absence of adequate data. Also, this box could go beyond the economic value but is limited to presenting a set of economic figures which are actually not relevant. What is the value for indigenous peoples, what do fish represent for Latin American cultures? All this could bring in the discussion of the plurality of values.	The plurality of values is discussed in Table 2.21. Nature's contributions to people (NCP) support human well-being via multiple values and value systems.
Susan Preston		exec summary			this section is packed with clearly documented sets of conclusions about many NCPs but seems heavily weighted to the 'material contributions' with far less attention to regulating and non-material. Guessing this is partly a result of the data provided by the core indicator set for IPBES but anticipating that the assessment will be able to delve deeper into regulating and non-material.	The executive summary was completed reorganized.
Brenda McAfee	38	Fig.2.1 6	38	Fig.2. 16	It would be helpful to choose colours that can also be distinguished in black and white print	Thanks for this comment. Noted and completed.
Brenda McAfee	55	Fig.2.2 7	55	Fig 2.2.7	An interesting way to communicate the results of this synthesis, making the information rapidly understandable. Works also in B&W.	Thanks for this comment. Noted and completed.
United States Government	20	Figure 2.1			Figure 2.1 - the AAV measure seems highly influenced by commodity prices, which can fluctuate widely. So while comparing in a particular year across countries makes sense, comparing across years seems somewhat problematic; consider revising.	Figure deleted.
Daniel P Faith					see box below with references	We do not understand this comment



Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Daniel P Faith					<p>Great job on these chapters! Comments specific to particular chapters/lines follow further below, but the initial following comments I think are relevant to the SPM and both chapters 2 and 3. The references for these comments are at the bottom of this review form (but some references from the quoted text from Faith 2017 are listed only in that paper, so I have attached also that paper).The scoping for chapter 2 indicates that it will assess NCPs including the status/trends of the NCPs. The scoping for chapter 3 indicates that it will build on the chapter 2 assessment of NCPs and look at the status/trends of biodiversity and ecosystems with an eye to how that influences NCPs. These tasks normally are a close fit, but are in fact overlapping in the case of NCP18. NCP18 is mostly about the contribution of biodiversity itself in providing “maintenance of options” or “option value”. For example, NCP18 refers to “Benefits (including those of future generations) associated with the continued existence of a wide variety...” Living variety is of course another way of saying “biodiversity”. This NCP18 benefits statement echoes the oldest discussions of the value of biodiversity itself as a benefit (following e.g. Haskins 1974; reviewed in Faith 2017*). *Faith 2017 summarised: “this link between biodiversity and human well-being actually traces back to the “pre-history” of “biodiversity” (roughly, the history of the term before it was invented). Haskins (1974: 646) summarised an important discussion meeting where participants called for “an Ethic of Biotic Diversity in which such diversity is viewed as a value in itself and is tied in with the survival and fitness of the human race”. Haskins (1974: 646) warned, “Plants and animals that may now be regarded as dispensable may one day emerge as valuable resources” and that extinction “threatens to narrow down future choices for mankind”. Roush (1977: 9) similarly argued that</p>	Thanks for this comment.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Daniel P Faith					Just as it might be confusing to take studies that are about ecosystem services and refer to that as NCP, it would be confusing to take a study about biodiversity option value and refer to that as ecosystem services. Faith 2017 reviews such studies concerning biodiversity option value in contrast to ecosystem services. These references include the MA, which makes a clear distinction. Thus, in the chapters, it is useful to avoid ecosystem services as the catch-all term. See other comments for specific lines.	We have used the terms as per the instructions provided by IPBES.
Daniel P Faith					for chap 2 or 3 as discussed above; here are draft diagrams extracted from pubs in the reference list; also emailed to TSU	We were not able to incorporate new graphs.
Daniel P Faith					also I reproduce below the draft figs for the tabulation of imperilled PD for NCP18. this is at bottom of form, but might get lost when the template is processed. I am happy to serve as a contributing author on one (or more) of the chapters in order to expand on the text, and /or finalise those suggested figs. Please ask/remind the TSU Americas to send the figures that Mr. Faith sent, it was difficult to include them in the spreadsheet	We thank the reviewer for these suggestions, but it was not possible in this version to attend to a new contribution.
Diego Pacheco					I do not understand why table 2.12 is there. Examples of economic valuation of nature-related tourism sector with psychological experiences.	Now Table 2.8. we were asked explicitly by national focal points to enhance the economic values in the chapter. So this was retained.
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					General Comments. Provisioning ecosystem services or NCPs have been addressed from a very monistic perspective, either from the biophysical or monetary approach, very western perspective centered and does not include the different conceptualizations of nature. These diverse values are more adequately addressed as the chapter moves to regulating and non-tangible NCPs, and provides an interesting cross cutting discussion towards the end but it comes in too late	The new version of the chapter hopefully addresses this issue

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					The environmental paradox paper (Bioscience) is centered on one very materialistic western and instrumental perspective of well-being and under a western perspective of development and does not include different dimensions of well-being	The new version of the chapter hopefully addresses this issue
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					It is OK to be explicit that some sections of the the text addresses NCPs and good quality of life from a scientific perspective but rather it is important to explore what are the implications of not including other perspectives (e.g. ILK) of NCPs. It would be important to include also these other dimensions	The new version of the chapter hopefully addresses this issue
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					Further editing of the text is needed Some sections of the document seem to lack congruence with the IPBES conceptual framework and the Values Guide. This is reflected by a narrow perspective of well-being focused on a material perspective, an economic perspective on the valuation of ecosystem services, a western centered perspective of development that does not include IPLCs . This will also allow more integration of key concepts and a more consistent treatment of key issues as well as a reorganization of the whole chapter. It would also allow to have more consistent tone and rithm of the chapter. More consistency accross subsections in terms of key topics to be addressed within each of them. Also some parragraphs or topics need to be weaved into the narrative	The new version of the chapter hopefully addresses this issue
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					The NCP document starts from a conceptual discussion of NCPs and the different dimesions and conceptualizations and starts with regulating NCPs. We suggest using this approach to allow for a more integrated reading of the chapter	Thanks for this suggestion.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					The executive summary reads as separate items. We suggest using the cross-cutting messages developed towards the end of the document to knit a narrative that is very policy relevant and that would then be based on the evidence presented in more detail, and to provide a better structure for the whole chapter	The executive summary was completed reorganized.
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					This document is clearly the result of a huge effort and provides a very interesting perspective of the knowledge on the topic. The amount of data and detail is huge, and there is an effort to be inclusive and plural. This second order draft is clearly much stronger and wider and we would like to congratulate the authors for their huge effort	Thanks for this comment.
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					The temperate biomes of North America and the tropical biomes of South America stand out but more is needed to provide a wider representation	We will look for balance.
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					More consistency is needed in the Executive Summary on how teased apart the specific quantitative data is presented. Sometimes its summarized for the whole regions, sometimes per regions, but sometimes the more detailed data is available. Also, clarification on which section of the continent is referred to is needed.	The executive summary was completed reorganized.
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					Too many study cases are based in Canada, and a more diverse representation of the diversity across the americas is needed. While we understand the limitations in data the rich cultural diversity of the americas has been widely documented by ethnographic and ethnoecological literature. The same for the case of the diversity within each country as in Mexico the emphasis is put only in the Maya culture	We considered a balance presented of cases.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					We would like to suggest a systematic revision of how the different dimensions, regions or topics are addressed across the document to enrich the current version	Thanks for this comment.
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					Agrobiodiversity and ILK associated to diverse agricultural systems are not clearly presented in the food section nor in its impacts on regulatng services nor in the different types of agriculture and productive systems	It is presented on section 2.4
Instituto de Investigaciones en Ecosistemas, UNAM, campus Morelia					It would be very interesting to include more success stories related to NCPs	A n attempt was made for such improvement.
IPBES Knowledge and Data Task Force (KD TF)/ Task Group on Indicators (TGI)	119		119		Although the table of Ecological Footprint was not part of visualization package which TGI provided, TGI is happy to provide an updated table for the assessment that are consistent to the graph	We would be have to included if provided on time
IPBES Knowledge and Data Task Force (KD TF)/ Task Group on Indicators (TGI)	29		29		The graph of Inland Fishery Production can be replaced to the graph which TGI will provide soon	We would be have to included if provided on time
IPBES Knowledge and Data Task Force (KD TF)/ Task Group on Indicators (TGI)	60		60		The graph of Percentage of areas covered by protected areas - marine and terrestrial can be replaced to the graph which TGI provided	We would be have to included if provided on time

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
IPBES Knowledge and Data Task Force (KD TF)/ Task Group on Indicators (TGI)	37		37		The graph of Total Wood Removals can be replaced to the graph which TGI provided	We would be have to included if provided on time
IPBES Knowledge and Data Task Force (KD TF)/ Task Group on Indicators (TGI)					This review provides feedback from the IPBES Knowledge and Data Task Force (KD TF) / Task Group on Indicators (TGI) on the use of IPBES core indicators in your assessment. We see potential for inclusion of additional core indicators and for the more consistent use of the standardized visuals provided. For information on core indicators potentially relevant to a given chapter, please see <a href="http://www.ipbes.net/indicators">http://www.ipbes.net/indicators</a> (or see the tab named, "core indicators" in this spreadsheet) and check the indicator trend graphs shared by your TSU. For the trends of IPBES core indicator, standardized visualizations should be used as much as possible to ensure the consistency between and within the assessments. The KD TF/TGI aim to follow up with specific recommendations in the near future. In the meantime, do not hesitate to reach out to them through your TSU or the KD TF TSU ( <a href="mailto:ipbes.kdtsu@gmail.com">ipbes.kdtsu@gmail.com</a> ).	We would be have to included if provided on time
Lucía Pérez Volkow					Again livestock is generalize in one big whole when there are more environmentally friendly ways of production	Thanks for your comment. IPBES assessment on sustainable use is planned.
Lucía Pérez Volkow					In general my feeling is that some sections are more developed than others. I think it is better if you standariz e the information for each section, or at least give the basic point it shoudl include. For example: levels of production, environemental impact	Thanks for your comment. Environment impact is dealt partially in chapters 3 and 4.
Lucía Pérez Volkow					Again livestock is generalize in one big whole when there are more environmentally friendly ways of production	Thanks for your comment. IPBES assessment on sustainable use is planned.

Reviewer Name	From Page	From Line	Till Page	Till Line	Comment	Author Annotations
Lucía Pérez Volkow - Social ecological systems and ecosystem services Interinstitutional Discussion Seminar					In general my feeling is that some sections are more developed than others. I think it is better if you standarize the information for each section, or at least give the basic point it should include. For example: levels of production, environmental impact	Thanks for your comment. Environment impact is dealt partially in chapters 3 and 4.
Social ecological systems and ecosystem services Interinstitutional Discussion Seminar					Again livestock is generalized in one big whole when there are more environmentally friendly ways of production	Thanks for your comment. IPBES assessment on sustainable use is planned.