

REGIONAL ASSESSMENT REPORT ON BIODIVERSITY AND ECOSYSTEM SERVICES FOR EUROPE AND CENTRAL ASIA							
Comments external review first order draft - Chapter 6							
Reviewer Name	Chapter	From Page	From Line	To Page	To Line	Comment	Response
Frank Wugt Larsen (EEA input)	General	General	0			General: our 'light' review has focused on relevant information hosted by the European Environment Agency (EEA) for which we believe a consultation by authors could improve the ECA report. We have also provided some specific comments to issues we spotted (please note that this has not been done systematically given the length of the report). In general, we will also refer to the EEA/ETC BD document 'Information note to IPBES secretariat on EEA and EU information' (http://bd.eionet.europa.eu/Reports/ETCBTechnicalWorkingpapers/PDF/Information_IPBES_on_EEA_EU.pdf), which was shared with the ECA TSU in 2015. Several reports provide a good starting point to find relevant information, incl. EEA, 2015 European environment — state and outlook 2015 (SOER 2015 (http://www.eea.europa.eu/soer/)), in particular, thematic briefings (http://www.eea.europa.eu/soer-2015/europe) and SOER synthesis (http://www.eea.europa.eu/soer/soer-synthesis-report); EEA 2016. Mapping and assessing the condition of Europe's ecosystems. Progress and challenges (http://www.eea.europa.eu/publications/mapping-europes-ecosystems); EEA, 2015. State of Nature Report 2015 (http://www.eea.europa.eu/publications/state-of-nature-in-the-eu); EEA, 2015. State of Europe's Seas (http://www.eea.europa.eu/publications/state-of-europes-seas); EEA, 2016. European forest ecosystems – state and trends (http://www.eea.europa.eu/publications/european-forest-ecosystems). In general, the EEA website (http://www.eea.europa.eu) also provides access to a wealth of relevant indicators and assessments.	The ECA authors have been encouraged to use EEA reports as a resources, and we would like to thank the reviewer for providing the web links for these.
Frank Wugt Larsen (EEA input)	General	General	0			General: There seems to be quite some redundancy between the chapters. Additionally different data sources seem sometimes to be used in the redundant parts which may create more confusion than clarification leading to different partly biased messages. We assume the coherence and consistency of chapters will be dealt with in the next draft and haven't provided specific comments on this.	Agreed. We are aware of the overlap between chapters and this has been addressed in subsequent drafts
Frank Wugt Larsen (EEA input)	General	General	0			General: In general, there is a need to systematically check references in the chapters. References are cited in text but don't appear in reference lists, and references are missing in some graphs and in text etc. Specifically, EEA reports are not referenced consistently, e.g. sometime sit is EEA 2015, other times European Environment Agency 2015.	Agreed. The references were thoroughly checked in subsequent drafts and the author team has been encouraged to systematically use the Mendeley reference management software.
Thomas Brooks (IUCN)	General	0	0			Congratulations to the authors for all their hard work in producing this FOD.	Thank you
Thomas Brooks (IUCN)	General	0	0			If it would be useful to the authors for IUCN to disaggregate further the Red List data summarised for the ECA region and its component subregions by Brooks et al. (2016), please feel free to contact me accordingly. Examples of potentially useful disaggregation could include by marine/freshwater/terrestrial, by major systems (and sub-systems) aligned to the headings in Section 3.3.2, species groups aligned to the headings in Section 3.3.3, or drivers aligned to the headings in Section 4.3.	Thanks and these data have been made available to subsequent drafts of the ECA assessment
Thomas Brooks (IUCN)	General	0	0			IPBES follows the CBD definition of biodiversity, which encompasses diversity at genetic, species, and ecosystem levels. It is therefore redundant to say "biodiversity and ecosystems". Either replace with "genetic, species, and ecosystem diversity", or simply say "biodiversity". Same applies any other places this formulation is used throughout (eg Chapter 1 L146, L159, L164, L170, L788, L796; Chapter 2 L300, L1843-1844; Chapter 3 L461, L468, L472, L528, L635, L1018, L3305, L3307, L3317, L3323, L3340, L3738; Chapter 4 L265, L430, L4148; Chapter 5 L142-143, L144, L824, L846, L913, L1590, L1979, L1982, L1985).	The ECA assessment is based fundamentally on the IPBES conceptual framework. The conceptual framework refers to biodiversity and ecosystems in the 'Nature' box.
Douglas Nakashima	General	0	0			GENERAL: on incorporation of ILK as an actual source of knowledge: The way incorporation of ILK is recommended in the sections so far allows to address the question of indigenous and local people as a component of socio-ecological systems where humans and nature interact, where societies use nature, perceive it, invest it culturally etc... However, incorporation of ILK as an actual source of knowledge about biodiversity and ecosystems changes has not been fully developed in the FOD yet; although it is presented as a recommendation and announced in the 1st chapter. The involvement of indigenous and local people and ILK in scientific assessments and international organizations represents a political statement, and contributes to the recognition of indigenous people especially, as legitimate actors in decision making, in the context of natural resource management for example. However, incorporation of ILK is not only a political statement, but also represents a valuable source of knowledge. It is by taking seriously the value of this knowledge that incorporation of indigenous and local people can represent more than a superficial recognition. Published scientific literature represents a source of access to ILK. In this review, examples will be given of studies where ILK related to biodiversity and environmental change has been recorded. It can be factual qualitative observations made by local populations regarding components of the environment and the changes they observe, observations of the drivers of these changes, or narratives or stories embedded in personal history and local worldview illustrating the changes that occurred in the environment along one's lifetime or across generations. These observations can be added as a complementary source of information to scientific studies. They can corroborate scientific observations, but also complement them, contradict them, often operating at different time and space scales. It is to be noted that extraction of fragments of ILK to be incorporated to the different sections of such an assessment can be problematic, notably for the integrity of the knowledge which is outrooted from its context. (see comment line 8 of this table). SEE Nakashima & Roué 2002	Since the FOD, the author team has received the completed proceedings of the workshop with ILKP holders. Information within the proceedings has been included as much as possible within the SOD, although time constraints (the final workshop proceedings were only received 1 week before the SOD submission deadline) limited this task.
Douglas Nakashima	General	0	0			4.6.1.1. ECA in general Parrotta & Agnoletti 2007. (p1-2) "The holders and users of traditional knowledge in many parts of the world face significant challenges - continuing encroachment and/or expropriation of their lands, degradation of their forests, and the erosion of their cultures, values, and traditional lifestyles. In many developed societies, technological development, the abandonment of marginal lands, renaturalization, and inappropriate policies are rapidly erasing cultural values and contributing to the globalization of landscape, which are being simplified into areas either managed for commercial exploitation or left to natural succession." (p2) "This trend has been supported by the historical development of forestry, particularly in Europe. Since the early 19th century, the development of modern forestry promoted industrial plantations favoring species suited for timber production, as occurred in Europe with large-scale afforestation of conifers through artificial regeneration and producing even-aged forests. These ideas were spread throughout the world during the 19th century, largely through the colonial administrations of the European imperial powers. This process changed the features of many cultural forest landscapes created by traditional preindustrial societies, both in developed and developing countries. In the 1970s, forestry passed from a phase favoring almost exclusively economic aims, to one paying greater attention to the ecological roles of forests and the value of biodiversity. Unfortunately, the assessment of biodiversity has often neglected components arising from human influence, while monitoring and conservation have focused on "natural" species. The abandonment of traditional landscapes has reduced the diversity of forest management forms, creating simplified landscapes often with reduced biodiversity of habitats linked to land uses and related forest management practices."	Furthermore, the ECA assessment has established an ILP liaison group (Chaired by Zsolt Molnar) that is responsible for all aspects of ILKP within the assessment, including the SPM. We feel that this has improved the integration of ILKP within the SOD.
Germany	General		0			We believe that the regional ECA assessment generally has a comprehensive and scientifically sound structure: Status as well as trends are shown. It is however a first order draft and therefore, we hope that our comments will be useful for the further development and maturing of this regional assessment so that scientifically sound options for action can be derived. It needs to be critically highlighted in the first order draft that chapter 6 (Options for governance, institutional arrangements and private and public decision making across scales and sectors) refers to international organizations and treaties, thereby failing to discuss specific institutions and treaties, which are of relevance to Europe and Central Asia. As we are dealing with a regional assessment for Europe and Central Asia (ECA) we strongly encourage the authors of this assessment to assess regional organizations and treaties relevant to the ECA region so that useful options for actions can be derived for the potential user groups. Please also ensure that in the further development of this assessment key messages with their level of confidence/certainty are developed as outlined in the document IPBES/4/INF/9. Such key messages will be important to develop scientifically sound options for actions. We request the co-chairs of this assessment to ensure that the general comments listed here are made available to the CLAs and LAs of all 6 chapters. Reason: It is important that there is alignment in the use of terminology and structure of the document. In order to further strengthen the storyline throughout the 6 chapters we also encourage cross-referencing between the chapters so that information redundancies are avoided and the arguments are overall strengthened. We also strongly encourage the development of an appendix that lists all the acronyms and key terms (including their definitions) used in the ECA assessment and communicate these lists with the leaders of the other regional assessments to ensure that jointly, all 4 regional assessments can provide a solid basis for the global assessment (IPBES deliverable 2c) by using the same terms and definitions. We very much look forward to the second order draft of this important assessment.	Thanks you for your comments, which have been helpful for the ECA assessment. These comments have indeed been made available to all CLAs and LAs of each of the ECA assessment chapters. Ch6 deals with all relevant decisions makers including regional organisations and treaties. The standard use of terminology is being checked across chapters. The chapters will be cross-referenced and there will be a standard IPBES glossary and list of acronyms. Confidence language has been included for all key findings. However there are still confidence traditions in using confidence language in the humanities and social sciences and this is why confidence language is not used in the key messages concerning for example options for governance. We will thereby avoid being prescriptive and instead provide a portfolio of governance option for decision-makers.
Germany	General		0			Please ensure that the general comments on the ECA assessment are provided to all CLAs and LAs! Reason: It is crucial that the chapters (a) use the same terminology; (b) don't provide redundant information and (c) don't contradict each other, and (d) provide a consistent chain of arguments and discussions.	This has been done.
Germany	General		0			New knowledge und publications should be used, if available. Some cited publications e.g. about the EU CAP (one from 2003) seem to be outdated	Citations have been fully checked and the latest available (up to April 2017) used in the assessment
Germany	General		0			Data and findings of the SoW-Report (The State of the World's Biodiversity for Food and Agriculture, http://www.fao.org/nr/cgrfa/biodiversity/sowbfa/en/) from FAO and report from the project "Preparatory Action on EU genetic resources" from COM (for more info: http://www.geneticresources.eu/) could provide some valuable information for this chapter. Both reports will be published soon. Please check both reports as soon as they become available.	This source of evidence has been checked
Germany	General		0			Often, statements are linked to "Europe" but actually only refer to "Western Europe" or the European Union. Please ensure to present a well-nuanced picture of the ECA-region and state very carefully which sub-regions are concerned (see definitions in Table 1.2, p. 19).	The use of terms to describe the sub-regions has been checked across the chapters
Zsolt Molnar	General		0			The Balkan is heavily underrepresented in all chapters.	We have attempted to achieve a geographic balance right across the assessment, within the constraints of availability of evidence in some locations.
Zsolt Molnar	General		0			Many-many important publications on ILK are not at all used and cited in the assessment (see the literature lists provided by the ILK Task Force, and the Proceedings volume of the ILK Dialogue workshop)	The ECA assessment ILKP liaison group has taken on responsibility for information chapter authors of relevant ILKP literature.
Ayman Batisha	General	1	1	105	4013	The entire report should be homogeneously arranged, logically build and fully integrated with no inconsistency, disharmony or overlapping within its chapters and sections. The titles of chapters and sections are generally too long to be professional, as a quick example "4.6 Status and recent trends in indirect drivers", the phrase "Status and recent trends in indirect drivers of" could be omitted in titles 4.6.1 to 4.6.5.	Consistency across chapters has been verified. Some chapters and sections have changed their names to be more precise.

Ayman Batisha	General		1	1	105	4013	There should be examples/chapter to clarify how the biogeochemical cycle (carbon, oxygen, nitrogen, phosphorus, sulfur, calcium, rock and water etc.) through both biotic (biosphere) and abiotic (atmosphere, hydrosphere, and lithosphere) compartments of Earth can cause land degradation and restoration. Special attention should be emphasized to the human-caused cycle of atrazine, which may affect certain species. Land degradation and restoration should be assessed in the light of Global Changes; Global Warming; Global Sea Level Rise, and Global Ocean. Land degradation and restoration should be assessed into two categories which operates at different time scales: the biological – physical, (Near-term) and the geological, (Long-term). Land restoration opportunities, planning, economics, implementation constraints, and limits should be defined.	The LDR assessment is dealing with land degradation issues and environmental pollution. ECA will take up this evidence where relevant with respect to biodiversity (in Ch3)
Ayman Batisha	General		1	1	105	4013	Research related to the Science of biodiversity and ecosystem services should be emphasized on. Assessment on biodiversity and ecosystem services generally deal with multiple meanings of fuzzy concepts, so it is strongly recommended to add chapter/section to provide General Guidance to the subject of how applying fuzzy concepts in the context of biodiversity and ecosystem services using soft computing techniques. The scope of soft computing covers the areas of Fuzzy Logic, Neural Networks, Chaos Theory, Evolutionary Computing, Rough Sets, Ant Colony, Immunological Computing, Particle Swarm, Wavelet, Probabilistic Computing, Hybrid Methods and other similar techniques to address real world complexities achieving tractability, robustness and low cost solution. The chapter may be devoted to effective approaches to Data Collection; dealing with Uncertainties; Methodological and efficient technique Choice; Time Series Consistency Identification of Key Categories, and Quality Assurance/Quality Control and Verification. The application areas of soft computing include but are not limited to Detection and Attribution of biodiversity and ecosystem services: from Global to Regional and local, biodiversity and ecosystem services Projections and Predictability (Near-term and Long-term), biodiversity and ecosystem services and its relevance for future Global and Climate Change. Detection and attribution of observed and multi-sector biodiversity and ecosystem services, emergent risks, key vulnerabilities, and opportunities should be addressed. Biodiversity and ecosystem services should be assessed in the light of statistical analysis and levels of confidence.	Literature on these topics has been assessed along with other sources of evidence in terms of how these methods contribute to understanding of biodiversity and ecosystems. Chapter 5 is concerned with the use of models supporting biodiversity and ecosystem knowledge.
Ayman Batisha	General		1	1	105	4013	Atlas of Continental, Regional and local biodiversity and ecosystem services Existing, Projections and Predictability should be annexed.	Sorry we do not understand this comment
Marcus Zisenis	Chapter 6	General		0			This chapter provides an institutional overview of legal and governance/policy instruments with an impact on biodiversity values in this assessed region. However, it seems to be rather generic when it comes to concrete measures with an impact on biodiversity in this region. It seems to me to be too much to try analysing all or most of the relevant policy instruments with an impact on biodiversity values in this region which becomes additionally easily descriptive. It would be better to focus on key negative drivers on the different values of biodiversity and the necessary policy measures in this region to alter them.	The chapter has now developed significantly due to a more thorough assessment and relevant and insightful comments from external as well as internal reviewers. The drivers of change to biodiversity and ecosystem services is assessed in chapter 4. In this chapter we focus on options for governance. Although the chapter has developed significantly between the FOD and the SOD we are aware of that there still are room for improvements and gaps to be filled. This will be our focus in the next round of the process.
Sophie Condé	Chapter 6	General		0			Additional reference: ETC/BD Technical paper N°5/2014 Literature Review: The ecological effectiveness of the Natura 2000 Network. http://bd.eionet.europa.eu/Reports/ETC/BDTechnicalWorkingpapers/The_ecological_effectiveness_of_the_Natura_2000_Network	Thank you for the suggestion, it will be addressed in the final draft.
Sigrid Kusch	Chapter 6	general		0			In particular to complete the section on sustainable consumption and production, but also for other parts of the chapter, the recently (2016) released UNEP pan-European Geo-6 regional environmental assessment might contain useful information, http://uneplive.uneplive.org/theme/index/18#V1K0I2Y7Zpk (http://uneplive.uneplive.org/media/docs/assessments/GEO_6_Assessment_pan_European_region.pdf)	Thank you for the suggestion, we have taken the reference into consideration.
Tom West	Chapter 6	General		0			Given how important EU law is for this chapter, it would make sense to have an introduction to it in section 6.3 of the same format as the introduction to international law. It would then make sense to have one on national law too.	Thank you for the suggestion, a section on EU law has been added to section 6.3.
Tamar Pataridze	Chapter 6		1	0	80		One general reflection I have regarding the chapter is that it lacks examples of policy instruments and institutional arrangements (both successful and less successful) from EE countries that are not within EU. There might not be many but I believe that mentioning few more will increase the relevance of the assessment in the eyes of policy and decision-makers from those countries. On the other hand I was positively surprised on the amount of information collected and summarized about the Central Asia.	We are aware of this gap and have invited experts from the Eastern part of the region to contribute to the text. Furthermore, it is the responsibility of all the Lead Authors to review relevant literature from the entire region.
Douglas Nakashima	Chapter 6	General		0			6.6 Mainstreaming biodiversity and ecosystem services across sectors [NOTE: May be more applicable in a different section] ADD NEW section on co-management and knowledge co-production. e.g. - Molnár et al 2016 (Hungary): "Co-production of knowledge by ILK holders and scientists produces new knowledge that neither of them would otherwise have" - Varga et al 2016 (Hungary): "The gap between traditional local communities and government conservation approaches could be bridged and conservation management and decision making could become more efficient if rangers have possibility to learn, adapt and use TEK during their work. Besides TEK holder rangers could have a consultant role between local people and conservation officers and enrich the adaptive capacity of the traditional ecological knowledge." - Roturier et al 2016 (Sweden): "One option for the future is a better governance, which would increase the possibility for forest co-management. Some procedures already exist to increase dialogue between forestry and reindeer husbandry but still remain unsatisfactory from Sami herders' point of view because they do not allow alternative forms of forest management." - Lavrillier et al 2016 (Siberia): "Even if it is complicated to bridge both scientific and traditional knowledge paradigms, both types of observation and knowledge complement each other and improve the understanding of complex environmental systems."	Thank you for the useful references, they will be taken into account when developing the new section 6.4 Conservation and environment.
Douglas Nakashima	Chapter 6	General		0			6.6.5. Opportunities and challenges of biodiversity and ecosystem services for policy and decision making / bundles of ecosystem services 6.6.5.1. Raising awareness and participation Agnoletti 2006: (p21) "The conservation of traditional knowledge and their landscape can be better achieved, however, not simply placing limits on private or public activities, but by including them in an economic development process in which the advantage of preservation are superior to the benefits of degradation. This can be done with initiatives acknowledging the importance of services linked to landscape and slightly changing the traditional role of farmers often seen simply as "producers". Babal & Molnár 2014 (Romania): (p129) "In a recent paper, Fischer et al. (2012) argued that conservation policy in traditional farmlands should consider not only the "land-use link" between the people and landscape (i.e. farmers are paid to clean the pastures) but also the "ecosystem services link" too (e.g. farmers clean the pastures because they want high quality ecosystem service: they learned what is the best pasture management to have high quality pasture). Policies need to promote farmers motivation to learn and monitor the quality of the ecosystem services provided by the ecosystems, as traditional landscapes (Fischer et al., 2012)." Fernández-Giménez & Estaque 2012 (Spain): (p298) "At the regional level, herders lack a meaningful voice in government decisions about the management of their environment. Despite past collaborative planning for the PNVO, in which many stockmen participated over a period of 7 years, relatively few of their recommendations have been implemented, leaving pastoralists with an embittered attitude towards collaborative management (Carbonell nd)."	Thank you for the useful references it will be addressed in the final draft.
Germany	Chapter 6	general comment		0			To ensure regional balance and to fill the current information gaps, we would encourage more expertise from Russia and Central Asia (Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan) as well as more perspectives and expertise from Baltic region/Scandinavia and from Southeast Europe (Western Balkans) and ensure political sciences are well covered	We are aware of this gap and have invited experts from in particular the Eastern part of the region to contribute to the text. Furthermore, it is the responsibility of all the Lead Authors to review relevant literature from the entire region.
Germany	Chapter 6	general comment		0			Overall, more theoretical analyses of governance systems are presented rather than analyses of the policies implemented in the countries and regions	With the developed sector analysis the chapter now include a more thorough analysis of the options for governance in the different sectors. However, building on previous chapters we will further develop the analysis and develop a comprehensive assessment of options for governance and institutional arrangements beyond theoretical analysis
Germany	Chapter 6	general comment		0			This Chapter is currently very unbalanced in terms of country/region analyses - very few subchapters contain a thorough presentation of assessments of the Eastern European and Central Asian regions; e.g. in p.11, 1288 what about Eastern Europe/Central Asia; p. 32, l. 1019-p.35, l.1146 some small paragraphs on Central Asia, information on Eastern Europe and Central Asia still missing; p. 56, l.1994- p. 58, l. 214.	We are aware of this gap and have invited experts from in particular the Eastern part of the region to contribute to the text. Furthermore, it is the responsibility of all the responsible Lead Authors to review relevant literature from the entire region.
Germany	Chapter 6	general comment		0			This Chapter for now does not tackle the sector education (education for implementing biodiversity-thinking at kindergarten, school and university level, e.g. small garden projects; textbooks; targeted excursions; curricula...) and science (strengthening the link between science and policy, to improve the science-based decision making processes; what possibilities are available for policy stakeholders, how can scientists improve their communication of results to policy level). You may expand on this.	We added education and science as further sectors to consider, which will be addressed in the final draft.
Germany	Chapter 6	general comment		0			Please ensure that the questions asked in chapter 1 are clearly targeted in chapter 6. If gaps remain so that the authors are unable to answer certain questions please state clearly which gaps these are and provide options how to solve them	Thank you for this advice, we will ensure that the questions addressed in Ch 1 is clearly targeted throughout the chapter.
Germany	Chapter 6	general comment		0			The role of initiatives/programmes other than governmental (e.g. private sector, civil sector) are not presented	We agree that in the current version the focus is biased towards public sectors, private sectors will be more thoroughly addressed in the final draft.
Germany	Chapter 6	general comment		0			what about good examples from joint programming initiatives?	Thank you for the suggestion, it will be addressed in the final draft.
Germany	Chapter 6	general comment		0			what would be the minimum set of data required to get a reliable set of ecosystem service indicators, environmental accounting and threshold setting? Are these at all comparable to each other in the different regions? the EU macro-regional strategies (http://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/) play an important role for the coordination of activities and transborder cooperation in many European countries; at least these strategies are relevant for this assessment 1. Baltic Sea Region (EUSBSR) 2. Danube Region (EUSDR) Priority Area Bio - Preserving natural zones and biodiversity, including fisheries 3. Adriatic Ionian Region (EUSAIR) Priority Area 06 "To preserve biodiversity, landscapes and the quality of air and soils" 4. Alpine Region (EUSALP) Pillar 3: ENVIRONMENTAL QUALITY; objectives: To contribute to the goal of the EU Biodiversity Strategy to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restore them in so far as feasible, by addressing threats to marine and terrestrial biodiversity. - Topic 2 - Transnational terrestrial habitats and biodiversity Pillar 3. Ensuring sustainability in the Alps: preserving the Alpine heritage and promoting a sustainable use of natural and cultural resources.	This is a really good question. However, it is not the focus of this chapter alone, but rather the IPBES assessment as a whole. We will thus not be able to answer the question within the frame of chapter 6.
Germany	Chapter 6	general comment		0				Thank you for the useful comment, it will be considered in relation to section 6.3 on International, regional and transboundary environmental governance. Tables including the strategies will be addressed in the final draft.

Germany	Chapter 6	general comment	0				For the Western Balkans region the authors may want to look at "A Local Biodiversity Action Planning Network in the Western Balkans": objective: Integrating biodiversity and ecosystem services for beneficiary municipalities, to reflect local, national and international policy priorities and eventually bring better living conditions for the target group through income and job creation in the region. http://www.ecnc.org/projects/nature-and-society/a-local-biodiversity-action-planning-network-in-the-western-balkans/	Thank you for the useful references, they will be taken into account in relation to the new section 6.4 Conservation and environment in the final draft.
Germany	Chapter 6	general comment	0				take into account and elaborate more on CBD NBSAPs/national biodiversity strategies (f.ex Germany, France, Albania, Sweden, ...)	Thank you for the useful references, they will be taken into account in relation to the new section 6.4 Conservation and environment in the final draft.
Germany	Chapter 6	general comment	0				Most statements are not associated with quantitative likelihood statements nor qualitative confidence levels as outlined in Chapter 1, section 1.6.1.A coherent and adequate treatment of uncertainty is essential for the credibility of the assessment and, finally, the integrity of the IPBES. We strongly encourage you to look into the use of confidence terms used by the IPBES as outlined in IPBES/4/INF/9 pages 60-65.	Previous assessments (MA, UK NEA, IPCC) did not use confidence language in governance and policy-related chapters. For interdisciplinary work we need to acknowledge different traditions of disciplines; Standards coming from the natural and physical sciences may not be applied to very context-dependent governance issues; therefore, we will carefully check whether and in what cases it makes sense to apply confidence language in IPBES ch. 6 on governance and policies. This issue was intensively discussed at the joint authors meeting of all regional assessments in Bonn in August 2016, both CLAs chapters 6 and review editors were in favour of not using confidence levels for the governance chapters.
Germany	Chapter 6	general comment	0				This section provides a good overview about the interaction between law, economic and participative instruments etc. The given statements in the section are mainly abstract, but provide valuable insights. Nevertheless, if the section can be made more targeted and identify concrete, possible areas of action, this would be highly appreciated.	The chapter has been made more targeted and concrete during the review process.
Louise Willemen	Chapter 6	overall	0				Interesting chapter, mostly well written, and very comprehensive. I would strongly suggest the authors to reduce the length this chapter which will assist in better getting the messages across. In this review I have added suggestions to make the text more compact. Unfortunately, due to time restrictions, I could not go through the complete FOD text in detail. The chapter heavily dominated by EU legislation, but therefore not giving a well-balanced overview of other decision making levels and institutions. Work with boxes to give well structured examples of other (national) policy processes and refer to these the syntheses of the main sections.	Thank you for the useful suggestions. During the review we have elaborated on the text to make it more balanced in relation to the different parts of the ECA-region, and also worked more with tables, boxes etc to summarise important findings.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	0	0				The review of MEAs and international organisations is rather superficial, descriptive and biased by a relatively small number of academic papers. Many statements appear unsubstantiated or used uncritically. It does not take account of the very large literature on the assessment of effectiveness of MEAs and international organisations which these bodies themselves have produced for consideration of the funding members/govts. Sections on rights-based approaches seem to have more prominence than other approaches? The Chapter also seems detached from the other Chapters in the assessment and there may be significant duplication or contradiction in the sector specific reviews?	Section 6.3 has been restructured and rewritten to better consider the current literature on MEAs and to balance the assessment on various legal instruments.
Douglas Nakashima	Chapter 6	General	0				ADD information on impact of government policy drivers on ILK and local communities, e.g. - Ivascu and Rakosv 2016 (Romania): "CAP payments are crucial for the existence of HNV farming and European cultural landscapes, but a growing body of literature is arguing for the improvement of the eligibility criteria, since many important HNV holdings fell outside this framework and many national and EU requirements are contradicting local knowledge and land use patterns that have created HNV landscapes." - Babai 2016 (Romania): "Reconsidering the allocation of the agro-environmental subsidy and implementing a more effective supporting system would help the small-scale, thus less viable farms, which nevertheless are biodiversity hot spots... It is essential to support methods that are proven to increase biodiversity, such as the application of hayseed, grazing of hay meadows (aftermath) in autumn, parcel rotation (to ensure seed ripening)... According to farmers it would be necessary to also reconsider those rules and procedures which are often contradictory and make farming harder or even impossible (e.g. fresh milk must be cooled to 4°C in one hour, to avoid the maximum germ count 100,000/ml milk, somatic cell count 400,000/ml at 30°C – these rules are impossible to carry out in a mountainous cultural landscape, like Gyimes in Eastern Carpathians and as a result milk has become unsalable)" - Kis et al 2016 (Hungary): "Herders may provide significant assistance in tackling a number of emerging problems. Highlights included the eventual amendment of national (i.e. Hungarian) and European Union legislation to avoid adverse impacts on the present and the future of both nature conservation and herding practices and animal husbandry."	Thank you for the useful references it will be addressed in the final draft.
Douglas Nakashima	Chapter 6	General	0				ADD information on potential policy impacts re: legal recognition of sacred sites, e.g. - Sezdebek and Albek 2016 (Kyrgyzstan): "Although sacred sites informally play a prominent role in biocultural conservation in Kyrgyzstan, they are not recognized legally. Legal recognition of sacred sites (that takes into account specificity of local worldviews and that leaves enough governance space for local communities) can improve biocultural conservation beyond sacred sites."	Thank you for the useful references it will be addressed in the final draft.
Ram Pandit	Chapter 6	General comment	0				I think the work done is very good, I feel like there is over emphasis on some aspects such as section 6.4 than others. And also compared to Europe, BES in CA is not explored well. Of course availability of literature would be an issue here, but still emphasis on available peer-reviewed or grey literature from CA region would help here.	Thank you for the suggestions, the aim of the review is to better balance the sections and to take the different regions into account.
Violaine Brochier	Chapter 6	0	0	0	0	0	Europe is more described than Central Asia. Is that possible to bring more information about Central Asia ?	We are aware of this gap and have invited experts from in particular the Eastern part of the region to contribute to the text. Furthermore, it is the responsibility of all the responsible Lead Authors to review relevant literature from the entire region.
Tom West	Chapter 6	1	1	79	2868		The chapter needs a rather serious overhaul in terms of structure and content. In terms of structure, I would suggest: 6.1 Introduction - 6.2 Categorisations of Policy Instruments (current 6.6.4 goes in here) - 6.3 Introductions to International Governance and EU Governance (current 6.5 goes in here since it is international/EU governance that are designed to deal with transboundary issues) - 6.4 BES Governance in ECA (that is, ones designed to protect BES. Will include more detailed analysis of international/EU/national policy: the Bern Convention and Habitats/Birds Directives will probably take centre stage here, but discussion of PES schemes and environmental taxes would be good) - 6.5 Other Governance in ECA that affects BES (ie agriculture/forestry/energy laws. CAP/CFP/WFD/etc can be discussed here, as well as issues such as subsidies in other sectors affecting BES) - 6.6 Mainstreaming BES into Governance (what tools can do this? how can it be done? There will be win-wins (eg natural flood management), but not always) - 6.7 Conclusion. The smaller scale restructurings suggested above are also needed - in general, it would be better to introduce key concepts and ideas clearly first, and then discuss their strengths and weaknesses. In terms of content, I would suggest starting by reading Birnie, Boyle and Redgwell, International Law and the Environment (OUP 2009), and Bowman, Davies and Redgwell, Lyster's International Wildlife Law (Cambridge University Press 2010) which provide a good introduction to relevant international law.	Thank you for the useful comment. We have restructured the whole chapter, which to a large extent follow your suggestion.
Mark Sneath	Chapter 6	2	20				Access and benefit sharing (ABS) in the ECA region: Nagoya Protocol https://www.cbd.int/abs/text/default.shtml and its transposition in the EU: Regulation (EU) No 511/2014 of the European Parliament and of the Council of 16 April 2014 on compliance measures for users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization in the Union http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014R0511	Thank you for the useful references, they will address in the final draft.
Agnes Hallosserie	Chapter 6	2	43	2	47		It would seem more logical to put section 6.5 after 6.3 as both sections deal with international issues. It seems to me that Sections 6.4 and 6.6 are also standing together as both deal with mainstreaming	Thank you for the useful comment. We have restructured the whole chapter, which to a large extent follow your suggestion.
Nils Droste	Chapter 6	5	72	7	163		The executive summary is well structured and very plausible. One point, however, is particularly worth mentioning. The order of points and given and thus their relative importance is reasonable except that in my view the importance of an integrated approaches can hardly be overstressed. Although "mainstreaming biodiversity policy" is given as a first point, for me, a cross-sectoral, cross ministry, integration of biodiversity related aspects into policymaking, goes beyond just mainstreaming since it entails a strategic perspective that could allow for leveraging synergies and minimize trade-offs. The integrative approach point is however rather at the end of the executive summary and thus appears of minor relative importance (if I am not mistaken and the last points are the most important ones...?). In my opinion it might fit well as a second point before mentioning particular instruments - to stress that those are rather parts of an overall integrated approach.	Thank you for the valuable comment. The executive summary has been rearranged to take your suggestions into consideration.
Germany	Chapter 6	5	72	7			The executive summary is overall well written, but it a distinct reference to the ECA region is missing (instead it is very general/global and reads more like a summary of a chapter of the global assessment). We would welcome more specific references and findings on ECA included in the executive summary.	Based on the findings of the assessment the executive summary has been developed but will be further developed and including more references and examples from the ECA region in the final draft.
Louise Willemen	Chapter 6	5	72	7	163		The executive summary and ToC are very distinct. If these policy instruments are your key outcomes, I would expect to see this more prominently in the chapter outline (I finally found them in 6.6.4). Perhaps sit down with your co-chair to discuss the scope of this chapter. It seems too broad (also indicated by the number of content main sections: 5, whereas others have max 3).	The chapter has been made more targeted and concrete during the review process. This will also be reflected in a more concrete and developed key messages
Tom West	Chapter 6	5	73	5	84		Would be good to have a couple of examples of the new institutional arrangements as well as the new public decision-making frameworks (ie policy).	More examples will be added in the final draft.
Christoph Aicher	Chapter 6	5	73	7	163		The language should be more balanced not only referring to western science concepts like biodiversity, ecosystem services, well-being etc. but also refer to the 'green' or 'grey' concepts and notions of the IPBES-framework like mother earth. A proposal for line 73-77 on page 4 is:	Thank you for the suggestion, our ambition is to assess available literature based on the IPBES-framework, including different knowledge systems. Although there is a development in this regard between the FOD and the SOD we are aware that there are still gaps to be filled. This is one of these gaps that we will take into account in the final draft.
Germany	Chapter 6	5	73	5	84		Institutions and governance are at the center of the IPBES framework for a good reason. Institutions and governance impact nature and nature's benefit to people as well as vice versa: nature and its benefits influence governance and institutions. Improving the situation and moving governance from a rather reactive approach to a more proactive approach of sustainable environmental management calls for mainstreaming of concepts like Mother Earth, biodiversity and ecosystem services, nature's benefits to people etc. Developing policy options and appropriate institutional arrangements is key to reach sustainability.	Thank you for the suggestion, it will be considered in the final draft.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	73					
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	76				Should refer to mainstreaming 'consideration of' biodiversity etc.	Thank you for the suggestion, it will be considered in the final draft.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	76				Suggest a more general terms than 'targets' such as 'outcomes'	Thank you for the suggestion, it will be considered in the final draft.

PESC-3	Chapter 6	5	84	5	84	Add a key message on the difficulty to transfer one policy tool from one country or region to another due to different socio-economic contexts (see row 11). It could be along the lines of: "There is no one size fits all way for sustainable governance of biodiversity and ecosystem services in a region as vast and ecological, social, political and economically diverse as ECA. The identification and analysis of relationships among multiple levels of socio-ecological systems at different spatial and temporal scales is therefore a core challenge to achieve this goal. It needs to recognize the holistic nature of socio-ecological systems. Governance schemes and policies have to be designed and implemented which are integrative across different economic, policy and societal sectors and boundaries. Coordination needs to be improved among international institutions and across decision-making levels, taking due account of regional, national and sub-national requirements, scientific as well as local communities' and indigenous peoples' knowledge, as well as different socio-cultural contexts and related value systems."	Thank you for the suggestion, the key messages has been changed to take your suggestion into account with the following statement: "There is no one size fits all for sustainable governance of biodiversity and ecosystem services in a region as vast and ecological, social, politically and economically diverse as ECA. The difficulties to transfer policies across regions, nations and sectors needs to be acknowledged. Governance schemes and policies have to be designed and adapted to different economic, policy and societal sectors. Coordination needs to be improved among international institutions and across decision-making levels, taking due account of regional, national and sub-national requirements, scientific as well as local communities' and indigenous peoples' knowledge, as well as different socio-cultural contexts and related value systems (6.2, 6.3, 6.4, 6.5.3)." ☺
PESC-3	Chapter 6	5	84	5	84	Add a message on the potential of existing tools for policy integration.	This has been taken into account during the review process and can be found in section 6.6.
Nils Droste	Chapter 6	5	85	5	96	This comment relates to the legal and regulatory instruments that appear of relative importance in the executive summary but is - imo - missing in the text - or could be stressed better. I agree that legal and regulatory instruments are the backbone of conservation policy/mixes: setting boundaries to permitted behaviour creates a legally certain action-space in which autonomous individual behaviour can than be steered more liberally through incentives and nudges and without restricting freedom too much. But the ban of societally undesirable action and effects appears quite crucial in order to safe-guard certain natural resources and means of livelihood. But I could not find a subchapter about legal and regulatory instruments in chapter 6. It is not that they do not appear in the text - they appear often (see e.g. section 6.2, table 6.2, but no conclusions their either; in sectoral chapter 6.4, table 6.3, conclusions p.28, through out in the substructure of subchapters in 6.4. and in conclusions 6.4.9, under 6.6.3 "Sustainable consumption and production" in Table 6.4 and in 6.6.4, where there it is rather prominent (even in the section title) but it remains on a general level and does not yet link back properly to findings/synthesis from different sectors chapter 6.4). I would however expect that the conclusion of the executive summary is better supported by the text, e.g. a substantial synthesis regarding different regulatory experiences in sectors (could be somewhere in chapter 6.6. but with a better link to the chapters 6.4 and 6.5, e.g. 6.3.). This means the substance is somewhat there but remains hidden, i.e. there is no synthesis across the many hints within the text that really supports the exec summary conclusion. What could help to draw such overall conclusion / synthesis might be summary tables for all sectors such as Table 6.3. Also: one particular regulatory instrument that is missing somewhat is the mitigation hierarchy and no-net-loss initiative and some national experiences with different implements of it.	We agree that in its current state there are substantial gaps in the text. However this will be elaborated in the final draft to better synthesise the findings and thus better link the executive summary to the findings.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	85		96	The summary seems unbalanced between regulatory approaches, financial instruments and voluntary codes of practice in comparison to discussion in Section 6.2. Is there sufficient evidence to justify the effectiveness of EU Directives, especially in regard to ecosystem services.	Section 6.2 is the framework section guiding the analysis of the differenret levels and sectors (6.3-6.5), followed by a section (6.6) on methods for mainstreaming biodiversity and ecosystem services across sectors. The executive summary is based on the findings in these sections (6.3-6.6).
PESC-3	Chapter 6	5	87	5	87	Can you explain the concept of "balance of nature"?	The sentence has now been rephrased into: "Legal and regulatory instruments are the backbone of policy mixes necessary to promote the conservation and sustainable use of biodiversity as well as fair ecosystem governance for the long term maintenance of ecosystems, both for themselves and for human well being."
Tom West	Chapter 6	5	90	5	94	There are important differences between international and EU law. However, this paragraph implies that EU law is a part of international law, which it is not. Rather, the EU (and its member states) meet many of its international obligations through EU law.	The sentence has now been rephrased into: "In the European Union, many of the improvements in ecosystem services and biodiversity have been a result of effective regulation, driven by policy directives to be implemented by all EU member states."
Louise Willemen	Chapter 6	5	94			This list of sections is too long to be informative (here and other lines)	The list of sections has now been reduced.
Agnes Hallosserie	Chapter 6	5	97	6	129	It would be good to add an assessment of the level of enforcement and efficacy of the rights-based, economic and social policy instruments for biodiversity conservation, along the lines of what can be read p.51.90-94 regarding the effectiveness of legal instruments. Section 6.6.4 addresses most of this comment but as a reader I expected it to come earlier in the Chapter.	A new section, 6.4 Conservation and environment has been added to take this comment into consideration.
Tom West	Chapter 6	5	97	5	97	What exactly is meant by 'rights-based instruments' and 'customary norms' in the report? 'Customary law' is a technical term within international law (see Article 38(1)(b) of the ICJ Statute) that is distinguishable from international agreements. It does not appear that it is being used in this sense, in which case it is probably worth confirming that it means 'traditional codes for behaviour at a local level'. Are 'rights-based instruments' agreements in international human rights law? If so, does this include soft law declarations (such as the UDHR and the Declaration on the Rights of Indigenous Peoples) as well as binding hard law (such as the two Covenants)?	This is further elaborated on and explained in section 6.2.
Petr Petrik	Chapter 6	5	99	5	99	change peoples to people	According to our knowledge the correct term is Indigenous Peoples
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	104		106	Not clear what evidence is presented which demonstrates that right-based instruments are effective.	That is also why we are emphasising that further efforts are needed to develop these approaches in order to take e.g. Indigenous peoples rights into consideration.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	110			Not sure that economic and financial instruments will apply to governments?	Correct, we have changed the sentence.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	5	113		115	This is a very strong statement. Does the evidence justify it?	Thank you for the comment, the text has been rewritten to better take pros and cons with the instruments into consideration.
Tom West	Chapter 6	6	118	6	128	Are there certified products that directly consider biodiversity, or can it be considered an indirect effect from the label's primary focus?	Yes, products certified according to for exampel FSC directly considers biodiversity.
Agnes Hallosserie	Chapter 6	6	127	6	127	Who should be targeted for the capacity-building activities?	For example Indigenous and local peoples as described in the sections referred to in the text.
Tom West	Chapter 6	6	130	6	139	What is meant by 'sectors' here? Given that it is talking about government institutional arrangements, does it mean ministerial departments? Or is it still considering action within an environment department? Consideration of how different ministerial departments (especially health and education) can find win-wins with biodiversity (through improving access to green space, for example) is worth looking at.	The concept "sectors" is further explained in section 6.2, the framework section, where we include policy sectors such as conservation and environment, but also traditional economic sectors such as for example agriculture.
Nils Droste	Chapter 6	6	130	6	139	This comment regards the nature of the key and very important recommendation suggesting a more integrated biodiversity policy mix approach and the support of the conclusion from within chapter 6. For me, this is one of most important recommendation that can be drawn from reading the chapters and from my experience. If there are only sectoral (and potentially too weak) sectoral policies, mainstreaming is certainly important but integrating different sectoral perspectives and requirements into an overarching and strategic biodiversity policy/mix that exploits synergies and minimizes trade-offs is a relatively innovative and in my view quite promising recommendation. The recommendation (however strongly articulated) should be supported well-foundedly by the chapter - which it mostly is already. The element of such a support are already there, but the synthesis chapter in section 6.6.1 is still lacking strong linkages back to examples from sectoral, transboundary and international biodiversity / conservation policies (there is basically just one from the forreste sector line 2218 ff). Here are some references from the text that could serve to built up and strengthen chapter 6.6.1: . Figure 6.6: Ways of coordination in planning, Box 6.2: Policy support tools to integrate across sectors (could be extended beyond SEA and EIA, e.g. mitigation hierarchy, J, 6.6.4.5 Policymix, 6.6.5.3 Designing instruments and policy mixes, lines 1611 ff. . As further sources could also serve the literature on integrated coastal zone management, integrated water resource management, water-food-energy nexus, and e.g.: Lafferty, W., & Hovden, E. (2003). Environmental policy integration: towards an analytical framework. Environmental politics, 12(3), 1-22.	Thank you for these helpful suggestions. We will take these into account in the final draft.
Germany	Chapter 6	6	130	6	139	Strategy setting above the sectors' level is needed	Thank you for this comments, we start the sector analysis with reference to policy objectives and strategies.
Agnes Hallosserie	Chapter 6	6	140	6	153	A reference to SDG 16 (on transparency, inclusiveness and participation) could be added in this paragraph.	Thank you for the suggestion. We will take the suggestion into account in the final draft.
PESC-3	Chapter 6	6	140	6	140	We suggest to rephrase this line as the "is developing" seems to imply that this is a general trend but this can be observed in some specific contexts only.	The sentence has been rephrased
Christoph Aicher	Chapter 6	6	140	6	142	The governance of biodiversity and ecosystem services is developing into a shared responsibility of state, market and civil society through collaborative governance that is to be welcome as such, though effectiveness, efficiency and equity of relevant arrangements need to be carefully evaluated and monitored. Alternative: The governance of nature and nature's benefits to people is growingly integrating different stakeholders from politics, administration, economy and civil society. These collaborative governance arrangements are promising. However, their effectiveness, efficiency and equity effects need to be carefully evaluated and monitored.	Thank you for the suggestion. The sentences has been changed accordingly
Tom West	Chapter 6	6	142	6	142	Evaluated and monitored by whom? A role for government?	Not necessarily since this has developed into a shared responsibility between the state, the market and civil society.
Christoph Aicher	Chapter 6	6	153	6	153	The governance and management ...CANNOT (need to) understand ...	The sentence has been corrected
Andrew Stott, UK IPBES National Focal Point	Chapter 6	6	153		154	Odd wording 'governance needs to understand'? 'governance needs to take account' would be better.	The sentence has been corrected
Andrew Stott, UK IPBES National Focal Point	Chapter 6	6	153	7	163	rather narrowly focussed on 'conservation', governance needs to address all elements of the IPBES conceptual framework	Key messages end / The sentence has been rephrased
Louise Willemen	Chapter 6	8	166			Clear Introduction	Section 6.1 start/ Thank you for the comment.

Ram Pandit	Chapter 6	8	166	9	231	The introductory section has been developed well. I thank the authors for such a comprehensive introduction. I would think that if some elaboration is made on Key achievements of MDG and aspirations of SDG would be more informative.	Thank you for these kind words. Regarding your recommendation on MDGs and SDGs: we have already mentioned these goals in one of the introductory paragraphs. As we would like to keep the introduction as concise as possible, we would rather check, where in later sections of the chapter this would fit for the next revision stage. At the same time, we need to see what previous chapters have already written about them in order to avoid duplications.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	8	170		171	sustainable use and conservation of biodiversity - OK. But these pronouns do not apply to ecosystem services and human wellbeing.	Thank you for the comment, the sentence has been rephrased.
Germany	Chapter 6	8	175	8	179	This is not (yet?) the content of chapter 5	The sentence relating to the content of chapter 5 has been updated.
Tom West	Chapter 6	8	182	8	185	And across political borders. As such, supranational governance is also necessary.	Thank you for the comment, the sentence has been rephrased to: "In chapter 6, governance options will be assessed at various governmental levels, from the international, regional, over the national to the local level, and across political borders in order to consider transboundary policies and cooperation."
Christoph Aicher	Chapter 6	8	182	8	184	Are the underlying causes of nature degradation and destruction really addressed by focusing on primary economic sectors? What about subsistence farming, sustainable forest management, ecological fishing etc.? Are not rather specific forms of land use and water management the problem (large scale, mechanized etc.)?	Thank you for the comment, you are right. We have rephrased the sentence / paragraph and eliminated "focus on".
Rob J.J. Hendriks	Chapter 6	8	186	8	186	What is meant with 'strengthening consumer perspectives for nature-based solutions.?'	These can for example be found in relation to policy instruments such as certification schemes and eco-labeling. These aspects are further elaborated on in section 6.3-6.6. The sentence has been changed to refer to such schemes.
Rob J.J. Hendriks	Chapter 6	8	186	8	186	What is 'this' referring to?	It refers back to the solutions mentioned in the previous sentence e.g. nature based solutions. Sentences have been revised.
Germany	Chapter 6	8	186	8	186	"nature based solutions"- though this focus for the regional assessment is mentioned in chapter 1, it needs to be defined what nature based solutions are.	Thank you for the comment, the concept will be defined in the final draft. Yet, before providing definitions in our chapter, we need to carefully check, how previous ECA-chapters have referred to the concept, and whether and how it has been included in the Glossary that is being developed.
T. Hilding-Rydevik	Chapter 6	8	187	8	187	Define main concepts in ch 6 like mainstreaming and policy integration. Without a clear definition or goal related to these concepts it will be difficult for the concepts to guide action. How does one know when mainstreaming or policy integration is achieved? Can it be monitored etc. What change of practice is needed in order to promote mainstreaming and policy integration? Often environmental policies use these concepts but without answering these questions.	The concepts are defined and further elaborated on in sections 6.2 and section 6.6.
Rob J.J. Hendriks	Chapter 6	8	187	8	189	Rephrase? (there seems to be a grammatical error in this sentence).	Correct, we have changed the sentence.
Germany	Chapter 6	8	194	8	194	citing literature from 2007 is not good (very old); there was another UNECE assessment after that	Thank you for the comment; we have now added very recent references as well such as the GEO-6 Assessment for the pan-European region published in 2016.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	8	199			not sure what 'correlation between NBSAPs and poverty alleviation' means?	The whole section is referring to the previously rather weak link between biodiversity protection and human rights, which has been strengthened through the 2030 Agenda for Sustainable Development.
Tom West	Chapter 6	8	201	8	203	If 'rights-based approaches' is referring to using international human rights law to ensure that the environment is protected, then the work of John Knox as Special Rapporteur for Human Rights and the Environment needs consideration at this stage (http://srenvironment.org/). In any case, it is not clear what the report means by 'rights-based approaches'.	Thank you for the comment; we now refer to the latest Report of the Special Rapporteur just came out end of January 2017.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	8	201			not clear why the reference to rights based approaches is included here?	The whole section is referring to the previously rather weak link between biodiversity protection and human rights, which has been strengthened through the 2030 Agenda for Sustainable Development. We have slightly changed to just mention human rights, as the IPBES category of policy instruments "Rights-based approaches and customary norms will only be introduced in Section 6.2 in more detail.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	8	208	9	209	not sure what this means?	This sentence has been rephrased to make it clearer.
Germany	Chapter 6	9	212	9	212	Is the framework ECA-specific? We would appreciate to ensure sufficient coherence across the regional assessments when discussing governance and institutional aspects as well as decision-making having the future global assessment in mind	The approach was presented and discussed at the joint authors meeting with all ch. 6 CLAs of other regional assessments in Bonn in August 2016. ECA seemed to be most advanced to provide such a structured framework to implement the general scoping for ch. 6. We follow up with exchange as part of the ch. 6 liaison group across regional assessments.
Agnes Hallosserie	Chapter 6	9	223	9	223	Opportunities for different actors could be formulated in a clearer way in Section 6.4 such as "Governments could do this; businesses could do this; NGOs could do this". All subsections of 6.4 could have a summary table such as Table 6.3, which could be complemented by a column indicating which type of stakeholder is in the best position to use the various instruments listed.	The chapter has been made more targeted and concrete during the review process to reflect the content of the comment.
Germany	Chapter 6	9	224	9	225	Please be very careful when referring to ECA region as a whole and make sure that those statements are indeed valid for the whole region and not only for certain areas, such as the EU.	Thank you for this valuable reminder, we will ensure that this is taken into account in the final draft of the chapter.
Germany	Chapter 6	9	224	9	224	"In Europe and Central Asia, the European Union..." what common strategies are meant here? The EU Central Asia strategy? Please name and elaborate	This section has been updated
Agnes Hallosserie	Chapter 6	9	228	9	228	"Mainstreaming attention for biodiversity and ecosystem services" might not be ambitious enough to achieve results. Maybe "mainstreaming biodiversity and ecosystem services within and across policy sectors" would address biodiversity related issues in a more comprehensive way? Mainstreaming attention only sounds a bit weak.	6.1 end/ Thank you the sentence has been rephrased.
Tamar Pataridze	Chapter 6	9	233	14		In the light of some EE countries striving to join EU and other countries willing to have economic relationships with EU, it will be good to mention European Union Association Agreement which is the treaty between the EU members states and non-EU countries and creates the framework for cooperation between them. For the countries that are envisaging themselves as the members of EU in the future, the signing of the agreement creates the obligations and commitments to carry our reforms (including legislative, institutional etc.) in different sectors, among them agriculture, biodiversity, forests, fish. Georgia, Moldova, Albania and other EE countries already signed the Agreement and are in the process of reforms, including in agriculture, forestry and other sectors. In the next column I copy the link to the document of Association Agreement between EU and Georgia, that is one of the examples among many. https://eeas.europa.eu/georgia/pdf/eu-ge_aa-dcta_en.pdf	6.2 start Thank you for the comment. This is certainly true and will be taken into account in the final draft. We have also recruited contributing authors from Eastern Europe who may be able to provide input in the assessment of these agreements.
Germany	Chapter 6	9	233	12	334	The definitions of institutions and governance types in the context of biodiversity and ecosystems is very useful. This also holds true for the discussion of institutional failures and policy instruments. However, this seems general information which could be relevant for all regional assessments. Please ensure coherence and ensure that the ECA-specific information is clearly visible.	The coherence across Regional Assessments and the Global Assessment is a core objective of the liaison group of Ch. 6 CLAs across assessments and information has been and is exchanged between the relevant CLAs. Section 6.2 is a framework section to explain the underlying concepts, terms and approaches. Therefore ECA-specific examples are included in this section 6.2 and have been increased (see, for example, Box 6.1 on Norwegian fisheries management based on IPBES categories of policy instruments and families of policy support tools, based on IPBES deliverable 4c). Yet, the actual assessment of governance options, institutional arrangement and policies for Europe and Central Asia follows in the sections to come from 6.3 onwards.
Louise Willemsen	Chapter 6	9	233			Clear section 6.2	Thank you.
Petr Petrik	Chapter 6	9	235	9	250	To assess and monitor SUB, we need open access data and set up proper indicators. The very relevant initiative recognizing the need to develop, integrate and deploy infrastructure for monitoring and assessment of ecosystem services, open access databases, and virtual institutes for data exchange and analyses is the European Platform for Biodiversity Research Strategy (www.epbrs.org). There are many recommendations in science-policy interface made by EPBRS I wonder why in the whole FOD, same as in the ZOD, there is no mention about such initiative! The EPBRS was child of IPBES.	EPBRS has now been introduced as a science-policy platform and forum aiming to promote knowledge for sustainability, with a focus on the conservation and sustainable use of biodiversity and ecosystem services science and policy. The information has been included in section 6.2, towards the end of the third paragraph, as it did not fit in the paragraph where this comment was made.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	9	240		241	rather narrowly focused on 'tackling biodiversity issues'	The sentence has been changed to "Addressing biodiversity loss and ecosystem degradation...".
Mark Sneathlge	Chapter 6	9	243	9	243	"generates" -> "influences", "affects"?	The term "generate" comes from the original publication Diaz et al 2015, therefore we prefer to keep it.

Tom West	Chapter 6	9	246	9	249	It is quite correct to consider the various formal/informal national/international norms that influence the relationships between people and nature. However, the categories and ideas here don't seem to line up. For example, 'law' is a formal institution - but 'policies' are not an institution as such. But then the examples given in line 247 are of laws (not 'law') and policies - one could call these formal governance tools (eg) rather than institutions. The next sentence is then confusing - what does it mean for laws to be based on legal instruments? Reference to 'treaties' then skips to international law. Although it is true that national (and EU) law and policy is often based on international environmental treaties, this point is not quite adequately made. And again, how is 'customary laws' understood here - in the technical international legal sense, or in a more informal sense. Having it alongside treaties suggests the former, but the following sentence suggests the latter.	Apparently different disciplines use different definitions of formal and informal institutions. To be clearer, we changed the relevant section to: "Formal institutions include written constitutions, laws, policies, rights and regulations enforced by official authorities. Informal institutions in turn include mostly unwritten social norms and rules, customs and traditions such as those related to collective action." We deleted the unclear sentence: "These are typically based on legal instruments, treaties and customary laws." However, contrary to the reviewer, we consider both laws and policies as formal institutions.
Tom West	Chapter 6	10	252	10	255	There is an important distinction between governments and governance, but this sentence is rather hard to understand. The important point to make is that good governance means involving a range of actors (such as businesses and civil society) through discussion and collaboration.	We think governance is more than collaboration and discussion which is explained by the different governance modes. "Good" governance is also a normative concept that needs explaining what "good" means. At this stage in the text, we only want to introduce governance distinguishing it from government. Nevertheless, we changed the relevant sentence slightly, in hope for more clarity.
Tom West	Chapter 6	10	258	10	271	There seem to be three different gradients operating across the continuum provided: mandatory/voluntary; top-down/bottom-up; public/private. These are not necessarily the same, and so it is hard to work out the differences the table attempts to draw out. For example, environmental taxes (line 264) are not a result of public-private partnerships, but are a mandatory and top-down policy involving private actors. Or for example, it is not the case that shifting from national government to local government involves a shift towards societal autonomy: local government rules are still mandatory and public, and although their place on a top-down/bottom-up spectrum may move more naturally towards the latter but this is not necessarily the case. Or for example, unilateral supply chain decisions taken by large multinational corporations are private and voluntary, but not bottom-up. The section may be improved by drawing out these different dimensions over which governance can vary rather than trying them to squash them together. In any case, both 'state intervention' and 'societal autonomy' are rather loaded terms that somewhat distract from the message you are trying to get across.	Based on the original sources (esp. Lange et al. 2013), the table has been slightly rephrased to become more precise: Especially the "Public-private partnerships" have been renamed to "public-private governance" and the column updated to better capture this governance mode. Now the text with its examples (such as env. taxes) is better reflected by the table. Partnerships may actually be part both of the public-private governance and the private governance modes. We also explicitly mentioned now the decentralized governance mode in the text to avoid misunderstandings as the one highlighted in the reviewer comment. We acknowledge that the three different gradients mentioned are not the same. However, we do not want to overload the text by systematically spelling out each of the three in relation to the various governance modes.
Christoph Aicher	Chapter 6	10	270	10	270	Table 6.1: governance modes... shows inconsistencies. What about: Government policy (centralized) and Government policy (decentralized) in first row of table. The categories of the last row are also inconsistent. Are top-down or bottom up useful categories?	This table has been adapted from Lange et al (2013) and Drissen et al (2012) and considerably shortened to focus on issues important to our framework for assessing biodiversity and ecosystem governance. We went back to the original sources to be more precise in terminology, see comment above. However, the Table presents different "governance modes" based on these two major sources, therefore we do not want to get too far away from the original sources.
Tom West	Chapter 6	10	272	10	274	The EU's 'subsidiarity principle' is set out in Article 5(3) of the Treaty on European Union. It states that the EU "shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level". This may be worth mentioning when discussing at what governance level action is best taken.	The subsidiarity principle has now been included in the text.
Germany	Chapter 6	10	272	11	288	The text is very condensed and misses some basic links. Furthermore it only refers to EU and not to the rest of Europe or CA.	This text serves to explain the governance modes by way of example of the European Union. It has now been split into two paragraphs, and the second one also points to examples from Eastern Europe and Central Asia. However, the actual assessment and more details will be provided in later sections of the chapter.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	10	272	11	288	The EU recognises the principle of subsidiarity and that policy implementation should be decentralised to the level at which is most effective. There should be more discussion of the variation in national and sub-national programmes and policies that implement EU policies and directives.	The subsidiarity principle has now been included in the text. The EU is only used as an example to explain the various governance modes. Programmes at different levels will be assessed in later sections of the chapter.
Allan Watt	Chapter 6	10	275	10	276	See Chapter 3, which is more critical of impact regulation.	The relevant sentence does not mention "impact regulation", but effective regulation in general. This refers to the UK NEA. Furthermore, we could not find the term "impact regulation" in chapter 3. Therefore we kept the relevant sentence, as there seems to be a misunderstanding here on the interpretation of regulation.
Tom West	Chapter 6	10	275	10	276	Does this mean "effective EU regulation"?	This means "driven by various European Union policy directives", referring to a key finding of the UK NEA. The reference has now also been specified.
Tom West	Chapter 6	10	278	10	278	Note that the Natura 2000 network is not yet complete. Note also that the Birds and Habitats Directives allow the EU to meet its obligations under international law (in particular the Bern Convention)	The importance link to international law has been included in the text. The tense has been changed from "led" to "have led", indicating that the completion of the network still continues to the present.
Tom West	Chapter 6	10	278	11	282	The CAP may have made some contributions to improve biodiversity in the EU, but it has also had some significant negative affects. There needs to be explanation of how the CAP combines hierarchical with decentralised governance and public-private partnerships. A detailed overview of how the CAP functions is needed in the Report given how often it is referred to, although I am not sure where is the best place for it. The details of the Pillar II payments that are referred to in lines 281-82 need fleshing out as to why they are relevant here.	This paragraph introduces CAP as an example of hierarchical governance combined with decentralised governance and public-private partnerships, to explain the concepts. CAP as a negative driver has been dealt with in chapter 4. Furthermore, section 6.5.2 on the analysis of the agricultural sector deals in much more detail with the CAP.
Mark Snethlage	Chapter 6	10	278	10	278	"...the Natura 2000 network, led to an increase in the /.../ condition of protected areas." ?	We corrected the sentence and referred to the original source for this statement.
Tom West	Chapter 6	11	283	11	284	NGOs cannot themselves amend legislation, though they can be influential in its design. See Yamin, 'NGOs and International Environmental Law: A Critical Evaluation of their Roles and Responsibilities' (2001) 10 RECIEL 149, Spiro, 'NGOs and Civil Society' in The Oxford Handbook on International Environmental Law (OUP 2007).	Thank you for this clarification. The sentence was not precise. It has been amended and Yamin 2001 cited.
Tom West	Chapter 6	11	284	11	288	More explanation of the OMC is needed: what is it, how does it work, what is good about it?	Again, in this section we mention OMC as an example of modes of governance. In this section we do not aim to explain in detail and assess all these governance modes. It will be taken up later in section 6.3.
Christoph Aicher	Chapter 6	11	285	11	285	"the open method of coordination (OMC)" should be explained	we have provided more detail on this method
Allan Watt	Chapter 6	11	289	11	290	Check for consistency across Chapters.	We will certainly check for consistency across chapter, yet this key message refers in general to various institutional failures that are the indirect drivers and thus the underlying causes of biodiversity loss. Such a general message can not really contradict previous findings.
Tom West	Chapter 6	11	289	11	290	This is quite a bold claim. Doesn't seem necessary. Could be replace with "Biodiversity loss and ecosystem degradation can be exacerbated by poor institutional frameworks"	For social scientists this is not a bold statement, but rather based on common conceptual frameworks and they way social scientists do institutional analysis. Relevant IPBES documents have been cited and this paragraph builds on such institutional analysis. Nevertheless we have slightly rephrased the relevant main message to: "Biodiversity loss and ecosystem degradation are exacerbated by various institutional failures".
Mark Snethlage	Chapter 6	11	289	11	290	"The main underlying reason behind biodiversity loss and ecosystem degradation is due to various institutional failures." this seems to be a very bold statement, and it is not substantiated with evidence in the following paragraph. It ignores the role of the prevailing economic and political models (neoliberalism, capitalism, sustained growth), which are not dealt with here, and seem to me to be more of a root cause than institutional failure alone.	Governance options are to a large extent related to institutional frameworks, and formal and informal institutions. Therefore it is necessary for this chapter to focus on those and relate it to basic concepts in political sciences and economics. We do not agree that this statement ignores prevailing economic and political models. However, we are not supposed to be prescriptive in terms of economic or political models chosen in any society. It is not clear from this comment how the reviewer would define "institutional failure" for himself. It seems to be different from ours.
Germany	Chapter 6	11	289	11	297	Reference and specific details relevant to the ECA region are missing.	This section 6.2 has not the primary role to provide the assessment for ECA, rather to bring the reader on the footing how we conceptually approach our assessment. The actual assessment comes in sections 6.3 - 6.6.
Ram Pandit	Chapter 6	11	289	11	300	The description here relates to IPBES framework, how this has been or not applied in ECA context, the assessment of policy cycle would help here with examples from the region.	This section 6.2 has not the primary role to provide the assessment for ECA, rather to bring the reader on the footing how we conceptually approach our assessment. The actual assessment comes in sections 6.3 - 6.6.
Agnes Hallosserie	Chapter 6	11	293	11	293	Can you put a definition of collective action norms as a footnote?	we have included examples to explain this concept
Tom West	Chapter 6	11	297	11	298	Legal and regulatory instruments can also support sustainable use of ecosystem services (eg limitations on water extraction). Customary norms can also support nature protection and sustainable use of ecosystem services. Social and cultural instruments can also support nature protection. Economic and financial instruments can also support nature protection and living in harmony (eg through PES).	The comment is relating to the arrows in the previous FOD version of the figure. We revised it now.
Louise Willemen	Chapter 6	11	299			Figure 6.1 is just from an info document and is not perfect (strange grouping of tools, 2 arrow to social instruments, example policy goals). I would create your own Figure.	We developed the figure.

Ram Pandit	Chapter 6	11	302	12	334	I find the text here similar to the earlier text. A good description but lacks critical assessment of the situation in ECA. The assessment of existing policy instruments and their efficacy from multiple perspective is needed here. That would strengthen the analysis/assessment.	This section 6.2 has not the primary role to provide the assessment for ECA, rather to bring the reader on the footing how we conceptually approach our assessment. The actual assessment comes in sections 6.3 - 6.6.
Tom West	Chapter 6	12	313	12	315	But which comes first - the choice of policy instrument or the desired distribution of responsibility etc. Surely the latter must dictate the former.	The choice of instruments and the distribution of responsibilities are closely related to each other. Distribution of responsibilities in terms of decision competencies, financing and implementation competencies for public actors are often given. However, many policy instruments assign new roles to certain actors and in this way, change the distribution of certain responsibilities. For example, introducing env. taxes, thus enforcing the polluter-pays-principle, provides the addressees with the option to innovate and avoid paying these taxes or continue with business-as-usual and pay the tax.
Tom West	Chapter 6	12	317	12	318	As well as there being an issue over acceptance of governance frameworks, there is also an issue over effectiveness. Policy approach A may be more amenable to a larger number of stakeholders, but Policy approach B may actually be able to meet the goal much more effectively.	These type of trade-offs will be assessed later on in the chapter.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	12	317		318	Is the preference of stakeholders what matters? The assessment should look at the evidence concerning the comparative effectiveness of these different approaches in different situations and draw conclusions from that evidence.	We are here in the framework section for chapter 6, providing examples for explaining concepts chosen. We do not aim at actually assessing different approaches in this section. Having said this, in practice, stakeholder preferences do matter a lot depending on the problem to be solved and the issues at stake.
Tom West	Chapter 6	12	321	12	322	Suggested alternative categorisation: 'Law and regulation designed to protect the environment' (for both anthropocentric and ecocentric reasons) (standards, EIAs, protected areas, taxes, fines, customary norms, biodiversity conservation); 'Other law and regulation' (including human rights law, international customary law, equitable management); 'Economic and financial instruments' (subsidies, trading, voluntary PES); 'Social and cultural norms and institutions' (ecolabels, social licence, voluntary agreements, carbon offsetting, customary norms). There are of course overlaps between these - for example, both ecolabels and taxes have an economic/financial element, and some laws may be primarily enforced through social and cultural practice. However, the first two categories are mandatory, the second two are voluntary, and this provides a useful distinction.	Depending on disciplinary perspectives, and even within any one discipline, there have been multiple ways to categorise policy instruments. We use the categories developed by IPBES experts groups working for IPBES Deliverable 3d (diverse conceptualization of multiple values of nature and its benefits) and Deliverable 4c (Policy support tools and methodologies); The categorisation is subject to development, and discussed among all CLAs of the IPBES Regional Assessments and the Global Assessment, including the newly founded TSU for Policy support tools and methodologies.
Christoph Aicher	Chapter 6	12	321	74	2657	there are variations in the text with regard to: Indigenous peoples, or indigenous peoples, or Indigenous Peoples; Please harmonize	Will be harmonized, will be Indigenous Peoples
Germany	Chapter 6	12	321	12	321	Table 6.2.: is very general/global; need to have links to ECA. It would be valuable to have more detailed presentation of these instruments in the region.	We are here in the framework section for chapter 6, providing examples for explaining concepts and instrument categories chosen. We do not aim at actually assessing different approaches in this section. Concrete instruments will be discussed later.
Germany	Chapter 6	12	321	12	322	Very helpful table, but it remains unclear, how the instruments were categorized; according to which criteria? Ecolabeling can also be considered as an economic instrument	The categorisation goes back to IPBES deliverable 4c, as cited in the main text. Due to IPBES focus on ILKP, the category of "Rights-based instruments and customary norms" has been introduced. The other categories relate to the familiar classes of regulatory, economic and information-based instruments that can be found in a lot of textbooks on policy analysis. These categories are not always clear cut and different authors may assign the same instruments such as certification or eco-labeling to several categories.
Mark Snethlage	Chapter 6	12	324	12	328	For comparison: EU policy evaluation are: Efficiency, Effectiveness, Impact, Relevance and Coherence. Sustainability and Added value can also be part of it. See "Fitness Check of the Birds and Habitats Directives" http://ec.europa.eu/environment/nature/legislation/fitness_check/index_en.htm	We added "policy coherence" and "relevance", but find most of the other criteria mentioned are already part of the text. The purpose of this section is to present generic criteria for policy assessments, and not to bring concrete examples for a specific policy evaluation.
Tom West	Chapter 6	12	328	12	331	Would be good to state earlier and more explicitly here that what is being talked about is procedural and distributive equity, and how the two intertwine in a cyclical fashion. That is, improved procedural equity tends to cause improved distributive equity, which tends to cause improved procedural equity and so on.	Chapter 2 has been introducing the concepts of procedural and distributive equity in more detail.
Ram Pandit	Chapter 6	13	345	13	356	Good examples here. From assessment point of view which instrument works in what context, what are enabling factors with specific examples would enrich this discussion.	We are here in the framework section for chapter 6, providing examples for explaining concepts and instrument categories chosen. We do not aim at actually assessing different approaches in this section. Concrete instruments will be discussed later.
Tom West	Chapter 6	12	346	12	346	Non-economic incentives (ie social/cultural ones) can also do this.	It is just an example.
Agnes Hallosserie	Chapter 6	13	357	13	366	It would be useful if the chapter could present how to conduct a policy mix analysis (tools available, case study of a policy mix analysis undertaken in a country)	We have now included a box of a policy mix analysis of Norwegian fisheries management.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	13	363		364	This is an important observation but it does not appear to be backed up by any evidence. What evidence is there that such conflicting policies are ineffective or inefficient?	the evidence is included by the citation in the previous sentence. The two sentences have to be read in context.
Tom West	Chapter 6	13	364	13	366	Can we see the interaction between SDGs and Aichi as a route towards this?	This will be elaborated on in later parts of the chapter in the final draft (probably 6.3 and 6.4)
Allan Watt	Chapter 6	13	367	14	379	Supporting evidence / references needed.	The paragraph is meant to provide an explanation of Figure 6.2, and in this way, prepares the following sections of chapter 6. Therefore, we do not think that references are needed, as we explain our own framework figure. However, the first sentence of this paragraph of the FOD was formulated in a way that would have required backing from the literature. We now deleted this sentence: "Notwithstanding many private actors', businesses' and civil society organizations' intrinsic motivation to safeguard nature, public policies are core to address the mitigation of degradation trends, to halt biodiversity losses and ensure the provision of ecosystem services for human well-being and sustainable development."
Andrew Stott, UK IPBES National Focal Point	Chapter 6	13	367	14	379	No references are cited for the points made in this para. Can they be substantiated or is this just the view of the authors?	The paragraph is meant to provide an explanation of Figure 6.2, and in this way, prepares the following sections of chapter 6. Therefore, we do not think that references are needed, as we explain our own framework figure. However, the first sentence of this paragraph of the FOD was formulated in a way that would have required backing from the literature. We now deleted this sentence: "Notwithstanding many private actors', businesses' and civil society organizations' intrinsic motivation to safeguard nature, public policies are core to address the mitigation of degradation trends, to halt biodiversity losses and ensure the provision of ecosystem services for human well-being and sustainable development."
Germany	Chapter 6	14	378	14	379	The Figure tries to simplify and structure the complexity - it does not "depict the complexity"	changed accordingly
Marie Stenseke	Chapter 6	14	380			The figure is overall good, but the placement of "Transboundary" needs to be reconsidered, as it is not a level as such, and also misplaced after local. Also, the subtitle 'Systems' is problematic, especially since the figure concerns decision making. Alternative terms are 'type of area' or 'biotope'	We follow these suggestions and have changed the figure accordingly.
Christoph Aicher	Chapter 6	14	380	14	381	Figure 6.2 should be explained in the text. The comment: "depicts the complexity of this task" is not satisfying.	We will add more explanatory text for the different components of the figure.
Germany	Chapter 6	14	380	14	384	We welcome very much Figure 6.2 and the approach outlines here. However the box at the top with governance modes remains unclear- how is this linked to the other boxes? The outline of this chapter follows this approach. It would be good to explain this and link back to this figure when the information for the different "boxes" is presented. It would be good to ensure consistency across regional assessment with regard to the approach towards governance, institutions and decision-making.	The figure has been changed according to comments from reviewers to ensure consistency across regional assessments and will be further elaborated on in the final draft.
Rob J.J. Hendriks	Chapter 6	14	381	14	381	What are the relations between the elements in this figure?	Short synthesizing section has been added to explain the relations between the elements in this figure and will be further elaborated in the final draft.
Germany	Chapter 6	14	381	14	383	Figure 6.2: Do you consider education and Science as sectors could help to provide a more complete picture?	we added education and science as further sectors to consider
Louise Willemen	Chapter 6	14	382			Figure 6.2 The caption and figure do not seem to match (much more elements in the figure). The linkages among the different figure elements are currently not very clear	Short synthesizing section has been added to explain the relations between the elements in this figure.
Ram Pandit	Chapter 6	14	382	14	383	Figure 6.2. This is an interesting and useful figure. I wonder, the three E (efficiency, equity, and effectiveness) as an assessment lenses of policy instruments would need critical appraisal. Some instrument may be efficient but not equitable; others may be effective but not be efficient and so on. What is the case for particular instrument or a group of instruments in ECA?	Short synthesizing section has been added to explain the relations between the elements in this figure. Furthermore, the three E's will be further elaborated in relation to the assessment performed in the following sections 6.3 - 6.6 and in the final draft.

Petr Petrik	Chapter 6	15	383	15	384		corrected
						join the rows	6.2 end
Agnes Hallosserie	Chapter 6	14	386	14	386	This section could be made more specific to the ECA region. For example, in 6.3.1, beyond describing existing intergovernmental organisation, describe how ECA countries are involved with them: as funders or as recipients, do they contribute to the adoption and implementation of the organisation's programme of work and how.	We agree that this would be very relevant. However, it was difficult to find data to get an overview of how ECA countries are involved in IGOs and to separate that from the overall role of IGOs. So far we have focused on the more general role of IGOs in relation to the ECA region, but will continue the assessment.
Santosh Kumar Mishra	Chapter 6	14	386			First paragraph under section 6.3 International governance (Page 14, Line 386; starting with sentence: Since most environmental problems have a transboundary nature and often a global scope, they can....): Shortened words MEAs and ECA need to be expanded. It is useful for the readers of this chapter.	The sentences has now been changed in accordance with the suggestion.
Christoph Aicher	Chapter 6	14	386	14	386	International governance should be phrased international environmental governance	The title is changed to "International, regional and transboundary environmental governance". It is necessary to include international environmental governance in general since many of the more general conventions also have an impact on BES.
Germany	Chapter 6	14	386	19	591	Comment: Why does 6.3 deal with international environmental governance in general and does not focus on biodiversity / ecosystems ?	
						Please consider adding important regional instruments like the Flora-Fauna-Habitat Directive of the EU, the Birds Directive, the Bern Convention, the Alpine Convention, the Carpathian Convention, the Water Framework Directive, the OSPAR, Helcom and Barcelona Conventions about regional seas (maybe Black Sea Convention), regional Agreements under the Bonn Convention, agreements dealing with transboundary watercourses (e.g. Rhine, Elbe, Danub) and many others, which are currently missing.	The mentioned regional instruments have been included and a list of the most relevant instruments have been added to the section, for efficiency.
Petr Petrik	Chapter 6	15	388	15	389	join the rows	Corrected
Tom West	Chapter 6	14	396	14	397	The adoption of fewer MEAs is treated here as a negative - but the key problem for international environmental law (IEL) is its implementation, rather than the setting of new standards and targets. As such, focus moving from adopting new MEAs could be seen as a good thing - if it could be shown that energies have transferred to improving compliance and enforcement.	We agree and have changed the text accordingly. The implementation gap from international to domestic level need to be stressed better in text.
Germany	Chapter 6	14	396	14	397		We agree that the situation is more complex than described in the text and has further elaborated on this statement to show this complexity. Yes the coverage is quite good, but the implementation and enforcement are big problems.
						The reason for the adoption of fewer MEA in the last decade can also be that the coverage is already quite good!	
Andrew Stott, UK IPBES National Focal Point	Chapter 6	14	397				The argument for this has been developed to include also more complex environmental issues where there may be a need to coordinate across administrative boundaries.
Tom West	Chapter 6	15	398	15	398	Not sure what stagnation in law development means? All MEAs are constantly being developed and rather than created new ones the emphasis should be on achieving synergies between them.	
						That few new MEAs have been drawn up does not mean that existing ones are no longer in force. Thus to say 'in its place' is misleading as it suggests that existing MEAs have fallen away. Furthermore, wildlife conventions continue to attract new members through time, and they are often constructed so as to be frameworks that develop. Consider the creation of the 'Emerald Network' by the (1979) Bern Convention in 1998, or the adoption of the Nagoya Protocol through the CBD in 2010.	The text has now been developed to consider the evolutionary role of MEAs.
Christoph Aicher	Chapter 6	14	401	14	402	Which assessment is meant ("The findings from the assessment")? The phrase is unclear. It should be better explained why the 3 analytical categories (i.e. 1) international organizations, 2) the global Treaty system and finally 3) policy instruments at the international level) are important.	The text has now been clarified and the whole section has been rearranged to better correspond the framework presented in section 6.2.
Tom West	Chapter 6	15	402	15	403		We have inserted tables including the most important biodiversity related conventions, directives at the EU-level and transboundary conventions in force in the ECA-region. The tables are not yet complete but provide a point of departure for assessing their role and their implementation.
						It would make more sense to begin by providing an overview of the substantive provisions of MEAs in force in the ECA region. Then looking at how these are monitored and enforced (including the role of important actors).	
Mark Snethlage	Chapter 6	15	405	15	461	Still very incomplete. Do not understand the level of detail given for the Arctic region / Arctic Council in this section. Shouldn't there be a distinction between Global Intergovernmental Organisations (i.e. UN organisations such as UNEP, UNDP, UNESCO - world heritage sites ...). Regional Intergovernmental Organisations (Council of Europe - CoE, European Union - EU, Organisation for Economic Cooperation and Development - OECD, United Nations Economic Commission for Europe - UNECE, ...), International NGO's (World Wildlife Fund for Nature - WWF, International Union for the Conservation of Nature - IUCN,...)	The whole section has been rewritten to better balance the display of different organisations and their role.
Christoph Aicher	Chapter 6	15	405	16	461	6.3.1 International organizations. ?	
						Are IUCN or WWF IOs? According to OECD definition: International organisations are entities established by formal political agreements between their members that have the status of international treaties; their existence is recognised by law in their member countries; they are not treated as resident institutional units of the countries in which they are located. Maybe int. institutions would be a better word. In Ch. 6.3.1 the institutional arrangement and their objective is mixed. The selection of the institutions mentioned and described is somewhat unclear.	The whole section has now been restructured and rewritten. The different types of organization at the international level has been characterised according to common definitions.
Germany	Chapter 6	15	405			Please consider adding regional organizations	Done
Germany	Chapter 6	15	405	19	592	these subchapters look at international organizations such as UN; yet there are many bilateral organizations such as the Royal Bird Society or the Frankfurt Zoological Society, Succow Foundation and others who are very active in promoting biodiversity in the ECA region; also the IFAS (International Fund for Saving the Aral Sea) is not mentioned; and these other prominent organizations should be included	Due to lack of space all different environmental organ cannot be included. However, their important role of these organisations are acknowledged.
Germany	Chapter 6	15	405	16	461	OECD should be mentioned here: publications, activities and programme "Economics and policies for biodiversity" (http://www.oecd.org/env/resources/biodiversity.htm)	See list/table.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	15	405				
						Shouldn't this section deal with regional organisations? And in particular the EU? Nothing in here on marine treaties and organisations?	Yes, and a new section on EU has been added.
Ram Pandit	Chapter 6	14	405	15	461	The description here is a bit generic, it needs to be specific in terms of the impact of these global/regional organisation in the BES of the region. I suspect more examples from CA are needed not only here through out the chapter.	The available literature is unfortunately very generic. We have identified this as an important knowledge gap that needs to be taken into consideration.
Tom West	Chapter 6	15	406	15	421	This listing of international organisations is not helpful unless what each of the organisations do is also mentioned. The only one for which this is done is 'Environment for Europe', which I'd never heard of before. The Council of Europe, as the body responsible for the Bern Convention, may also be worth mentioning. As might the institutions established by MEAs (once reordered as suggested above) such as COPs/MOPs/Secretariats/Standing Committees and so on.	We agree but, due to limited space available, we are focusing more on representative examples of IGOs and INGOs and their role in environmental governance.
Germany	Chapter 6	15	406	16	461	This sub-Chapter could benefit substantially from including important organisations such as the Council of Europe or the UNESCO. The current focus on the Arctic Council is not explained and therefore difficult to understand. Here more balance would be appreciated. Concerning NGOs: IUCN has specific offices in various parts of the regions and therefore the region (especially in SEE, the Caucasus or CA) can be much better explained. In addition, it is not advisable to talk only about WWF (and here only on their Arctic programme) whilst many other NGOs are present and active in Europe as well. Also the European Environment Agency needs to be mentioned as a major source of environmental information and its Eionet. Both reach wider than the European Union.	We agree and have added more representative examples of IGOs and INGOs to assess their role in the environmental governance system.
Allan Watt	Chapter 6	15	408				In general we avoid acronyms as much as possible, but we follow the general use of acronyms in the assessment.
Tom West	Chapter 6	15	422	16	441	General comment: BES is a horrible acronym (British Ecological Society, Binge Eating Scale etc.) and should not be used.	We agree the text has been rearranged.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	15	423			Again, although it is clear that the Arctic Council is worth of consideration here, it is odd how much focus is given to it and how little to other organisations such as UNEP.	
						Coverage of Arctic Council seems unbalanced. Probably should be included as a treaty rather than an organisation.	We agree the text has been rearranged.
Tom West	Chapter 6	16	442	16	442	The IUCN is not really an NGO, but a "membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together." (http://www.iucn.org/secretariat/about) This is not to say that the IUCN should not be discussed - it certainly should - but it is not quite an NGO.	We agree the text has been clarified
Tom West	Chapter 6	16	442	16	461	It would make more sense to begin by stating that NGOs also play an important role in international environmental law, what that role is, and then discussing some key players. At the moment, the discussion of IUCN/WWF doesn't really engage with their role as international legal actors, but rather what they do 'on the ground'. NGOs have been key in the development of IEL. The sources cited above (Yamin/Spiro) may be of use, and it may also be worth considering the role of NGOs in the ICJ's Nuclear Weapons Opinion and Whaling in the Antarctic Case.	We agree, the text has been rearranged to highlight the role of NGOs and better distinguish between different kinds of organisations.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	15	442				
						Worth mentioning that although IUCN is an NGO, it also has Govts as members.	We agree and the has been clarified
Germany	Chapter 6	16	444	16	448		This section has been rewritten. Since the red list is treated elsewhere it is only included as an example of a policy instrument.
Agnes Hallosserie	Chapter 6	16	445	16	445	What is the reason to cite the global IUCN Red List of threatened species when there are regional and national Red Lists available (refer to title of assessment with a regional focus)	This section has been rewritten. Since the red list is treated elsewhere it is only included as an example of a policy instrument.
Agnes Hallosserie	Chapter 6	16	448	16	452	What are the IUCN figures for the ECA region?	This is displayed in other parts of the assessment.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	15	451		452	It would be interesting to have a table of the number of protected areas for each IUCN category for the ECA region.	
						Not sure what this means or why it is important?	We believe this is highly relevant since this deal explicitly with governance structures.

Agnes Hallosserie	Chapter 6	16	463	17	514	Even if most ECA countries are part of the global treaty system it might be worth highlighting the regional treaty system as well. Is there something relevant for biodiversity and ecosystem services in the EU founding treaties? Relevant regional seas conventions and others such as the Bern Convention could be mentioned here as well even if detailed later in subsections on marine systems and on environment and conservation policies. It could also be good to describe the repartition of competencies between the EU and the Member states within the global treaty system, for example looking at EU Biodiversity Strategy and Targets in light of EU commitments with the CBD, and how it works between MS and EU Targets and MS and CBD Targets. As it is, section 6.3.2 seems very global in scope and would fit better in IPBES global assessment.	We have, throughout the sections tried to make it more ECA-relevant and have included also the regional treaties and EU directives of relevance.
Christoph Aicher	Chapter 6	16	463	16	464	The treaty-MAKING-system does not match with the continuation of the phrase: OR the set of mechanisms by which countries through agreements promote sustainable development... These are different aspects. In the following paragraph there is no mention about the MAKING-system. The existing system and its weaknesses is rather tackled illustrated by some examples. Please reconsider sentence.	Sentence reconsidered
Christoph Aicher	Chapter 6	16	463	16	463	The global treaty system Is it not rather: Effectiveness and weaknesses of the global treaty system ?	Corrected
Andrew Stott, UK IPBES National Focal Point	Chapter 6	15	463			Suggest that the section on treaties global and regional treaties come before organisations, as treaties between govts have preminence. The Arctic Council is a treaty not an organisation.	We agree that treaties have preminence, however it is the actors that set up, design and monitor these treaties. That is why we describe the actors first and then the treaties.
Tom West	Chapter 6	16	464	17	514	Overall, this overview of IEL would be improved by first providing information about the general structures and features of IEL and then critiquing it and suggesting improvements.	This is changed via restructuring and adding text on general key features.
Tom West	Chapter 6	16	465	16	465	It is wrong to equate IEL with the set of mechanisms by which countries promote sustainable development. Its scope is much broader (including, for example, nuclear energy, hazardous waste, wildlife, the atmosphere, dispute settlement...) See Birnie, Boyle and Redgwell, International Law and the Environment (OUP 2009), The Oxford Handbook of IEL (OUP 2009).	We agree. Text is modified.
Tom West	Chapter 6	16	465	16	466	It doesn't make sense to begin by saying that IEL is 'vitiated with problems' if we don't even know what IEL is yet. It would be better to first introduce the basic concepts and frameworks, (in terms of overall treaty objectives, state duties, monitoring and enforcement, institutional arrangements, COPs/MOPs, technical bodies, financial/technological assistance and so on) then discuss the problems with it.	This is changed via restructuring and adding text on general key features.
Tom West	Chapter 6	16	470	16	471	This is the first time I have heard that the CBD is a failure. Yes, the 2010 targets were missed, but this does not mean the entire project is a failure. For comparison, consider that people still commit murder despite their being a law against it; this doesn't mean that laws against murder have failed. The objectives of the CBD are the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of its benefits. These are highly ambitious objectives, and to state that the CBD is a failure unless these are met in their entirety is rather extreme. For a more realistic appraisal, see Bowman, Davies and Redgwell, Lyster's International Wildlife Law (Cambridge University Press 2010) esp2626-29.	The whole section has been rewritten to in accordance with the literature better acknowledge the strengths and weaknesses of the CBD.
Germany	Chapter 6	16	470	16	471	The given statement "...the Convention on biological diversity, which failed to achieve its stated purpose." refers to the goal to significantly reduce the current rate of biodiversity loss until 2010. In that year, the CBD adopted its Strategic plan for the years 2011-2020 with its Aichi Targets. Although the midterm review published in GBO-4 revealed a rather slow progress in achieving these targets, there is a heterogeneous picture with progress in at least some of them. So a more differentiated statement, including the mentioning of the Strategic Plan and its Aichi Targets would be highly appreciated. In addition, the way the statement is phrased, leads to the (mis)interpretation, that the convention itself seems inappropriately designed to achieve its stated purpose. The statement should therefore be rephrased in a way that reflects the insight that the CBD is a very good piece of international law and contracting parties are responsible for the implementation of the CBD decisions. It should be briefly explained by what means it was judged that the CBD has failed to achieve its stated purpose. There is no complete black and white. There are failures, but there are also successes! This is a very strong statement and only validated with two quite old references. It would be very important to avoid such bold statement and provide a more nuanced picture of the role of the CBD for biodiversity and ecosystem services. In this context, please also consider the relationship between IPBES and CBD.	The whole section has been rewritten to in accordance with the literature better acknowledge the strengths and weaknesses of the CBD.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	16	470			Such statements of failure would need to be backed up by significantly more evidence than a couple of papers, and would need to explain in what ways they have failed.	The whole section has been rewritten to in accordance with the literature better acknowledge the strengths and weaknesses of the CBD.
Germany	Chapter 6	16	472	16	482	Please add to the given text the following points: Although there are several biodiversity-related conventions, there is cooperation among them on various levels and to different degrees, ranging from MOUs to joint work programmes (e.g. for the CBD and the Ramsar convention). So, each convention has its specific goals and related tools and ways of operating. In working together the strengths and expertise of each convention can be drawn on without compromising the others. This is a clear advantage of having more than one treaty in place. Existing disadvantages (like the burden to report to many conventions) is seen and addressed by an ongoing process to harmonise the reporting systems. On the issue of biodiversity related conventions see: https://www.cbd.int/br	We agree, good comment. We have inserted this in the text.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	16	472			The reason why multiple treaties leads to 'failure' is not explained.	The whole section has been rewritten to in accordance with the literature better acknowledge the strengths and weaknesses of the treaties.
Tom West	Chapter 6	16	473	16	479	Needs an overview of these key MEAs and how they function by species, by region, or globally. Koester refers to 5 treaties - why the switch to seven? Perhaps more importantly, given the geographical scope of this Report, the Bern Convention on the Conservation of European Wildlife and Natural Habitats (ETS 104) must be discussed in some detail. It can be considered a mechanism for the regional implementation of the Convention on Biological Diversity.	This is now covered in a table , in particular the covered in the ECA-region which is quite impressive compared to other regions.
Tom West	Chapter 6	17	486	17	487	196 parties to an international convention is incredibly rare (there are only 193 states in the UN). Yes, the lack of US involvement is an issue, but this is a relatively frequent one in international law. For example, the US is not a party to the International Covenant on Economic, Social and Cultural Rights nor the Convention on the Rights of the Child nor the International Criminal Court Statute. What exactly about the 'status' of the CBD is being questioned? It is clearly still binding on its parties. Yes, it would be better if MEAs were universally adopted, but to use the CBD as an example of problems of low participation is extremely odd: the CBD "now enjoys virtually universal participation with an impressive 193 Parties. The United States (a signatory since 1993) remains the only major state not a party to the Convention (The list of non-participants is now very short indeed: the United States, Andorra and the Holy See)" (Lyster p593 and fn28). Andorra has since ratified in 2015. In any case, the United States of America is not in the ECA region.	The whole section has been rewritten to in accordance with the literature better acknowledge the strengths and weaknesses of the treaties.
Germany	Chapter 6	17	486	17	487	The sentence is slightly incorrect: The US signed the CBD in 1993 but never ratified it. Also, the way the sentence is phrased right now "...since key countries (e.g. the US) have not signed the convention..." one would assume that there are several key countries not part of the convention, but the US are the only key country not being Party to the CBD. Angelo et al. 2012 have questioned the status of the convention. But what does it mean? Please also remove the term "key" here as its meaning and definition can be questioned in this context	Agreed. It is changed.
Louise Willemen	Chapter 6	17	486	17	493	This could be the paragraph to specify to role of IPBES in the international decision making context	We are not sure that this is the place to describe the role of this process. This needs to be further coordinated within the whole assessment in the final draft.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	16	491			There are many reasons why progress has been insufficient and these have been thoroughly reviewed in GBO4 and in subsequent reviews by CBD SBSTTA. All this evidence should be reviewed at cited, not just academic papers.	Thank you, the reference with its content has now been included in the report.
Tom West	Chapter 6	17	494	17	496	The breadth of the treaty obligations stems from the need for subsidiarity and to ensure broad state participation. The treaty text must be vague - the details are to be worked out through Aichi Targets and national legislation.	We agree and this has been considered in text.
Christoph Aicher	Chapter 6	17	494	17	514	Two paragraphs have to be reconsidered. What is the issue? Is it the problem of integrating science and non-science knowledge in international negotiations or treaties? Or is the complexity of the issue (biodiversity, socio-ecological systems etc.) a problem for administrative processes? In the two paras this is mixed and confusing. Some problems are too specific (i.e. the problems with progress reports).	We agree that this needed clarification. The whole section has been rearranged and rewritten.
Germany	Chapter 6	17	495	17	495	The statement " overarching objectives often are too broad and difficult to explicitly operationalize and thus to implement." is definitively true for the 2010-target, but learning from this experience, the new Strategic Plan with its Aichi Targets sets a clearly structured set of goals, targets and indicators and the Secretariat of the CBD provides plenty of supporting materials to help implementation. Thus, a more differentiated analysis of progress in achieving the goals is possible. Please also reflect on the GBOs.	We agree that there has been improvements with regard to the formulation of objectives. This is however findings in the literature which can be referred to many international treaties. The text however needed clarifications. We have rearranged the whole section and also referred to the GBOs.
Tom West	Chapter 6	17	496	17	498	Strengthening reporting regarding NBSAPs and the Aichi Targets would be good for discussion here.	Yes, we agree. This has been included in 6.3 and also in 6.4
Agnes Hallosserie	Chapter 6	17	498	17	504	It could be reminded here that IPBES aspires to be to biodiversity-related conventions, including CBD, what IPCC is to UNFCCC. It would be worth describing interactions between IPBES, SBSTTA and the CBD COP, for example taking the example of IPBES pollination assessment which led to a series of recommendations from SBSTTA to COP 13. See: https://www.cbd.int/doc/recommendations/sbstta-20/sbstta-20-rec-09-en.pdf	We have not understood our task as describing the role of IPBES. It is probably too early to draw any major conclusion from the process. However, there is a lot of research going on about the process which will provide important input to further development.
Germany	Chapter 6	17	498	17	504	It seems that in the given paragraph Scientific bodies of conventions (like the SBSTTA of the CBD) are mixed up with independent scientific panels (like the IPCC). The scientific body of the UNFCCC is SBSTA, the independent scientific panel is IPCC. Respectively, the scientific body of the CBD is SBSTTA, whereas the independent scientific panel is IPBES (which is not mentioned in the text). Like the work of SBSTA is comparable to the work of SBSTTA, the work of IPCC is somewhat comparable to IPBES. And indeed, the role of SBSTTA is to give scientific advice to the COP.	The whole section has been rewritten to clarify the role of different international bodies.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	16	499			This is a misunderstanding. Many papers for SBSTTA are prepared by groups of scientific experts and are peer reviewed (eg on geoengineering, synthetic biology, ocean acidification etc). SBSTTA is a science-policy interface it is not primarily a scientific body. In any case, in recognition of these characteristics of SBSTTA, Govts worked together to establish IPBES.	The whole section has been rewritten to clarify the role of different international bodies.
Germany	Chapter 6	17	501			There are no Parties to SBSTTA (maybe Parties to the CBD which send delegations to SBSTTA)	Correct, text has been rewritten.
Louise Willemen	Chapter 6	15	502			Replace Holland with "the Netherlands"	Done
Andrew Stott, UK IPBES National Focal Point	Chapter 6	16	503			The reference to Koetz, 2008 is quite dated - anything more recent than this?	Reference has been updated

Tom West	Chapter 6	17	505	17	506	As an example of considering indigenous peoples and the process of international law formation, the Universal Declaration of the Rights of Mother Earth may be worth consideration. This is not international law in any sense at all, but in terms of the processes it may be of interest. The UN 'Harmony with Nature' initiative (http://harmonywithnature.org/) may also be of relevance, as may the concept of 'biocultural rights' (see Kabir Sanjay Bavikatte and Tom Bennett, 'Community stewardship: the foundation of biocultural rights' (2015) 6 Journal of Human Rights and the Environment 7).	We agree, have further elaborated the text on ILKP, however this needs further assessment which we will do in the next stage.
Louise Willemsen	Chapter 6	17	505			Explain briefly what is meant with "indigenous peoples" (for sure also mentioned in an earlier chapter)	This is defined in the introduction of the report.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	16	505			The CBD's Article 8j addresses interests of local and indigenous peoples, and has a specific working group.	Yes, this is now included in text.
Germany	Chapter 6	17	511	17	514	Please rephrase the final sentence taking into account the comments given above. (line 498 ff.)	This conclusion is supported by research, so we will not change it.
Germany	Chapter 6	17	511	17	514	Given the very strong statement above considering CBD as a failure, this list of measure to improve the treaty system seems to be rather superficial	The whole section has been rewritten to in accordance with the literature better acknowledge the strengths and weaknesses of the CBD.
Santosh Kumar Mishra	Chapter 6	17	516			Before start of information given under section 6.3.3 Policy instruments and capacity building at the international level (Page 17, Line 516; starting with sentence: The third element of international governance concerns the use of various policy instrument but also.....), add following information: Ecosystems provide numerous benefits -ecosystem services- which are underpinned by biodiversity. Climate change has increased vulnerability and reduced resilience of ecosystems globally with potentially far reaching impacts on human well-being. There is therefore a need to foster a greater understanding of the links between biodiversity conservation, ecosystem services and climate change to enhance leadership at a local and global scale (http://www.birdlife.org/biodiversity-and-climate-change/capacity-building , accessed on June 18, 2016).	Thank you for the suggestion, we have rearranged the whole section to better reflect the underpinnings of your suggestion.
Christoph Aicher	Chapter 6	17	516	19	575	Capacity building is mentioned in the heading (6.3.3) but then does not play a major role except in the last para and in line 557. In line 557 capacity is framed as lacking in developing countries with regard to additional (i.e. non-regulatory instruments). In the last paragraph, however, the capacity building problem (financial resources etc.) are discussed and the paragraph ends with the statement, that capacity building for implementing international LAW is missing (574-575). This seems contradicting.	The whole section has been rearranged and focus more on the role of international law as such.
Tom West	Chapter 6	17	519	17	522	But the MEAs do not cease to apply. It is possible to argue that the MEAs always had such a broad array of actors built into them in the first place. Furthermore, most MEAs have regular meetings built in to them, meaning that new rules of procedure and reports are being regularly produced.	Correct, and we have rephrased the text.
Tom West	Chapter 6	17	521	17	521	Rights-based instruments at the international level are law.	We have rearranged the whole section to clarify the role of hard and soft law.
Tom West	Chapter 6	18	526	18	530	For the relationship between human rights and the environment, see (eg): Dinah Shelton (ed), Human Rights And The Environment (Edward Elgar 2011); Alan Boyle and Michael Anderson, Human Rights Approaches To Environmental Protection (Clarendon Press 1996); David Boyd, The Environmental Rights Revolution (UBC Press 2012); Donald Arton & Dinah Shelton, Environmental Protection and Human Rights (Cambridge University Press 2011); Dinah Shelton, "Developing substantive environmental rights" (2010) 1 Journal of Human Rights and the Environment 89; Dinah Shelton, "Human Rights, Environmental Rights, and the Right to Environment", (1991) 28 Stanford Journal of International Law 103; Alan Boyle, "Human Rights and the Environment: Where Next?" (2012) 23 EJI 613; and the work of the UN: UNHRC, "Analytical study on the relationship between human rights and the environment" A/HRC/19/34 (16 December 2011); UNHRC, "Preliminary report" A/HRC/22/43 (24 December 2012); UNHRC, "Mapping report" A/HRC/25/53 (30 December 2013); UNHRC, "Human rights and the environment" A/HRC/25/L.31 (24 March 2014); UNHRC, "Human rights and the environment" A/HRC/RES/25/21 (15 April 2014); UNHRC, "Compilation of good practices" A/HRC/28/61 (3 February 2015); UNHRC, "Human rights and the environment" A/HRC/28/L.19 (24 March 2015).	Thank you for the references. Some of them have been included in the text. We will however need to elaborate further on this section in the next version.
Christoph Aicher	Chapter 6	18	526	18	526	Start new paragraph after: 2006).	Corrected
Christoph Aicher	Chapter 6	18	528	18	534	Delete, since this information is not important:	
						"This rights-based approach is however not at all new. The recognition of the link between human rights and environmental protection was highlighted already in the 1972 Stockholm Declaration. In the recently adopted Sustainable Development Goals (SDGs), the link between human rights, human well-being and the protection of the environment are key. Building on the Agenda 21, many international conventions and MEAs also explicitly recognize rights to participation in environmental decision making as more or less a moral." Ⓒ	We do not agree, it is an important information about the development of the relationship between these two aspects over time.
Tom West	Chapter 6	18	533	18	536	The Aarhus Convention is key here and needs fuller analysis. Rights to participation may well be based on a "moral imperative" (line 533-4), but the whole point here is that they are now legal requirements (many laws can be seen as being based on a moral imperative). The obligation to conduct EIAs may also be worth discussing. See in particular the Espoo Convention and the ICJ's judgement in the Pulp Mills case that "it may now be a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource." (para 204).	We agree that it would be good to analyse all the conventions. However the literature on the impact of the Aarhus convention is limited. We will have to develop the analysis further in the final draft.
Tom West	Chapter 6	18	533	18	533	What about the substantive environmental obligations arising from IHRL? There is a considerable body of case law from the European Court of Human Rights on the 'greening' of the Convention. The focus has tended to be on pollution and procedural issues. It would be very interesting to analyse this in terms of ecosystem services. For an overview of the ECHR and the environment, see the following three links: http://www.coe.int/t/dghl/standardsetting/hrpolicy/Publications/Manual_Env_2012_nocover_Eng.pdf http://www.echr.coe.int/Documents/FS_Environment_ENG.pdf http://srenvironment.org/regional-decisions/european-court/	Yes agree, text on substantive rights has been included.
Tom West	Chapter 6	18	539	18	539	Again, what about the good impacts of improved public participation. Some of these are listed in lines 545-48: would be good to have them earlier.	We have rearranged the whole section.
Tom West	Chapter 6	18	542	18	542	What is the principle of equality?	The whole section has been rearranged why this is not relevant anymore
Tom West	Chapter 6	18	553	18	555	Reference needed and/or discussion of the assumption.	Reference added.
Tom West	Chapter 6	18	558	18	564	Some examples of market mechanism would be of interest. REDD+? The Peatland Code?	We have developed this section with the main focus on the certification schemes. We will have to elaborate further on the different mechanisms with a focus on the ECA region.
Tom West	Chapter 6	18	568	18	568	The GEF is a key instance of how financial and technological assistance can be mobilised. Potentially a key institution worthy of greater discussion.	GEF is now included in the text.
Christoph Aicher	Chapter 6	19	577	19	591	The conclusion does not really reflect the results of the above discussed aspect. Why should the international community be equipped ENVIRONMENTALLY? Is the task to deal with nature and the benefits of nature not something which has to be dealt with on multi-levels? The solutions mentioned (584-586) are problematic. The ecosystem / mother earth approach is an approach reflecting the complexity, focusing on explicit objectives runs the risk of simplifying the problem, IPBES wants to avoid with its framework. Maybe it is rather important to reflect about the evaluation imperative and the result fixation of political discourses. Why should the organization of scientific panels have any advantage (585-586). Is not the IPBES approach to integrate various knowledge production systems? Should the aim not be rather be something like providing useful knowledge to decision making by integrating different knowledge system and reflecting how to respect various validation systems of the different knowledge production systems (see i.e.: Turnhout, E., et al. (2012). "Conservation policy: Listen to the voices of experience." Nature 488(7412): 454-455.) Have NGO tried to fill an AUTHORITATIVE gap? The categorization of the effects of NGO proposals (complementary, substitution, counter acting) is not further explained or developed and as such is not helpful neither to understand the difficulties of international environmental governance nor the provision of useful solutions for environmental problems.	We have restructured and rewritten section the whole section and tried to clarify the roles of different actors.
Germany	Chapter 6	19	577	19	591	This summary needs to be improved. The role of an authoritative body comes here as a surprise and it is not further specified what kind of (UN?) body this should be? In this context you may want to have a look at UNEP UNEA2 Resolution 2/7 "Enhancing the work of the United Nations Environment Programme in facilitating cooperation, collaboration and synergies among biodiversity-related conventions"	We have restructured and rewritten section and conclusions
Germany	Chapter 6	19	577	19	591	Please rephrase the final conclusions taking into account the comments given above. (line 498 ff.)	We have restructured and rewritten section and conclusions
Germany	Chapter 6	19	577	19	592	The conclusions are too weak and quite general. Options for international systems are missing and should be added	We have restructured and rewritten section and conclusions
Germany	Chapter 6	19	577	19	592	The conclusions could be extended with a focus on international governance. Western/Central is mostly linked through EU membership while Eastern Europe and Central Asia have regional cooperations. How to link to those governance systems may constitute a major challenge.	We have restructured and rewritten section and conclusions
Tom West	Chapter 6	19	579	19	581	Exactly - what would it be like if we did not have these imperfect MEAs and institutions?	We have restructured and rewritten section and conclusions
Rob J.J. Hendriks	Chapter 6	19	581	19	581	'environmentally equipped' -> 'What's that?'	Corrected
Tom West	Chapter 6	19	585	19	585		
						Why do the Aichi Targets not count as explicit objectives? As to financial incentives, see (eg) Articles 20-21 of the CBD. As to scientific panels, see (eg) Article 25 CBD and IPBES(!)	We have restructured and rewritten section and conclusions by focusing more on the overarching role of hard vs soft law as international policy instrument with an impact in the ECA region.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	19	587		591	Not sure this conclusion is justified by the evidence presented, nor is it very coherent. Not clear how this relates to specific issues identified in previous Chps relating to Europe and Central Asia.	We have restructured and rewritten section and conclusions
Tom West	Chapter 6	19	593	46	1615	The structure taken in the Agriculture section - ie to consider the impact of policy relevant to the sector under discussion on various ES - is much better and it would be better if all the sections in 6.4 followed it. A better structure would be (a) summary of key governance structures (b) key impacts of the sector on BES (c) how governance has affected the impacts on BES (d) weaknesses and areas for improvement for current governance structures.	6.4 general/Intro A structure has been defined for the analysis of sectors as follows: What are the policy objectives for the sector analysed; what kind of governance mode and policy instruments or combination of policy instruments are used to govern the policy sector; What are the key constraints or opportunities with these policies, governance modes and instruments. Ⓒ

Sylvain Boucherand	Chapter 6	19	593	46	1631	Some sectors that do not feel concerned by biodiversity or who are unaware of their impacts should be mentioned even succinctly. Indeed, their indirect impacts might be as important as the direct impacts on some other sectors mentioned in the text such as energy and mining, forestry... It is the case, for the following sectors: banking, media, insurance, electronics. In order to make all kind of sectors feel concerned, some sectors should be added as the retail, food, chemical, cosmetic and health, the sector of leisure and tourism, restoration ... Moreover, it would be wise to see the sectors dependency approach and not only impact approach	We are still looking for expertise in the missing sectors
PESC-3	Chapter 6	19	593	46	1615	Because of the limited space available in the chapter, deal with examples of policy tools by sectors (6.4) in a summary table. Identify policy instruments by type (regulatory, economic, rights-based, social and cultural) by the sectors listed in the scoping document for the ECA assessment. Currently, section 6.4 presents the impact of the sectoral activities on nature, but not much on the effect of sectoral policies on nature. This could be deleted as we think it belongs to Chapter 4 and 5 and leave more space for the analysis of tools for policy integration (see row 8)	A defined structure for carrying out sector analysis has been agreed in Zadar and a tale to summarise results per sector analysed has been proposed to authors (see tab 6.3 in the agricultural section)
PESC-3	Chapter 6	19	593	46	1615	Exemplify integrative policy approaches by strategies, initiatives etc. from countries all over the ECA region. Balance between the EU region and the Eastern European and Central Asian region.	Experts from Eastern European and Central Asian region are now working for the agriculture sector analysis and will provide us with input for the final draft.
Louise Willemen	Chapter 6	19	593	46	1616	Section 6.4 is too long and lacks a digestible message. The four re-occurring questions per sector are clear and give a nice structure. However due to the length of certain sub-sections one loses sight of this structure. Consider working with Tables and only keeping the summary in the main text. Section 6.4 is also very strongly dominated by EU legislation. Given multi-level scope noteworthy national (CA and European) sector policies should be mentioned as examples too (and EU is not a IPBES signatory, the countries are). My comments to this section are only general, I didn't read in detail.	A table (see tab 6.3 in the agricultural section) has been proposed to authors to summarise results from sector analysis. Examples from national cases will be included in boxes
Louise Willemen	Chapter 6	19	593	46	1616	This is now only on public sector policies. Consider including options for business/ private sector (in line with your Chapter title). Check work by WRI, (http://www.wri.org/publication/corporate-ecosystem-services-review). WBCSD http://www.wbcd.org/Pages/EDocument/EDocumentDetails.aspx?ID=14923&NoSearchContextKey=true , LPFN (http://ecoagriculture.org/wp-content/uploads/2015/10/African-Business-Engagement-Needs-and-Opportunities-Assessment-Web.pdf). Also for section 6.4.3.	Options for Private/business are now considered in the agriculture sector analysis (e.g. enrolment in agri-environmental schemes, rural tourism business, food quality certification schemes (PDO, PGI, TSG), short food supply chains, ILKPs), in the Forestry sector analysis (e.g.voluntary contracts or public-private partnerships with private forest owners to protect biodiversity, certification schemes (FSC, PEFC), forest co-management) and fishery (e.g. responsible fishery behaviour, participation in designing coastal and marine management initiatives that promote environmental sustainability, education and training programmes)
Ram Pandit	Chapter 6	19	593	46	1615	I think the text in this section is rich, but I wonder there is a scope to have such a detailed description in the assessment report. I certainly think that authors need to think how to present this section, one option is to develop tables for key aspects of the review and leave out the fine details, perhaps whether the detailed in this section is in line with the works happening in other regions. That might provide some ideas on how to tackle the issue.	A defined structure for carrying out sector analysis has been agreed in Zadar and a tale to summarise results per sector analysed has been proposed to authors
Roger Keller	Chapter 6	19	595	20	617	It should be mentioned here, that i.e. Cultural Ecosystem Services are often not explicitly dealt with in biodiversity policies, but rather in other policies like "landscape" (see also European Landscape Convention). Policy areas mentioned in Chapter 6 focus primarily on the other ES categories (provisioning and regulating). This should be made clear in this introduction.	Cultural services are dealt with sectors such as agriculture, see tab 6.3 at the end of section 6.5.2 agriculture in western and central Europe
Sigrid Kusch	Chapter 6	19	596	19	601	It is stated that historically, governance in the ECA region has shown more failures than success in managing biodiversity and ecosystem services. Is this really correct in this form and widely accepted? Is it not rather that historically, biodiversity and ecosystem services were not in key focus in the ECA region? The statement should at least be explained by some more information or illustrated by examples.	The fact of historically not including BES in key focus means that governance failed to set appropriate policy objectives and strategies.
Tom West	Chapter 6	19	599	19	600	The cited source states that "there are severe implementation gaps in many global environmental policies relating to the PB issues, where problematic trends are not being halted or reversed despite international consensus about the urgency of the problems." This is not the same as the claim in the report.	The text has been changed as follows: ". In general, in the last 50-60 years, these governance systems have shown more failures than successes in halting biodiversity loss, habitat destruction and exploitation, reducing pollution and climate change (Millennium Ecosystem Assessment, 2005; EEA, 2015b, Steffen et al., 2015).
Andrew Stott, UK IPBES National Focal Point	Chapter 6	19	599			A sweeping statement for which only one reference is given.	The text has been changed and more references added (See answer to comment above).
Allan Watt	Chapter 6	19	600			Reference cited does not consider governance systems.	The text has been changed and more references added (See answer to comment above).
Germany	Chapter 6	19	601	19	602	This would be really helpful. Please highlight those 'lessons learned'	Lessons learned will be highlighted at the end of each sector analysed in the relative sub-sections in the final draft.
Tom West	Chapter 6	20	602	20	602	The Common Agricultural Policy	The CAP is analysed in detailed in the western agriculture section
Rob J.J. Hendriks	Chapter 6	19	605	19	606	'spatial planning' -> is this a sector? (or rather a policy instrument?) see also para 6.4.6.	Spatial planning it is more a policy instrument than a sector and it has been moved to section 6.6 on Mainstreaming biodiversity and ecosystem services into sectors.
Germany	Chapter 6	19	606	19	606	Please ensure link to the discussion on direct and indirect drivers when talking about pressures	Contacts with Chapter 4 experts are established
Agnes Hallosserie	Chapter 6	19	609	19	609	Could the standardized spreadsheet be available as a decision support tool on Bes-net: http://www.besnet.world/knowledge-policy-support so that governments can undertake their own analysis?	This could be feasible but we need to discuss this possibility with TSU
Germany	Chapter 6	20	615	20	615	This would be highly useful. Please ensure that these three criteria are comprehensively assessed in the following sections	6.4 general/intro: Thank you for the comment, the concepts has been further developd in section 6.2 and are used throughout the chapter. However to ensure consistency the use of the concepts will be further elaborated on in the final draft.
Agnes Hallosserie	Chapter 6	20	619	20	630	It could also be useful to have a few boxes and case studies on different applications of EU directives at the national level since EU member states can in some instances implement EU-wide policies in quite specific a manner. It would be interesting to compare 2 countries' experience on a similar EU policy (for example, a CAP measure), to highlight the importance of designing appropriate measures in the national context.	Agriculture start Box 6.5.2 - Shortcomings in the implementation of Natura 2000 payments by EU Members Countries has been included in the SOD, in section 6.5.2.3 Constraints and opportunities, under economic and financial instruments.
Douglas Nakashima	Chapter 6	20	619			6.4.2. Agriculture in Western and Central Europe - Iniesta-Arandia et al. 2014 (Spain): (p9) "Currently, there has been a debate on environmental and agricultural policies (i.e., EU Biodiversity Strategy and Common Agricultural Policy), which has discussed how traditional management practices and their embedded knowledge system should be preserved while at the same time ensuring they are financially attractive. Similar to Fischer et al. (2012), we consider that the real challenge of environmental policies is recognizing the interlinking processes between nature and people. Thus, it is necessary that protected areas (1) recognize the real value of LEK as one of the key factors for coupling nature and society, (2) strengthen local organizations where experiential knowledge should be exchanged among community members, such as irrigation communities, and (3) foster new initiatives co-created by protected area managers and local people to empower local communities in actions addressed to protect biodiversity and cultural diversity. Therefore, the role of protected areas should focus not only on protecting biodiversity but also on preserving LEK through the promotion of those institutions and cultural factors that favor biodiversity conservation while empowering local communities. Steps in this direction have been taken in the Nacimiento watershed as the Sierra Nevada National Park has promoted actions for restoring old high-mountain acequias and compiling the experiential knowledge related to water management (Espín et al. 2010). In addition, in the Sierra Nevada National Park, there are local water organizations that work to conserve LEK and traditional management practices, although they are composed of an aging community without generational renewal." - Pautasso et al. 2012. Seed exchange networks for agrobiodiversity conservation. A review. - Agnoletti 2006. Traditional knowledge and the European Common Agricultural Policy (PAC): the case of the Italian National Rural Development Plan 2007-2013. - Deschamps & Demeulenaere 2015. The agricultural observatory of biodiversity. Towards a re-anchoring of practices into their environment. [In French - L'observatoire agricole de la biodiversité. Vers un ré-ancrage des pratiques dans leur milieu.]	Some of the suggested references ILKP and others have been included in the text of the SOD see section 6.5.2.2 Governance modes and policy instruments under Social and cultural instruments and in section 6.5.2.3 Constraints and opportunities under economic and financial instruments and social and cultural instruments.
Germany	Chapter 6	20	619	20	629	the non EU Member countries and the neighbourhood countries are unfortunately left out here, since the chapter deals with the (EU) CAP policy. It is stated that important national specificities will be highlighted in boxes which do not (yet?) appear in the following text. This has to be added in order to give a complete picture of the situation	Boxes for pointing out the case of Turkey and Switzerland are included in the SOD
Louise Willemen	Chapter 6	20	619	20	900	This is one of the too long sub-sections (and will still be expanded with CA and ILK.) I would suggest to remove the text on individual ES and work just with a table.	The text on individual ES has been removed and included in a table
Tom West	Chapter 6	20	624	20	625	What about Norway/Iceland/Switzerland. Will need updating in the light of the UK's situation. Turkey have been trying to join the EU since the 1980's, and there is no indication this will happen any time soon. However, agree that focussing on the CAP is reasonable.	See comment above. UK at the moment of writing is still a EU member States.
Tom West	Chapter 6	20	632	21	670	It would make sense to begin the section with a brief history of the CAP, and then a detailed overview of the current arrangements, broken down into Pillars I and II, and emphasising the environmental measures contained within (such as 'greening', Ecological Focus Areas, and provisions for organic farming). Next could be discussion of how the CAP has in practice negatively affected BES in ECA.	This is the approach adopted in the text.
Mark Sneathlge	Chapter 6	20	632	21	670	Perhaps include some evidence from new research commissioned by the EEB that paints a very bleak picture of the application of greening measures following the latest CAP reform http://www.eeb.org/index.cfm/news-events/news/new-research-shows-cap-greening-will-fall-to-make-positive-impact-on-europe-s-farms/	Some other references have been used to assess the envisaged impact of greening. However the possible inclusion also of other reference such as the one suggested may be taken into consideration
Tom West	Chapter 6	21	671	21	675	Given the centrality of subsidies to the CAP, it is possible to argue that the whole thing is essentially an economic instrument. Yet economic instruments are not mentioned here.	The text has been re-organised and now the analysis of economic instruments is made explicit in sub-sections 6.5.2.2 Governance modes and policy instruments and 6.5.2.3 Constraints and opportunities.
Zsolt Molnar	Chapter 6	20	671	21	680	These two subchapters will need ILK expertise.	References to ILKP have been included in the text of the SOD see section 6.5.2.2 Governance modes and policy instruments under Social and cultural instruments, and in section 6.5.2.3 Constraints and opportunities under economic and financial instruments and social and cultural instruments.

Agnes Hallosserie	Chapter 6	22	691	22	693	Are there studies or experts suggesting solutions to the problems mentioned here? For example, what about the efficiency of short circuits (directly from producers to consumers)?	Some references to the short supply chains have been added as follows: "Markets opportunities for small-medium farms located in HNVF can be further enhanced by promoting short food supply chains such as farm direct selling of local products to visitors, farmers' markets and e-commerce (Kneafsey et al., 2013; Simoncini, 2015, EIP-AGRI, 2015) and networking of farmers."
Allan Watt	Chapter 6	22	691	22	693	Supporting evidence / reference needed.	The sentence has been deleted from the text
Rob J.J. Hendriks	Chapter 6	22	694	22	697	Difficult to understand this long sentence.	The sentence has been shortened as follows: "For what regards funding the provision of public goods also by Pillar 1, the definition of CC and greening requirements without considering local ecological and agronomic local specificities, and therefore different local opportunity costs, may result in an inefficient (Matthews, 2013; Tangermann, 2011) and not equitable policy."
Germany	Chapter 6	22	699	22	700	More information on this controversial discussion and the role of biodiv within the greening component of the CAP would be highly useful	More information has been added in section 6.5.2.3 Constraints and opportunities in sub-section on regulatory instruments as follows: "CC and greening criteria may have "mixed effects" (trade-offs and synergies) on BES. Results depend on baseline, land-use alternatives, farming systems and site specific ecological characteristics (Hauck et al., 2014). Art.43 of Reg.1307/2013 on rules for direct payments envisages the possibility for member States to select greening equivalent practices tailored to their national situation and which "yield an equivalent or higher level of benefit for the climate and the environment" compared to the greening criteria. However, this seems more an opportunity to facilitate the implementation of greening by farmers than actually increasing environmental outcomes (Hart, 2015)." and also in sub-section of economic and financial instruments: "For what regards funding the provision of public goods also by Pillar 1, the rationale underlying the design of CC and greening is that of having the greatest number of EU farmers to respect environmental requirements so contributing to achieve ecological benefits and biodiversity conservation in agro-ecosystems. However, the definition of CC and greening requirements without considering appropriately local ecological and agronomic local specificities, and therefore also different local opportunity costs, may result in a not effective, inefficient and not equitable policy (Matthews, 2013; Tangermann, 2011). This raises questions on the effectiveness of spending around €12.5 billion/year for greening, compared to the €14 billion/year for RD (Pillar 2), of which only 16 % allocated to agr-environment-climate measures (Hart, 2015). Direct payments could be defined more transparently in terms of the income supporting objective and the ecological objective (Alan Matthews, 2013)."
Tom West	Chapter 6	22	710	22	718	This digression into the WFD and Nitrates Directive seems a little odd given that the section was stated to be about the CAP. Undeniably, the WFD is worth consideration, but it feels like a diversion at the moment.	The text has been restructured and the WFD and the Nitrates Directive are taken into consideration as an example of how to link the territorial dimension to the implementation of regulatory instruments in the section 6.5.2.3 Constraints and opportunities, sub-section legal and regulatory instruments as follows: "On the integration of the territorial dimension in regulatory instruments it could be of help to look at the EU WFD and Nitrate Directives. The EU WFD (2000/60/EC), has been developed with an innovative management approach based on Good Ecological Status baselines for water quality (i.e. biological, chemical and hydrological state), river basins management plans covering the period 2009-2015 (a second set expected for 2016-2021) (EEA, 2015b), and also pricing policies which aim to reflect the true opportunity cost of water use through the Full Cost Recovery of water services (Stoate et al., 2009). According to EEA (2015) also Norway and Iceland are following the implementation of the WFD, while in Switzerland and Turkey there are similar policies for water protection and management.
Tom West	Chapter 6	22	710	22	728	There is a risk of confusing 2 EEAs here: The European Economic Area and the European Environment Agency	As soon as a decision will be made about the EEA acronym by the editor, this will be left or changed
Tom West	Chapter 6	22	722	22	728	But how is this tied to the CAP?	The data on nitrogen and phosphorus surpluses are now included in the table 6.3 in reference to water quality. These data refer to agricultural soil (see also foot note), so it is possible to see this information also in relation to the implementation of CAP policy instruments and other directives addressing the problem of reducing nitrogen and phosphorus.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	22	722			Avoid statements such as 'a matter of fact' - when there must be an element of uncertainty.	The statement "as a matter of Fact" has been eliminated
Frederic Lemaître	Chapter 6	23	734	23	737	It could be mentioned here that although they cover less than 0.5% of the agricultural area in Europe, the presence of green linear elements increased the visitation probability by 5–20% while being the sole providers of pollinators in 12% of the croplands, as demonstrated in Schulp, C.J.E, S. Lautenbach, P.H. Verburg (2014): Quantifying and mapping ecosystem services: Demand and supply of pollination in the European Union, Ecological Indicators; 36:131–141. This paper also provides policy guidance on where to improve ecosystem services supply in face of demand and where pollinator-dependent crops could be expanded given the supply of pollination services.	The citation from this paper has been included in the table 6.3 at the end of the section on Agriculture in western and central Europe
Allan Watt	Chapter 6	23	734	23	747	A very limited perspective on pollination, High Nature Value farmland and organic agriculture. Pollination is crucial to all forms of agriculture (although not all crops), and both High Nature Value farmland and organic agriculture are significant in other respects. Reference to the IPBES assessment on this subject is recommended.	The text has been restructured and the data are now included in tab.6.3 only to show some evidences of the state of favourable habitats for pollinators such as HNVF and linear elements. A reference to the IPBES assessment has been also included in the table as follows: "According to the IUCN Red List assessments "in Europe, 9% of bees and butterfly species are threatened and populations are declining for 37% of bees and 31% of butterflies (excluding data deficient species, which includes 57% of bees)". (IPBES, 2016c)"
Tom West	Chapter 6	23	734	23	734	High Nature Value' has a formal definition under the CAP.	The definition of High Nature Value Farmland has been inserted in the text in a note at the bottom of the page on section 6.5.2.2 Governance modes and policy instruments
Tom West	Chapter 6	23	734	24	759	Needs to include the 'bad news' about agriculture and pollinators too. This can probably draw from the IPBES Pollinators Report.	The "bad news" have been included in tab 6.3 for pollination service under the column state and trends as follows: "According to the IUCN Red List assessments "in Europe, 9% of bees and butterfly species are threatened and populations are declining for: 37% of bees and 31% of butterflies (excluding data deficient species, which includes 57% of bees)". (IPBES, 2016c). The presence of hedgerows and semi-natural elements in cropland is fundamental for enhancing pollination. According to Schulp et al. (2014) green linear elements, covering only 0.5% of agricultural area, increase the probability of visitation of crops by pollinators by 15/20%. Only around 15-25% of total Utilised Agricultural Area (UAA) in EU is high nature value farmland (Keenleyside et al., 2014). Despite organic agriculture land increased in the EU-27, from 5.7 million in 2002 to 9.6 million ha in 2011, the total area represents only 5.4% of (UAA) in Europe. (European Commission, 2013b)"
Andrew Stott, UK IPBES National Focal Point	Chapter 6	23	737			Remaining' from what? What is the baseline, how was it established.	The text has been revised and included in the table at the end of the Agriculture section as follows: "Until the first decades of last century all agricultural systems in Europe were HNVF (Keenleyside et al., 2014). HNVF land cover estimates vary extremely from country to country ranging from around 15% of agricultural land in Germany and Netherlands to around 46% in Switzerland and Turkey and up to around 80% in Albania and around 90% in Croatia (EEA, 2012) . At EU level the HNVF total extent is estimated to be around between 15-25% (European Commission, 2014b) and 30% of agricultural land (EEA, 2012; Keenleyside et al., 2014)."

Agnes Hallosserie	Chapter 6	24	743	24	759	It would be useful to refer to the measures identified in Table 6.4.1 and Table 6.4.2.1 (Chapter 6) of the IPBES pollination assessment and look at the governance mode for their implementation.	A reference to the the tables of chapter 6 of the IPBES pollination assessment has been included in tab.6.3 for pollination in coloumn on opportunities
Allan Watt	Chapter 6	24	760	26	805	The inclusion of species (and not just habitats) here contrasts with Chapter 2 where "Habitat maintenance" is considered. Obviously there needs to be consistency across all Chapters and I recommend habitat maintenance (although the relevance text in Chapter 2 takes a rather narrow view of habitat maintenance). The information presented here on species relates to biodiversity, not a regulating service.	The text has been restructured in SOD by following policy instruments (see section 6.5.2.2 Governance modes and policy instruments). There is no more reference to species and habitats or regulating services as a sub-section.
Andrew Stott, UK IPBES National Focal Point	Chapter 6	24	761			maintenance of species shows no signs of recovery' doesn't make sense and it is defined how this assessed, or what sources of evidence.	This statement has been eliminated from the SOD
Tom West	Chapter 6	24	765	24	767	It is incorrect to suggest that Natura 2000 is under CAP. They are separate EU policies. Natura 2000 probably needs introducing and discussing at an early stage in this chapter.	The text has been corrected to make clear that Natura 2000 is not under the CAP. Natura 2000 is introduced in sub-chapter 6.4 Environment and Conservation Policies in ECA Countries
Andrew Stott, UK IPBES National Focal Point	Chapter 6	24	768			Not sure what this statement means, and it is also rather out of date.	This statement has been eliminated from the SOD
Tom West	Chapter 6	25	773	25	773	How do you mean that the CAP is 'in charge' of funding for Natura 2000? Natura 2000 sites do received some funding via the CAP, but Natura 2000 is not a subdomain of the CAP. In any case, the Natura 2000 network is no doubt drastically underfunded, even though it receives some funding via the CAP. Consider also the EU LIFE funding body and other institutions (http://ec.europa.eu/environment/nature/natura2000/financing/docs/Natura2000financingHandbook_part%201.pdf)	The text has been revised and included in box 6.5.2 in section 6.5.2.3 Constraints and opportunities, under economic and financial instruments as follows: "Unfortunately, in the 2007-2013 period in EU-27, Natura 2000 payments and Natura 2000 payments linked to Directive 2000/60/EC (WFD) have resulted respectively in 0.1% and 0.5% of the EAFRD expenditures for Axis 2 on the environment (European Commission, 2013d) and consequently in under funding of Natura 2000 areas (Hansjürgens et al., 2011; Hochkirch et al., 2013)"
Rob J.J. Hendriks	Chapter 6	25	774	25	774	AEMs?	AEMs stands for Agri-Environmental Measures
Rob J.J. Hendriks	Chapter 6	25	774	25	777	'unfortunately, in the ... on environment' -> rephrase in less technical terms?	The text has been revised as follows: "Unfortunately, in the 2007-2013 period in EU-27, Natura 2000 payments and Natura 2000 payments linked to Directive 2000/60/EC (WFD) have resulted respectively in 0.1% and 0.5% of the EAFRD expenditures for Axis 2 on the environment (European Commission, 2013d) and consequently in under funding of Natura 2000 areas (Hansjürgens et al., 2011; Hochkirch et al., 2013)"
Tom West	Chapter 6	25	775	25	775	What are measures 213 and 224?	Measures 213 and 224 are Natura 2000 payments under the CAP. However the text has now been revised (see annotation above)
Tom West	Chapter 6	25	778	25	781	A valid point, but what does it have to do with CAP? This is not just covering agricultural land.	The point has been eliminated in the SOD
Andrew Stott, UK IPBES National Focal Point	Chapter 6	25	785			Not clear how this figure relates to the text. I would have thought that these trends would have been presented in other Chapters of the assessment?	The figure has been eliminated from the SOD
Roger Keller	Chapter 6	26	808	26	808	Definition of "rural tourism"? From the description in this chapter I think that rural tourism doesn't include tourism in remote areas? Is "rural tourism" defined the same by different countries?	Despite the term is widely used in literature a universally recognised definition of rural tourism is not available. However rural tourism refers to tourism in rural areas and as such in Europe it includes also tourism in remote areas.
Rob J.J. Hendriks	Chapter 6	26	820	26	820	What is meant with 'endogenous resources'?	The term endogenous resources is referring to local resources and was introduced in the CAP terminology since 1996 by the Cork conference on rural development that, according to the outcome of that conference, should be Endogenous, Integrated and Sustainable
Allan Watt	Chapter 6	26	821	26	823	Supporting evidence / reference needed.	Two references have been included (see section 6.5.2.3 Constraints and opportunities sub-section economic and financial instruments): 1) Brelik, A., and Kulyk, P. (2014). The evaluation of the attractiveness of the tourist commune as conditioning of the development of agricultural tourism farms. Management. 2014. Vol.18, No 1. ISSN 1429-9321. doi:10.2478/manment-2014-0037. 2) Papageorgiou, I., and Gultton, M., (2009). Improving the attractiveness of rural areas through common strategies. Experiences in European mountains. Euromontana. Study carried out in the framework of a call for project proposals from the French Ministry for Agriculture and Fisheries.
Zsolt Molnar	Chapter 6	26	824	26	824	This subchapter will need ILK expertise.	The text of the SOD has been restructured; now references to ILK are added in section 6.5.2.3 Constraints and opportunities under economic and financial instruments and social and cultural instruments.
Louise Willemen	Chapter 6	26	826	26	827	Rephrase, unclear sentence	The sentence has been eliminated
Douglas Nakashima	Chapter 6	26	828			Bérard & Marchenay 2006: (p.109) "Today, geographical indications (Gis) have an international reputation (Sylvander 2005). Beyond the legal protection of the geographical name, which represents their founding principle, they can contribute to maintaining biodiversity in general and genetic resources in particular. These are good fields of study for understanding how the combination of natural factors and human factors can influence biological and cultural diversity." (p.111-112) "The AOC Domfront perry obtained in December 2002 is exemplary in terms of the conditions of production. On the one hand, the main variety is the plant de blanc, well-known locally, accompanied by complementary local varieties. On the other hand, this is the first AOC that strictly defines how the plant resources, here pear trees, must be managed and the related agroecosystem, the orchard. Plant density (less than 150 trees per hectare), standard growth trained on high stem, association with a pasture, are criteria that correspond to local customs. This consideration of local norms and plant resources introduces a landscape dimension in the cider economy and falls within the perspective of conserving cultural biodiversity. In addition, as the traditional meadow orchard is a refuge for a certain number of animals, in particular insects, mammals, and birds, it contributes to saving many species because of the resulting biodiversity (Bérard et al. 2006)." see paper for more examples...	The reference to the paper of Bérard & Marchenay 2006 has been included in the text as follows: "By promoting and protecting agricultural products and foodstuffs, these three schemes also contribute to maintenance of cultural heritage related to local gastronomic specialities and associated traditional agricultural landscapes and agrobiodiversity (local animal breeds and plant varieties) (Bérard & Marchenay 2006). "
Agnes Hallosserie	Chapter 6	27	839	27	840	The heritage section could also include safeguarding traditional agricultural breeds and genes (fauna and flora).	This has been included in the text see annotation above
Allan Watt	Chapter 6	27	840			A consideration of the cultural importance of High Nature Value farming should be included. A brief survey of such schemes (Ireland and Scotland) suggests that they are relevant to cultural heritage.	High Nature Value Farming is now included in the section on social and cultural instruments in the text.
Sigrid Kusch	Chapter 6	27	841	28	845	Table 6.3 is an excellent element. It could be extended. As one example, food is listed, but not biomass for other applications (e.g. energy crops)	Biomass is now included in table 6.3.
Louise Willemen	Chapter 6	27	841			Table 6.3 I like the idea behind the Table but I have difficulties with the interpretation. What does the " Outcome" column represent? A historical trend analysis, a BAU prediction, the impact of the mentioned policy instruments?	"Outcome" coloumn in table 6.3 has been substituted by "State and trend of BES delivering"
Agnes Hallosserie	Chapter 6	27	843	28	844	This is a really interesting table that would be useful for each sector assessed in 6.4, not only the agricultural sector. As this is still work in progress, I expect there will be more instruments other than regulatory in the future. Otherwise it would seem that only central governments with regulatory powers are able to take action.	More policy instruments have been included and highlighted in table 6.3
Agnes Hallosserie	Chapter 6	27	843	27	843	The opportunities identified for pollination are innovative and clear. It tackles contradictions within and across sectors. This could be used as an example for the other features of biodiversity and ES presented in the table, and the other tables to be developed for other sectors.	For Agriculture Tab. 6.3 has been re-drafted. The option to develop similar tables also for other sectors was put forward and left open for authors to decide upon its use.
Agnes Hallosserie	Chapter 6	27	843	27	843	The main policy objectives for recreation could be part of a strategy for rural development, as an alternative income for farmers.	I agree with that. In section 6.5.2.2 Governance modes and policy instruments, under economic and financial instruments, it is highlighted as follows: "Rural tourism is a private sector activity driven by market demand, often resulting in small/medium farms diversification."
Louise Willemen	Chapter 6	28	847	29	900	Looking forward to see a short crisp summary like in the other sector section here	The section on 6.5.2.3 Constraints and opportunities has been re-drafted in the SOD and a summary is presented in tab. 6.3
Agnes Hallosserie	Chapter 6	28	867	29	881	You could also find examples of economic instruments in the work of Mouysset, Doyen & al. Suggested publications: 1) Mouysset L., Doyen L., Perea J.C., Jiguet F., 2014. Benefits and costs of biodiversity in agricultural public policies, European Review of Agricultural Economics. doi:10.1093/erae/bu005 2) Mouysset L., Doyen, L. and Jiguet, F. (2013). How does economic risk aversion affect biodiversity?. Ecological Applications, 23: 96-109. doi:10.1890/11-1887.1 3) MOUYSSET, L., DOYEN, L. and JIGUET, F. (2014). From Population Viability Analysis to Covariability of Farmland Biodiversity and Agriculture. Conservation Biology, 28: 187-201. doi: 10.1111/cobi.12184	The section on 6.5.2.3 Constraints and opportunities has been re-drafted in the SOD with examples of economic instruments.
Allan Watt	Chapter 6	28	868	29	889	A more thorough assessment of AEMs is needed (but avoid the acronym). Work by Kleijn, Pywell and others should be consulted.	A thorough assessment is now given in section 6.5.2.3 Constraints and opportunities under Economic and financial instruments sub-section
Germany	Chapter 6	28	871	28	874	There are no adequate indicators for measuring the effects of agri-environmental measures on biodiversity in agriculture and forestry. Therefore it is not appropriate to state that CAP has failed, justified by not-desired effects or not visible extend of effects. There are dark green AEMs working and there are some effects from light green AEMs also, that contribute to improve biodiversity.	The sentence has been rephrased in section 6.5.2.3 Constraints and opportunities, under economic and financial instruments by adding: "... there is also evidence that effectiveness of action-oriented measures is relatively low compared to that of results oriented measures (Burton & Schwarz, 2013, Hodge et al., 2015, Stoaite et al. 2009, Berendse et al., 2004)"

Mark Snethlage	Chapter 6	28	873	28	874	There is mounting evidence and examples of well functioning results-based agri environmental implementation. Examples include Burren Life http://burrenprogramme.com/the-programme/our-approach/ ; Russi, D., Margue, H., Oppermann, R., Keenleyside, C., 2016. Result-based agri-environment measures: Market-based instruments, incentives or rewards? The case of Baden-Württemberg. Land Use Policy 54, 69–77. doi:10.1016/j.landusepol.2016.01.012 http://www.sciencedirect.com/science/article/pii/S0264837716000132 ; Results Based Agri Environmental Measures EU Blog http://blogs.ec.europa.eu/rbaps/ ; http://ec.europa.eu/environment/nature/rbaps/index_en.htm etc. Some key conditions increase their success, such as involving the farmers in the monitoring process (and thereby reducing the costs of external monitoring).	In the SOD section 6.5.2.3 Constraints and opportunities (under economic and financial instruments) references to this has been included in the text as follows: "In western Europe there is mounting evidence of already implemented and well functioning result-oriented schemes (see Fig. 6.5) (Keenleyside et al., 2014a; Russi et al., 2014)."
Marianne Penker	Chapter 6	28	882		889	You might add, that agri-environmental schemes' biodiversity outcomes have been largely underwhelming. One reason for this may be that they tend to be administered at the farm or field scale (McKenzie et al., 2013). However, cross-farm co-ordination and collective action is needed for many landscape assets, such as wild life corridors, the conservation of habitats or threatened species. Collective stewardship action contributes to common goods and region-specific landscape characteristics, such as endemic species, scenery, cultural heritage, or sense of place. Therefore, collaborative and adaptive stewardship approaches on the landscape scale promise more effectiveness (McKenzie et al., 2013). Although receiving growing scientific interest, collaborative agri-environmental schemes are the exception rather than the rule (e.g., Franks and Emery, 2013; Franks and Mc Gloin, 2007; McKenzie et al., 2013; Prager et al., 2012; Prager, 2015a,b).	In the SOD, section 6.5.2.3 Constraints and opportunities (under economic and financial instruments) references to Prager and McKenzie have been included as follows: "By adopting result-based agri-environmental policy, measures could be targeted more to specific agro-ecosystems and socio-ecological systems, contracts with farmers for delivering some ecosystem services (e.g. maintenance of particular habitat, endemic species, scenery, cultural heritage, territorial identity) could be made at a landscape level through collaborative Agri-environmental schemes (Prager, 2015; McKenzie et al. 2013) so to achieve the critical territorial extension and to reduce transaction and monitoring costs (Fleury et al., 2015; Zanten et al., 2014; Berendse et al., 2004)"
Marianne Penker	Chapter 6	29	890		892	You might add: benefit sharing between tourism and low-input farming (e.g., by conservation programmes funded via a tourism tax)	In the SOD, section 6.5.2.2 Governance modes and policy instruments (under economic and financial instruments) the text has been revised as follows: "This is somehow justified by the fact that attractiveness of rural areas for tourism relies very much on the maintenance of traditional landscape aesthetic qualities which is a public good."
Germany	Chapter 6	29	898	29	898	We look very much forward to reading this section in the SOD. We would like to suggest to look at literature from IAMO (Leibniz-Institut für Agrarentwicklung in Transformationsökonomie), ZEF (Center for Development Research), World Bank, FAO, ICARDA for more information	Thank you for the suggested literature, some of these have already been integrated and some of them will be addressed in the final draft.
Louise Willemen	Chapter 6	29	898			Do you have a strategy how to include/select national ag policies? (European and CA). Perhaps a box with an example of one/two ag strategies?	Two boxes with national policies have been included in the text for non-EU Countries (e.g. Switzerland and Turkey). experts on agriculture in EE CA have been contacted
Douglas Nakashima	Chapter 6	29	902			6.4.3. Forestry SEE Parrotta & Agnoletti 2007	Agriculture end. Thank you for the suggested literature. It has been integrated in the text.
Douglas Nakashima	Chapter 6	29	902			6.4.3. Forestry - Roturier et al 2016 (Sweden): "One option for the future is a better governance, which would increase the possibility for forest co-management. Some procedures already exist to increase dialogue between forestry and reindeer husbandry but still remain unsatisfactory from Sami herders' point of view because they do not allow alternative forms of forest management. As a matter of fact, reindeer herders do not own any land, they only benefit from land use rights. Their valuation of the land is much more holistic and sustainable, offering an ethic of land use that respects the diversity and the functioning of ecosystems in the long run." - Demeter 2016 (Ukraine): "Though the Ukrainian Forest Code recognises the rights of the locals in accessing the secondary forest benefits, the lack of transparency of the legislation makes justified its reconsideration and amendment. Over the past two decades, Ukraine has made considerable efforts in reforming the forestry sector and forestry legislation. In addition, initiatives have been taken to involve the local communities in the decisions affecting forest management."	
Christoph Aicher	Chapter 6	29	902	32	1017	There is a bias of information / assessment of the European (Western) side	We now mention both examples in the text.
Germany	Chapter 6	29	902	32	1017	Russia, Caucasus and Central Asia are missing although they have large areas with forests; should be added	We now include more information and references on Eastern Europe and Central Asia
Germany	Chapter 6	29	902	32	1017	You may want to look at UNCEC main report on forests 2015, also GIZ analyses ("forestry sector analyses Tajikistan 2010") and other to fill the current gaps	We now include more information and references on Eastern Europe and Central Asia
Germany	Chapter 6	29	902	32	1017	what about impact of MoUs with other (neighbouring) countries, such as Central Asia- Korea MoU Cooperation on Forestry 2013?, these could be stated as good examples	Thank you for the suggested literature we have included the UNCEC 2015 in the text.
Roger Keller	Chapter 6	29	903	29	911	Recreation is totally missing here. Studies in Switzerland have highlighted the socio-cultural importance of forests (see http://www.wsl.ch/fe/wisoz/projekte/WaMos2/index_EN).	Thank you for the suggestion, we will address these in the final text.
Christoph Aicher	Chapter 6	29	904	29	904	This is a report of ECA; what is meant by: 46 signatory countries? Please make a reference (footnote) about the countries or the relationship to the ECA	We now mention the provision of recreation opportunities as one of the major forest functions and make use of the indicated reference.
Christoph Aicher	Chapter 6	29	906	29	907		We now use UNECE 2015 as a major source of information concerning the whole ECA region. The 'signatory countries' have been deleted.
Christoph Aicher	Chapter 6	29	918	30	927	Why is the information on a continuously increasing forest cover since 1990 important? Are these monocultural 'green deserts'? What information exists about the biodiversity of these forests or the health of forest ecosystems? Why is it important to know that: in nearly all countries there is a 'forest policy' or 'forest strategy' in place, and 'most forests have a management plan'? This sound like forestry science / forest bureaucracy rhetoric. What is the link between management plan and biodiv / Mother Earth conservation, when in traditional plans the maximization of timber production is the main issue?	We now mention that forest area is increasing in nearly all ECA countries due to afforestation and natural growth. Forest policy, strategy and management plans are seen as means towards a sustainable use of forest resources and do not aim at 'maximization of timber production'. Shortcomings concerning conservation goals are now mentioned.
Christoph Aicher	Chapter 6	29	918	30	927	The fragmentation is considered as a major problem; yet the fragmentation is framed as a mix of hard-soft-self-disciplining authoritative means. Is this really a fragmentation? Integration is considered as necessary, however, the conflicts around the use of forests and forest resources is only sketched briefly. This needs further reflection.	We now explain in more detail, why the described mix can be characterized as fragmentation and which conflicting policies and instruments exist around forest resources.
Tom West	Chapter 6	29	920	30	924	The distinction between soft and hard international law is a well-established and entirely commonplace one. Soft law has been crucial in the development of international environmental law, international human rights law, international bioethics law, and international economics law. For example, the Rio and Stockholm Declarations are soft law. For an introduction to soft law in IEL, see Birnie, Boyle and Redgwell, International Law and the Environment (OUP 2009) 34-37.	We now define soft laws and highlight their potential to become binding treaty commitments, and explain why this has not been the case in the forestry realm.
Agnes Hallosserie	Chapter 6	30	933	30	935	It would be clearer with examples of good practices in at least 2 different institutional contexts and countries.	We now provide examples from two different contexts: forestry (FSC, PEFC) and fishery (MSC)
Christoph Aicher	Chapter 6	30	936	30	936	Is private level a meaningful category? Levels usually refer to space-relevant entities	We now refer to the our figure 6.2, where the self or private level is introduced as a governance level.
Allan Watt	Chapter 6	30	944			Trial and error – or adaptive management – is not necessarily inefficient. If this point is retained, supporting evidence is needed.	We rephrased the sentence, now saying that these processes might "lead to ineffective and inefficient results"
Tom West	Chapter 6	30	945	30	951	The Human Rights Committee has also engaged with the relationship between the Sami and logging. See (inter alia) Lansman v Finland Communication No 671/1995, UN Doc CPCR/C/58/D/671/1995 (1996); Communication No 1023/2001, UN Doc A/60/40, Vol. II, at 90 (HRC 2005).	We now include this comment and the respective reference
Christoph Aicher	Chapter 6	30	952	30	959	This should go above under the law /top-down paragraph (after 935)	We have now moved the paragraph to the suggested place
Christoph Aicher	Chapter 6	30	953	30	953	Something should be integrated like: Despite the necessity to get the decision making closer to the spaces of implementation through the decentralisation of state authority, Humphrey mentions ...	We now include the following phrase: "As a means to get the decision-making closer to the implementation level, Humphreys (2004) identifies four variables most important for achieving sustainable forest management even via nation-wide Forest Programmes:..."
Christoph Aicher	Chapter 6	30	960	30	964	In this paragraph the discussion jumps back to the international level after reflecting on decentralization. Should this not be placed further above? The paragraph discusses the 'soft' law of international agreements and the problem of implementation. I do not understand the argument of Sotirov: Forests are considered to be national resources according to various UN agreements. If this is the case, is it not normal that national governments take decisions about THEIR forests? Why is the funding so important. Is there much international or multilateral funding for forests for the ECA region anyway, for instance in the EU?	We have shifted the paragraph above to the "international part" of the subchapter. There is substantial funding provided by the EU, but the national governments decide where and how to spend it.
Agnes Hallosserie	Chapter 6	30	962	30	964	The link between the scarcity of information and the fact that decisions are increasingly taken by governments is not clear: wouldn't government-driven measures be easier to track? Maybe develop a little on this issue or rephrase.	Financing stems from the EU but national authorities decide how to use the money. This process is not always easy to track. We have now clarified that we mean EU forest funding, which is spend on the national level.
Christoph Aicher	Chapter 6	31	966	31	969	the categories mentioned are not consistent	We now mention that these broad categories might show interdependencies. However, we still find them useful to organize and describe major challenges.
Agnes Hallosserie	Chapter 6	31	972	31	974	This would be clearer with a case study or an illustrative diagram with examples of sectors (horizontal) and governance hierarchy (vertical) and the interaction between them.	We now mention different sectors (forestry, energy, conservation) and scales (international, EU, national, regional) to clarify this aspect.
Christoph Aicher	Chapter 6	31	981	31	981	new para after: "the rule."	We now start a new paragraph after 'the rule'
Agnes Hallosserie	Chapter 6	31	986	31	993	This would need to be illustrated by concrete examples of measures, like Table 6.3 did for the agriculture sector. Using a table could help saving some space by putting examples directly in the table, instead of having the description of the reasoning that leads to the suggestion of such measures (which is I think the current content of the text).	We have now partly rephrased this paragraph to clarify the meaning. However, there was no space available to insert a new table for illustration
Christoph Aicher	Chapter 6	31	998	32	1017	The summary discusses problems of achieving sustainable forest management. However, what about the IPBES goals? Is sustainable forest management necessarily identical with mother earth / nature's benefits discourses? The whole sub-chapter is rather a sectoral discussion on developments in the forestry sector than an exemplification what the new IPBES perspective means / could mean to forest ecosystems and their use.	Indeed, we aimed at describing and discussing the constraints and opportunities of governance and policy instruments in the forestry sector. Implications for a possible mainstreaming of IPBES into this sector are dealt with in sub-chapter 6.6

Agnes Hallosserie	Chapter 6	31	1007	32	1017	This is solid governance theory but it would be more relevant to the assessment if this frame could be used to describe the forestry policy context in the ECA region.	We now indicate that this frame is useful to explain success or failure of governance shifts in eastern as well as western countries, and provide several references with respective case studies.
Christoph Aicher	Chapter 6	32	1010	32	1010	what are the: three elements of forest policy (Borrass et al., 2015).	We now mention that the three elements are setting, instruments and goals.
Douglas Nakashima	Chapter 6	32	1019			6.4.4. Fisheries and aquaculture Cush & Varley 2013. Cooperation as a survival strategy among west of Ireland small-scale mussel farmers Himes 2003. Small-scale Sicilian fisheries: opinions of artisanal fishers and sociocultural effects in two MPA case studies. [Abstract]: "Marine resource management and related stakeholder conflicts have been clearly defined in recent decades as pressing issues worldwide. This article provides a comparative study of the management regimes of the Gulf of Castellammare Fishery Reserve and the Egadi Islands Marine Reserve in Sicily, Italy. What managers in these two reserves have neglected to include in management is a social science evaluation scheme to ensure the development of more effective overall management. This is a significant problem in both Italy and the rest of the Mediterranean, where few sociocultural and economic studies have been conducted. Using data collected with standard anthropological field methods, analysis was conducted on how artisanal fishers are impacted by reserves, the extent of their knowledge regarding regulations, their opinions on management, and demographics. The results indicate that while fishers in the two case studies are all aware of the marine reserves where they fish, most fishers are not well informed of the associated regulations. Fishers feel alienated from the management process, and would feel more comfortable with reserve managers and regulations if they were involved in management. The article concludes by showing how such data could help to develop more useful and practical management practices in both these and other MPAs with "	Fisheries start Now highlight this work in section 6.4.4.2 "...While there is consistent evidence for the positive effects of full and partial protection on the density and biomass of protected species it has been shown that fishers can feel alienated from the management process and may feel more comfortable with reserve managers and MPA regulations if they were involved in the management process (Himes, 2003)."
Germany	Chapter 6	32	1021	32	1025	Please elaborate more on how the fishery policies affect biodiversity; (see subchapter 6.4.5.1 as useful example)	We now add a new paragraph on this topic at the start of the section (second paragraph) "Fishing and aquaculture policy that promotes overfishing or targeting of vulnerable species (in terms of their lifecycle) can affect biodiversity by reducing species richness (Lee and Safina, 1995). Fisheries pressure on biodiversity can also affect the heritable adaptations of a species and alter its characteristics and the characteristics of an ecosystem over time. Fishing and aquaculture related policies can also introduce new species to a given ecosystem. For example, the Pacific oyster was introduced to help boost Britain's declining commercial shellfish fishery. It had been assumed that this species could not reproduce in Britain's cooler waters but the species is now spreading in the wild. Fisheries policy can also cause loss of genetic variability simply because they reduce a species to such a low level that there are not enough individuals in the gene pool to carry the full range of variability that once comprised the population. For example, an Irish commercial fishery for orange roughy began in the Northeast Atlantic in 2001 with the assistance of government grants. The fishery began as an open access, non-quota fishery. Similar to orange roughy fisheries elsewhere the fishery resulted in unsustainable fishing levels and given the fact that orange roughy is often found near deep water seamounts and cold water corals there was also damage to cold water corals. Foley et al. (2011) suggest that in the absence of the subsidies, deep water trawling for orange roughy would not have been viable and the destruction of the species by the Irish fleet would have been avoided."
Allan Watt	Chapter 6	32	1024	32	1025	Chapter 2 makes the same point but also mentions that the trend in the ECA region has not matched the global pattern.	Thank you for the comment, we have now revised this section and will in the next round coordinate the findings with chapter.
Agnes Hallosserie	Chapter 6	32	1026	33	1108	Marine protected areas (MPA) and networks seem to be missing in this section. Suggested publications: 1) Andreollo, M., Jacobi, M. N., Manel, S., Thuiller, W. and Moullot, D. (2015). Extending networks of protected areas to optimize connectivity and population growth rate. <i>Ecography</i> , 38: 273–282. doi: 10.1111/ecog.00975 2) Lagabrielle E., Crochelet E., Andreollo M., Schill S. R., Arnaud-Haond S., Alloncle N., and Ponge B. (2014) Connecting MPAs – eight challenges for science and management. <i>Aquatic Conserv: Mar. Freshw. Ecosyst.</i> , 24, pages 94–110. doi: 10.1002/aqc.2500.	Now highlight this work in section 6.4.4.2 "Closed areas are tools proposed through the ecosystem based management approach for fisheries. These can be temporary closures or more permanent Marine Protected Areas (MPAs) (Andreollo et al., 2015; Lagabrielle et al., 2014; Hynes et al. 2016). Management in MPAs is very diverse, with local restrictions ranging from 'no-take' to zoning or gear limitations. While there is consistent evidence for the positive effects of full and partial protection on the density and biomass of protected species it has been shown that fishers can feel alienated from the management process and may feel more comfortable with reserve managers and MPA regulations if they were involved in the management process (Himes, 2003)."
Tom West	Chapter 6	32	1043	32	1043	Surely the CFP must be the first tool referred to here.	The discussion on CFP has been moved up ahead of that on RFMOs. However we still start the section off at the highest governance levels referring first to UN, UNCLOS and the FAO
Tom West	Chapter 6	32	1050	32	1050	Good ecological/chemical status' (WFD) and 'good environmental status' (MSFD) are not identical, though there are overlaps with respect to chemical quality, the effects of nutrient enrichment, and aspects of ecological and hydromorphological quality.	This is carried now "The WFD (with its aim of good ecological status) is thus intended to operate alongside the Marine Strategy Framework Directive (MSFD) which provides policy guideline on management of the entire marine environment through the attainment of good environmental status (GES)."
Rob J.J. Hendriks	Chapter 6	32	1050	32	1050	Write GES in full in this sentence and use the abbreviation in the next?	Done
Allan Watt	Chapter 6	33	1053			Natura	Natural changed to Natura
Rob J.J. Hendriks	Chapter 6	33	1053	33	1053	"Natural 2020 network" -> Is the Natura 2000 network meant here?	Yes corrected
Mark Snethlage	Chapter 6	33	1053			"Natural 2020 Network" -> "Natura 2000 Network"	Yes corrected
Mark Snethlage	Chapter 6	33	1083	33	1083	See the landing obligation since 2015 http://ec.europa.eu/fisheries/cfp/fishing_rules/landing-obligation/index_en.htm	Landing obligation is discussed in section 6.4.4.3
Germany	Chapter 6	34	1109	34	1127	what about the constraints of CACfish (Central Asian and Caucasus Regional Fisheries and Aquaculture Commission)? And other Russian/Central Asian/Eastern European policies?	We now highlight the fact that "A recent report by the Central Asian and Caucasus Regional Fisheries and Aquaculture (2016) highlighted a number of constraints in implementing the code of conduct for responsible fisheries in the Central Asian and Caucasus region. The main constraints highlighted were related to inadequate scientific research, statistics and access to information, to insufficient budgetary resources and institutional weaknesses, and to insufficient fisheries monitoring, control and surveillance and overcapacity in fisheries."
Tom West	Chapter 6	34	1110	34	1111	A more recent Commission document has been produced, 'Strategic Guidelines for the sustainable development of EU aquaculture' in 2013. This is then mentioned in lines 1117-8, but it makes introducing the section with the old document seem odd. This section would be better framed around the EU's general goal of increasing aquaculture production, and the possible effects this could have on BES.	This is correct but here we are trying to trace the evolution of the strategy. We have refined this section to state "the EU Strategy for Sustainable Development of European Aquaculture 2002 sets out the European policy for the development and growth of aquaculture. The original strategy of 2002 was considered to have been successful in the areas of environmental management, food safety and quality, but has not resulted in growth of production in the sector across the EU, in contrast with the rest of the world (EC, 2013b). In 2009 the Commission undertook a review of the strategy. The renewed 2013 strategy sought to identify causes of the EU stagnation and identified policy actions to address competitiveness, sustainability and governance in the sector. Following the review, the Commission published Strategic Guidelines for the Sustainable Development of EU Aquaculture (Comm, 2013)."
Tom West	Chapter 6	34	1120	34	1121	These MANPs have now been published, and the Commission has produced a summary: http://ec.europa.eu/fisheries/cfp/aquaculture/multiannual-national-plans/index_en.htm	We now note this fact in the discussion
Tom West	Chapter 6	34	1124	34	1127	The EIA Directive, SEA Directive, Habitats Directive, WFD and MSFD are all also potentially relevant to aquaculture. See the following two Commission documents on Natura 2000 and WFD/MSFD: http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf and http://ec.europa.eu/environment/marine/pdf/MSFD_2016_178.pdf	We now note these other directives also in the aquaculture section as well. "Furthermore, the Environmental Impact Assessment Directive, the Strategic Environmental Assessment Directive, the Habitats Directive, WFD and MSFD also influence the potential development of aquaculture in environmentally sensitive areas and its impact on marine ecosystems."
Mark Snethlage	Chapter 6	34	1137	34	1137	"EU Integrated Marine Plan" -> "EU Integrated Marine Policy"	Changed to EU Integrated Marine Policy
Germany	Chapter 6	35	1140	35	1146	these conclusions are too general; should be more focused on the three subregions EU/Eastern Europe/Central Asia with some results from the policy analyses; at the moment it sounds as if everything was fine	Conclusions have been extended to be more specific.

Rob J.J. Hendriks	Chapter 6	35	1141	35	1141		Changed to EU/Eastern Europe/Central Asia
						'EU and Central Asian environmental...?'	fisheries end
Tamar Pataridze	Chapter 6	35	1148	39		In the context of international commitment to combat climate change, some countries voluntarily work on and prepare Low Emission Development Strategies (LEDS) as well as Nationally Appropriate Mitigation Actions (NAMA). EE and CIS countries such as Azerbaijan, Armenia, Georgia and some of Central Asian countries applied or are the process of elaboration of these policy instruments. Although, biodiversity and ES are not the main focus (although, forest will be one of the separate chapters in LEDS of Georgia), the objectives and priorities of the documents directly or indirectly imply the positive implications on them. https://www.ec-leds.org/	We now include the phrase: Further, some countries, such as Georgia and Kazakhstan, voluntarily develop 'Low Emission Development Strategies' to promote the transition to climate-resilient, low emission, sustainable development (EC-LEDS 2017).
Allan Watt	Chapter 6	35	1148				Thank you for the suggestion, we are currently coordinating between chapters, in particular with chapter 4 and 5, but we will have to coordinate the assessment even further to provide a concise overview of the impact of drivers and governance options for the energy sector in the final draft.
Tom West	Chapter 6	35	1148	35	1148	A thorough consideration of the energy sector follows. In contrast, the previous Chapter does not give energy the same prominence. This should be discussed at CLA meetings.	I agree with this comment. Instead of business, I have inserted the term "industry".
Douglas Nakashima	Chapter 6	35	1148			Why is the word 'Business' included in this subheading? It doesn't match with the other ones (Agriculture/Forestry/Fisheries and Aquaculture)	
Douglas Nakashima	Chapter 6	35	1148			6.4.5. Business: energy and mining Lavrillier 2013 (Russia, Siberia): (263-264) "Among other factors of the overall change in their immediate environment, the Tungus note the pollution from local mining companies, nuclear power stations, construction of dams, roads, railways and pipelines, coal power plants and other exploitation of natural resources. All have an adverse effect on the immediate natural environment of the hunters, herders and fishermen."	As suggested, we have inserted this ILK-related contribution to lines 1269-1272. Also, another paraphrase referencing Lavrillier has been added to lines 1442-1445.
Douglas Nakashima	Chapter 6	35	1148			6.4.5. Business - ADD trade/markets, e.g. - Lavrillier et al 2016 (Siberia): the paper presents a case study of one of the most important ecosystem services for the Evenk nomads - sable hunting - and discusses drivers of change, including political drivers and economic/market factors.	This comment is more relevant for the new "Services sectors" section, which will be further developed in the final draft.
Sigrid Kusch	Chapter 6	35	1152	39	1317	Fracking should be included as a specific topic, at least mentioned.	We now mention it in lines 1217-1223.
Sigrid Kusch	Chapter 6	35	1152	39	1317	The assessment could generally be more detailed with view to energy under consideration of existing policies and strategies. As one example, decarbonisation of the energy sector is not mentioned. Renewable energy is also not mentioned.	Renewable energy is widely mentioned throughout the section. See lines 1215, 1306, 1310, 1313, 1314, 1378, 1424, 1428.
Mark Snethlage	Chapter 6	35	1163	35	1181		The mining policies and regulation appears between 1235 to 1267. Here it is more about the impact on BES and mining does not appear in chapter 4. I think it should be here or moved to chapter 4 through the chapter 6 liaison.
Germany	Chapter 6	36	1182	39	1317	Isn't this section more relevant for chapter 4: drivers?	
Germany	Chapter 6	36	1182	39	1317	We would suggest to look at energy producing countries such as Azerbaijan, Kazakhstan, Uzbekistan and Turkmenistan (gas, oil) separately; water conflict (e.g. Tajikistan/Uzbekistan) could also be addressed	Contributing authors from the region have provided expertise to this section.
Germany	Chapter 6	36	1182	39	1317	You may also want to look at resource-rich countries such as Kazakhstan, Uzbekistan, and Tajikistan; especially since Central Asia has amongst the largest resources of rare metals in the world	A paragraph has been added. See lines 1218 and 1380.
Germany	Chapter 6	36	1182	39	1317	Initiatives like "green economy" (e.g. in Kazakhstan) may also be discussed. Where do they have their current limitations?	I have added a note on this in line 1380.
Tom West	Chapter 6	36	1185	36	1190		Upon this suggestion I have added a paragraph that explains the governance framework in the energy sector in ECA, just before the existing paragraph. See lines 1304-1318.
Rob J.J. Hendriks	Chapter 6	36	1196	36	1196	Again, it is hard to understand the criticism when we don't yet know what the framework is like. It would be better if the structure was outlined first, and then critiqued.	Corrected.
Mark Snethlage	Chapter 6	36	1196	36	1196	treaties instead of thirties?	Corrected.
Mark Snethlage	Chapter 6	36	1196	36	1196	"thirties" -> "treaties" ?	Corrected.
Tom West	Chapter 6	36	1218	36	1225		
Germany	Chapter 6	37	1229	38	1290	Why is this in the same paragraph. The paragraph needs splitting up into (a) European policy (b) Asian policy. Then the role of indigenous peoples surely needs to be considered in a separate fashion.	We splitted the paragraph into two as suggested (see lines 1330 & 1344). We carried the part on indigenous peoples to lines 1275-1300 where it is more relevant.
Germany	Chapter 6	37	1229	38	1290	what about the economic subsidies regarding energy in Eastern Europe/Central Asia (This is contra-productive to energy-efficiency approaches; energy supply in rural areas vs cities is of concern looking at the growing cities; rural areas often live without energy for some hours thus using very innovative ways to cope; some affect biodiversity, some don't	I have added a related paragraph in lines 1326-1331.
Germany	Chapter 6	37	1229	38	1290	Kazakhstan cooperates quite strongly with the northern EU countries in the field of mining; here also it is important to look at what regulations are in place (EU standards or Kazakh standards?)	We have addressed this comment in lines 1435-1436.
Agnes Hallosserie	Chapter 6	37	1231	37	1247	This is another good example of what can be expected from this Chapter of the ECA assessment: concrete example of measures, and recommendations for implementation. They could be put in a table similar to Table 6.3 to save some space.	Thanks for this comment. I think it is more space-saving when it remains in the form of text.
Agnes Hallosserie	Chapter 6	37	1251	37	1257	This paragraph covers sectors beyond energy and mining. It could maybe be moved to the introduction or summary of the whole section 6.4	The paragraph was totally removed.
Tom West	Chapter 6	37	1251	37	1257	What does this have to do with mining and energy, the governance around it, or the impact of this governance on BES?	The paragraph was totally removed.
Violaine Brochier	Chapter 6	37	1252	37	1253	What is bioeconomy? Is that possible to have the definition?	This does not apply any more since the corresponding paragraph was totally removed.
Agnes Hallosserie	Chapter 6	38	1278	38	1281	I understand this section deals with energy and mining only as space is limited but this paragraph made me think of the aluminium factory incident in Hungary in 2010 (Aika factory). Maybe this could still be referred to here, and any measure that followed from the Hungarian government to prevent such accidents. Some figures for the whole ECA region would be enlightening: how many accidents in mining facilities occurred in the past 10 or 20 years across the region?	As the mining accidents do not directly relate to this section regarding the impacts on BES, we did not include such figures here.
Mark Snethlage	Chapter 6	38	1312	38	1312	"infected" -> "impacts on"?	Corrected.
Tamar Pataridze	Chapter 6	39	1318	44			
						In the context of spatial planning, transport and infrastructure the initiative of the European Commission - Covenant of Mayors can be mentioned. Under this initiative, the cities and municipalities become the signatories of CoM and thus take voluntary commitments to decrease the CO2 emissions by 20% by 2020. The signatory cities/municipalities develop the Sustainable Energy Action Plans (SEAPs) and later implement with the support from EC and other international partners. The main sectors for energy efficient measures are transport and buildings. This decentralized voluntary policy instrument so far proves to be a helpful one to support sustainable transport and infrastructure development. A number of EE and CIS countries are the signatories of the CoM. http://www.covenantofmayors.eu/index_en.html	Spatial planning start: this section has been moved to section 6.6.2.2 for the SOD
Rob J.J. Hendriks	Chapter 6	39	1318	39	1318		Thank you for pointing this out. We have included a sentence on that in the 10. paragraph of 6.6.2.2
						Is this a sector? Perhaps add a little extra explanation here or in para 6.4.1 as to why this is treated along the same lines as e.g. agriculture, forestry, fisheries/aquaculture, mining and transport.	We agree that spatial planning is not a sector such as the others, and that we should rather emphasize its integration functions. It was therefore decided to move this section to subchapter 6.6.2.2 on Mainstreaming biodiversity and ecosystem services
Douglas Nakashima	Chapter 6	39	1318			6.4.6. Spatial planning SEE Flannery, W. & Ó Cinnéide, M. 2008. Spatial planning from the perspective of a small seaside community in Ireland.	Thank you, we included a section on Marine spatial planning in the 5. paragraph of 6.6.2.2
Germany	Chapter 6	39	1318	43	1483		
						this subchapter is very theoretical; there is literature available on land reforms and different land use policies for Eastern Europe and Central Asia (see Trevisani, IAMO, etc.) which could give some more examples	Thank you for mentioning that there is literature available. We have conducted a systematic search with various combinations of keywords relating to spatial planning in combination with terms relating to the different countries and regions included in Europe and Central Asia. Moreover, we specifically looked for publications related to Trevisani or IAMO. We needed to realize that only very few studies are available that reflect upon spatial planning and provide links to aspects of biodiversity and ecosystem services. We included everything that we found relevant - if there is more that we are not aware of, we would be very grateful if we could receive the respective reference. Thank you!
Frederic Lemaitre	Chapter 6	39	1353	39	1356		
						Maybe the urban aspect could be developed further here, as cities represent contrasting urbanization trends and examples of emerging science-policy linkages for improving urban landscapes for human health and well-being, and are beginning to take action and increased responsibility for protecting and enhancing the ability of local ecosystems to meet urban resident needs (e.g. Barcelona Green Infrastructure and Biodiversity Plan as a novel approach to the planning of the city; Protection models by formal and informal management systems in Stockholm; civic engagement for urban green space management in Berlin; a shifting focus in Rotterdam from technological flood mitigation strategies to risk-based and adaptation strategies) (see Schewenius M, McPhearson T, Elmqvist T (2014). Opportunities for Increasing Resilience and Sustainability of Urban Social-Ecological Systems: Insights from the URBES and the Cities Biodiversity Outlook Projects. AMBIO (Special Issue), 43:434-444).	This aspect is not integrated in section 6.6.2.2
T. Hilding-Rydevik	Chapter 6	40	1357	40	1365		
						The vast critique of SEA is lacking here. In relation to effectiveness and context dependence. The environmental policy instrument of SEA is coupled with many theoretical expectations in research as in policy. In practice though the effectiveness of SEA to deliver e.g. environmental integration in spatial planning still has to be proven (Hilding-Rydevik and Bjarnadóttir 2007). The role of implementation context in defining the aims of SEA as in measuring the effectiveness is needed in order to advance impact assessment and policy integration theory (Hilding-Rydevik and Bjarnadóttir 2007, Cashmore et al 2010). Cashmore, M., Richardson, T., Hilding-Rydevik, T. and Emmelin, L. 2010. Evaluating the effectiveness of impact assessment instruments: Theorising the nature and implications of their political constitution. Environmental Impact Assessment Review 30 (2010) 371-379. Hilding-Rydevik, T. and Bjarnadóttir, H. 2007. Context awareness and sensitivity in SEA. Implementation. Environmental Impact Assessment Review 27 (2007) 666-684	A critical remark on SEA is now added to the paragraph on SEA and EIA which is located in the 4. paragraph of 6.6.2.2
Tom West	Chapter 6	40	1362	40	1362		
						"The initial Directive of 1985 and its three amendments have been codified by DIRECTIVE 2011/92/EU of 13 December 2011. Directive 2011/92/EU has been amended in 2014 by DIRECTIVE 2014/52/EU (for detailed information please refer to Review of the EIA Directive)" http://ec.europa.eu/environment/eia/eia-legalcontext.htm	Thank you. We have decided to leave out the specific directives as they become rather long in the text. We decided to rather provide links to official websites and some references to relevant literature.
Tom West	Chapter 6	40	1368	40	1368	What is modernist or master planning?	A description of modernist or master planning was inserted in the 11. paragraph 6.6.2.2
Rob J.J. Hendriks	Chapter 6	41	1388	41	1392		
						Also make a cross reference to para 6.4.2?	Thank you - a reference to section 6.4.2. Agriculture in Western and Central Europe was added.

Marie Stenseke	Chapter 6		41	1404	42	1435	On the issue of participation, the European Landscape convention (ELC) could preferably be mentioned. ELC is a product of the Council of Europe and relates, thus, to Wester, Central and Eastern Europe. Following ELC, there is a vast literature on public participation, see e.g. Jørgensen, K., Clemetsen, M., Halvorsen Thoren, A-K., Richardson, T. (Eds.) 2015, Mainstreaming Landscape Through the European Landscape Convention. Concept, Policy and Practice, Routledge; Jones M & Stenseke M, eds (2011): The European Landscape Convention. Challenges of Participation, Dordrecht: Springer.	Yes, we have inserted a reference to the European landscape convention as well as to the Aarhus convention, another important convention enhancing participation in planning. We have also added the references provided. (compare 9.th paragraph of 6.6.2.2
Marie Stenseke	Chapter 6		42	1436	42	1452	One opportunity can be related to Aichi target 1, awareness rising, by public engagement in landscape issues and also by everyday experiences of green areas, enhancing environmental behaviour and stewardship, see e.g. Beatley, T. 2011. Biophilic Cities: Integrating nature into urban design and planning. Washington: Island Press; Hartig, T., F.G. Kaiser, and P. A. Bowler. 2001. Psychological restoration in nature as a positive motivation for ecological behavior. Environment and Behavior 33 (4): 590-607; Wells, N., and K. S. Lekies. 2006. Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. Children, Youth and Environments 16(1): 1-24.	Thank you, we have included two new paragraphs at the end of section 6.4.6.3 that highlight these opportunities (fourth- and fifth-last paragraph in 6.6.2.2
Agnes Hallosserie	Chapter 6		42	1460	42	1463	Could you give examples of the measures resulting from the integration of BES in planning that were actually implemented?	In the third-last paragraph of 6.6.2.2 we added the sentence: "Successful examples for integrating BES in spatial planning concern river restoration in Vitoria-Gasteiz (Kopperoinen et al. 2015) and protected areas' management in Donana, Spain (Palomo et al., 2011)." If you have other references, we would be glad to receive the reference. Thank you!
Frederic Lemaitre	Chapter 6		42	1460	42	1462	Please consider referring to this cross-cutting study on biodiversity, ecosystem services and urbanization trends in the European cities of Stockholm, Berlin, Rotterdam, Barcelona, Salzburg and the affiliated cities Helsinki and New York: Schewenius M, McPhearson T, Elmquist T (2014). Opportunities for Increasing Resilience and Sustainability of Urban Social– Ecological Systems: Insights from the URBES and the Cities Biodiversity Outlook Projects. AMBIO (Special Issue), 43:434-444	Yes, a reference to this publication has been included in the third paragraph of 6.6.2.2
Allan Watt	Chapter 6		42	1460	42	1464	Is there evidence of work done on including protected areas in spatial planning (that could be included here)?	Thank you, we have responded to this comment together with the one from line 375: in the third-last paragraph of 6.6.2.2 we added the sentence: "Successful examples for integrating BES in spatial planning concern river restoration in Vitoria-Gasteiz (Kopperoinen et al. 2015) and protected areas' management in Donana, Spain (Palomo et al., 2011)."
Frederic Lemaitre	Chapter 6		42	1469	42	1470	In addition, at subnational scale, cultural ecosystem services (CES) may serve as a useful gateway for addressing and managing nature in cities, as these can be more directly experienced, their benefits more readily appreciated, and the environment-to-benefit linkages more easily and intuitively understood by the beneficiaries relative to many material ES. CES can thus help embed multifunctional ecosystems and the services they generate in urban landscapes and in the minds of urbanites and planners, serving an important role in addressing urban sustainability (larger than actual CES) (see Andersson E, Tengö M, McPhearson T, Kremer P (2015). Cultural ecosystem services as a gateway for improving urban sustainability. Ecosystem Services 12: 165-168)	A good point indeed. This has been added within the second-last paragraph of 6.6.2.2.
Violaine Brochier	Chapter 6		43	1485	43		What about fresh water? Is that relevant as we are talking about soil degradation?	Please see lines 1488 and 1565-1566
Agnes Hallosserie	Chapter 6		43	1489	43	1494	You could also highlight the opportunities for habitat conservation or restoration in the no-go zones of transport infrastructures. See for example the work of ITTECO: http://www.ittecop.fr/doc/COM/ITTECOPlaquetteANG.pdf and of the IENE network: http://www.iene.info/	These initiatives and their benefits are now mentioned at lines 1558-1560.
Agnes Hallosserie	Chapter 6		43	1506	43	1506	Wasn't "multi-instrumentality" referred to as "policy mix" earlier?	"Multi-instrumentality" has been changed into "policy mix" as suggested.
Agnes Hallosserie	Chapter 6		43	1516	44	1522	Even if most transport-policies deal with climate and pollution, the impact of infrastructures on biodiversity and habitats shouldn't be overlooked. Comment on row 35 could help integrate a bit of this in the section.	The relevance of the transport sector's impacts on biodiversity has been clarified (see lines 1487 and 1558-1560)
Allan Watt	Chapter 6		44	1522			Impacts of transport of biodiversity, e.g. in fragmenting habitats, disrupting migration, should be considered (somewhere in assessment).	The relevance of the transport sector's impacts on biodiversity has been clarified (see lines 1487 and 1558-1560)
Germany	Chapter 6		44	1523	45	1570	In this chapter, it would also be interesting to read about the implications of investments from China in Central Asia (see "one belt one road" as new Chinese strategy towards the west), which standards in terms of ecosystem protection do they apply? And how do the CA countries react/are they prepared with some legislations/regulations/standards?	These aspects are covered in section 6.3.5 "Responding to transboundary challenges"
Agnes Hallosserie	Chapter 6		45	1566	45	1570	This is already done by some businesses with the support of governments. See for example the methodological guide for transportation business to inform customers on CO2 emissions (in French) produced by the Ministry of Environment: http://www.developpement-durable.gouv.fr/IMG/pdf/Guide_Information_CO2-2.pdf This is implemented, among other, by the national rail company SNCF see: http://www.sncf.com/fr/presse/fi-info/co2-sncf-informe Customers are also offered to offset their flights CO2 emission when travelling on the Portuguese national company see: http://www.tapportugal.com/Info/en/about-tap-our-company/environment-strategy/carbon-offset	This approach and the examples suggested have been added at lines 1543-1547
Agnes Hallosserie	Chapter 6		45	1571	45	1571	Environment/Conservation start this analysis is now in a new section 6.4	Environment/Conservation start this analysis is now in a new section 6.4
Tom West	Chapter 6		45	1571	45	1571	It would be good if section 6.4.8 could deal with protected areas and networks in the ECA region, including an assessment of their efficiency and representativity.	This is the reason why we have now decided to have a separate section 6.4 on conservation and environment. The international level is covered in section 6.3
Douglas Nakashima	Chapter 6		45	1571			6.4.8. Environment and conservation [nothing yet] Subsection on the role of ILK / TEK in the development of conservation measures: Biró et al. 2014: (p319) "There are only few examples in Europe for the application of TEK in conservation (see Hernández-Morcillo et al. 2014, for a recent review). For example, Carvalho et al. (2010) suggested to include people's perceptions and traditional ecological knowledge in general in landscape management and conservation. Roturier and Roué (2009) studied Sami herders' classification of reindeer winter pastures to improve cooperation with forest management. Molnár (2012) documented that traditional herders in Hungary use several traditional pasture management practices that could be included in conservation management of the steppes. Fernández-Giménez and Estaque (2012) suggested to use the extensive knowledge of Pyrenean pastoralist communities on the relationships between terrain, climate, vegetation and animal nutrition and behavior in pasture resource management. In the Cévennes mountains in France, local traditional ecological knowledge was collected and used in national park management and the planning of agri-environmental programs (Crosnier 2005)." (p324) "We argue that TEK can provide substantial relevant information to nature conservation not at the level of populations, but at another spatial scale, the level of habitats and landscapes. TEK and conservation biology differ in scale with regard to threatened species. As emphasized by Gagnon and Berteaux (2009) and Menzies and Butler (2006), folk knowledge tends to be locally relevant, and therefore its generalization is not a trivial step. Scale disparity, however, is not only a handicap. We agree with Gagnon and Berteaux (2009) that emphasizing complementarities across scales would be powerful for generating new insights." Schultz et al. 2007 (Sweden): (p141) "Local people's knowledge of local resources and ecosystem dynamics can complement scientific knowledge in conservation efforts (see Berkes et al. 2000; Gadgil et al. 2003; Aswani & Hamilton 2004; Sheil & Lawrence 2004), and stakeholder participation and the need to involve communities are explicitly stated in several official documents and agreements on ecosystem management and biodiversity conservation."	Thank you for the valuable comment. It will be addressed in the final draft.
Douglas Nakashima	Chapter 6		45	1571			Gadgil et al. 2003: (p191) "In Sweden, governmental resource management agencies have progressively created an arena for the involvement of local people in liming programs to counteract acidification and in the management of fish and crayfish. Local fishing associations commonly play such a role in involving people in many parts of Sweden managing vast numbers of lakes, rivers, and streams." (p193) "Individuals involved in fishing and hunting contribute with knowledge and experience from almost daily observations of the area and provide information such as the kind of species preying on crayfish, fluctuations in the populations of these predators, algae growth, and other changes in the crayfish habitat. The occasional observations and systematic monitoring at the local level are complemented with information from scientific studies and from surveys of the area carried out by authorities at the municipality and county levels." (p196) "The Swedish case shows how a local organization and its members that are given a chance, organize themselves, monitor and observe changes in their social-ecological environment, and use their knowledge to create, re-evaluate, and reshape local institutions. The devolution of management rights in 1994 was a step in the direction of co-management, using existing organizational structures and the potential of local fishing associations to manage fish resources. It provides an arena where local and scientific knowledge can complement each other."	Thank you for the valuable comment. It will be addressed in the final draft.
Zsolt Molnar	Chapter 6		45	1571	45	1573	The conservation subchapter would need an ILK expert as a co-author.	Thank you for the comment, our ambition is to integrate ILKP expertise in all sub-chapters. However we agree that this particular chapter is of specific importance to ILKP and will ensure that this comment is addressed in the final draft.
Tom West	Chapter 6		45	1576	45	1578	I am not convinced that such a transition has been demonstrated in the section. For example, (cf line 1581), CAP is still clearly the dominant governance framework for agriculture in the EU.	6.4 Conclusion This section has been deleted and relevant conclusions has been integrated in section 6.6.
PESC-3	Chapter 6		45	1576	46	1615	Deal with the issue of policy transfer: the examples of policy instruments for the different sectors from a country or subregion cannot be simply transferred to another country or region. It will depend on the context and political environment. It would be good to include an assessment of the relevance of policy tool transposition from one country to another.	This section has been deleted and relevant conclusions has been integrated in section 6.6.
Tom West	Chapter 6		45	1582	45	1583	Surely public goods are at stake in the agricultural, forestry and fisheries sectors too. (eg recreational, cultural, regulating services)	This section has been deleted and relevant conclusions has been integrated in section 6.6.
Agnes Hallosserie	Chapter 6		45	1583	45	1585	A comparative table with examples across sectors and countries would be useful to illustrate this sentence.	This section has been deleted and relevant conclusions has been integrated in section 6.6.
Tom West	Chapter 6		45	1588	45	1588	Ok - payment for ecosystem services are well worth deep consideration (eg can CAP subsidies be considered as a form of PES?) - but they have not really been discussed in this section.	This section has been deleted and relevant conclusions has been integrated in section 6.6.
Tom West	Chapter 6		46	1613	46	1615	What are these improved and innovative governance solutions?	This section has been deleted and relevant conclusions has been integrated in section 6.6.
Agnes Hallosserie	Chapter 6		46	1614	46	1615	Could you provide some examples of options and solutions or refer to the relevant sections in 6.4?	This section has been deleted and relevant conclusions has been integrated in section 6.6.

Mark Snethlage	Chapter 6	46	1617				Transboundary challenges start: old section 6.5 has now been moved to 6.3.5 following reviewers' comments.
						"Responding to transboundary challenges": in what sense are "Terrestrial and freshwater degradation and restoration" more typical transboundary issues than the other issues dealt with in this chapter?	This statement does not appear in the new chapter version.
Germany	Chapter 6	46	1617	55	1992		referred to in section 3.5.3.3. now where we state "Through its European Neighbourhood Policy (ENP), the EU works with its southern and eastern neighbours to achieve the closest possible political association and the greatest possible degree of economic integration. The ENP is a key part of the European Union's foreign policy. Partner countries agree an ENP action plan or an Association Agenda with the EU demonstrating their commitment to, amongst other issues, environmental protection and sustainable development. In particular the intergovernmental policy seeks to strengthen marine environment protection across borders with the EU by "better preserving shared natural resources and improving conditions for fisheries" and by ensuring "the protection of shared seas and river basins". The ENP is a jointly owned initiative and its implementation requires action on both sides, by the neighbouring state and by the EU. There are currently 16 neighbouring states involved including, Jordan, Israel, Georgia, Armenia and Azerbaijan."
						EU transboundary programmes e.g. via ENP (eastern neighbourhood partnership programme) could be relevant for the analyses, here quite some projects in the Caucasus region are implemented	
Louise Willemen	Chapter 6	46	1617	60	2166		Tables for conventions and directives now used in some instances to save space.
Tom West	Chapter 6	46	1632	60	2166		Section 6.5. is now being incorporated into section 6.3 under subsection (6.3.5). the formr land and freshwater degradation sections have also been joined into one. This has meant a change in focus and the sections on each shortened and reorganised under the headings of The headings are: Binding legal instruments, nvironmental rights approaches, Soft law instruments and capacity building, Intergovernmental organizations and Private/business initiatives
						This section would be better structured as (1) Terrestrial Transboundary Challenges (2) Freshwater Transboundary Challenges (3) Marine Transboundary Challenges (4) Invasive Species. Each of these could then be subdivided (mirroring 6.4) into: (a) summary of key governance structures (b) key transboundary issues (c) how governance has affected the impacts on BES (d) weaknesses and areas for improvement for current governance structures. Given the centrality of EU legislation, it makes little sense to consider EU policy here as 'transboundary' - really this section needs to deal with interactions beyond the EU - effectively treating the EU as a single unit.	
Ram Pandit	Chapter 6	46	1632	60	2166		See comment above
Louise Willemen	Chapter 6	46	1634				"United Nations Convention to Combat Desertification" only now mentioned in web link but will be added to tables and glossary in the final draft.
Louise Willemen	Chapter 6	47	1645			Add definition UNCCD.	Unfortunately I don't know what this is referring to?
Mark Snethlage	Chapter 6	47	1664			Use the IPBES definition here.	
						The section "Soil degradation" consists of a series of apparently unrelated paragraphs that also have little relation with the theme "soil degradation". Need to review the choice of section heading, contents and structure?	The section was totally rearranged
Petr Petrik	Chapter 6	47	1664	48	1726		In the current space restrictions, there is not enough place for examples, in addition the subchapter surveys the means of conservation and restoration and not drivers.
Mark Snethlage	Chapter 6	47	1665	47	1667		There is not enough space to go into detail in the legal and policy-making processes. The soil framework is not being mentioned per se, but rather the framework method as a soft law system.
						However, strong lobbying by Austria, France, Germany, Netherlands and the UK have resulted in the rejection of the proposed Soil Framework Directive in 2014	
Mark Snethlage	Chapter 6	47	1672		1681	Not related to the section title "Soil degradation"	Soil was changed to terrestrial in the title
Germany	Chapter 6	47	1682	48	1694		
						Additionally, the authors may also want to look at international research organizations' work in Central Asia such as IWMI, ICARDA, ICBA, Bioversity international etc. with their relevant projects and initiatives	IWMI and ICARDA were added as sustainable agriculture programs
Germany	Chapter 6	48	1695	48	1705	Are you sure that low population density makes this aspect less relevant in Central Asia as compared to Europe? Please expand your discussions on the role of income distribution, because people in rural Central Asia may be more vulnerable to desertification progressing than rural people in Europe. (Pls cross-check with the IPBES-land degradation assessment)	Does not appear in the current version
Mark Snethlage	Chapter 6	48	1699	48	1705		
						Meanwhile, Chapter 4, page 83 lines 2458 -2460 state: "In other areas, the collapse of irrigation-based agriculture due to water shortages will lead to desertification, e.g. complete drying up of Aral Sea (Gentile 2005)."	Aral sea case study is for now, not included
Rob J.J. Hendriks	Chapter 6	48	1707	48	1708	In what sense are the restoration processes of the Aral Sea intensifying desertification and Aeolic soil erosion?	Aral sea case study is for now, not included
Mark Snethlage	Chapter 6	48	1711		1726	Also this paragraph: what is the relation with "soil degradation" within the section "Responding to transboundary challenges"? Need for restructuring and/or changing the headings?	Headings are different now
Douglas Nakashima	Chapter 6	48	1727			6.5.1.3. Freshwater resources deterioration Mustonen 2013 (Finland): (p81) "the role of these lived oral histories provides evidence and targets for watershed restoration work as limited written records hinder a baseline assessment." Mustonen 2011. 'Songs of the Kolyma Tundra' - Co-production and perpetuation of knowledge concerning ecology and weather in the indigenous communities of Nizhnikolyma, Republic of Sakha (Yakutia), Russian Federation: collection of observations, stories, memories of local inhabitants (fishers...) about a damaged freshwater environment - the article shows how this information can be useful to design management and restoration practices based on long term knowledge of the ecosystem and a holistic conception of its components.	Mustonen et al 2011 was cited in the environmental rights section
Mark Snethlage	Chapter 6	48	1728	48	1728	"Eventhough European climate is commonly considered as temperate with positive precipitation-evaporation balance,..."; perhaps "commonly considered as" is not the best choice of verb. Perhaps best leave these three words out entirely?	The general background was omitted from the current version
Mark Snethlage	Chapter 6	49	1758			"In this section we summarize the major transboundary water conventions, treaties, directives and other legislative acts relevant for Europe and Central Asia.": even so the section heading is "Freshwater resources deterioration". Suggestion: adapt structure and / or headings / titles	Headings are different now
Tom West	Chapter 6	50	1781	50	1800	There is no difference between a Convention and a Treaty.	This structure does not exist any more
Tom West	Chapter 6	50	1782	50	1784		Revised: 1 referring to the 1999 convention 2 deleted 3 now it is in a "Soft law instruments and capacity building" context 4 the EC is regarded as coordinating party 5 legally responsible for upholding the convention 6 UNECE is regarded in the "binding legal instruments" section
Mark Snethlage	Chapter 6	50	1782		1783	(1) Which Rhine Convention (The 1976 Convention On The Protection Of The Rhine Against Pollution By Chlorides 16 ILM 265, or The 1999 Convention on the Protection of the Rhine) (2) What does it mean for a treaty to be 'popular'? (3) 'member-states' is here being used in the EU sense, which is potentially misleading (4) The European Commission cannot be a party to a convention, only the European Union (formally the European Community) can (5) What does it mean to say that the ICRP has legal personality? Lots of things have lots of different kinds of legal personality. (6) What about the 1992 UNECE Convention on the Protection and Use of Transboundary Waters and Lakes ("now the principle multilateral treaty governing environmental protection of European watercourses and the first regional framework convention dealing with international watercourses" Birnie, Boyle and Redgwell, International Law and the Environment (OUP 2009) 538)	This has been deleted
Mark Snethlage	Chapter 6	50	1783	50	1786	"popular"? In what sense? The best functioning?	Thank you for the comment, we have not been able to take this into account yet, but will if possible assess it in the next round.
Agnes Hallosserie	Chapter 6	50	1783	50	1786	Could we have some results of the effectiveness of the actions and results of the programme, as evaluated by the ICRP?	The effectiveness of the measures is subject to recent attention, but there is a general lack of quantitative data. However qualitative information can be added. It will be dealt with in the next round of the assessment.
Agnes Hallosserie	Chapter 6	50	1789	50	1799		
						Similarly, have the International Commissions for the Danube and for the Albufeira Convention assessed the effectiveness of the actions implemented and if yes, what are the results?	
Tom West	Chapter 6	50	1789	50	1814	Same problems as above	We will take this into account in the final draft.
Tom West	Chapter 6	50	1795	50	1799	Is the convention still in force? What are its provisions? If it has not changed since the 18th C then its relevance is doubtful. Needs more information.	Not referred to in current revision of section
Mark Snethlage	Chapter 6	51	1825	51	1835	Better insert this paragraph after P 49, L 1780?	Has been revised in the SOD
Agnes Hallosserie	Chapter 6	51	1836	51	1845	This could be moved just after line 1780 as it deals with improving the implementation of the EU water directives. This can also be used as a transition to the following subsections on conventions and treaties which adopted river basin approaches.	Has been rearranged in the SOD
Agnes Hallosserie	Chapter 6	51	1847	52	1863	A way to deal with the governance of marine and coastal systems while avoiding listing the regional conventions could be to synthesize (potentially in a table) how the different conventions address key pressures on the marine environment. It is important to keep the transboundary challenges for governance as mentioned on lines 1860-1861.	Tables for conventions and directives now used in some instances to save space.

Allan Watt	Chapter 6	51	1850			Ecosystem-based management should be defined. It's usage in the marine environment is probably unique.	Ecosystem based management now defined in section in brackets (defined here as management aimed at maintaining or restoring the composition, structure, function, and delivery of services of natural and modified ecosystems for the goal of achieving sustainability. It is based on an adaptive, collaboratively developed vision of desired future conditions that integrates ecological, socioeconomic, and institutional perspectives, applied within a geographic framework, and defined primarily by natural ecological boundaries)
Allan Watt	Chapter 6	51	1851			See definitions of drivers and comments on different terms in Chapter 4 (and try to be consistent).	Drivers no longer mentioned in this section
Agnes Hallosserie	Chapter 6	52	1870	53	1905		We have added the following "The regional seas conventions have been seen to be successful in the joint management and conservation of large marine areas but an early report by the UNEP on their success did warn that "In many regions the level of expertise and facilities available for the actual implementation and conduct of the agreed action plans is limited" (UNEP, 1982). More recently Mackelworth (2016) notes that while modern conservation principles are explicitly incorporated or implicitly applied under the relevant regional instruments, they still require further operationalization and consistent application by all organizations and countries involved."
Germany	Chapter 6	52	1884	52	1886	It would be useful to assess in a few words whether the main instruments implemented by the conventions listed have succeeded in conserving or enhancing the (good) environmental status.	
Germany	Chapter 6	52	1884	52	1886	Wording needs to be corrected, e.g. as follows: OSPAR focuses on the application of the ecosystem approach to the management of human activities in the Northeast Atlantic marine environment and on implementing the principles (...).	Wording has been corrected. Now reads "OSPAR here is focus on the use of the ecosystem approach to management of the North-East Atlantic and implementing the principles OSPAR focuses on the application of the ecosystem approach to the management of human activities in the Northeast Atlantic marine environment and on implementing the precautionary principle, the polluter pays principle and best environmental practices, into marine environmental policy."
Tom West	Chapter 6	53	1906	53	1906	EU law is not the same as international law.	True, we have toned down the reference to Europe in this section although the EU still provides some of the best examples of ecosystem based cross country border legislation.
Germany	Chapter 6	53	1908	53	1911		This now read Article 10 specifically refers to the Regional Sea Conventions "Member States shall take into account the continuing application of relevant existing environmental targets laid down at national, Community or international level in respect of the same waters, ensuring that these targets are mutually compatible and that relevant transboundary impacts and transboundary features are also taken into account, to the extent possible".
Germany	Chapter 6	53	1911	53	1920	The citation originates from Art. 10, not from Art. 6, and should end with "to the extent possible."	
Germany	Chapter 6	53	1911	53	1920	The remaining paragraph is incorrect - please check and revise accordingly.	The lines "If the assessment under the MSFD is to be integrated at the regional seas level, then a comparable set of marine ecosystem and economic data will have to be agreed upon by all member states bordering the regional sea and where possible the same data sources will be needed in order to inform policy and to link environmental quality change to industry activities." have been removed. It would have been more accurate to have said that the assessment under the MSFD would be better if the assessment under the MSFD was to be integrated at the regional seas level with a comparable set of marine ecosystem and economic data.
Mark Snethlage	Chapter 6	53	1920			Softer forms of international cooperation for the joint management and conservation of the seas exist such as the Trilateral Wadden Sea Cooperation. Since 1978, the Netherlands, Germany and Denmark have cooperated to protect the Wadden Sea as an ecological entity. The Guiding Principle of the Trilateral Wadden Sea Cooperation is to "achieve, as far as possible, a natural and sustainable ecosystem in which natural processes proceed in an undisturbed way". The Cooperation is based on the "Joint Declaration on the Protection of the Wadden Sea", which was first signed in 1982 and then updated in 2010. The Joint Declaration is a declaration of intent, and includes the objectives and areas of the cooperation and the institutional and financial arrangements. For over 30 years, the Cooperation has united partners from politics, nature conservation, science and administration, along with local stakeholders, who together represent an enormous store of knowledge and experience. It is a world wide unique example of effective transboundary ecosystem-based collaboration in order to conserve a World Heritage site. http://www.waddensea-secretariat.org/	We thank the reviewer for this and it has been added in to section 6.3.5.3 now
Allan Watt	Chapter 6	54	1946			An "economist's" perspective is presented but something broader is needed.	Sentence is rewritten as "Hanley et al. (2015a) point out that the integration of ecosystem service valuation into marine policy formation remains challenging due to the fact that these ecosystems tend to be large and often overlap multiple political jurisdictions."
Sigrid Kusch	Chapter 6	54	1957			Add marine litter?	Good point, sentence now reads "Elsewhere (Oinonen et al., 2016) point out that several of the descriptors of 'good environmental status' under the MSFD are already regulated by existing legislation and recommend that economic analysis for the implementation of the MSFD should place particular emphasis on those descriptors that are not covered by any other piece of legislation, such as underwater noise and marine litter."
Mark Snethlage	Chapter 6	54	1958		1960		This sentence now reads "The political commitment of the governments of countries bordering regional seas to cooperative management is a fundamental requirement for success of any agreements aimed at the implementation of environmental protection measures."
Allan Watt	Chapter 6	54	1965			Sentence difficult to understand: "boarding" -> "bordering"?	
Allan Watt	Chapter 6	54	1965			Ecosystem services approach should be defined (or an alternative phrasing used).	Ecosystem based management approach now used instead, as defined earlier in sub section
Tom West	Chapter 6	55	1979	55	1980	This can't be coastal regions of the EU. It highlights Norway (not in the EU, but in the EEA), Turkey (not in the EU or the EEA) and does not highlight any in Sweden, Finland, Poland, Estonia, Latvia, Lithuania (in EU).	This have referred to coastal regions of the Atlantic and Mediterranean rather than EU but the figure is no longer used.
Tom West	Chapter 6	55	1982	55	1983	Discuss the River Basins of the WFD: these are based on ecological characteristics.	These are discussed in the freshwater subsection of 6.3.5.3
Rob J.J. Hendriks	Chapter 6	55	1989	55	1992	?? Difficult to get the point here.	On rereading this final line was confusing and not necessary. It has been removed.
Mark Snethlage	Chapter 6	56	1995	56	2017	This has been covered in chapter 4. Perhaps directly start this section with the policy / governance aspects?	Thank you for the suggestion, we have rearranged the structure of the analysis and now starts directly with the policy and governance aspects.
Allan Watt	Chapter 6	56	1996			A consistent terminology on alien species / alien invasive species is needed and only one acronym (and none if possible).	Explained in glossary
Mark Snethlage	Chapter 6	56	2021			DEFRA is the UK Department for Environment, Food and Rural Affairs.	Corrected
Agnes Hallosserie	Chapter 6	56	2023	56	2026	The examples of good practices provided here are all for island countries. It could be useful to distinguish in the analysis governance for islands (with easier control at IAS entry points) and governance for areas with terrestrial continuity.	But they exist mostly in islands... :-)
Tom West	Chapter 6	57	2038	57	2075		reference to EU Regulation amended. Concerning the Barcelona Convention, please replace with following -> adopted an Action Plan concerning species introductions (UNEP/DEPI/MED IG.22/28 (Decision IG.22/15), pp. 602-611) that repeats (nearly verbatim) the Action Plan adopted in 2003 (http://www.unep.org/regionalseas/publications/brochures/pdfs/invasive_alien_brochure.pdf). The contracting parties to the Barcelona Convention, individually or jointly failed completely to effectively manage the introduction of marine alien species.
Louise Willemen	Chapter 6	57	2038			Give full name IAS	added
Allan Watt	Chapter 6	57	2073			A lovely phrase but the sentence probably should be re-worded.	thank you - changed
Germany	Chapter 6	58	2081	58	2082		You are right, but many member states behave this way. A critique of Regulation 1143/2014 should point out its devious 'Catch 22': it excludes wide spread invasive species from mitigation of adverse impacts, yet demands high level of certainty concerning proof available only when an alien population is well established and numerous enough to cause impact - and then of course it is too late to "prevent, minimise or mitigate" these impacts. It is a perfect 'do nothing' Regulation - it is either too late to act, or there are not sufficient evidence to act upon.
Germany	Chapter 6	58	2081	58	2082	The scope of the Regulation 1143/2014 is "inclusion on the Union list would effectively prevent, minimise or mitigate the adverse impact of those species in a cost efficient manner". Therefore invasive species already present and wide spread are not within the scope of this regulation - which does not mean the EU legislation failed. This should be clarified.	

Agnes Hallosserie	Chapter 6	58	2085	58	2086	This is ambiguous for me: does 4) suggest that use of herbicides and insecticides to eradicate IAS should expand, based on best practice exchange, or does it suggest that the use of herbicides and insecticides to eradicate IAS is harmful to non-target species and that these products should therefore be used with special care, hence the idea of best practice exchange?	rephrased: 4) The need for harmonization of national legislations targeting use of herbicides or insecticides and therefore allow transfer of best practice management (use of chemical treatment) across boundaries.
Agnes Hallosserie	Chapter 6	58	2089	58	2114	Such a subsection is excellent, clear and very relevant for decision-making. Could there be a section "options for decision-makers" for each of the points made in Chapter 6 (throughout 6.4, 6.5 and 6.6)?	This will be quite long text... therefore we would like to keep it as it is
Germany	Chapter 6	58	2097	58	2097	As the EU legislation is not in place within the EU yet, it is far too early to review it. First the EU list of invasive species and the respective measures "to prevent, minimise or mitigate the adverse impact of those species in a cost efficient manner" should be in place within the EU for some years before an evaluation should take place, which could lead to a review of the EU IAS legislation.	It is already in place and we have some first experiences. And they confirm our statements...
Germany	Chapter 6	58	2116	60	2166	The content of this sub-chapter does not comply with the heading - this is a methodological analysis of different instruments and tools rather than the description of the transboundary challenges	Section 6.5. is now being incorporated into section 6.3 under subsection (6.3.5). This has meant a change in focus and the sections on each shortened and reorganised under the headings (when relevant) of: Binding legal instruments, environmental rights approaches, Soft law instruments and capacity building, Intergovernmental organizations and Private/business initiatives
Sigrid Kusch	Chapter 6	58	2117	59	2146	Ecological Footprint is discussed in chapter 2 of the report. The two sections should be cross-checked and might be merged.	Given overlaps, this sub section has been removed following incorporation of this section into 6.3
Allan Watt	Chapter 6	58	2119			Overlap with earlier Chapter (on ecological footprint).	this sub section has been removed following incorporation of this section into 6.3
Tom West	Chapter 6	58	2119	59	2123	The footprint is not a literally physical transboundary problem, but one caused by global trade. Not to say that it is not worth discussing, but this probably needs spelling out, especially as the entirety of this subsection is devoted to this indirect transboundary impact.	this sub section has been removed following incorporation of this section into 6.3
Agnes Hallosserie	Chapter 6	59	2136	59	2146	Could we have some figures of the average ecological footprint of citizens from countries across the ECA region (maybe one representative country for each subregion)? It could also be interesting to see whether ECA citizen's ecological footprint is affecting ECA region itself or whether the pressure is borne in other areas of the world (through product importation or waste exportation for example). (Maybe this belongs to Chapter 4?)	this sub section has been removed following incorporation of this section into 6.3
Rob J.J. Hendriks	Chapter 6	59	2139	59	2146	More clearly indicate which are the strengths and which are the shortcomings. And why so?	this sub section has been removed following incorporation of this section into 6.3
Allan Watt	Chapter 6	59	2147	59	2159	Supporting evidence / references needed.	this sub section has been removed following incorporation of this section into 6.3
Rob J.J. Hendriks	Chapter 6	59	2147	60	2166	What's the relevance to governance or decision making here? Perhaps this is a bit too technical?	this sub section has been removed following incorporation of this section into 6.3
Rob J.J. Hendriks	Chapter 6	59	2156	59	2158	What kind of emissions?	this sub section has been removed following incorporation of this section into 6.3
Germany	Chapter 6	60	2167	75	2705	Alternative: the issues discussed here are highly relevant and important for policy makers, but the presented discussions remain at a rather broad level. This does not allow any insights into more specific political difficulties or the decision-making realities. Please try to focus the discussion more and avoid too general literature.	We have now included more examples to show the specific difficulties of decision making related to the different instruments (see sections for legal and regulatory, economic and financial, social and cultural as well as rights-based and cultural instruments).
Louise Willemen	Chapter 6	60	2167			Section 6.6 to me is the key section of this chapter.	no comment
Ram Pandit	Chapter 6	60	2167	74	2705	I think this section is needed, but in a succinct form. Also, it could cover the issues raised in the previous section, so there is a room to streamline different sections within 6.4.	We decided to maintain the structure of the sub-chapter, while attempting to better link it to the former sections of chapter 6.
Louise Willemen	Chapter 6	60	2168			Explain link Aichi target and IPBES.	The link will be explained for all chapters in the introduction of the assessment.
Tom West	Chapter 6	60	2178	60	2178	It would be good to start by being clear about what 'mainstreaming BES' means - transforming BES from a niche sector to an issue that is relevant to all government departments and policies. As such, BES should affect a wide variety of public and private decision-making.	We now start the subchapter by defining 'mainstreaming': Mainstreaming biodiversity and ecosystem services aims at transforming both from a niche concept to an issue that is relevant to all policy and decision making levels. This comprises vertical and horizontal integration as well as the involvement of stakeholders (Schleyer et al. 2015).
PESC-3	Chapter 6	60	2196	62	2257	Make a stronger case for the need to adopt an integrative approach. Take section 6.6.1 in the introduction of the chapter. A key message from the chapter should be that it is impossible for each sector to achieve sustainability and biodiversity and ES goals if they keep having their own instruments. Hence the chapter focuses on tools for integrated policies, and only give examples of what has been done to date in various sectors.	We agree that the integrative approach is important. Therefore, we mention the integration across sectors several time in the introduction of chapter 6. Further, we now include the key message as suggested by the reviewer in the first paragraph of 6.6.1. However, we did not follow the reviewer to additionally move the whole section 6.6.1 to the introduction because it would change the elaborated structure of the chapter.
Tom West	Chapter 6	60	2200	60	2202	Do we really need to be told this at this stage? It's distracting.	We have now deleted this sentence.
Allan Watt	Chapter 6	61	2207	61	2209	But conflicts should not be ignored in the search for win-wins (and see the literature on conflict).	We now mention that conflicts increase with potential demand for ES, and present some conditions for a successful conflict solution in the first paragraph of 6.6.1
Mark Snehlage	Chapter 6	61	2207			Might add references: (CoR 2014, Davis et al. 2014); Davis, M., H. Gerdes, Muehlmann, P. and H. Robrecht (2014) Multilevel-governance of our natural capital: the contribution of regional and local authorities to the EU Biodiversity Strategy 2020 and the Aichi Biodiversity Targets-Part A: Analysis and case studies & Part B: Recommendations. ICLEI / Ecologic. http://cor.europa.eu/en/documentation/studies/Documents/Multilevel-governance-of-our-natural-capital-PartA.pdf ; CoR (2014) Committee of the Regions Multi-level governance of our natural capital: local and subnational governments' contribution to the EU Biodiversity Strategy 2020 and the Aichi Biodiversity Targets. Committee of the Regions, Brussels, Belgium http://cor.europa.eu/en/documentation/brochures/Documents/Multi-level-governance%20of%20our%20natural%20capital/2299-Brochure-Biodiversity.pdf	We now include recommendations provided by Davis et al 2014 (1. paragraph in 6.6.1)
Douglas Nakashima	Chapter 6	61	2212	61	2217	"Policymaking needs to recognize the holistic nature of socio-ecological systems. Integrated policies have to be designed and implemented, requiring policy integration within and across different economic, policy and societal sectors. Coordination needs to be improved among international institutions and across decision-making levels, taking due account of regional, national and sub-national requirements, scientific as well as local communities' and indigenous peoples' knowledge, as well as different socio-cultural contexts and related value systems." EXAMPLE: Kittl et al. 2006 (Sweden and Finland): (p144) "When considering the sustainability of resources from the Sami point of view, one is dealing with a holistic issue. Thus it is critical to take into account that concept of an environment consisting of several aspects, including the ecological, cultural, social, and linguistic. These factors make up the whole and must therefore be seen as a single entity (Helander 1996)." (p159) "This study has shown that the quality of pastures is dynamically and contextually determined. It has also demonstrated that quality is defined via a complex set of interactions between environmental and anthropogenic factors. However, for the relevant government authorities, quality has been often, and is still to a large extent, determined by a carrying capacity model, which compares the number, density and slaughter weights of reindeer against prevailing land-cover classes visible in low-resolution satellite imagery. By focusing on biological indicators, such an approach overlooks several other influences that are used on an ongoing basis by herders for determining the overall "quality" of pastures - or perhaps more appropriately, grazing conditions." Roturier & Roué 2009 (Sweden): (p1961) "The Sa' mi herders believe, however, that the forestry sector does not adequately consider their interests. Conversely, forest managers often consider herders' practices and demands to be both difficult to comprehend and to satisfy. For these reasons, it is essential to examine how the Sa' mi herder's body of knowledge concerning reindeer herding and their local environment is structured." (p1963) observations from a herder: "A pine-heath was clear-cut 15 years ago, and is now a young forest with a lot of lichen on the ground. There is a mature forest located next to it, with more diverse vegetation; bilberry, lingonberry and only a few spots of lichen. In a normal winter, the reindeer graze in the younger forest, where the lichen coverage is continuous, even if the lichen is very short. But if the snow freezes to ice in the younger forest but not in the mature forest, then the reindeer will graze in the mature forest where there are only spots of lichen. That's why we need different types of forest. That's why we want to take care of the last lichen-rich pine forests that we have because the snow conditions are never the same from year to year. (L.-E. Nutti, pers. comm., Sept 02, 2008)"	We now include the following sentence and references: "The relation between the forestry sector and Sami herders in Sweden can be seen as an example, where neglecting the holistic character (including biological, geographical, climatic, socio-economic and management issues) and a missing mutual understanding of the problem can aggravate conflicting situations (Kitty et al. 2006, Roturier & Roué 2009)"
Douglas Nakashima	Chapter 6	61	2212	61	2217	Fernández-Giménez & Estaque 2012 (Spain): (p295): "In this example, local pastoralists saw a need for a change in management based on their observations of changing resource availability due to shrub encroachment, initiated the change by requesting an updated management plan, and worked closely with the government-contracted technician to provide the best information on actual conditions based on their local knowledge of vegetation distribution and actual grazing use patterns." (p295) "Local knowledge of how to keep the mountain landscape "clean" using traditional methods such as firewood cutting, logging, and small-scale artisanal burning, could help communities to address undesired shrub encroachment and increased wildfire risk, as well as potentially providing supplemental income for some residents. At minimum, herders' knowledge of the landscape and how to burn and tend the forest and pastures would be invaluable information for planning large-scale mechanical treatments or prescribed burns if these are undertaken by the government." (p296-297) "Our interviews also revealed that herders use various indicators to evaluate pasture quality and conditions, particularly vegetation characteristics (fino, basto, fuerte and fojo), as well as indicators of animal condition and behavior. These indicators could be integrated into a monitoring scheme to track pasture conditions in relation to livestock use patterns, weather and other relevant variables, such as recreational use." (p297) "Pyrenean pastoralists' TEK includes the knowledge and skills to manage mountain vegetation using fire and other tools to limit shrub expansion and maintain desired forest densities. With recent socio-economic and regulatory changes, this knowledge has fallen into disuse and may be lost. However, these skills are potentially valuable to maintaining the landscape in a socially desirable state, with a heterogeneous mix of different habitat types that supports biodiversity, reduces wildfire risk, provides the aesthetic and cultural values that sustain tourism and a high quality of life for rural residents, and is compatible with a sustainable pastoral economy. We suggest that local and regional authorities consider relaxing regulatory constraints to allow for continued use of these traditional landscape management skills in a way that meets social and environmental goals, and prevents the loss of this traditional knowledge. One potential mechanism could be stewardship contracting, in which local residents would be contracted by the Government of Aragón to carry out vegetation management projects in each valley."	We feel that the relevant paragraph as written now is quite balanced and mentioning the relevance of ILK next to other knowledge forms and thus not well suited to go into more details regarding concrete ILK practices. However we will in the final draft re-consider these recommendations once more for section 6.5. e.g. the agricultural sector
Allan Watt	Chapter 6	61	2219			See also review: Identifying, managing and monitoring conflicts between forest biodiversity conservation and other human interests in Europe (Niemela et al. 2005).	We now include Niemela et al. as a reference and mention the different dimensions of conflicts in the third paragraph of 6.6.1

Tom West	Chapter 6	61	2221	61	2221	What does it mean to contribute to the WFD? To contribute towards achieving the objectives of the WFD?	We meant the contribution to achieve the objectives and have rephrased the sentence accordingly.
Mark Snethlage	Chapter 6	61	2236			"free-conflict mineral trade" should surely read "conflict-free mineral trade"?	Sure! We adapted the text accordingly
Agnes Hallosserie	Chapter 6	61	2242	61	2242	I understand policy mix and policy mix analysis are core concepts throughout this Chapter but it is still not clear to me what it really relates to. A box with definitions and maybe an example would be useful when first mentioned in the Chapter.	Policy mix' is first mentioned in chapter 6.1 (lines 344-365 of the first order draft). There, we explain the term in the context of different policy instruments and give examples.
T. Hilding-Rydevik	Chapter 6	62	2251	62	2257	The vast discussion on effectiveness of EIA and EIA is lacking here. How to define effectiveness, instrumental rationality etc. Large potential in theory but not always effective in practice.	Besides the assessment of EIA and SEA provided in Box 6.2, we inserted a cross reference to the new section 6.6.2.2 'Spatial Planning', where both instruments are discussed further.
Rob J.J. Hendriks	Chapter 6	62	2254	62	2257	Cross reference to para 6.4.6?	We inserted a cross reference to the new section 6.6.2.2 'Spatial planning'
Allan Watt	Chapter 6	63	2269	66	2378	Very important section but the text suggests a huge gap between this and other topics discussed in this Chapter. Mention of strong and weak sustainability, for example, will come as a surprise to most readers not familiar with this debate within the world of economists. The topic of natural capital accounting is, surprisingly, barely mentioned, and not only would a more thorough treatment of the work done in the UK and elsewhere on natural capital accounting fit into the context of the Chapter better but is also much more relevant to the assessment.	We have added a more detailed discussion of weak vs. strong sustainability in lines 2418-2429. We focus on "natural capital accounting" throughout the sub-section referring to it as either "green accounting" or "environmental accounting" within the framework of "wealth accounting". We gave examples of the work done in the UK and the Netherlands (lines 2369 & 2471-72) in regards to natural capital accounting.
PESC-3	Chapter 6	63	2270	77	2786	We suggest to focus the chapter on tools for integration across sectors: - policy mix - national accounting (6.6.2) - SEAs and EIAs (Box 6.2) - sustainable consumption and production (6.6.3) - spatial planning - integrated land management - integrated river basin management - integrated coastal zone/water management	Thank you for the suggestion, we have developed these aspects in section 6.3 and 6.6. and will continue to assess the role of policy instruments for different purposes, among them integration across sectors in the next round.
Tom West	Chapter 6	63	2272	63	2276	These concepts need more thorough explanation. In particular, why is consumption tied to outcomes and capitals to capabilities?	I deleted this paragraph as the concepts are extensively explained throughout the rest of the subsection.
Tom West	Chapter 6	63	2280	63	2280	What are these caveats and limitations? But again, first tell us what it is and how it works before critiquing it.	The limitations as well as what it is and how it works is now explained in the first paragraph of 6.6.2.1
Tom West	Chapter 6	64	2285	64	2285	Is it really the case that this is the only way to address intergenerational equity?	This sentence has been deleted as we find it unnecessary.
Tom West	Chapter 6	64	2286	64	2294	There seems to be some swinging between measuring and valuing flows (ie ecosystem services) and stocks (ie natural capital) here. More clarity over these two issues is needed. This could be achieved by setting out the two concepts and introducing them clearly.	The corresponding lines focus on "stocks" or "changes in stocks". Hence we deleted the term "ecosystem services". On the other hand, the paragraph on WAVES focuses on the efforts to incorporate "flows" (i.e. Ecosystem services) into accounting.
Agnes Hallosserie	Chapter 6	64	2290	64	2294	Could you spell out the acronym ANS when used for the first time? It would also be useful if you could extract the World Bank data on ANS for the countries of the ECA region and present a synthesis of these.	As suggested, we now spell out ANS in the second paragraph of 6.6.2.1. We have also added a graph to display the ANS of ECA region with respect to the world in line ... however it should be checked whether a similar type of graph or table exists in the previous chapters.
Tom West	Chapter 6	64	2296	64	2303	The issue of substitutability is a really important one here that can't afford to be buried in this paragraph. A fundamental assumption of ecological accounting and valuing multiple ES by one metric (eg €) is that they are substitutable. Tying it to the contested concepts of weak-strong sustainability is not helpful.	We now explain the issue of substitutability in more detail in the 4. paragraph of 6.6.2.1.
Tom West	Chapter 6	64	2306	64	2306	Is biodiversity itself a resource? 'Biological diversity' and 'biological resources' are defined and used separately in the CBD (see Article 2).	We deleted the term biodiversity from the parentheses.
Tom West	Chapter 6	64	2307	64	2307	Are soil degradation and use of pesticides aspects of natural capital? Soil degradation is a process that affects the value of natural capital. Use of pesticides is a human activity that affects the value of services that natural capital can provide (may increase provisioning in the short term, but reduce all in the long term).	We revised the sentence accordingly as follows: "While Hamilton & Hartwick (2014) criticize ANS for being a measure "too broad to be operational", the World Bank's calculations do not incorporate several types of natural resources (such as fisheries, biodiversity and water) and do not capture the processes or activities that affect the value of natural capital or its services (such as soil degradation, use of artificial fertilizers and pesticides)."
Tom West	Chapter 6	64	2307	64	2318	Although fully agree with the criticism of environmental accounts being restrictive, not being able to measure several aspects does not imply that there are no economic values applied to any aspects. The SEEA still falls short of providing actual Total Economic Value.	We make a note of this shortcoming as follows: "However, the SEEA still falls short of providing actual total economic value."
Tom West	Chapter 6	65	2331	65	2331	What are these conceptual complications?	We make a note of these complications in the text as follows: "Although recognizing that green accounting provides important information, the critique relates to practical drawbacks, such as lacking data, and the variability of methods to determine unit rents/prices for metals and minerals, as well as conceptual complications, such as the issue of attaching a monetary value to natural capital, and defining capital consumption in regards to intangibles (human, social and institutional capital)."
Tom West	Chapter 6	65	2335	65	2335	Would be good to have these defined and their similarities drawn out.	We now address these in the text.
Tom West	Chapter 6	65	2342	65	2344	See Aichi Target 2. I thought the previous para had just suggested that we need to move away from economic valuations.	The previous paragraph summarizes the critiques on economic valuations; however it does not suggest a move-away. This paragraph is about the integration of economic value of ecosystems into accounting and reporting systems.
Tom West	Chapter 6	66	2380	68	2432	Is the idea here to demonstrate how private actors are looking to mainstream BES? If so, this needs to be explained.	No, not so much on how private sectors are looking for mainstreaming BES, but WHAT private sectors can practically do to lower the pressure on BES by biophysical measures. The way HOW these interventions can be promoted and implemented might be answered in preceding sections.
Mark Snethlage	Chapter 6	66	2380			The strategies for reducing the impacts of consumption and production presented in this chapter all seem to fall within the current paradigm of "sustainable growth" (considered an oxymoron by many, e.g. Daly, H., Townsend, K., 1996. Valuing the Earth: Economics, Ecology, Ethics. MIT Press.). What about including an overview of options for reducing impact related through a move towards a Steady-State Economics (Daly, 1996); new economics of prosperity (Jackson, 2009, NEF, 2009 and Schor, 2011); or Degrowth (Latouche, 2009 and Martinez-Alier et al., 2010). For a discussion (and further references) of these approaches, see Kallis, G., Kerschner, C., Martinez-Alier, J., 2012. The economics of degrowth. Ecological Economics, 84, 172–180. doi:10.1016/j.ecolecon.2012.08.017 http://www.sciencedirect.com/science/article/pii/S0921800912003333	This is an interesting suggestion, related to the A in the IPAT principle (Affluence, or consumption change), and has been added to this section.
Germany	Chapter 6	67	2380	75	2705	In sub-chapter 6.6.3 and 6.6.4 a few case study findings would be helpful. The text refers mainly to more generalized research findings that lack indications on action that may generate positive outcomes.	Section 6.6.4 assesses the effectiveness of policy instruments. Mentioning concrete cases will be considered if informative and appropriate in the final draft.
Sigrid Kusch	Chapter 6	66	2391			In line with the waste management hierarchy, this should be rewritten/ rearranged to 'reducing waste, re-use, recycle', and it would make sense to add 'responsible disposal of unavoidable waste'. Poor waste management practices still exist throughout the region and cause burden to the environment, endangering ecosystem services.	Thank you for the suggestion, we rewrote accordingly. (See list of intervention types)
Sigrid Kusch	Chapter 6	66	2399	66	2402	Delocalisation is indeed a topic, especially for the EU where many resources are imported, resulting in high ecological rucksacks/'hidden flows' in other regions. However, calling for application of a "consumer responsibility approach" is at least unclear here or misleading without further explanation (what is the consumer??). Note that "consumer" is used in the sense of "final consumer" later in this section, and also to differentiate between consumption and production stages in the value chains. The so-called "consumer responsibility approach" is not a common approach, but probably refers to consumer in the sense of "region making use of resources for its economic activities" rather than in the sense of "final consumer".	What is meant by "final consumer" approach is that impact is not calculated per step or actor in the supply chain but over all steps and actors contributing to the endproduct, avoiding ecological footprints or 'hidden flows'.
Sigrid Kusch	Chapter 6	67	2415	68	2431	Please consider replacing supply-chain perspective, supply chain, etc. by life-cycle perspective, life cycle, value chain, etc.	In this section we do not consider the entire life cycle also including the waste and recycling phase, but the production phase, only.
Germany	Chapter 6	67	2425	67	2428	We look forward to the SOD for the fully elaborated table. We would appreciate more information going beyond sustainability standards.	Table covers more than sustainable production and consumption as it aims to give an overview of all policy instruments. Thus, the table has been removed. The contents is no covered by Table 6.2 in chapter 6.2.
Agnes Hallosserie	Chapter 6	68	2433	75	2705	I think section 6.6.4 could appear much earlier in the Chapter. As it refers to the typology of instruments that are detailed in section 6.4, it could be moved just before or after section 6.4, to be a synthesis of what is presented in more details for each sector.	Thank you for the comment, 6.6.4 also take other aspects than sector policies into consideration (consumption and production) why we would like to keep it as it is. However the final decision will be made after having considered all other rearrangements in the chapter in the final draft.
Douglas Nakashima	Chapter 6	68	2433			6.6.4. Assessment of policy instruments	no comment
Douglas Nakashima	Chapter 6	68	2433			Babai & Molnár 2014 (Romania): (p129) "Being strictly focused on promoting land use, and ignoring local traditional ecological knowledge, current policies weaken the traditionally strong bounds between the systems of people and nature in traditional rural landscapes. If subsidy systems could appropriately interpret local ecological knowledge, they might encourage the maintenance of traditional land-use systems, and at the same time, the survival of the highly valued semi-natural grasslands." Flannery & Ó Cinnéide 2008. Spatial planning from the perspective of a small seaside community in Ireland.	We have now taken this aspect into account and included the reference in the text (paragraph on price-based mechanisms)

Douglas Nakashima	Chapter 6	68	2433			<p>Agnoletti 2006: (p23) "The conservation of landscape mosaics originating from traditional practices linked to the management of wood pastures, chestnut orchards, pastured woods, various forms of coppices, as well as hedges, tree rows and managements of single trees (e.g. pollarding, shredding etc.), or the conservation of veteran trees, are all financed. These measures are at least partly consistent with those of the working group on biodiversity, which also stresses the need to reduce the increase of forest land on pastures and afforestation. However, the scope for restoration of landscape diversity is limited due to the legislation forbidding, or strongly limiting, the possibility of converting woodland to former pasture or field conditions."</p> <p>Fernández-Giménez & Estaque 2012: (p286) "At the scale of the European Union, agro-environmental subsidies for extensive livestock production in mountain areas, such as Los Valles Occidentales, are currently a mainstay of herders' incomes, with most of the stockmen obtaining half or more of their livestock-based income from these payments rather than sales of livestock products. Under current economic conditions, these subsidies are essential to the continuity of pastoralism in Los Valles, and thus to the continued application of TEK. Subsidies that target extensive livestock production encourage and support the use of transhumance and the TEK embedded within this practice. However, stockmen's dependence on these payments also makes them vulnerable to changes in EU policy. Unless stockmen can reduce their production costs and increase the value of their livestock products, the future of the industry is largely in the hands of distant policy-makers. Rebalancing the economics of production, in turn, requires greater economic cooperation locally."</p>	<p>We have now taken both aspects into account and included the reference in the text (paragraph on (i) legal instruments and (ii) price-based mechanisms)</p>
Germany	Chapter 6	68	2433	75	2705	<p>what about creating a table where all the mentioned mechanisms and instruments are listed for the different countries, e.g. does Uzbekistan have certification standards - yes/no; does Georgia have environmental reporting mechanisms - yes/no; this could help the governments to see where systems could be improved</p>	<p>Although principally a good idea, we refrained from including such a table due to the high number of countries and a lack of specific data.</p>
Louise Willemen	Chapter 6	68	2433			<p>We added Science & Technological instrument on BES matters to the list of policy instruments. Eg to develop an education system for interdisciplinary research, include ES topics in National research grants.</p>	<p>Table 6.2. presents the different policy instruments. There we mention "Education/Training" as an example of social and cultural instruments, and "Technology Requirements" as a legal and regulatory instrument. Thus, agree with the reviewer that these aspects are important however we did not dedicate a separate category of instruments to them.</p>
Tom West	Chapter 6	68	2436	68	2438	<p>But this has been the challenge taken on by this chapter.</p>	<p>This sentence is just ment to emphasize that in general assessing policy instruments is challenging, and even more so with regard to BES.</p>
Tom West	Chapter 6	68	2439	64	2437	<p>Uncertainty over what? What the rules are? What the scientific analysis is?</p>	<p>We refer to the scientific analysis, (e.g. the ecological production function or bio-physical trade-offs). We now mention this in the first paragraph of 6.6.3</p>
Tom West	Chapter 6	68	2447	74	2658	<p>Surely this level of analysis is needed towards the start not the end?</p>	<p>Thank you for the comment, 6.6.4 also take other aspects than sector policies into consideration (consumption and production) why we would like to keep it as it is. However the final decision will be made after having considered all other rearrangements in the chapter in the final draft.</p>
Germany	Chapter 6	68	2447	75		<p>Chapter 6.6.4.1: The role of the legal instruments should not be played down or mixed with other instruments. The mandatory compliance with legal standards leads to improved solutions than the voluntary market-based approaches. Please recheck the text.</p>	<p>It is not our intention to 'downplay' the role of legal instruments. In contrast, we explicitly say that they are often 'first choice', 'permit fast and direct response', are still the 'dominant factor'.... Besides, a multiple approach seems to be promising, combining regulatory and market-based approaches. In case the reviewer would provide unsuccessful or negative examples concerning this multiple approach, we would be glad to include them in the text.</p>
Agnes Hallosserie	Chapter 6	69	2452	69	2452	<p>Legal and regulatory instruments are not always a fast and direct response... There are many up and downs to go through as part of the legislative process at the national level.</p>	<p>We agree and rephrased accordingly: "it is supposed to permit..."</p>
Tom West	Chapter 6	69	2459	69	2459	<p>This contrasts with the claim that there has been a transition to private governance in 6.4.9.</p>	<p>Our finding that 'transitions ... are visible in all sectors' does not necessarily contradict the statement that 'traditional environmental monitoring and enforcement ... is still the dominant factor. Moreover, we emphasise that there are differences between sectors.</p>
Agnes Hallosserie	Chapter 6	69	2470	69	2472	<p>This should be in the key messages of the executive summary.</p>	<p>Thank you, this is considered in the executive summary (need for policy mixes) however it will be further elaborated on in the final draft.</p>
Tom West	Chapter 6	69	2470	69	2471	<p>With what kind of regulation? All kinds? Or conservation regulation? Looking into the source, it states that the value (-2 to +2) for 'regulation' (variable 21) was based on: "List the binding and nonbinding multilateral agreements that influence nature policy either positively or negatively and the key legislation used to manage biodiversity at national level; identify the most important nonenvironmental legislation that impacts biodiversity; is licensing for use allowed; what is the level of enforcement and compliance with each of the identified pieces of legislation and regulations?" (Supporting Information). It seems strange to analyse the effectiveness of laws without stating which laws are being analysed.</p>	<p>The results are based on 34 (local and international) case studies, which means that the involved laws and regulations are quite heterogeneous. Thus, the specific regulations are assessed against their specific background. Although more informative, we suppose that listing all laws and regulations completely would go beyond the scope of the publication.</p>
Douglas Nakashima	Chapter 6	69	2478			<p>6.6.4.2. Assessment of economic and financial instruments Culdinova et al. 1999. (Czech Republic): (p71) "Our qualitative analysis is based on interviews with farmers in S Ůmava Mountains to ascertain their opinions and experience with ecological subsidies as a new form of state support. The main reason that the ecological subsidies are falling appears to be because they ignore the social factor: the recipient of the subsidy. Most of the subsidies are awarded to businessmen ('new experts') who have no ties with the landscape or with its values and management."</p>	<p>We have taken up this example in the second paragraph of 'price-based mechanisms'</p>
Tom West	Chapter 6	69	2486	70	2509	<p>I think this section is trying to talk about PES. Would it not be more straightforward to introduce what PES is, how it works, and then discuss some of the problems with it?</p>	<p>PES is one instrument among other price-based instruments (as defined at the beginning of 6.6.3.2). Thus, our approach is broader. However, we agree that PES is important and now introduce it in the second paragraph of 'price-based mechanisms'</p>
Tom West	Chapter 6	69	2487	69	2492	<p>(1) It is correct that correcting market failures is not enough to prevent biodiversity loss on farms - actions by actual farmers are also needed, but "favourable conditions ... created by appropriate institutions" are the former not the latter. (2) By the definition of 'effective' in line 2443, effectiveness is not dependent on environmental benefits being distributed to those who bear the costs. It is only necessary for there to be an environmental benefit. One could argue that to be socially equitable, the beneficiary (or polluter) must pay, but this can clearly be arranged through economic tools such as PES and taxes.</p>	<p>(1) We agree that 'appropriate institutions' can correct market failures and create 'favourable conditions', and rephrased the text accordingly. (2) Effectiveness compares in how far a specific goal is achieved or not. Equity and efficiency aspects are explicitly excluded. We take up the question, how equity can be achieved by implementing economic instruments in chapter 6.2.</p>
Tom West	Chapter 6	69	2493	69	2494	<p>Would be good to have some examples of economic instruments that do rely on markets and monetary valuation, and some that do not.</p>	<p>We have now included some examples: According to Hahn et al. (2015) economic instruments do not necessarily have to rely on markets or monetary valuation, such as taxes or subsidies. However, most are associated at least to some degree with commodification, e.g. market-based payments for ecosystem services (PES). (second paragraph of 'price-based mechanisms')</p>
Tom West	Chapter 6	70	2498	70	2498	<p>Again, these conditions are not necessary for the test of 'effectiveness' as set out in this report, which only requires that there is an improvement to the environment. I think the distinction in the report is a good one, but it should be followed through with.</p>	<p>We rephrased the text, now mentioning that the conditions concern 'efficiency', but not necessarily effectiveness. (second paragraph of 'price-based mechanisms')</p>
Tom West	Chapter 6	70	2500	70	2502	<p>That government policies might change and funding might run out is a much bigger problem - it affects all governance.</p>	<p>We now mention that "it might reduce credibility of market-based instruments and environmental governance as a whole." (second paragraph of 'price-based mechanisms')</p>
Tom West	Chapter 6	70	2510	71	2539	<p>Again, this section seems to be about biodiversity offsetting. So it would make sense to call it that, introduce the concept, then discuss some of its advantages and disadvantages.</p>	<p>We now mention 'biodiversity offsets' explicitly before discussing them. See 'quantity-based mechanisms'</p>
Germany	Chapter 6	70	2511	71	2539	<p>Tradable permits and habitat banking should not obscure that significant impacts on biodiversity result in irreparable damage to nature and landscape. The principle of avoidance of damages should come first. Against this background, the role of these instruments should be further discussed.</p>	<p>Citing Bull et al. (2013), we now mention that there are conditions, such as substantial ecological uncertainty or doubtful compliance, under which avoiding damages can be more appropriate.</p>
Tom West	Chapter 6	70	2513	70	2514	<p>They are also rather controversial.</p>	<p>We discuss the controversial aspects below in the same paragraph. See 'quantity-based mechanisms'</p>
Tom West	Chapter 6	70	2514	70	2517	<p>Some of their many problems are: the lack of an appropriate metric; the lack of legal safeguards for offset areas; the lack of protection of non-fungible habitats; the treatment of diverse nature as monotonous.</p>	<p>We now include these aspects in the text. See 'quantity-based mechanisms'</p>
Allan Watt	Chapter 6	71	2539			<p>There should be mention of relevant (no net loss) policy in Europe and work done on this topic.</p>	<p>We now mention that the idea of 'biodiversity markets' is still at an initial stage and there are only very few programs developing, mainly in western Europe (EU, France, Germany, Sweden, and UK) (Madsen et al. 2010, 2011) See 'quantity-based mechanisms'</p>
Douglas Nakashima	Chapter 6	71	2540			<p>6.6.4.3. Assessment of social and cultural instruments Certification of resource production and trade Agnoletti 2006: (p22) "The market value of wood products, but also traditional foods coming from the forest, cheese coming from wooded pastures, as well as tourism, can be strongly supported by the added value of the cultural landscapes from which they are derived. This is a crucial factor in the increasing competition at national and international market level. Landscape resources represent a unique factor of competitiveness for each country or region that cannot be reproduced by a competitor in another country. This is particularly important for typical products. A cheese produced in a specific landscape pattern can increase its market value if the producer is also caring for the conservation of the cultural landscape."</p>	<p>We now mention that, sector specific certification standards, e.g. in forestry, do not consider the conservation of cultural landscapes as a whole. Maintaining landscape mosaics by using traditional production patterns and local knowledge can increase the competitiveness of goods, such as cheese or fruits, on national and international markets, while contributing to local diversity and autonomy (Agnoletti 2006, Demulenaere and Bonneuil 2010). see third paragraph in 6.6.3.3</p>

Douglas Nakashima	Chapter 6	71	2540			Demeulenaere & Bonneuil 2010 (France) [in French]: (p4-5) "From the end of the 1970s, gardeners started to organize themselves to create associations aiming to save and revitalize this biological and cultural heritage: the "Croqueurs de pommes" for example contribute to inventory fruit tree varieties present on the French territory and to foster the diffusion of the most threatened of them, by graft multiplication and training of amateur gardeners to grafting techniques. These initiatives concern mostly vegetable and fruit crops. They are pioneers compared to the regional institutions created in the 1980s to counteract the erosion of the genetic heritage, and value it in local development and agricultural productions diversification programs - a strategy which became urgent in a context of agricultural surproduction crisis, by questioning the validity of an economy based on massive offer of standard quality products" (p7) "[the ambition of the Network Semence Paysannes goes beyond and stands out. "the CNDSF [National Coordination for the Defence of Farm Crops] wants to get back to the farm crops, whereas we want to get back to a complete autonomy on the crop, which means making our own selection, and getting to select in the fields." The criticism is about the orientations and modalities of modern selection, aimed to plant productively only and carried on in agronomic stations with soils artificialised by intrants, and also about the properties of the resulting varieties, too homogeneous and inadapted to the diversity of the cultivation conditions of organic agriculture"			see comment 525
Agnes Hallosserie	Chapter 6	71	2541	71	2547	It could be mentioned here that there is an incentive for private stakeholders to be ahead of the legislation on environmental matters and to adopt standards before they are required to do so by the law. Indeed, it is more likely that if the private sector anticipates the law, the law will align itself on the existing practices. If the private sector doesn't anticipate this, there is a risk that the law will be more demanding compared to what it would have if based on existing, voluntary practices. See for example: Lyon, T.P and J. W. Maxwell (2001) "Voluntary" Approaches to Environmental Regulation: A Survey, in "Economic Institutions and Environmental Policy, ed. M. Franzini and A. Nicita, Aldershot, Hampshire. http://ostromworkshop.indiana.edu/papers/lyon031901.pdf			We now mention this aspect and the reference in the text at the end of the paragraph on certification. We have now include a sentence describing activities of Fairtrade International (incl. Examples from CA). See second paragraph in 6.6.3.3
Germany	Chapter 6	71	2548	72	2587	what about Fairtrade International? They are active in the ECA region			We now show that forestry is the only sector with major certification activities within the ECA region and that intensity differs widely among ECA countries (providing some examples).
Agnes Hallosserie	Chapter 6	71	2556	71	2564	It would be useful to have here figures of the importance of the market for certified products within the ECA region. Is there a high demand from consumers? Does the offer of certified products meet this demand?			We now include an example of joint knowledge production of Hungarian herders and scientists as a positive example. See last paragraph in 6.6.3.4
Agnes Hallosserie	Chapter 6	74	2649	74	2657	This paragraph is a bit generic and theoretic: could you make it more concrete and more specific to the ECA region with one or two examples?			We checked and adapted the sentence.
Rob J.J. Hendriks	Chapter 6	74	2649	74	2653	Long sentence. Grammatically correct?			We now include the example of 'hunting vs. conservation' based on Redpath et al. 2013 and refer to Redpath et al. 2015 stating that such conflicts comprise "a complex layering of diverse issues related to different world views, issues of trust, power imbalances or latent historical issues". (see last paragraph in 6.6.3.4)
Allan Watt	Chapter 6	74	2655	74	2658	Is work done on conflicts relating to hunting and conservation also relevant here? See chapters in Conflicts in conservation: Navigating towards solutions (Redpath et al. 2015)			We now include this aspect in the text: Molnar et al (2016) agree that -instead of being the source of conflicts -indigenous peoples can often provide "opportunities to learn about a potentially more sustainable use of natural resources". (see last paragraph in 6.6.3.4)
Douglas Nakashima	Chapter 6	74	2655			6.6.4.4 Assessment of rights based instruments and cultural norms BALANCE comment about "conflicts often occur", e.g. - Molnar 2016 (Hungary): "Traditional peoples are not a source of conflict, but in many cases they provide opportunities to learn about a potentially more sustainable use of natural resources ... They may help us pinpoint incentives and policies that are harmful to biodiversity and ecosystem services, and prevent misinterpretation of the local effects of policies and other drivers"			We checked the website: www.inco-ca.net and www.increast.eu , and now make a reference concerning this initiative: "Concerning Central Asia, a recently finished EU FP7- research project analysed the policy mix in the field of science and innovation. This peer review exercise could possibly serve as an example for a similar initiative related to BES." see third-last paragraph in 6.6.3.5
Germany	Chapter 6	74	2659	75	2705	Policy Mix peer review exercises have been implemented for Moldova, Kazakhstan, Kyrgyzstan, Georgia and Armenia in the field of Science and Innovation in the frame of EU projects (under FP7) and upon the request of the local governments; such exercises could be transferred to the topic of biodiversity/ecosystem management as well			We now include the following sentence: Combining scientific evidence with legal, political and social institutions can be a promising approach for balancing environmental protection and development. See second paragraph in 6.6.3.5
Asimina Skouteri	Chapter 6	75	2682			In fact when there is real strong independent and ethical political view, in combination with scientific evidence and legal, political and social barriers, the public can be interested more in implementing and supporting the future policies that equally balancing between environmental protection and growth and development.			A detailed example based on the policy architecture of the 2013 CAP reform for designing policy instruments has been added to the text in the section 6.6.4.3 Designing instruments and policy mixes
Germany	Chapter 6	75	2707	77	2786	this sub-chapter is the key of the assessment; in this view it is too theoretical; here some concrete options could be named/grouped; e.g. for raising awareness - "good practice examples" and approaches could be described; biodiversity year, activities, fairs, textbooks for schools, farmer trainings, competitions for communities...; designing instruments - again good practice examples representative for the different sub-regions will be helpful; also looking at transboundary policy objectives...			In the section 6.6.4.2 (third paragraph) it has been added: "For what regards the achievement of a sustainable level of socio-economic activities, the information on thresholds and tipping points in the delivering of ecosystem services should be included in policy instruments such as land use planning, EIA, SEA. This would allow a clear and transparent analysis, at the meaningful territorial scale, of the sustainability of impacts exerted by socio-economic activities in reference to the thresholds or tipping points not to be trespassed in order to achieve the delivering of selected ecosystem services. The information resulting from this type of analysis would be crucial to land use managers, local administrators and decision makers to take policy decision on tradeoffs and/or synergies between benefits from socio-economic activities and those resulting from ecosystem services and to assess their relative effectiveness, efficiency and equity"
PESC-3	Chapter 6	75	2710	77	2786	Highlight the importance and tools available to identify trade-offs and solve conflicts between sectors and the possibility this offers for biodiversity and ES governance. Example of the competing fisheries and mining/oil extraction in the Lofoten islands. It could include example of tools to engage larger shares of the population. Paper available: Nielsson, Griggs and Visbeck (2016) Map the interactions between Sustainable Development Goals, Nature.			The text has been rephrased as follows: "Contributions of the Ecosystem Services concept to policy development and decision making". The acronym ES has been eliminated in the text (see figure in 6.6.4)
Allan Watt	Chapter 6	76	2733	77	2751	See comments about the ecosystem service approach above. I do not think it is helpful to phrase this work in such a way given that the assessment is about (biodiversity and) ecosystem services. Also suggest not using the acronym ES (anywhere).			Result oriented agri-environmental measures are already discussed in the Western agriculture sector analysis. See section 6.5.2
Douglas Nakashima	Chapter 6	76	2735			Winter et al. 2011 (Austria): (p1765) " Nowadays, many agri-environmental scientists favour decentralised programmes based on rewarding results rather than rewarding actions (e.g. Gerowitt et al. 2003; Klimek et al. 2008). Nevertheless, result-oriented contracts as opposed to the prevailing input-oriented contracts are much less common. They offer payments for the delivery of defined "ecological results" (e.g. a number of particular indicator species) and do not oblige farmers to stick to fixed management dates or fertilisation restrictions (cf. Berke and Groth 2009). Outcome-oriented contracts favor measures tailored to the local context based on the farmers' site-specific knowledge on climate, soil and land use, their skills and innovative capacities (Sattler and Nagel 2010). Within these programmes farmers can decide themselves how to manage their grasslands and in that way use their expert knowledge to produce fodder and at the same time ecological goods. Examples of such programmes can be found in the German state of Baden-Wu"rttemberg (MELRBW 1999) or in Switzerland (Oppermann and Gujer 2003; Gujer 2005)." Glasenapp & Thornton 2011 (Switzerland): (p776-777) "The state (Bund) and canton (Graubünden) have significant influence on the management of the land, as they offer financial incentives for the ecological services of farmers. There are mandatory obligations for farmers in the regulations of the "Ökologischer Leistungsnachweis" (ÖLN) (Ecological requirements), which farmers in Vals did not view as burdensome. Furthermore, in Vals there is an ongoing Vernetzungsprojekt (Connect Biodiversity Project), initiated in the course of the land consolidation with the goal of incentivizing farmers to change their practices to benefit biodiversity and maintain cultivation of uneconomic and difficult to access land beyond the mandatory requirements. It further aims to integrate optimization of fodder quality with conservation of biodiversity (Trifolium 2006). Participation is voluntary and each farmer can negotiate his individual contract. In Vals all farmers are taking part in the project. Payments can be received for: 1) mowing or grazing abandoned land; 2) cutting grass late in the season (after 1 August) to provide habitat for ground-breeding birds and ensure the spread of plant seeds (the date can be negotiated depending on seasonal climate); 3) maintaining key elements of the landscape that provide habitat, such as small streams in fields, dry stone walls, small bushes, free standing trees and rocks, and buffer zones when spreading dung to protect streams, moors and forest edge habitats."			Thank you, we will address this when developing the key messages for the final draft. The text has been rephrased as follows: "For instance, the private benefits deriving from the consumption of food (commodity output) and the public benefits relative to the maintenance of cultural identity and aesthetic qualities of a landscape (non-commodity outputs) can be substituted only up to a certain point. Beyond, substitution can lead to catastrophic results. see first paragraph in 6.6.4.2"
Agnes Hallosserie	Chapter 6	76	2745	77	2751	This should be in the key messages of the executive summary.			A thorough explanation on how the selection of policy objectives could be achieved by using information available on ecological thresholds and tipping points has been included now in the text (see third paragraph in 6.6.4.2)
Rob J.J. Hendriks	Chapter 6	77	2758	77	2764	Difficult formulations. Hard to follow the messages here.			The example of the Paris Agreement has been added to the text as follows: "The definition by the Paris agreement in 2015 of limiting the increase in temperature below 1.5-2 Celsius degrees by the end of this century, is an example at global level of the adoption of the above approach for climate regulation (ref.)." (see third paragraph in 6.6.4.2)
Allan Watt	Chapter 6	77	2762	77	2765	Work on thresholds and tipping points needs a much more thorough assessment.			This would be good to have a country-case study to illustrate this point.

Allan Watt	Chapter 6	77	2784	77	2786	Some idea of what these "great opportunities" should be mentioned.	The idea of designing policy based on ecological thresholds to be not trespassed in order to have conservation of biodiversity and the delivering of ecosystem services is included in the text. (see third paragraph in 6.6.4.3) 6.6 end
Allan Watt	Chapter 6	78	2790	79	2868	Presumably this section will be updated. When updated, it would be useful to include mention of the knowledge gaps and uncertainties as perceived by others: currently there are no references in this section.	(6.7 starts)/Thank you for th ecomment. This section summarises the knowledge gaps in the sector analysis. Thus it builds on our findings throughout the chapter. We will continue to develop this section as the assessment evolve.
T. Hilding-Rydevik	Chapter 6	78	2790	78	2790	Maybe "challenges" should be part of the head-line. One challenge is for the environmental and nature conservation community is also critical self reflection in relation to how to contribute to policy integration in relation to BES. How do we frame and represent the BES challenges today and how does this promote integration of BES in sectors outside the environmental and conservation sphere. The ES approach is one part of this - but what more?	Thank you for the suggestions, we have included it in the headline.
Tom West	Chapter 6	78	2792	78	2813	This does not serve as an accurate overview of international environmental governance	This section has been rewritten.
Agnes Hallosserie	Chapter 6	78	2810	78	2813	The challenge of enforcing international law, and even more international environmental law, could be briefly discussed here. There is actually in the EU some successful enforcement e.g. through fines to countries that do not apply environmental directives. See: http://ec.europa.eu/environment/legal/law/press_en.htm	This has been covered in revised section 6.3. The focus of this section 6.7 is challenges, knowlegde gaps and uncertainties and the paragraph has been rewritten accordingly however succesful enforcement is not the topic of this section.
Tom West	Chapter 6	78	2827	78	2828	See (eg) Alexander Gillespie, International Environmental Law, Policy and Ethics (2nd edn, OUP 2014) 99-110; Tom West, 'Environmental Justice and International Climate Change Legislation: A Cosmpolitan Perspective' (2012) 25 Georgetown International Environmental Law Review 129; Birnie, Boyle and Redgwell, International Law and the Environment (OUP 2009) 119-23 and sources cited therein.	We will check the reference for knowledge gaps in the next round.
Sigrid Kusch	Chapter 6	79	2861	79	2864	That would be progress in 'social innovation'. It can be stated as that, e.g. "... consumer oriented policies have to be developed that encourage social innovation with pro-active engagement of citizens in more sustainable consumption practices." Furthermore, what please are "nudging strategies"?	Thank you for the suggestion we have included the sentence in the section and will in the next round better explain nudging-related strategies.