

REGIONAL ASSESSMENT REPORT ON BIODIVERSITY AND ECOSYSTEM SERVICES FOR EUROPE AND CENTRAL ASIA							
Comments external review second order draft - Chapter 6							
Reviewer Name	Chapter / SPM	From Page	From Line	To Page	To Line	Comment	Response
Ilija Gasan Osojnik Črncvec	0	0	0			local and native breeds are two interchangeable terms, for greater clarity, I would recommend only one expression is used for the whole publication.	The two terms address slightly different issues, as local breeds denotes breeds present only in a distinct region, and native breeds denotes breeds which had sufficient time to adapt to specific local conditions.
Brendan Coolsaet	0	0	0			All documents include big differences in the quality of the writing. Everything should be thoroughly proof-read and edited by native speakers.	This has been done throughout
Brendan Coolsaet	0	0	0			Use of genetic resources and Nagoya protocol are notably absent in most of the chapters	Limited or unequal access to NCP or genetic resources is now mentioned where appropriate.
Brendan Coolsaet	0	0	0			For reviewing purposes, it may be useful to indicate the gender-balance and 'discipline-balance' within the group of authors (could be illustrated with a gauge at the beginning of each doc for example). This will facilitate identifying biases	The complete authorship is listed at the beginning of each chapter. Statistics on gender and disciplinary balance are available from the ECA TSU and IPBES Secretariat
Germany	0	0	0			We believe that the regional ECA assessment generally has a comprehensive and scientifically sound structure. However, linkages between the chapters, especially for chapters 6, are not that strong yet. For instance, it is not clear in how far chap. 6 builds upon the findings and insights of the analyses within the previous chapters. While the review work, analyses and evaluations made in these chapters are by themselves very insightful, linking more strongly back to the status and trends chapter as well as the drivers/scenarios/visions and pathways chapters would be very useful. For instance, the 'status and trends' chapter 3 might help identify where policy action is most needed and the 'drivers' chapter 4 determines the underlying drivers which need to be addressed by policy action. Giving more weight to these chapters in the discussion of policy options might help to derive more region-based options. As it stands now, many key messages of chapter 6 are of a more general nature.	A comprehensive attempt has been made to cross-reference the different chapters to ensure consistency between them. All chapter texts were screened for potential opportunities for governance or management action and these opportunities are now mentioned in chapter 6 with reference to the chapter of origin.
Germany	0	0	0			This assessment shows some imbalances regarding a lack of coherence in the use of terminology: This can lead to different understandings and also to misinterpretations. For instance, at its last Plenary, the IPBES had agreed to use the term "nature's contributions to people" (NCP) as a synonym for the term "ecosystem services". Unfortunately, the term NCP is now being used in the assessment frequently in a modified form and therefore inconsistently. This aspect needs to be addressed in the assessment as well as in the SPM.	Terminology was systematically checked across the full report
Germany	0	0	0			There are significant contributions and benefits arising from agro-ecosystems. The increase in food, feed and timber production and resulting food security has been mentioned, but not thoroughly discussed. We would therefore ask the authors to extend this discussion and provide a more balanced perspective on the increase in food security over the last decades. Furthermore, information on traditional varieties and breeds or on genetic resources for food and agriculture is missing. Thus, the contributions of agriculture to the biological diversity in the agricultural sector have not been completely considered so far.	We have attempted to address this comment by taking a more balanced perspective on the relative contributions of nature to people especially with respect to food and fibre provision in chapter 2. We have also increased the treatment of genetic diversity of crops and animal breeds in chapter 3.
Germany	0	0	0			Regarding knowledge gaps - please provide a section at the end of each chapter to present the relevant knowledge gaps that were identified from the reviews (for chapter 3 it's missing). It is referred to in the SPM, p. 81. 233 that relevant knowledge gaps are identified, so please ensure that all knowledge gaps identified throughout the individual chapters are then summarized and assessed in the corresponding section of knowledge gaps and uncertainties towards the end of each chapter.	Knowledge gaps have been identified for each chapter, as well as being summarised as a box in the SPM
Germany	0	0	0			Some of the chapters (particularly 2, 3, 4, 6) are very long and readers easily lose track as to what type of information is currently presented. Please try to synthesize the information as much as possible and if a lot of information is to be presented provide short summaries or highly important findings.	All of the chapters have been reduced considerably in length
Germany	0	0	0			There are still some gaps, placeholders or work in progress in the SOD. This makes it partly difficult to comment. Please fill these gaps effectively.	Gaps have been filled throughout the document
Germany	0	0	0			We urgently request the chapter authors to ensure that all facts and figures contained in the chapters are accurately cited and adequately referenced with up-to-date sources. We also encourage chapter authors to cross-check whether the same facts and figures on a specific topic are being used throughout the assessment. Please make sure that all key messages are backed up by facts and figures.	The use of evidence sources has been comprehensively checked across the document, especially including those that integrate across chapters
Germany	0	0	0			Please explain all abbreviations when first used and then use them coherently afterwards (e.g. ILKP in the SPM)	All abbreviations have either been spelled-out or defined on first use
Belgian government - Hilde Eggermont (IPBES National Focal Point)	0	0	0			All documents include big differences in the quality of the writing. Everything should be thoroughly proof-read and edited by native speakers.	The document has been comprehensively reviewed by native English speakers
Belgian government - Hilde Eggermont (IPBES National Focal Point)	0	0	0			Use of genetic resources and Nagoya protocol are notably absent in most of the chapters	Limited or unequal access to NCP or genetic resources is now mentioned where appropriate.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	0	0	0			For reviewing purposes, it may be useful to indicate the gender-balance and 'discipline-balance' within the group of authors (could be illustrated with a gauge at the beginning of each doc for example). This will facilitate identifying biases	The complete authorship is listed at the beginning of each chapter. Statistics on gender and disciplinary balance are available from the ECA TSU and IPBES Secretariat
Belgian government - Hilde Eggermont (IPBES National Focal Point)	0	0	0			no reference to Nature-based solutions, though very relevant in this assessment (i.e. in the different Chapters and SPM)	The NBS concept is referenced where there is literature and evidence to support its use
Anatolij Khapugin	0	0	0	0	0	Through the whole assessment, there are many cases of mixture English (British+American): e.g. ch.1, p. 12, line 333 (prioritize) vs. ch.1, p. 4, line 83 (recognised), etc. I think, some one of English forms should be used through the whole assessment. Also, there are many mistakes (or it is a lack of standards of formatting) for references style. I would recommend check it through the whole assessment. I didn't add concrete recommendations because I don't know what format of references and references style should be used	The document language has been systematically edited by native English speakers
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0			We would recommend that the IPBES Core Indicator 'Marine Trophic Index' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net. This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Dirk Zeller (email: d.zeller@oceans.ubc.ca).	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0			We would recommend that the IPBES Core Indicator 'Proportion of local breeds, classified as being at risk, not-at-risk or unknown level of risk of extinction' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net. This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Roswitha Baumung (email: Roswitha.Baumung@fao.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.

UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Core Indicator Percentage of Category 1 nations in CITES is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Tom De-Meulenaer (email: Tom.DE-MEULENAER@cites.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Core Indicator 'Nitrogen + Phosphate Fertilizers (N+P2O5 total nutrients)' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Francesco Tubiello (email: francesco.tubiello@fao.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Core Indicator 'Trends in Pesticide Use' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Francesco Tubiello (email: francesco.tubiello@fao.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Core Indicator 'Percentage of Undernourished People' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Carlo Cafiero (email: Carlo.Cafiero@fao.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Wetland Extent Trend Index' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Sarah Darrah (email: Sarah.Darrah@unep-wcmc.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Trends in invasive alien species vertebrate eradications' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Shyama Pagad (email: s.pagad@auckland.ac.nz)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator RAMSAR areas is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Maria Rivera (email: RIVERA@ramsar.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Number of countries with national instruments on biodiversity relevant tradable permit schemes' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . These indicators are country-specific, so they can be disaggregated by countries in your region. However, given the incomplete country coverage, any regional aggregates cannot be taken to represent the entire region. Currently we have data on about 58 countries. (Just to note, we also have information on countries with biodiversity-relevant taxes in place). More information on this is available from the indicator Focal point Katia Karousakis (email: Katia.KAROUSAKIS@oecd.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Trends in potentially harmful elements of government support to agriculture (produced support estimates)' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator is available for the OECD as a whole and has not been disaggregated as such. The original data on (total) government support to agriculture is available on the OECD website by country. More information on this is available from the Indicator Focal point Katia Karousakis (email: Katia.KAROUSAKIS@oecd.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Better Life Index' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . The data is available for only 38 countries and therefore it would be difficult to be used regionally the way IPBES has classified these. More information on this is available from the Indicator Focal point Katia Karousakis (email: Katia.KAROUSAKIS@oecd.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Protected area coverage of terrestrial, marine and freshwater ecoregions' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Ed Lewis (email: Edward.Lewis@unep-wcmc.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Growth in species occurrence records accessible through GBIF' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Tim Hirsch (email: thirsch@gbif.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Robert Hoft (email: robert.hoft@cbd.int)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Information provided through the financial reporting framework, adopted by decision XII/3' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Robert Hoft (email: robert.hoft@cbd.int)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the IPBES Highlighted Indicator 'Number of world natural heritage sites per country per year' is used in this assessment. Indicator information is available from the IPBES Indicator portal and the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Douglas Nakashima (email: D.Nakashima@unesco.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Trends in Loss of Reactive Nitrogen to the Environment' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Albert Bleeker (email: Albert.Bleeker@pbl.nl)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Wild Bird Index (forest & farmland specialist birds)' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Richard Gregory (email: richard.gregory@rspb.org.uk)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Climatic impacts on European and North American birds' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Richard Gregory (email: richard.gregory@rspb.org.uk)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.

UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Ocean Health Index' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Benjamin Halpern (email: halpern@nceas.ucsb.edu)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Cumulative Human Impacts on Marine Ecosystems' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Benjamin Halpern (email: halpern@nceas.ucsb.edu)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Shyama Pagad (email: s.pagad@auckland.ac.nz)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Biodiversity Barometer' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Rik Kutsch Lojenga (email: rik@ethicalbiotrade.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Red List Index (impacts of utilisation)' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Tom De-Meulenaer (email: Tom.DE-MEULENAER@cites.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Water Quality Index for Biodiversity' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Hartwig Kremer (email: hartwig.kremer@unep.org)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	0	0	0		We would recommend that the Indicator 'Number of Parties to the CBD that have deposited the instrument of ratification, acceptance, approval or accession of the Nagoya Protocol' is used in this assessment. Indicator information is available from the BIP website www.bipindicators.net . This indicator can be disaggregated/made available for this region, more information on this is available from the Indicator Focal point Beatriz Gomez (email: beatriz.gomez@cbd.int)	Chapter author teams made use of these core/highlighted/further indicators as far as possible given the delivery late in the process.
EU: Frank Wugt Larsen (EEA)	0	0	0		A few points on references: 1) In general, there is a need to systematically check references in the chapters. Specifically, EEA reports are not referenced consistently, e.g. in some chapters it is EEA XXXX, while in other chapters European Environment Agency XXXX. 2) Chapter 3 doesn't seem to contain any reference to EEA materials, which seems a bit odd given the many relevant EEA publications. 3) Some EEA references are not the most current one, e.g. Climate change, impacts and vulnerability in Europe 2012 is referenced although there is 2016 report.	References have been systematically checked and standardised throughout the document using the Mendeley bibliographic software.
EU: Frank Wugt Larsen (EEA)	0	0	0		As during last review, we would like to point you to relevant information hosted by the EEA for which we believe a consultation by authors could improve the ECA 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/ETCDBDTechnicalWorkingpapers/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, in particular, thematic briefings and SOER synthesis); EEA 2016. Mapping and assessing the condition of Europe's ecosystems. Progress and challenges; EEA, 2015, State of Nature Report 2015; EEA, 2015, State of Europe's Seas; EEA, 2016. European forest ecosystems – state and trends. In general, the EEA website (http://www.eea.europa.eu) also provides access to a wealth of relevant indicators and assessments.	EEA sources are highly appreciated and cited throughout the assessment.
Thomas Brooks	0	0	0		Overall: the ECA assessment is looking really good - many congratulations to all the authors. I have focused the great bulk of my comments on issues directly related to data mobilised for the ECA against IUCN standards, especially in the light of the provision of these data for IPBES in https://www.nature.com/articles/sdata20167 , and of IUCN's strategic partnership with IPBES in general.	Thanks for the comment
Switzerland: José Romero	0	0	0		General: establish a glossary as part of this report and include in the glossary words like "cohesiveness", "regulatory", "material", "non-material" NCPs; "trophic level"; "biotic homogenisation".	A glossary has been created as suggested
Switzerland: José Romero	0	0	0		General: in this report, the concept of "trade-off" is used in a rather negative sense, while generally a trade-off is a situation reached for the satisfaction of divergent views and interests, which is considered to be a positive solution. We wonder if this rather negative use of trade-off in the report would be correctly translated in the other non-English languages. For example, in French, we would rather think of a happy outcome when a trade-off (e.g. a compromise, a good deal) is done in front of irreconcilable antagonisms. If the use in this report is more in a negative sense, then why not qualify trade-offs as e.g. "harmful". We hope that the English speakers authors understand our point and find a way out to address it in English as well as in the other non-English languages.	Trade-off is here consistently meant to indicate a negative relation between two variables of interest, e.g. between two NCPs. Mitigation of a trade-off would correspond to your "happy outcome".
The Netherlands: Astrid Hilgers	0	0	0	0	(Financial) cost-benefit analyses for policymakers/society are missing, as it is important to name such considerations explicitly. Also, certain concepts should be defined more precisely. This goes, among others things, for Natural Capital.	Discussion of the economics of ES (valuation) has been increased in the document, especially in Ch2
Ramsar Secretariat	0	0	0	0	We recommend that as in the regional assessments for Africa and the Americas, the area of Ramsar Sites, wetlands protected under the Ramsar Convention as internationally important by sub-region, be included in this assessment as an indicator. See: https://rsis.ramsar.org/	Done in chapter 3.
IPBES Knowledge and Data Task Force (KD TF) / Task Group on Indicators (TGI)	0	0	0		This review provides feedback from the IPBES Knowledge and Data Task Force (KD TF) / Task Group on Indicators (TGI) on the use of IPBES core indicators in your assessment. We see potential for inclusion of additional core indicators and for the more consistent use of the standardized visuals provided. For information on core indicators potentially relevant to a given chapter, please see http://www.ipbes.net/indicators (or see the tab named, "core indicators" in this spreadsheet) and check the indicator trend graphs shared by your TSU. For the trends of IPBES core indicator, standardized visualizations should be used as much as possible to ensure the consistency between and within the assessments. The KD TF/TGI aim to follow up with specific recommendations in the near future. In the meantime, do not hesitate to reach out to them through your TSU or the KD TF TSU (ipbes.kdtsu@gmail.com).	Chapter author teams made use of the core indicators as far as possible given the delivery late in the process.
Kremena Gocheva	0	0	0		The draft assessment is an impressive and very informative work. It can, also, be seen that the drafting and peer review process are flexible enough to incorporate very recent work despite the long drafting cycle. It would be helpful to incorporate a feedback mechanism from stakeholders as well, for collecting new information that becomes available on a running basis. For example, the Bulgarian mapping and assessment outside NATURA 2000 - some 66% of the country - for ecosystem condition and biophysical valuation of ecosystem services was completed in April, 2017. IBER-BAS has mapped six of the nine ecosystem types in Bulgaria, and had the lead role in developing the underlying methodological framework. However, the final reports are under verification and publications upon it are still to follow, with findings being systematized. Similarly, work is underway in other countries too. Therefore, at the current stage the comments are somewhat generic and limited to the general approach (Chapter 1) but it would be suitable, if such a mechanism existed, to keep contributing beyond June 26 until the report is ready. It may be good to allow for submitting links to new publications on a regular basis, so the report authors would get up-to-date information in a timely manner.	Thank you for the suggestion concerning new literature. The IPBES guidelines requires us to establish a cut-off date for literature (April 2017), but we have attempted to be flexible in incorporating more recent, but highly important, material.

						The assessment's description in Chapter 1 appears anthropocentric without a clear focus on humans as part of Nature. Since the Assessment clearly notes (Table 1.1, Figure 1.2) that the IPBES has a scope overarching earlier assessments such as MA, TEEB, MAES by providing a holistic view on Nature, the introduction, too, may need to put more emphasis on the socio-ecologic system as a single entity rather than merely a source of benefits to humans.	
Kremena Gocheva		0	0	0		This could lead onto introducing insights at the win-win and lose-lose options, including the ecosystem disservices, as well as a more systemic view at the continuum of states in which the socio-ecologic system is evolving over time. It would bring out more clearly the NATURE component of the IPBES CF, in particular its Mother Earth and Systems Values categories which appear to be underrepresented in the current draft. Their equivalent in Western science appears to be not the entire body of knowledge on biodiversity and ecosystems but rather the parts of ecology that treat ecosystems from the energy/emergy/entropy/information theory points of view.	Chapter 1 has been edited considerably to adopt a more comprehensive socio-ecological systems approach as well as recognising the intrinsic value of nature and pointing out non-material relational values.
Mark Rounsevell	Ch.6		0	0		This is developing really nicely. One thing to watch is the use of 'prescriptive language'. I've edited the Executive Summary to remove this, but the chapter as a whole will need careful editing to avoid such language. Also, the chapter is currently long, so editing down the length of the text would be good.	The text has been edited to avoid prescriptive language and has also been shortened
Bruno Fady	Ch.6		0	0	0	Euforgen, the European programme for forest genetic resources, is never mentioned. This more than 20 year old programme (http://www.euforgen.org/) is a success for raising awareness of and implementing strategies for conservation of genetic diversity across Europe	Reference has been added
Germany	Ch.6		0	0		While you do partly address the ECA region very well and base your findings on the region, in other parts the discussions remain very general and could apply to any region. In those paragraphs please try to link the analyses more closely to the characteristics and settings within ECA	Thank you for the comment. We have in all parts of the chapter tried to be more specific to the region.
Germany	Ch.6		0	0		When examples or more region-specific information is given, this very often relates to examples from the EU or EU-countries - rarely to EE or CA. It would be very helpful to know whether the reason for this apparent imbalance and state it explicitly in the text. Didn't you find appropriate examples from these regions because they do not exist or is it a data access/knowledge problem?	We are well aware of the knowledge gaps related to Eastern and Central Europe, and Central Asia. We have as much as possible tried to include literature for these subregions.
Germany	Ch.6		0	0		The chapter is very long and information could certainly be condensed. Though interesting, please make sure that you present only information which is of specific relevance for the analyses you do and for the ECA region. For instance the section section 6.3 there are many global institutions presented which are relevant for all regions. Would this better fit into the global assessment and can you here address only the ECA-relevant points? See, for instance, the discussion on WTO, GATS etc. I. 624-659.	All sections has been substantially shortened and made more ECA-specific.
Germany	Ch.6		0	0		The concept of NCPs is applied in the chapter, but not used coherently in the different sections. Please stream-line	The use of the concept has been streamlined.
Germany	Ch.6		0	0		The benefits of integration of policies/measures/tools are mentioned in several sections. This makes it repetitive, please try to streamline, this would also be beneficial w.r.t. the length of the chapter	We have tried to streamline the text to meet the comment. However this is a recurrent theme in the literature related to the different sectors. The need for polic integration will also be highlighted in the executive summary.
Germany	Ch.6		0	0		As it stands now, many key messages of chapter 6 are of more general nature. The sections on "policy-options" are yet to be developed. Please ensure to provide concrete policy options. This may help policy-makers to take action. These options should not be prescriptive, but provide a range of possible actions for policy-makers. Please base those findings on the results of chapter 6, but also on the other very relevant chapter 2-5	The executive summary has been substantially revised to meet this comment.
Olesya Petrovych	Ch.6		0	0		Chapter 6 needs detailed analysis and unification of structure of information.	The chapter has been substantially shortened to meet this request.
Olesya Petrovych	Ch.6		0	0		I really like the examples and case studies. However, chapter 6 can be shortened by the graphs and tables showing examples.	The chapter has been substantially shortened to meet this request.
Audun Ruud	Ch.6		0	0		In general there is an impressive number of references and approaches, but in general they should and could be better merged and drawn upon throughout the chapter: For instance at pages 8 – 9, the introductory table 6.1 is very valid and relevant, but on instruments I am missing certificates which are referred to several places later in the chapter for instance in section 6.3 and 6.6	The table has been updated to include more examples of policy instruments.
Andrew Wade	Ch.6		0	0		Congratulations to all the authors and review editors on excellent work to collate and present the material.	Thank you!
ECA values liaison group	Ch.6		0	0		When applicable, i.e. when different value types are mentioned or discussed, please refer to the values table and definitions in Chapter 1 that introduces and defines all value types in the assessment. This will be suggested to each ECA chapter	This has been considered throughout the text.
ECA values liaison group	Ch.6		0	0		Replace 'human well-being' with 'quality of life' in lines: 72, 78, 87, 92, 124, 180, 184, 190, 236, 258, 493, 572, 1335, 3338, 3532, 3546, 3639, 3890, 4441, 4520, 4588,	The concept has been changed where relevant.
ECA values liaison group	Ch.6		0	0		Replace 'ecosystem services' with 'nature's contributions to people' in lines: 63, 70, 71, 83, 86, 98, 124, 135, 141, 151, 163, 177, 183, 190, 226, 245, 248, 249, 251, 260, 309, 405, 406, 555, 557, 560, 572, 611, 716, 767, 1180, 1308, 1335, 1697, 1700, 1712, 1715, 2061, 2218, 2221, 2222, 2313, 2977, 3175, 3187, 3190, 3282, 3284, 3297, 3338, 3351, 3357, 3361, 3374, 3404, 3476, 3498, 3508, 3509, 3527, 3533, 3544, 3546, 3557, 3609, 3618, 3638, 3642, 3667, 3729, 3999, 4089, 4264, 4266, 4267, 4283, 4348, 4353, 4422, 4426, 4428, 4434, 4439	The concept has been changed where relevant.
ECA values liaison group	Ch.6		0	0		In order to align with the other chapters, please replace "BES" with the relevant full term (nature and its contributions to people where possible and relevant), in box 6.11 and lines: 638, 2069, 2230, 2982, 2984, 2986, 3124, 3127, 3201, 3234, 3593, 3622, 3623, 3626, 3637, 3878, 3880, 3887, 3890, 3898, 3903, 3904, 3911, 3954, 3968, 3980, 4002, 4005, 4012, 4013, 4014, 4016, 4018, 4020, 4027, 4065, 4075, 4080, 4081, 4090, 4139, 4140, 4168, 4211, 4408	The concept has been changed where relevant.
ECA values liaison group	Ch.6		0	0		Check that all subregions are covered roughly equally in terms of values.	We have tried to meet this request when possible.
Mark Sneath	Ch.6		0	0		In this table, suggestions are made for maps to illustrate some sections of the different chapters. A document with a number of examples (referred to below) is available at: https://tinyurl.com/ECA-Maps ECA sharepoint site login required	Thank you. We have considered the information provided.
ECA values liaison group	Ch.6		0	0		Please double check the use of the term 'worldview' to ensure it is used consistently, and consistently with IPBES wording and meaning, or at least it is clear from the context what exactly is meant.	We use it, but not often, and in the case it is used it is defined in its context.
PESC-4: Teuta Skorin	Ch.6		0	0	0	As the chapter draws a lot from the theory of organizations, it would be good to put emphasis on regional examples towards the end of each subsection to make it more concrete and more ECA-relevant.	We are not really sure what is requested here. The text has however been made more ECA-relevant throughout the text.
PESC-4: Kristina Kujundzic	Ch.6		0	0	0	For all the examples of policies and instruments, it would be good to emphasize more where there are successes and failures, at the subregional level. It does not need to focus on countries since ecosystems are shared across countries.	The chapter primarily focuses on the global, regional and national level. Information on sub-regional level is provided when there are good and illustrative examples of success and failure.
PESC-4: Natalya Minchenko	Ch.6		0	0	0	The environmental performance reviews conducted by the United Nations Economic Commission for Europe contain a lot of information relevant to policy tools and instruments, and their efficiency in Eastern Europe and Central Asia. They could be used as references in order to strengthen IPBES' analysis of which policy and instruments work or not, and in which contexts. See here: http://www.uncece.org/env/epr/publications.html	Thank you we have included relevant information based in the reference in the chapter.

PESC-4: Kristina Kujundzic	Ch.6	0	0	0	0	0	0	It would be great if all sections were built such as section 6.5.2, 6.5.3, 6.5.4 and 6.5.5 with a very short introduction to the topic, the detailed analysis and explanations, and a subsection dedicated to conclusions and synthesis at the end. Use it as a model for each subsection. All the tables listing examples could be annexed to the chapter. When possible, for the conclusion subsections, make statements by subregions and make clear where there is no data. When there is no data, make a conclusion about the existing data: can it be extrapolated to the areas with data gaps?	Thank you we have tried to apply the same outline for all the sector analysis in the chapter.
Finnish Government	Ch.6	0	0	0	0	0	0	General: The chapter is too long. For instance the chapter 6.3.1. includes unnecessary descriptions about international law etc. Also in chapter 6.3.2 there is unnecessary description of decision making in the EU. Overall there is quite a bit of parts only describing or even just listing instruments, actors etc. all these parts could be shortened and put more focus on analytical information. Attention should also be paid to the balance between different chapters and sectors. A lot of relevant literature missing on especially legal literature on integrating ecosystem services in decision making, new environmental governance, adaptive law and governance, resilience & law and governance. (Authors to consider include Tony Arnold, Lance Gunderson, A. S. Garmestani, J. B. Ruhl, Holly Doremus, Elisa Morgera, Armstrong, Kenneth, Börzel, Tanja.)	Thank you for the comment. The chapter has been substantially shortened and made more ECA-specific. Literature on adaptive and transformative governance has been added (see eg. 6.6.)
Finnish Government	Ch.6	0	0	0	0	0	0	General: as it is difficult to make general conclusions on the effectiveness, equity, efficiency, etc. Ogeneralize the effectiveness,	We are not really sure what is meant by ogeneralize the effectiveness. We have defined effectiveness in a general term as goal achievement which make it possible to assess the effectiveness.
Dmitry Schigel	Ch.6	0	0					Overall, IPBES would arrive to better results if the assessments would be based on the hybrid sources of i) primary data (through indicators and custom analyses) and ii) literature review as in the present assessment. The closer to source data the pathway i) will be, the better will be the result. There is a dangerous, through attractive, avenue to use secondary sources, such as expert, not evidence, based species ranges and mechanical and algorithmic data mash-ups for indicators, instead of those directly based on the primary data. The set of Core indicators needs to be reconsidered for the future assessments to straighten and to shorten the way from the raw data to the IPBES assessments. The task group on data and knowledge is in the ideal position to change the data policy for the next assessments.	This comment has to be addressed by the co-chairs.
Harald Pauli	Ch.6	1	1	188	7119			Undoubtedly, the chapter raises important issues on building governance and decision structures for integrating biodiversity, ecosystem integrity and services into mechanisms that regulate human activities and interactions. The scientific basis, the role of those providing biodiversity data and who should be capable in doing so in the future, however, is quite drifted away from the main stream of the report. A vital participation of biodiversity researchers, taxonomists, biogeographers and ecologists in governance and decision structures and processes appears to be indispensable for a sustainable and cautious procedure. In addition to halting the losses of biological diversity of the biosphere, capacity building for expertise in biodiversity research and taxonomy is essential not only for filling the large knowledge gaps, but also for the long-term observation of biodiversity patterns. In view of the overall rather weak financial support and long-term commitment for maintaining and building of expertise and monitoring infrastructure, its role in the above process needs to be emphasized, especially regarding the international level.	Thank you for the comment, we highlight the need for mobilization of financial resources to achieve policy objectives.
Mark Rounsevell	Ch.6	1	23					These need to be added	They have been added
Mark Rounsevell	Ch.6	3	62					No confidence statements given here	They have been added
Jetske Bouma	Ch.6	3	62					the relation between biodiversity and ecosystem services needs to be specified: not all ecosystem services depend on biodiversity, and even scientifically the relation between biodiversity and ecosystem services is not so clear. Making this relation clear is crucial for gaining policy commitment and coherence.	This relationship has been elaborated in in previous chapters.
Jetske Bouma	Ch.6	3	62					I like the way the different policy instruments are discussed: legal and regulatory instruments crucial, financial and economic instruments complementary, right-based approaches important but only emerging. Only the term 'social and cultural' instruments I don't find very convincing. Why not say voluntary approaches or instruments for creating societal awareness and commitment.	Thank you we have changed the term to social and information based instruments.
Jetske Bouma	Ch.6	3	62					In discussing the governance of biodiversity and ecosystem services I miss two crucial issues: a) the interests of future generations (mostly linked to biodiversity and the supporting ecosystem services) and b) the public good characteristics of biodiversity and certain ecosystem services which imply a crucial role for governments (in safeguarding the provisioning of ecosystem services in the long run). Especially give the current fragmentation of biodiversity governance, it is crucial that the key determinants of a stable ecosystem are safeguarded by governments, and I think this should be specified.	The link to chapter 5 (on futures) have been established. The definition of the specific character of biodiversity and certain NCPs is made in chapter 1.
UNEP-WCMC: Elise Belle	Ch.6	3	62	134	4670			A few sections are missing or are not final throughout the chapter.	They have now been written and included in the chapter.
Hanna Skryhan	Ch.6	3	62	5	172			executive summary is needed in the strong re-development after correction of the chapter	The executive summary has been substantially rewritten.
Friedrich Wulf	Ch.6	3	62	5	172			The whole chapter is hard to read and to understand. Sentences are long, the language very scientific and "jargon". Rather than making sure that everything is scientifically correct and complete, efforts should be made that the messages are comprehensible and come across so policy makers can understand.	The text has been substantially revised and shortened.
Friedrich Wulf	Ch.6	3	62	5	172			The executive summary lists a number of different options for governance and explains that they all can work more or less under come circumstances. It does not set any priorities and this lacks focus for the chapter to be helpful as guidance. There is no recommendation of what actually should be done.	This is actually the case, it is important that the policy instruments are adapted to the specific context to which they are being implemented. The text is intended to give options and opportunities for decisions makers.
Mark Rounsevell	Ch.6	3	63					Try to be a bit less prescriptive	Done
PESC-4: Hanna Skryhan	Ch.6	3	63	5	171			The executive summary is right and good but contains too many generalities. More direction, guidance and hints for policy-makers should be provided to make the findings useful.	The text is intended to give options and opportunities for decisions makers.
PESC-4: Axel Paulsch	Ch.6	3	63	5	171			The messages in bold in the executive summary are statements but they do not provide a direction. With the perspective of the next CBD COP in 2018, there should be at least directions in the summary, so that they are picked up in the international political fora. Otherwise, CBD will struggle to guide its Parties' actions.	in accordance with the scoping documents the text is intended to give options and opportunities for decisions makers, while not being prescriptive.
ECA values liaison group	Ch.6	3	75					To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	Done where relevant.
Finnish Government	Ch.6	3	77	3	79			Based on literature on adaptive governance and adaptive law, I'd add fifth aspect is to adjust decisions based on monitoring results (see amongst others DeCaro, D. A., B. C. Chaffin, E. Schlager, A. S. Garmestani, and J. B. Ruhl. 2017. Legal and institutional foundations of adaptive environmental governance. Ecology and Society 22(1):32 Legal and Institutional Foundations of Adaptive Environmental Governance. This fifth aspect should then be added accordingly to other parts of the text.	Thank you for the comment. We think that it is more important that the feedback mechanisms are related to the specific policies and not the mainstreaming process. We have elaborated on the role of adaptive and transformative governance in other sections (see eg. 6.6.)
Mark Rounsevell	Ch.6	3	80	3	82			Revised to avoid prescriptive language	Done
PESC-4: Machteld Schoonenberg	Ch.6	3	80	3	89			Please clarify what is specific to the ECA region in this finding.	The executive summary has been substantially rewritten and made more ECA-specific.
Markus Fischer	Ch.6	3	83					"...win-win solutions...": Why not "synergies"	The has been changed.
Mark Rounsevell	Ch.6	3	84					Edited to simplify the message, and to avoid prescriptive language	Done
Germany	Ch.6	3	84	3	85			This is a very important finding which has important repercussions. Are there more factors that come into play when trade-offs have to be evaluated than participatory approaches (which are definitely important in this context)?	There are more factors that come into play when trade-offs have to be evaluated. These are elaborated on in the individual sector analysis.
Markus Fischer	Ch.6	3	86	3	87			Not clear: ...between biodiversity and ecosystem services, among different ecosystem services and between biodiversity and human well-being?	Text has been revised
Mark Rounsevell	Ch.6	3	90					Does it mean that standards and planning turned out less relevant when assessing? If so, say more explicitly.	The text has been revised substantially.
Germany	Ch.6	3	90	3	104			Here you refer to an EU example and an example from CA, which is very useful (compare to earlier comment on balance of sub-regions).	Thank you we have considered the comment when revising the executive summary.

UNEP-WCMC: Elise Belle	Ch.6		3	92	3	92	"of ecosystems and the services they provide to human well-being."	The text has been revised
UNEP-WCMC: Elise Belle	Ch.6		3	102		102	"Pan-European Biological and Landscape Diversity Strategy"	The text has been revised.
Germany	Ch.6		3	127	4	138	Please be more specific here. The differentiation into developed market economies vs. undeveloped seems not very useful here. How relevant are certification schemes in the different ECA-subregions?	We do not use the term undeveloped anymore. For the status in the different subregions please see table 6.11 in the TOD.
UNEP-WCMC: Elise Belle	Ch.6		4	106	30	1004	Why using the upper case in 'Indigenous' throughout the document?	This has been changed.
UNEP-WCMC: Elise Belle	Ch.6		4	110	4	110	"are being increasingly implemented"	This has been changed.
Markus Fischer	Ch.6		4	111			identification or recognition?	recognition
Finnish Government	Ch.6		4	118	4	123	Economic instruments can also be used to change the behaviour of public bodies, i.e. public procurement	We have revised the relevant key message and we explicitly say that they aim also to change the behaviour of public actors.
Markus Fischer	Ch.6		4	119	4	120	History and context of what exactly? Be more precise, please.	The text has been substantially revised.
UNEP-WCMC: Elise Belle	Ch.6		4	129		129	"at the local, national, regional and international"	Political levels have been added
UNEP-WCMC: Elise Belle	Ch.6		4	138		138	Incomplete section.	The text has been revised
Mark Rounsevell	Ch.6		5	151			Less prescriptive	The text has been revised
Mark Rounsevell	Ch.6		5	152			Edited to be less prescriptive	Done
UNEP-WCMC: Elise Belle	Ch.6		5	153	5	153	What do you mean by 'employ appropriate governmental levels'?	The text has been revised
UNEP-WCMC: Elise Belle	Ch.6		5	160		160	"large scale transboundary initiatives"	Text has been deleted
PESC-4: Teuta Skorin	Ch.6		5	163	5	171	Some countries might think that since there is no "one size fits all", then they cannot act. So when stating that, give also hints of what one should think about in order to design actions relevant for one's own country. This could for example build on the "summary" subsections you made for sectors, or on the conclusions you made for different subregions, thus showing the diversity of responses for different context. This should provide ideas for decision-makers to go further.	Thank you for the comment, the text
PESC-4: Zoi Konstantinou	Ch.6		5	163	5	171	When there is a gap, you could give an hypothetic example, not pointing to a specific country experience but still giving guidance. The style of the paragraph would be more encouraging to act for the environment.	The assessment builds on available literature and not hypothetical examples. When there is a knowledge gap it is highlighted in the text.
UNEP-WCMC: Elise Belle	Ch.6		5	168		168	"among regional and international institutions"	The text has been revised
Mark Rounsevell	Ch.6		5	172			Excellent! Being more ECA-specific (or sub-region specific) would be a good step forward.	This is what we intended and hope to have achieved.
Markus Fischer	Ch.6		5	172			One or several key messages are missing pointing out the opportunities of various stakeholders/decision-makers for action. And subregionla information would be valuable also in this context.	The key messages have been updated and made more specific with this in mind
UNEP-WCMC: Elise Belle	Ch.6		5	172		172	Key messages still to be completed.	Done
Jetske Bouma	Ch.6		6	175			Ecosystem services:from concept to practice (2015), Cambridge University Press (eds Bouma & Van Beukering)	The reference has been added (see e.g. 6.3)
Jetske Bouma	Ch.6		6	175			mainstreaming biodiversity in the actions and activities of economic actors will only be possible if there is a very clear relation between biodiversity and the services it provides. This is hardly the case at the moment: we are just starting to learn about the role of biodiversity in providing ecosystem services. Hence we have to be realistic and conclude that at this stage mainstreaming the protection of biodiversity is highly unlikely, but mainstreaming the provisioning of certain ecosystem services (like recreation and landscape) could be an option - and this is also what we see happening.	We follow a slightly different approach to the term "mainstreaming biodiversity", see SCBD 2011 Training module on Mainstreaming biodiversity. We think that mainstreaming biodiversity is not exclusively possible only through the ecosystem services approach. We have now more explicitly defined mainstreaming in 6.1.
Olesya Petrovych	Ch.6		6	175	17		Part 6.3 has its own introduction, and next subpart 6.3.1 has an introduction again. They can be deleted because the chapter's 6 introduction is enough.	The text has been shortened substantially.
Germany	Ch.6		6	176	6	180	"informed by findings of previous chapters". It would be very helpful to build much more explicitly on the findings arising from previous chapters. As it reads now, there are very few explicit links to specific findings of other chapters. It seems that the results on the drivers of biodiversity loss identified in chapter 4 were not that well considered in the policy evaluation.	We have now improved the links to previous chapter throughout chapter 6, but feel that section 6.1 as the introduction to the chapter is not the right place to extensively relate back to previous chapters, especially given the needs to shorten the chapter. We have therefore deleted the rather generic sentences and directly move into the objective of chapter 6.
Germany	Ch.6		6	181	6	187	It is essential to build specifically on chapter 4 and 5. So this one paragraph (even though it will be further coordinated and updated) is not sufficient for this purpose. Otherwise the impression might be created that all the previous chapter were unnecessary for finding suitable policy options.	We have now improved the links to previous chapter throughout chapter 6, but feel that section 6.1 as the introduction to the chapter is not the right place to extensively relate back to previous chapters, especially given the needs to shorten the chapter. We have therefore deleted the rather generic sentences and directly move into the objective of chapter 6.
PESC-4: Teuta Skorin	Ch.6		6	183	6	187	You can delete the description of what chapters 4 and 5 have done because this is not crucial information.	Done
Hanna Skryhan	Ch.6		6	187	6	187	this paragraph should be deleted: it has not got sense and connections to the content of Ch.6	Done
Germany	Ch.6		6	204	6	205	This is a very general statement- is there really no difference between the ECA sub-regions? Shouldn't this chapter shed more light on this issue?	This general sentence has been deleted.
Markus Fischer	Ch.6		7	255	7	256	In this section you use a format as in the executive summary, with bold messages followed by supporting text. This should be changed to non-bold format without losing the emphasis, however.	Text has been reformatted and bold format removed.
Jetske Bouma	Ch.6		7	255			the overview of instruments and approaches is fine and interesting, but what I miss is a more analytical approach: which policy options and approaches are useful for which types of ecosystem services (see also discussion about public good characteristics above) and what do we know already about the effectiveness and efficiency of the different approaches? I know that evaluations are scarce, but some evaluations are available and could be used.	Section 6.2 introduces the framework and important concepts used later in the chapter and does not aim at assessing different options or instruments. The latter is covered by next sections of ch. 6, specifically the sector analyses.
Markus Fischer	Ch.6		7	257			A bit prescriptive. May be "offer considerable potential for"	We don't think that this expression is prescriptive, yet, we added a reference to substantiate it.
Markus Fischer	Ch.6		8	273			Again, prescriptive wording	revised to sound less prescriptive
Audun Ruud	Ch.6		8	295			References to this table is only implicitly made later in the chapter. Could be used more explicitly for instance in 6.6.3 in which there is also a presentation of certification in section 6.6.3.3	This table has been picked up and applied to agriculture in Central Asia/Kyrgyzstan, and is also referred to in the sector analysis' when different governance modes are identified and assessed.

Hanna Skryhan	Ch.6	8	295	9	296	repetition of the table?	We are not sure what you mean. In any case the format still needs to be adjusted, as the table unfortunately ran over a page break in the review version of the SOD.
Finnish Government	Ch.6	8	295	9		Table 6.1. the table is a bit too simplified. i.e. Centralized governance modes uses also other types of instruments than legislation, norms and standards. For instance economic instruments like taxation are also often used in centralized governance.	We have now deleted the "Instruments" row to avoid misunderstandings. These instruments simply indicated tendencies or typical instruments being used in each of the governance modes. This does not mean other instruments are excluded.
Hanna Skryhan	Ch.6	9	297	9	308	strong bias to WE. EE & CA are missing totally	This paragraph only served to explain in more detail the combination of various governance modes in practice. With some changes in the following text, it is now directly followed by references to EE and CA, therefore, the text is now more balanced.
Germany	Ch.6	9	309	9	310	Shouldn't this refer back to the findings of chapter 3 - on status and trends? This would allow to get a better understanding of the nature of these improvements	section on N2K and Emerald has now been moved to section 6.4 / conservation sector - there, we have referred back to findings of chapter 3
Hanna Skryhan	Ch.6	9	309	9	329	need in full re-writing the paragraph	As you do not explain why and into what direction you would like to see a re-writing, we could not address your concern. But the paragraph has now been revised/shortened.
Hanna Skryhan	Ch.6	9	314	9	316	delete the sentence	not clear why...we have moved the paragraph to section 6.4
Hanna Skryhan	Ch.6	9	318	9	321	delete the text, it's not suitable here	why do you think it is not suitable? In any case the section has now been revised.
PESC-4: Kristina Kujundzic	Ch.6	9	321	10	329	Bionet is a good network in the Balkan that could be mentioned here: see for example https://www.giz.de/expertise/downloads/giz2016-en-orf-biodiversity-bionet.pdf	Thank you for this suggestion, included.
UNEP-WCMC: Elise Belle	Ch.6	10	295	11	296	Table 6.1, penultimate line: "Sub-national governments [...] determined boundaries"	We now avoided the abbreviations, the typo was due to formatting the pdf, not caused by us.
Mark Rounsevell	Ch.6	10	330			This seems to me to be a really important point. Should it form a key finding in the Executive Summary?	Institutional failures are mentioned in the executive summary.
Markus Fischer	Ch.6	10	330			This seems to me to be a really important point. Should it form a key finding in the Executive Summary?	Institutional failures are mentioned in the executive summary.
Hanna Skryhan	Ch.6	10	330	10	339	it makes the sense to analyse in the framework of the "implementation deficits concept"	we added implementation deficits to organisational failures.
Markus Fischer	Ch.6	10	340			Reword, as is sound sprescriptive	Rephrased.
Sigrud Kusch	Ch.6	10	348	10	349	In figure 6.1, the arrangement of the blocks "Economic and financial instruments" and "Social and cultural instruments" should be changed, to make the visualisation consistent with the text and with Figure 6.2. (i.e.: "Economic and financial instruments" should be placed left of "Social and cultural instruments"), otherwise the reader might wonder if this changed arrangement implies some sort of prioritisation.	done
PESC-4: Jeroen Arends	Ch.6	10	348	11	351	In Figure 6.1, cost-benefit analysis is a classical economics approach to valuation and does not do justice to other forms of economic valuation that is incorporated in ecosystem services. Total Economic Value or TEV in my opinion would be a better valuation approach because next to use-values (market, avoidance costs, replacement costs) it also covers non-use values (bequest values, existence values).	We included CBA as just one example, next to other policy support tools aiming at non-monetary valuation approaches such as deliberative tools or multi-criteria decision analysis that are also included in the figure. TEV is more a concept, not a concrete tool or methodology.
ECA values liaison group	Ch.6	10	349			Fig 6.1: adapt wording: "Biodiversity loss and degradation of NCP and GQL"; "Sustainable use of NCP"	This is simply too complex a suggestion to include in such a figure. Reworded to "Biodiversity and ecosystem degradation" to avoid the term "ecosystem services".
Audun Ruud	Ch.6	11	350			The figure 6.1 on pages 10-11 is also very valid, but I am missing a follow-up for instance on participatory planning	These are just examples for policy support tools and not to followed up in detail specifically in this chapter. This chapter also does not follow up with field and remote senson monitoring, for example. Yet, we cover participatory approaches quite substantially. Therefore we chose to keep the term as is.
Finnish Government	Ch.6	11	350	16	522	The artificial nature of classifying instruments could be elaborated, i.e. taxes, trading schemes etc. Often require use of legislation. It should also be acknowledge that it is extremely difficult to assess and make general conclusions on the effectiveness/equity/effiviency of any given instrument category or a mix of instruments as ultimately they depend largely on instrument design. Therefore it would be nice to have conclusions on the key issues to be addressed in regulatory design and in making choices of instruments. i.e. it under which conditions different instruments work the best and which are the choice.	Three of these categories are quite common classifications in environmental policy analysis in several scientific disciplines (legal/regulatory; economic and financial; social and information-based instruments); The 3rd one (rights-based) refers to the special needs in relation to ILK in IPBES. We have now included in the text that it is very difficult to make general conclusions on instruments categories or mixes of instruments. More detailed suggestions follow later in the text.
ECA values liaison group	Ch.6	11	353			To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	done
ECA values liaison group	Ch.6	11	354			adapt wording "nature's contributions" instead of nature's benefits	done
ECA values liaison group	Ch.6	11	357			adapt wording "advantages and disadvantages" instead of "costs and benefits"	done
Hanna Skryhan	Ch.6	11	363	11	374	the assessment of the policy options could be provided on the approach of the gap analysis or "good governance principles". Look at the respective aticles	In this paragraph we specifically talk about assessing policy instruments and explain relevant policy assessment criteria. We do not talk about the much broader term "governance" in this context/paragraph, or the normative concept of "good governance".
ECA values liaison group	Ch.6	11	371			adapt wording "distribution of nature's contributions"	we do not necessarily talk about benefits in relation nature's contributions here; benefits can also relate to other benefits. So we chose to keep benefits in this context.
Hanna Skryhan	Ch.6	11	375	12	376	delete the table, but to add in the beginning of each chapter the inventory of the policy instruments from the table 6.2	we do not think that this serves our purpose. We wanted to provide an overview to readers about the various possible instruments belonging to each category.
PESC-4: Machteld Schoonenberg	Ch.6	11	375	12	376	This table could be simplified because it is too complicated for the reader. The chapter presents all these tools in detail, specifying which ones are more relevant for the ECA region. Tables 6.1 covers already some of the instruments so those two tables could be merged.	We find this a rather simple table just showing to unfamiliar readers what instruments belong to which categories. However, we now simplified Table 6.1 and deleted the row on instruments to avoid duplication.

						see the concept of the regims interconnections (has sense to use the mentioned concept for this paragraph): Harfst J., Wirth P. Structural change in former mining regions: problems, potentials and capacities in multi-level-governance systems. Regional Environmental Governance: Interdisciplinary Perspectives, Theoretical Issues, Comparative Designs (REGov). 2011. Vol. 14. Pp. 167–176. http://www.sciencedirect.com/science/article/pii/S1877042811002035 . Kim J. A. Regime interplay: the case of biodiversity and climate change // Global Environmental Change. 2004. Vol. 14. Pp. 315–324. Moss T. Solving Problems of 'Fit' at the Expense of Problems of 'Interplay'? The Spatial Reorganisation of Water Management following the EU Water Framework Directive. 2012. 22 p. http://www.irs-net.de/download/workpaper3.pdf . Nielsen H. O., Frederiksen P., Saarikoski H., Rytökönä A., Pedersen A. B. How different institutional arrangements promote integrated river basin management. Evidence from the Baltic Sea Region // Land Use Policy. 2013. Vol. 30. Pp. 437–445. Orsini A., Morin J. F., Young O. Regime Complexes, a Buzz, a Boom or a Boost for Global Governance? // Global Governance/ 2013. Vol. 19. Pp. 27–39. Repp A., Gaasch N., Hering D., Moss T., Naumann M., Sures B., Welth T. Ways of integrating water and land management at the urban rural interface // Urban Transformations: Cities and Water. Proceedings of the 50th ISOCARP Congress. (Gdynia, Poland, 23–26 September 2014). Gdynia, 2014. Pp. 456–472. http://publ.ext.zalf.de/publications/18bc16b8-24f6-4f43-9f8c-f71d5e-5e7855.pdf . Sandberg K., Hoffman S. J., Pearcey M. Lessons for Global Health from Global Environmental Governance. Centre on Global Health Security, 2015. 23 p. https://www.chathamhouse.org/sites/files/chathamhouse/field/field_document/20150119GlobalHealthEnvironmentSandbergHoffmanPearcey.pdf . Дата دسترسی: 11.06.2016. Urwin K., Jordan A. Does public policy support or undermine climate change adaptation? Exploring policy interplay across different scales of governance // Global Environmental Change. 2008. Vol. 18. Pp. 180–191. Vatn A., Vedeld P. Fit, interplay, and scale: a diagnosis // Ecology and Society. 2012. Vol. 17(4): 12. http://dx.doi.org/10.5751/ES-05022-170412 de Vos M. G., Janssen P. H. M., Kok M. T. J., Frantzi S., Dellas E., Pattberg P., Petersen A. C., Bliermann F. Formalizing knowledge on international environmental regimes: A first step towards integrating political science in integrated assessments of global environmental change. // Environmental Modelling & Software. 2013. Vol. 44. Pp. 101–112.		We expanded the paragraph and now also include relevant concepts of coordination between regimes, spatial fit and interplay. Yet, we only added 3 references, as the chapter needs to be shortened anyway.
Hanna Skryhan	Ch.6	12	392	13	418			
Markus Fischer	Ch.6		404			"looking at" or considering?	Rephrased.	
Hanna Skryhan	Ch.6	13	419	15	487	cut three time!	The box has been moved to section 6.6 and was shortened.	
PESC-4: Machteld Schoolenberg	Ch.6	13	419	15	488	The case study on Norwegian fisheries takes a lot of space. It should be shortened to better fulfil its role as an informative box.	It has been shortened.	
Hanna Skryhan	Ch.6	13	499	13	502	the figure doesn't correspond with the its name: opportunities and constraints are not identified in the picture	Title has been revised	
ECA values liaison group	Ch.6	14	486			Table 6.3: adapt wording: "...Biophysical ecosystem considerations..."	Rephrased.	
Germany	Ch.6	15	489	4	492	Please do provide the insights of chapter 4 here. Chapter 4 found that climate change is an important driver, which is not at all mentioned here. Land use change was identified as most important driver in terms of impact.	This is the framework section, we relate back but do not repeat the message here. To refer to the drivers is the task for the different sector analysis.	
Germany	Ch.6	15	499	15	502	This figure provides a useful framework. However, the actual "operationalization" remains not that explicit: In how far are linkages to drivers and underlying factors of biodiversity loss (chap. 4) considered in the analyses? The analyses is based on the criteria: effectiveness, efficiency and equity, which seems to be appropriate. However, in the following sections it would be very helpful is this structure in "effectiveness, efficiency and equity" could be made more explicit. That would allow readers to easier get inot the analyses of policy- instruments.	A relevant paragraph on these policy assessment criteria has now been moved right after the figure to provide a better link. We have tried to better link the sector analyses to the framework and assess policy instruments accordingly.	
ECA values liaison group	Ch.6	15	499	15	501	Figure 6.2: You might try to include value categories in this figure by assigning different sector activities to nature (biodiversity conservation), NCP (agriculture, forestry, fishery, energy and mining, manufacturing), GQL (health, education, tourism).	We are sorry, but this suggestion is too complex to implement. Furthermore, the sector analyses have been based on this figure. If we completely change it, we need to revise the whole analysis which is impossible at this stage.	
Sigrud Kusch	Ch.6	15	501	15		Figure 6.2 overall would benefit from some more explanation/discussion in the main text. As one example, the triade "Effectiveness, Efficiency, Equity" could be briefly discussed. In the present form, the figure is not fully integrated.	A relevant paragraph on these policy assessment criteria has now been moved right after the figure to provide a better link.	
ECA values liaison group	Ch.6	15	503	16	522	Given that it is difficult to find exclusive connections you might think of inserting the following text: "It is difficult to connect value types (anthropocentric and non-anthropocentric) to specific policy instruments or governance modes. For example "legislation / command-and-control" can capture a wide range of values, including economic ones, e.g. through fines. On the other hand not all economic and financial instruments relate exclusively to monetary values derived by environmental / economic valuation methodologies"	Thank you for this suggestion, included.	
PESC-4: Teuta Skorin	Ch.6	15	503	16	522	This text is introducing the next subsection but without linking it specifically to the point of section 6.2, so this text could be removed.	Deleted.	
Jetske Bouma	Ch.6	17	523			here I would like to refer again to 'Ecosystem services- from concept to practice' specifically chapter 10 of Joyeeta Gupta, who considers the global governance of biodiversity and ecosystem services, and discusses the difficulties of governing biodiversity and ecosystem services internationally.	Thank you for the reference, we have taken it into consideration in the revision of the section.	
Jetske Bouma	Ch.6	17	523			the chapter gives a broad overview of the many treatments and international agreements, but a) it is not really applied to Europe/Central asia and b) the reader is left with a feeling that there are a lot of agreements but that it is unclear whether this is helping to protect biodiversity and ecosystem services provisioning. Could a discussion be added what the governance problems in Europe/central asia really are? Is it the monitoring and enforcement of legislation, is it the lack of societal commitment and awareness, what are the issues that need to be tackled first? Do we have issues with indigenous peoples in Europe or central asia? I thought this was more an issue in Africa/Latin America/South Asia...	We agree that it is not clear in the text. We have developed the discussion and concluded that the main problem is implementation and enforcement. Issues regarding indigenous and local communities are important in Arctic Europe (Sami Council, RAIPON)	
Finnish Government	Ch.6	17	524	18		As concepts such as regulation, governance, governance mode, mechanisms, policy instruments etc. are often used differently consider adding a paragraph describing how these concepts are understood in this report see good example in Romppanen Seitä: New governance in context- evaluating the EU Biofuels regime (2015, p. 68-69)	Section 6.2 serves as a theoretical framework where these concepts are defined.	
Hanna Skryhan	Ch.6	17	525	17	538	to cut!	Most of the text in the introduction is but the text is fine- tuned.	
Hanna Skryhan	Ch.6	18	566	21	723	add the role of the states in the BES management	This section is about global/regional/transboundary governance. The role of the states are elaborated on in the the following sections.	
Hanna Skryhan	Ch.6	18	577	20	659	it is necessary to clear list of ICO and identification their role in the BES management. The paragraph is needed to cut. Exclude the information about WTO - it is not relevant to chapter. It has sense to divide the direct and indirect influence of ICO on BES management	Comment is unclear, but we have shortened the text on WTO to save space.	
PESC-4: Machteld Schoolenberg	Ch.6	18	577	20	723	The two sections on organizations feel a bit like an inventory of organizations. It would be nice if you could focus more on the dynamics that can be observed between the different sub-regions in terms of governance through organizations (e.g. between organizations within or outside the E.U.), or the dynamics between countries within or outside of the organizations. Now that you have this inventory of structures, see how they interact together and the patterns rising.	We have shorten the section and clarified the role of IGO in relation to biodiversity and NCP.	
PESC-4: Kristina Kujundzic	Ch.6	18	578	18	602	The first paragraph here presents IGOs with actions deploying worldwide. This could be cut short in order to focus on the work of intergovernmental regional organisations, such as the Regional Cooperation Council (RCC) in the South-East Europe (SEE) region.	We have shorten the section and added informatin about SEE region.	
Hanna Skryhan	Ch.6	18	605	18	605	+ Carpathians	We have shorten the section and added information about the Carpathian region.	
PESC-4: Axel Paulsch	Ch.6	19	624	20	659	The paragraphs on WTO do not relate specifically to the ECA region, and there is no conclusion tailored for the region. So we suggest to delete these paragraphs, or to analyze the implications of participating to WTA for ECA region, compared to other regions.	This part has been reduced substantially.	
Hanna Skryhan	Ch.6	20	660	21	723	where is the list of INGO? The previous paragraph and this paragraph should be written the same way	There are so many INGOs why we only exemplify the most relevant for our region.	

PESC-4: Kristina Kujundzic	Ch.6	20	681	20	689	In Eastern Europe countries, there are "green chairs" in the parliament occupied by NGOs. This representation increases the quality of environmental governance. See for example the Green Chair used in Serbia. http://en.bfpe.org/events/green-chair-meeting-takes-place-in-the-national-assembly-on-24-june/	Thank you for the comment. We have not been able to find any assessments or evaluations of this system to build upon for this assessment.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	Ch.6	21	296	21	296	Add citation from http://www.iucnredlist.org/about/citing .	This has been included
Thomas Brooks	Ch.6	21	296	21	296	Add citation from http://www.iucnredlist.org/about/citing .	This has been included
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	Ch.6	21	297	21	297	Add citation to Dudley (2008); https://portals.iucn.org/library/node/44707 .	More recent references has been added.
Thomas Brooks	Ch.6	21	297	21	297	Add citation to Dudley (2008); https://portals.iucn.org/library/node/44707 .	More recent references has been added.
UNEP-WCMC: Elise Belle	Ch.6	21	694	21	694	"status with the UN Economic and"	Text has been revised
Thomas Brooks	Ch.6	21	695	21	695	IUCN is not an "INGO"; delete and replace with "international organization". IUCN is governed half by governments, half by civil society (see https://www.iucn.org/about/union).	This is why we define it as a hybrid organization. See lines 690-694.
UNEP-WCMC: Elise Belle	Ch.6	21	696		696	"instruments have played an important role: the IUCN Red List"	accept ":" instead of "."
UNEP-WCMC: Elise Belle	Ch.6	21	699		699	You could add: "local communities, and privately managed protected areas."	OK to include "and privately managed protected areas."
Germany	Ch.6	21	702	21	708	here, it would be useful to be more specific- which ECA countries are included?	No, we are not going to mention all countries, the countries appear on the cited homepage.
Mark Rounsevell	Ch.6	21	724			Should section 6.3.3 come after section 6.3.4, i.e. moving from the ECA region to the globe?	We have previously discussed the order of sections, but this fits best. We have however clarified the important role of the global level under 6.3.1.
Germany	Ch.6	21	728	21	729	here, it would be useful to be more specific- which ECA countries/sub-regions are included?	Due to limited space, unfortunately, we can not go into detail but have to rely on representative examples, as well as references to relevant websites and databases that show which countries have ratified different MEAs. A table of the most significant conventions are to be found in an appendix.
Germany	Ch.6	22	725	23	740	what about non-EU countries?	The example relating to the EU has been deleted, while the text now relate to the whole ECA region.
Hanna Skryhan	Ch.6	22	741	24	786	the paragraph should be write from the point of view of 'deficit implementation concept' or 'gap analysis'	The text is based on an assessment on available literature, which include e.g. gap analysis, therefore a special point of departure is not relevant. We must also avoid prescriptiveness.
Hanna Skryhan	Ch.6	22	741	24	786	it's reasonable to: - briefly review the documents - insert diagram reflected countries participation of the ECA countries in different conventions - analyse the implementation of the documents - reasons of the poor implementation / enforcement of the documents - conclusions / recommendation for better (full) implementation of the documents	The text is based on an assessment on available literature, which include e.g. gap analysis, therefore a special point of departure is not relevant. We must also avoid prescriptiveness.
PESC-4: Natalya Minchenko	Ch.6	22	741	23	784	It would be great if you could discuss the reasons why a country ratifies - or not - an MEA.	This is done elsewhere, see the introduction: "Since many natural resources are ecologically shared and many environmental problems have a global or transboundary nature, they can only be addressed effectively through different forms of international and/or regional cooperation". Specific reasons for a state not to ratify (after signing) a MEA may vary due to internal political affairs.
PESC-4: Kristina Kujundzic	Ch.6	22	741	23	784	To build on previous comment, we could look at the situation for the candidate countries for the E.U. As part of the negotiation process (Chapter 27), there are incentives for candidate countries to enter MEAs and adopt laws favoring biodiversity. See for example here for Serbia: https://rs.boell.org/en/2017/01/25/chapter-27-serbia-still-under-construction GIZ Open Regional Fund for South-East Europe provides overall support to candidate and future candidate countries in SEE region to fulfil multilateral agreements requirement on biodiversity – first of all CBD.	We agree, and have included a sentence on this in 6.3.3.1.
Ilija Gasan Osojnik Črnivec	Ch.6	23	785			Table 6.4 - suggested additions: The Cartagena Protocol on Biosafety (2000), The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (2010).	Table 6.4 has been moved to appendix and provide examples of relevant international conventions.
Brendan Coolsaet	Ch.6	23	785	24	786	CBD protocols (Cartagena & Nagoya) are missing from the table	Table 6.4 has been moved to appendix and provide examples of relevant international conventions.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	Ch.6	23	785	24	786	CBD protocols (Cartagena & Nagoya) are missing from the table	Table 6.4 has been moved to appendix and provide examples of relevant international conventions.
ECA values liaison group	Ch.6	23	785			Table 6.4: adapt wording "cultural and natural value" column "purpose"	This comment is unclear. "Purpose" relate to the convention's main aim.
Hanna Skryhan	Ch.6	23	785	24	786	replace the table 6.4 to the annexes	This has been done.
PESC-4: Axel Paulsch	Ch.6	23	785	24	786	Table 6.4 could be in any other assessment related to other countries. With one column added for each of the other IPBES regional assessment, it could go in the global assessment. The paragraph above the table provides the important information (many countries are part of MEAs but these agreements lack enforcement). This information is good enough, and there is no need to use the table. Figures of the number of Member countries for ECA region could be inserted in brackets in the text. Alternatively, a graph with the number of countries who ratified each MEA, disaggregated by subregions, would be more informative.	Thank you for the comment. The table has been removed to the annex in order to free space.
PESC-4: Jeroen Arends	Ch.6	23	785	23	785	Table 6.4: Convention on Long-Range Transboundary Air Pollution should be added. It was signed on 1979-11-13 and entered into force on 1983-03-16. 51 parties including Europe and Central Asia.	Table 6.4 has been moved to appendix and provide examples of relevant international conventions.
Finnish Government	Ch.6	23	785	24	786	Bern convention is missing	OK to include, but into a new table with regional conventions.

						it's reasonable to: - briefly review the documents - insert diagram reflected countries participation of the ECA countries in different conventions - analyse the implementation of the documents - reasons of the poor implementation / enforcement of the documents - conclusions / recommendation for better (full) implementation of the documents		Table 6.5 (now 6.6) is removed to Appendix. There is not enough space to review the implementation of regulations/directive in detail - and not the task either. We point generally to the assessment of implementation and enforcement evident from literature.
Hanna Skryhan	Ch.6	24	787	27	882	- delete the table 6.5		
Hanna Skryhan	Ch.6	24	791	25	801	repetition - replace to the paragraph with actors' description		Unfortunately we do not understand this comment.
UNEP-WCMC: Elise Belle	Ch.6	25	820	25	820	"World Commission on Protected Areas"		Text has been changed.
Germany	Ch.6	25	823	25	823	Is there a section on non-EU environmental law? If not, why not?		We mention a few under the revised section 6.3.3.2, see also the new table 6.5. However, there are fewer MEAs outside EU and Europe.
Sigrud Kusch	Ch.6	27	881	27		Table 6.5: Please consider adding "Resource Efficiency" as a separate topic to the list of topics. This would contain the Roadmap to a Resource Efficient Europe (this does not only focus on land and soil). The Circular Economy Package adopted in 2015 could be listed specifically.		The table comes from an EU web-page and is borrowed, and contains a selection of topics.
UNEP-WCMC: Elise Belle	Ch.6	27	881	29	948	Some incomplete/missing sections.		This section has been amended
Finnish Government	Ch.6	27	881			MSFD also includes biodiversity elements		We agree, the text has been revised.
PESC-4: Kristina Kujundzic	Ch.6	27	883	28	914	Soft law instruments are introduced in the Balkan region by development agencies such as ADA, SIDA, GIZ... The organisations are also working on capacity-building around these instruments. See for example the BIMR regional platform and the Open Regional Funds for South-East Europe Biodiversity. https://www.giz.de/expertise/downloads/giz2016-en-orf-biodiversity-bimr.pdf		We have elaborated on the role of soft law instruments in section 6.3.2
PESC-4: Teuta Skorin	Ch.6	27	883	31	1072	Sections 6.3.3.4 to 6.3.3.7 are very general. Since they are still under development, it would be great if they could focus much more on ECA subregions.		The text has been developed and made more ECA-specific.
Hanna Skryhan	Ch.6	27	884	28	914	need in the significant re-development: briefly describe the documents regulated soft documents, explain how they work, analysis why and where they do not work, conclude which conditions lead to efficient implementation and enforcement		The text has been substantially revised.
Hanna Skryhan	Ch.6	28	916	28	944	need in the significant re-development: the env. Rights should be described through documents where they established, analysis of the good and bad implementation and recommendations for policy-makers		This section has been updated. And IPBES should not be policy prescriptive!
PESC-4: Hanna Skryhan	Ch.6	29	945	30	1009	To make it more specific to the ECA region, you could focus this section on indigenous people in Russia, Roma, Gipsies, Samis, Basques...		The text has been substantially revised.
PESC-4: Machteld Schoonenberg	Ch.6	29	945	30	1009	Do the sources and papers mentioned in this subsection on ILK build on cases from the ECA region, or are they from cases in other regions? In that case, the conclusions might not be relevant for ECA. Suggestion to discuss data availability here.		The data builds on research from the ECA region
PESC-4: Axel Paulsch	Ch.6	29	945	30	1009	Section 6.3.3.6 on IPLCs can be shortened, and completed with information specifically relevant for ECA. See for example: Mónica Hernández-MorCILlo , Janis Hoberg , Elisa Oteros-Rozas , Tobias Plieninger , Erik Gómez-Baggethun & Victoria Reyes-García (2014) Traditional Ecological Knowledge in Europe: Status Quo and Insights for the Environmental Policy Agenda, Environment: Science and Policy for Sustainable Development, 56:1, 3-17, DOI: 10.1080/00139157.2014.861673 Link to this article: http://dx.doi.org/10.1080/00139157.2014.861673		Thank you for the reference, it is included. This subchapter has been totally re-arranged.
Hanna Skryhan	Ch.6	29	946	30	1009	need in the significant re-development. Add the analysis of the ECA sub-regions, add the conclusions, knowledge and policy gaps and make advice / recommendations for policy-makers		This subchapter has been totally re-arranged. However, a prescriptive language are to be avoided.
ECA values liaison group	Ch.6	29	970			adapt wording "relational and instrumental values" instead of benefits		"Benefit is not used in section"
UNEP-WCMC: Elise Belle	Ch.6	29	985	29	985	You could say a bit more about the WPC in Sydney in relation to indigenous people.		Information on the two WPCs are shortened.
UNEP-WCMC: Elise Belle	Ch.6	30	1003	30	1003	"room for manoeuvre"		Text has been revised
Hanna Skryhan	Ch.6	30	1011	31	1073	only 'common places'. Add the list of the instruments, analysis of their development in the ECA sub-regions, analysis of their efficiency, knowledge and policy gaps and what need to be done next		Rewritten. Text has been rewritten.
Germany	Ch.6	31	1052	31	1053	What about EE, CA?		Text has been revised to be more ECA-specific
PESC-4: Machteld Schoonenberg	Ch.6	31	1057	31	1072	This paragraph could be included under 6.5.3, since it also relates to governance of fisheries. Similarly, other sector-specific pieces of information are scattered across the chapter and it would be nice to bundle them in the sector-specific sections under 6.5, in order to improve the readability of this chapter.		The whole chapter has been rewritten and substantially shortened with the content of this comment in focus.
Germany	Ch.6	32	1082	34	1166	Though this section is entitled Terrestrial and freshwater degradation and restoration there is relatively little information on terrestrial issues- what is the reason for this imbalance?		The title here has been changed to " Groundwater and freshwater degradation and restoration". As now pointed out at the start of this section "For responses to transboundary environmental challenges related to land degradation, we refer to the global IPBES Assessment on Land Degradation in particular chapters 6 and 8 and the recently published reports of the Economics of Land Degradation Initiative (Quillérou et al., 2016). One regional report of the latter initiative has been dedicated to a synthesis of national studies in Central Asia (ELD Initiative, 2015a)."
Hanna Skryhan	Ch.6	32	1083	32	1098	land degradation is not only about soil! It has sense to make inventory of the transboundary env challenges within ECA and review of legislative / regulative documents to deal with mentioned transboundary issues. Land degradation is about landscapes and ecosystems		As now pointed out at the start of this section "For responses to transboundary environmental challenges related to land degradation, we refer to the global IPBES Assessment on Land Degradation in particular chapters 6 and 8 and the recently published reports of the Economics of Land Degradation Initiative (Quillérou et al., 2016). One regional report of the latter initiative has been dedicated to a synthesis of national studies in Central Asia (ELD Initiative, 2015a)."
Germany	Ch.6	32	1091	32	1094	This statement is judgemental. Please revise this sentence, for instance as follows: "The Commission decided to withdraw the proposal for a Soil Framework Directive in 2014 because a qualified majority in the Council in its favour was not achieved."		Sentence removed
Hanna Skryhan	Ch.6	32	1100	38	1319	it has sense to write the paragraph according to the identified transboundary problems (documents + cooperation + results + analysis and conclusions + knowledge and policy gaps + next steps)		Following previous review this was the format agreed upon. Also text has now been greatly reduced.
PESC-4: Axel Paulsch	Ch.6	32	1100	32	1108	This text is repeated in line 1260-1270, almost word for word.		True. The first six lines under 6.3.4.1.4 will be deleted.
Finnish Government	Ch.6	32	1100	34	1166	Why only water issues are covered here?		Many of the transboundary legal instruments focus on water

PESC-4: Arevik Mkrtchyan	Ch.6	32	1109	33	1130	Southern Caucasus countries have signed conventions on watershed management, and there are reports from the E.U. assessing their efficiency. See references: 1. UNECE (United Nations Economic Commission for Europe). 2011. "Second Assessment of Transboundary Rivers, Lakes, and Groundwaters". Convention on the Protection and Use of Transboundary Watercourses and International Lakes. 2. Yu, Winston; Cestti, Rita A.; Lee, Ju Young. 2015. Toward Integrated Water Resources Management in Armenia. Directions in Development--Countries and Regions.; Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/20459 license: CC BY 3.0 IGO." 3. EU project reports "Trans-boundary Management of Kura River - Phase II, Armenia, Azerbaijan and Georgia/2013	The southern caucasus countries are not mentioned in the text along with the first reference. We have added "Southern Caucasus countries have also signed conventions on watershed management, and while a report from the E noted that that focus on integrated water resource management is not generally applied in the Caucasus, the water sectors in many of the countries are undergoing reform and new legislative water codes have been developed (UNECE, 2011)."
PESC-4: Machteld Schoonenberg	Ch.6	35	1246	37	1248	It seems that we do not need the full Table 6.6 since the text above already covers several examples. However, it would be nice to elaborate further in the text, through a synthesis of the findings shown in the table.	The text has been reduced and also now rely on table to save space as chapter was too long.
Hanna Skryhan	Ch.6	36	1246	37	1248	delete the table 6.6	We had agreed to summarize the Mongolia-Russia-China bilateral agreements related to water management and nature conservation relevant to transboundary Amur River basin in a table rather than in text and this we did. Now people want to remove it again. I will leave this up to chapter editors to decide.
UK: Karsten Schonrogge	Ch.6	37	868	39	869	This comment might be entirely inappropriate, but the statements in table SPM 2 could acknowledge the drivers of change in forest environment to then present options to govern NCPs. For example pests/pathogens and/or climate change affect choices we make and NCPs in some cases at continental scales (Ash dieback, Dutch Elm Disease, Chestnut Blight to name a few). Examples where such links could be included: "Promoting policy integration with related policies (e.g. agriculture, energy, conservation)" use the EU regulation on invasive species as an example: "Stimulating the establishment and implementation of nationwide Forest Programmes" one could add "to future proof forests" or "increase the resilience of national forests"	Thank you for the comment. Table SPM2 has been substantially revised and focus in particular on mainstreaming of biodiversity and NCP.
Germany	Ch.6	37	1261	37	1265	repetition - see page 32, line 1101ff	True. The first six lines under 6.3.4.1.4 will be deleted.
UNEP-WCMC: Elise Belle	Ch.6	37	1282	37		"the Silk Road Economic Belt, China launched a new"	Changed as suggested
UNEP-WCMC: Elise Belle	Ch.6	38	1285	38	1286	"tool to prevent the degradation of the most valued"	Changed as suggested
UNEP-WCMC: Elise Belle	Ch.6	38	1286		1287	Complete references "(IUCN, CBD)". "Examples include the Sino-Russian"	Done
ECA values liaison group	Ch.6	38	1286			adapt wording "most important and vulnerable ecosystems"	Adapted as suggested
UNEP-WCMC: Elise Belle	Ch.6	38	1290		1290	"bi-lateral or tri-lateral programs"	"Bi- and tri-lateral programs" used
ECA values liaison group	Ch.6	38	1295	38	1297	ELD focusses on economic valuation. Include a phrase emphasising that with a integrated valuation potential trade-offs and power relations can be made more visible	Added line "It should also be noted that with integrated valuation, potential trade-offs and power relations can be made more visible."
Hens Runhaar	Ch.6	38	1306	38	1308	This statement needs to be underpinned with evidence or references or nuanced	Change to "at unfortunate locations where they cause huge damage "
The Netherlands: Astrid Hilgers	Ch.6	38	1306	38	1308	This statement needs to be underpinned with evidence or references or nuanced	Change to "at unfortunate locations where they cause huge damage "
UNEP-WCMC: Elise Belle	Ch.6	38	1312		1319	Delete from text and update references.	Sentence has been changed.
Hanna Skryhan	Ch.6	38	1322	43	1458	It has sense to write the paragraph according to the identified transboundary problems (documents + cooperation + results + analysis and conclusions + knowledge and policy gaps + next steps) delete the table 6.7, figure 6.3, table 6.8	Text has been greatly reduced. Conventions have been summarized into tables but figure 6.3 has been kept.
Olesya Petrovych	Ch.6	39	1358	40	1359	Subpart 6.3.4.2 doesn't only concern the marine system, but also the coastal ecosystems. Therefore table 6.7, for example, lacks points on Ramsar and Bonn conventions. Considerable parts of coastal areas and shallow waters have the status of Ramsar Sites and are characterised by high level of migratory species. Table 6.7 repeats information that is already included in the paragraph so this not necessary to have the table here. It could be put in an annex for example. Same for table 6.8. This is easier for the reader to make the connection between the development and conclusion if the text is condensed and not interrupted with tables.	Ramsar convention added. Bonn convention is much broader than marine or coastal. It refers to Conservation of all Migratory Species of Wild Animals so not included here.
PESC-4: Teuta Skorin	Ch.6	39	1358	40	1359	Birds and Habitats directives also includes marine elements	Suggestion: delete table 6.7 but keep table 6.8
Finnish Government	Ch.6	39	1358				With table 6.7 deleted this is not a problem
PESC-4: Hanna Skryhan	Ch.6	40	1367	40	1370	This map should be in Chapter 2 or 3 of the assessment. Why is it inserted here? The chapter is on instruments so this is confusing to have the map. Otherwise, explain better in the text how using this map makes it a policy instrument.	It is relevant here. Adjusted txt to read "The regional seas conventions have demonstrated that it is possible to develop an integrated ecosystem assessment on a regional scale. HELCOM (2010) for example achieved this under the Helsinki Convention by harmonising and combining maps of ecosystem features with maps of pressures resulting from human activities in a combined spatial analysis that crosses national jurisdictions. This allowed for a spatial description of the relative impacts of human activities across the Baltic Sea (Figure 6.3)."
Finnish Government	Ch.6	40	1367		1368	Perhaps there could be used the information of the latest version of HELCOM HOLAS II ?	We decided to stick to this version
Hens Runhaar	Ch.6	42	1408	42	1419	Companies may also employ instruments other than eco-labels, e.g. green procurement (see Runhaar 2016, already in the references). About eco-labels for marine protection, mixed findings are reported regarding their quality and impact; see e.g. Jacquet, J.L., Pauly, D., 2007. The rise of seafood awareness campaigns in an era of collapsing fisheries. Mar. Policy 31 (3), 308–313. https://jenniferjacquet.files.wordpress.com/2007/01/jacquetpauly2007_marpol.pdf	Text added "Companies may also employ instruments other than eco-labels such as green procurement (Runhaar 2016)".
The Netherlands: Astrid Hilgers	Ch.6	42	1408	42	1419	Companies may also employ instruments other than eco-labels, e.g. green procurement (see Runhaar 2016). About eco-labels for marine protection, mixed findings are reported regarding their quality and impact; see e.g. Jacquet, J.L., Pauly, D., 2007. The rise of seafood awareness campaigns in an era of collapsing fisheries. Mar. Policy 31 (3), 308–313.	See above (identical review comment).
ECA values liaison group	Ch.6	42	1421			Specify which type of valuation is meant (economic, biophysical,...) and how a integrated valuation might contribute/hinder policy formation	Both the integration of economic and biophysical ecosystem service valuation into marine policy formation.
Germany	Ch.6	43	1460	43	1461	Line 1461 "control of IAS is complex and difficult to handle with legal instruments" --> is this indeed the case? Or are we just lacking legal instruments, or is it difficult to handle with legal instruments alone? Please revise the sentence. There are studies showing that countries where efficient legal instruments are in place, the invasion rate dropped, at least for some species groups (see Seebens et al. 2017, for example).	Wording has been improved

Hanna Skryhan	Ch.6	43	1460	46	1562	delete the text	This introductory descriptive text on IAS is essential as the following text builds on it. In addition, it will be referred to in Chapter 3. The definition of IAS and its complexity is not occurring anywhere else in the ECA Assessment.
PESC-4: Arevik Mkrtchyan	Ch.6	43	1460	45	1511	The text mentions examples of species being introduced but not all of them have a negative impact and this ambiguity could be better reflected in the assessment. When there is a case of deliberate introduction of a non-native species, it would be good for IPBES to provide guidance on how to deal with the issue at the national level. In Armenia for example, see Republic of Armenia, First National Report to The Convention on Biological Diversity, 1999, incorporating A Country Study on the Biodiversity of Armenia: "Most introductions were non-accidental, and include species with economic (agricultural, fisheries, hunting, medical, or technical) or aesthetic value. For instance, American and Canadian poplars have been imported to grow on saline lands, pink geranium is grown for its essential oil, and sweet flag (Acorus) from India and China, has been grown since Medieval times. However, a number of species appear to have been introduced accidentally, and many of these prove damaging to both natural ecosystems and agricultural lands (such as Colorado beetles, and Asian grasshopper). Among the most aggressive invasive plant species are Xanthium, Cirsium, and Galinsoga parviflora, while wormwood ambrosia (Ambrosia artemisiifolia) has expanded its distribution by over 200km ² within the last decade. Armenia's fisheries have been supported by the introduction of a range of fish species since the 1920s (see Section 2.5.2), and such species now represent the most productive fish in Lake Sevan. However, their interaction with native fish is not well understood. However, the introduction of goldfish (Carassius auratus) to the lake resulted in increasing populations, and high levels of competition with native fish species. River crayfish have also spread dramatically in Lake Sevan since their introduction in the 1980s."	This text has been removed as another review highlighted we should be just dealing with political aspects here and not getting to the detail of particular species
Hanna Skryhan	Ch.6	46	1564	47	1618	to cut clearly describe the documents acting in the ECA sub-regions and the main statements in regards to alien species	This text is now replaced by Table 6.9.
Hens Runhaar	Ch.6	48	1652	48	1665	Another problem is a lack of public support for eradication; see e.g. Genovesi P (2011) Are we turning the tide? Eradications in times of crisis: how the global community is responding to biological invasions. Pages 5–8. In: Veitch C, Clout MN, Towns DR (eds) Island invasives: eradication and management. IUCN, Gland, Switzerland (https://www.researchgate.net/publication/233755935_Are_we_turning_the_tide_Eradications_in_times_of_crisis_how_the_global_community_is_responding_to_biological_invasions) or Vane, M. and H. Runhaar (2016), Public support for invasive alien species eradication programmes: insights from the Netherlands, Restoration Ecology, 24 (6), pp. 743-748 (http://onlinelibrary.wiley.com/doi/10.1111/rec.12379/abstract).	This may be an important aspect in some cases, but not the majority of recorded IAS. With our restricted page allowance here, this issue should be dealt with in-depth in the upcoming IPBES thematic assessment on IAS, to be published in 2021 or 2022.
The Netherlands: Astrid Hilgers	Ch.6	48	1652	48	1665	Another problem is a lack of public support for eradication; see e.g. Genovesi P (2011) Are we turning the tide? Eradications in times of crisis: how the global community is responding to biological invasions. Pages 5–8. In: Veitch C, Clout MN, Towns DR (eds) Island invasives: eradication and management. IUCN, Gland, Switzerland or Vane, M. and H. Runhaar (2016), Public support for invasive alien species eradication programmes: insights from the Netherlands, Restoration Ecology, 24 (6), pp. 743-748.	See above (identical review comment).
Finnish Government	Ch.6	48	1652	48	1666	Consider adding the shortage of the EU reg. On IAS as a problem	New EU legislation is mentioned in text. Also now have added the text "Mediterranean countries have been particularly insouciant about biosecurity hazards relating to movement of stock, feed, and equipment that may result in introduction of marine species (CIESM, 2007; Golani et al. 2015; Marchini et al. 2016) as well as illegal introductions. The appearance of five non-indigenous prawns in the Mediterranean, all of commercial interest and newly recorded in the past decade, raises a suspicion of direct human introduction, particularly as these species have been found in the vicinity of fish and shellfish farms. The European Union (EU) established a legal framework to limit the environmental risks related to the introduction and translocation of non-native species in aquaculture (Council Regulation 708/2007 concerning use of alien and locally absent species in aquaculture), but as it pertains only to Member States, and unevenly regulated even in those, illegal introductions and intra-national translocation of shellfish stocks (and their associated biota) continue to contribute to the introduction and spread of marine NIS in the Mediterranean Sea (Bakir and Aydin 2016)."
Jetske Bouma	Ch.6	49	1692			Would it not be more logical to have this chapter before the chapters on policy options and international agreements? You could then cluster the problems/issues/policy approaches in Europe/central asia and discuss the relevant governance problem/issues first, and then reflect on the role of the different policy approaches and potential role of international agreements for tackling them. It would help in making the chapter less descriptive and more focused, I think.	We have discussed this issue thoroughly with the author team and we decided to keep the current disposition since the global and transboundary framework often sets the frame for national policies.
Jetske Bouma	Ch.6	49	1692			I am happy to see that this paragraph actually discusses the governance problems, but what I miss is a discussion of potential solutions: monitoring and enforcement is made easier through remote sensing, how is this used in Europe/central asia, what is needed to scale successful examples up? Financing biodiversity management is an issue: what approaches have proven effective in generating the required finances, how can we collaborate internationally etc etc. Now, some of the solutions/potential mechanisms are discussed in paragraph 6.2 and the problems in paragraph 6.4...	The overall flow of the presentation of Chapter 6 is hopefully now, after the revisions to the entire chapter, more obvious: Section 6.2 introduces governance approaches and policy instruments in generic terms, Sections 6.4 and 6.5 identify existing approaches in the various sectors, and the constraints and opportunities that emerge, and Section 6.6 summarises and expands on the main opportunities across all sectors to avoid repetition.
Jetske Bouma	Ch.6	49	1692			environmental fiscal reform? This is not so easy when considering biodiversity management, and it remains unclear what the authors have in mind. Land based taxes? That could be an option (see our recent PBL study about this) but in order to make this effective for sustainable land use and biodiversity protection well implemented land governance policies are required as well.	See previous comment for overall argument. Note that this particular section is actually not about biodiversity management (which is addressed in the preceding section). However, also in this section EFR is critically discussed in Section 6.4.2.3
Audun Ruud	Ch.6	49	1692			There is a lot of very valid references throughout the chapter, but the 6.4 is relatively speaking weak even in the developed section 6.4.2	I have added eight more references to the section (a couple of them twice), and reviewed a number of additional ones (but didn't include them as they did not add anything). Section 6.4.2 now has approx 62 different references (some of them mentioned multiple times) on 8 pages, which should be sufficient.
Hanna Skryhan	Ch.6	49	1699	51	1796	need to re-development. Need in the analysis. The analysis could be used the concept of the regimes and their interaction. Look comment 108. We analysed regimes for Ukraine Carpathians Институциональное взаимодействие режимов на местном уровне: возможна ли синергия? Управление биоразнообразием и землепользованием в Черногории Применение метода кейсов в комплексных социально-экологических исследованиях. Под общей редакцией О.В. Лихачевой, А.Ю. Скриган и А.Д. Шаркубо, Псков, 2017. I can provide summary in English.	This comment was very unclear and has not been addressed. However, see other reviewers' suggestions below to include references to RCC and REC - this might help to address this comment here, too.

ECA values liaison group	Ch.6	50	1724			adapt wording "value systems" instead of "values"	Done
ECA values liaison group	Ch.6	50	1754			adapt wording "nature's contributions" instead of nature's benefits	Done
ECA values liaison group	Ch.6	50	1756			adapt wording "illustrated the advantages"	Revisited and considered, but not changed
PESC-4: Kristina Kujundzic	Ch.6	51	1771	51	1796	The Regional Cooperation Council (RCC) is missing in the key environmental policies for the Balkan region. See SEE 2020 Programming Document 2017-2019 e.g. Action 1 on responding to environmental challenges (http://www.rcc.int/files/user/docs/SEE_2020_Programming_document_2017-2019.pdf) and SEE 2020 Strategy, especially Dimension J on Environment (http://www.rcc.int/files/user/docs/reports/SEE2020-Strategy.pdf)	Thanks for the references - I have now reviewed this but environmental aspects seemed to play a rather minor role (e.g. the quoted Action 1 has a budget of 120 K EUR across all SEE countries). From a strategy paper such as this (that doesn't offer further analysis) it is also difficult to judge what the context and the impacts really are. I googled for more information and found on the RCC's own website a statement that this is really largely about ICT, economic connections and road networks (while considering environmental priorities). I'm sure this could be a good example for mainstreaming environmental considerations but am reluctant to present it as such in the absence of further information. The same holds for the second document suggested.
PESC-4: Jeroen Arends	Ch.6	51	1771	51	1796	The Regional Environmental Center for Eastern Europe and Central Asia (REC) could be mentioned here. It is an intergovernmental organization (Japan, Sweden, US, etc.) very active in the region when it comes to the environment and biodiversity, etc: www.rec.org	Thank you - I have now reviewed a number of REC reports available on the website, and incorporated two of them as references in 6.4.2.3
Germany	Ch.6	51	1775	51	1776	This is a very interesting and potentially very important finding- is there more evidence than just a "perception"?	More references included after some more specific literature search, and the phrasing has been edited accordingly.
Hanna Skryhan	Ch.6	51	1798	53	1876	content of the paragraph doesn't correspond to its title. Content now is only common places. Need in the analysis in regard to ECA sub-regions of the policy instruments, gaps and recommendations	I am sorry that the findings of this subsection turn out to be commonplace - this might be a result of the extremely widening remit and coverage of the overall section. However, this subsection does make references to specific subregions and countries so the 2nd part of the comment seems unwarranted.
Hens Runhaar	Ch.6	52	1817	52	1817	Also a growing number and variety of governance modes can be observed in the governance of agrobiodiversity (i.e. species abundance and diversity in the agricultural landscape; see e.g. Runhaar, H.A.C., Th.C.P. Melman, F.G. Boonstra, J.W. Erisman, L.G., Horlings, G.R. de Snoo, C.J.A.M. Termeer, M.J. Wassen, J. Westerink and B.J.M. Arts (2017), Promoting nature conservation by Dutch farmers: a governance perspective, International Journal of Agricultural Sustainability, 15 (3), pp. 264–281. http://www.tandfonline.com/doi/full/10.1080/14735903.2016.1232015?scroll=top&needAccess=true	This comment refers to agricultural policies (see Section 6.5) and has been passed on to Riccardo Simoncini.
The Netherlands: Astrid Hilgers	Ch.6	52	1817	52	1817	Also a growing number and variety of governance modes can be observed in the governance of agrobiodiversity (i.e. species abundance and diversity in the agricultural landscape; see e.g. Runhaar, H.A.C., Th.C.P. Melman, F.G. Boonstra, J.W. Erisman, L.G., Horlings, G.R. de Snoo, C.J.A.M. Termeer, M.J. Wassen, J. Westerink and B.J.M. Arts (2017), Promoting nature conservation by Dutch farmers: a governance perspective, International Journal of Agricultural Sustainability, 15 (3), pp. 264–281.	As above
Hanna Skryhan	Ch.6	53	1878	57	2057	re-development, add and correct in regards to changes in the previous paragraphs	Where this made sense, changes to the preceding sections have indeed been applied to the following sections, too.
Hens Runhaar	Ch.6	53	1881	53	1882	In the above reference (Runhaar et al. 2017) 10 distinct public and private governance arrangements for agrobiodiversity were evaluated. The focus was on the Netherlands but many of the governance arrangements are found elsewhere in the EU. The limited effectiveness was explained by two factors: one, nature conservation by farmers is too voluntary (think of participation in AES) and two, remunerations are too low (instead of being compensated for extra costs or forgone income, farmers should be more generously rewarded for taking nature conservation measures in their fields)	This comment refers to agricultural policies (see Section 6.5) and has been passed on to Riccardo Simoncini.
The Netherlands: Astrid Hilgers	Ch.6	53	1881	53	1882	In the above reference (Runhaar et al. 2017) 10 distinct public and private governance arrangements for agrobiodiversity were evaluated. The focus was on the Netherlands but many of the governance arrangements are found elsewhere in the EU. The limited effectiveness was explained by two factors: one, nature conservation by farmers is too voluntary (think of participation in AES) and two, remunerations are too low (instead of being compensated for extra costs or forgone income, farmers should be more generously rewarded for taking nature conservation measures in their fields)	As above
PESC-4: Jeroen Arends	Ch.6	53	1881	56	2016	Overall in the region (South East Europe), the policy, legal and regulatory framework is in a transition phase towards the EU framework regarding the environment, biodiversity, etc. What is lacking is an adequate institutional framework with sufficient resources and capacities in order to deal with environmental degradation, loss of biodiversity, etc. Ecosystem services is only mentioned in NBSAP of countries but often without specific targets and timelines. There is no cross sector policy formulation -yet- that incorporates ecosystem services or NCP. There is a transition going on where the above are brought in line with EU laws, etc. but often there is insufficient follow up due to budgetary constraints or lack of priority. Also, enforcing and inspection are lacking due to these reasons. Environmental Impact Assessments and Strategic Environmental Assessment in combination with spatial planning (at all levels) is lacking or not properly conducted, especially when it comes to public consultation rounds. This criticism comes a lot from NGO and citizens' groups. I have a link to one document here: Crnčević T. And Therivel R. (2009): Achieving sustainability in planning: English and Serbian experiences. Regional development, spatial planning and strategic governance, thematic conference proceedings volume 1. Institute of Architecture and Urban & Spatial Planning of Serbia (IAUS), Belgrade, Serbia (Conference proceedings).....Also, there is a knowledge gap and lack of data, or inconsistent data when it comes to environmental pollution and also regarding biodiversity. Often species are listed in inventories that actually never were present on a territory, for instance. There is also a lack of ownership regarding this data. There is some more information on this but I only have that for Serbia, not for the rest of the Balkans. I assume though that all countries to some extent or another struggle with the same issues. Other references are the EU progress reports for the various countries in the region.	Thanks - yes, many of these aspects are already covered in Section 6.4.2.3, but I have also added a sentence in the paragraph on EU accession to make this more explicit, quoting two REC reports. I have also added a EU-related reference on progress in mainstreaming the concept of ecosystem services within the environmental acquis (Bouwma et al. 2017). Unfortunately, I could not find the referenced document (Crnčević & Therivel) on the internet.
Hanna Skryhan	Ch.6	55	1958	55	1981	there is no link to the Box 6.4 in the text	There was a link in the final subsection, but Box 6.4 has now been deleted (and replaced by a reference) so the link to the box has been deleted, too.
ECA values liaison group	Ch.6	55	1978			adapt wording "provide instrumental values" instead of benefits	Entire box has been deleted, so comment is obsolete
Finnish Government	Ch.6	56	1990	56	1992	It is unclear what is how the referenced court case relates to the issue discussed? Elaborate more on the case or delete the sentence.	This sentence has now been deleted.
Hens Runhaar	Ch.6	57	2044	57	2048	But see the references to Glasbergen and the above reference	As above - passed on to the coordinators of the section on agriculture
The Netherlands: Astrid Hilgers	Ch.6	57	2044	57	2048	But see the references to Glasbergen and the above reference	As above
Mark Rounsevell	Ch.6	58	2060	58	2061	There's potential to edit down the more descriptive parts of this section.	The text has been substantially revised and shortened.
Jetske Bouma	Ch.6	58	2060			Again: the strength and focus of the chapter could be improved by changing the order of the chapters. And why discuss this separately from conservation policies? Why not discuss the governance approaches in relation to biodiversity and specific ecosystem services? That would immediately make it clear that integration is lacking at that policies currently interact in a negative way.	The scoping documents prescribe a sector analysis as a basis for the overall assessment in this chapter

						When describing the instruments existing for different sectoral policies, most instruments are related to sanctions. This should be balanced with the assessment of instruments related to positive incentives, such as green investment and companies on the green market. From literature regarding environmental policy making there are examples of environmental policy instruments regarding regulation (command and control), market based instruments and voluntary instruments (such as labels). One reference is James Connelly and Graham Smith 2003. Chapter 5 "Choosing the means" in Politics and the Environment: From Theory to Practice, London: Routledge Press, pages 157-186	Thank you for the comment, the chapter has been substantially revised with the content of the comment in mind.
PESC-4: Jeroen Arends	Ch.6	58	2060	104	3608		
UNEP-WCMC: Elise Belle	Ch.6	58	2064	58	2073	Change text format and reference to Box 6.5 (which actually does not exist).	Both changed text format and references to Box 6.5 and 6.7 are now in note 1.
Hanna Skryhan	Ch.6	58	2064	73	2428	Cut threefold	This comment is not very much useful. It would have been more helpful to indicate what part of the text could be cut and why (e.g. redundant, descriptive). However the text will be shortened as much as possible keeping an eye to not cut relevant information
Mark Rounsevell	Ch.6	58	2075			In terms of what? Financing, land area covered, number of countries, ...?	it was referred to land use, but it is very likely that also the financing and number of countries involved make the CAP the wider single policy in the world. However this statement has been cut in order to shorten the text.
Hens Runhaar	Ch.6	61	2120	62	2212	I don't want to refer too much to my own work, but the above reference may be interesting. We examined 10 distinct public, public-private and private governance arrangements for agrobiodiversity. Maybe interesting to summarise our findings in a Textbox? Species abundance and diversity has decreased much more in the Netherlands than elsewhere in the EU, hence effective governance of agrobiodiversity is especially important in this country. However, our evaluation shows that these arrangements, also in combination, are not enough to halt loss in agrobiodiversity and species abundance	Thanks for suggesting this interesting reference. Unfortunately the text is already long and needs to be shortened so it is not possible to insert another textbox. However in the text there is already an in depth assessment of different policy instruments and their effectiveness, and an analysis of constraints and opportunities. In particular, referring to your previous comment, the suggestion to adopt result-oriented AES and paying farmers not just for opportunity and undertaking cost but also for biodiversity conservation achieved has been pointed out
The Netherlands: Astrid Hilgers	Ch.6	61	2120	62	2212	Again, Runhaar et al (2017) might be interesting.	See reply above
PESC-4: Jeroen Arends	Ch.6	61	2129	61	2136	CAP is very favorable to big land owners, not so much small landholders, and this limit should be acknowledged for. Indeed, CAP payments as part of the green pillar are based on the size of the farm. Larger owners thus obtain more money, and this is easier for them to put land aside for environmental purposes.	This information is already included in the SOD text and it will be retain also in the TOD (lines 1996-2200) pages 60-61.
Ilja Gasan Osojnik Črnivec	Ch.6	62	2190			local and native breeds are two interchangeable terms, for greater clarity, I would recommend only one expression is used for the whole publication.	This needs to be checked with other chapters when the TOD will be finalised. At the moment in this section the term Local breeds will be used
ECA values liaison group	Ch.6	63	2221			To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	The term "multiple values" does not result in the text at the line indicated nor at page 63
PESC-4: Jeroen Arends	Ch.6	64	2226	64	2263	In post-Yugoslavia War countries, the issues related to land laws and land properties are a constraint for implementing conservation measures related to agricultural land. We are currently still in a transition period, with issues regarding land restitution. It makes governance difficult to enforce. Regarding agriculture in the Western Balkan countries there are two documents that describe the current state of the sector and the agriculture policy in the region: Volk, T. (ed.) 2010. Agriculture in the Western Balkan countries, (Studies on the agricultural and food sector in Central and Eastern Europe, vol. 57) and AGRICULTURAL POLICY AND EUROPEAN INTEGRATION IN SOUTHEASTERN EUROPE, FAO, 2014. They describe the current state of affairs and gaps.	Thanks for this interesting information. Unfortunately at the moment the text needs to be shortened and this makes unlikely to include further detailed information
ECA values liaison group	Ch.6	64	2228			adapt wording "relevant positive ecological impact"	Done. In TOD now line 2254
Hens Runhaar	Ch.6	64	2264	64	2264	In the Netherlands a financial instruments has been applied for a long time that is unique in Europe: the so called Fauna Funds. Under this arrangement, farmers can be compensated for damage caused by a specified list of species that are protected or otherwise considered special species. The main part of the budget is spent on damage caused by Geese (see Runhaar et al. 2017)	Thanks for this interesting information. Also in other EU countries there are some compensation measures for damages caused by wild fauna (e.g. by wolf killing sheep in Italy). Unfortunately at the moment the text needs to be shortened and this makes unlikely to include further detailed information
The Netherlands: Astrid Hilgers	Ch.6	64	2264	64	2264	In the Netherlands a financial instruments has been applied for a long time that is unique in Europe: the so called Fauna Funds. Under this arrangement, farmers can be compensated for damage caused by a specified list of species that are protected or otherwise considered special species. The main part of the budget is spent on damage caused by Geese (see Runhaar et al. 2017)	Thanks for this interesting information. Also in other EU countries there are some compenstion measures for damages caused by wild fauna (e.g. by wolf killing sheep in Italy). Unfortunately at the moment the text needs to be shorten and this makes unlikely to include further detailed information
ECA values liaison group	Ch.6	65	2278			adapt wording "achieve positive ecological impact"	Done. In TOD now line 2291
Hens Runhaar	Ch.6	66	2297	66	2298	For a critical evaluation of how the Netherlands have implemented the greening requirements in the CAP, see TERWAN, P., J. VAN MILTENBURG, A. GULDEMOND, A. VAN DOORN (2017) VERGROENING, AGRARISCH NATUURBEHEER EN COLLECTIEVEN: PRAKTIJKEEN VOOR EEN GROENERE LANDBOUW (in Dutch but with an English summary) available from http://portal.scan-ict.nl/system/files/documenten/nieuws/eindrapport_vergroening_agrarisch_natuurbeheer_en_collectieven_2017.pdf	Thanks for this interesting information. Unfortunately at the moment the text needs to be shortened and this makes unlikely to include further detailed information
ECA values liaison group	Ch.6	66	2297			In box 6.6, adapt wording "of the positive Natura 2000 effects"	Text has been adapted
ECA values liaison group	Ch.6	66	2302			adapt wording "achievement of positive ecological impacts"	Done.
ECA values liaison group	Ch.6	68	2352			adapt wording in the bracket "(e.g. relational values generated by local food production"	Done.
ECA values liaison group	Ch.6	68	2353			adapt wording "advantages for farmers and general society..."	Done.
ECA values liaison group	Ch.6	68	2364			adapt wording "the future relational values (cultural"	This paragraph has been eliminated in order to shorten the text
UNEP-WCMC: Elise Belle	Ch.6	68	2366	68	2366	Box 6.7 not referenced in text.	Box 6.7 now referenced in the text at page 65 line 2332.
ECA values liaison group	Ch.6	69	2392			adapt wording "positive ecological effects for flora"	This paragraph has been eliminated in order to shorten the text

ECA values liaison group	Ch.6	69	2416			adapt wording "assessing the non-anthropocentric biodiversity value..."	The assessment in this case refers to the value of the farm for biodiversity. It is not clear why to refer specifically to non-anthropocentric value.
UNEP-WCMC: Elise Belle	Ch.6	70	2423	73	2428	Finalize Table 6.9, including display of trends.	Trends are already displayed in tab.6.9 by coloured arrows. If possible these will be enlarged in the TOD.
PESC-4: Arevik Mkrtchyan	Ch.6	70	2423	73	2428	There is already a lot of text in Table 6.9 so it should be reduced as much as possible in the final version of the table, in order to make it useful.	The text will be reduced as much as possible
ECA values liaison group	Ch.6	72	2425			Table 6.9: "...[and to the positive ecological impact]"	Unclear what is meant by this comment.
Hanna Skryhan	Ch.6	74	2431	74	2431	Agriculture in EE is totally missing!	The text has been renamed to also cover Eastern Europe
Hanna Skryhan	Ch.6	74	2432	74	2459	delete the text	There is no explanation to this request?
PESC-4: Hanna Skryhan	Ch.6	74	2432	76	2482	The text describing the context of agriculture in the region can be shortened significantly, so that we focus on the policy instruments which are at the core of Chapter 6.	The text has been substantially reduced,
ECA values liaison group	Ch.6	74	2455	74	2456	Adapt wording: "...around 60 percent of the value of NCP comes from pastures."	Text has been adapted
ECA values liaison group	Ch.6	74	2455			make clear	Text has been edited
ECA values liaison group	Ch.6	74	2455			Specify which type of valuation is meant (economic, biophysical, integrated,...)	The text has been revised
UNEP-WCMC: Elise Belle	Ch.6	75	2468	75	2469	Figure 6.6: Increase resolution of the map.	Done
Hanna Skryhan	Ch.6	75	2468	75	2470	delete the figure 6.6	There is no justification for this request.
Hanna Skryhan	Ch.6	75	2481	76	2482	delete the table 6.10	There is no justification for this request.
Hanna Skryhan	Ch.6	77	2533	80	2622	delete the figure, table 6.11, table 6.12 from the Box 6.9	There is no justification for this request.
UNEP-WCMC: Elise Belle	Ch.6	77	2547	78	2548	Figure 6.7: Remove title and sentence at top of the figure.	Done
Amor Torre-Marin	Ch.6	79	2602			Confidence term? If so it should go between brackets. If not alternative wording should be used.	The text has been revised
ECA values liaison group	Ch.6	79	2610			adapt wording "the costs and instrumental benefits of ..."	Text has been revised
ECA values liaison group	Ch.6	80	2612			adapt wording "...lead to higher net income and..."	Text has been revised
Hanna Skryhan	Ch.6	80	2623	83	2782	add the analysis of the policy instruments in ECA sub-regions	The instrument analysis has now been transferred to section 6.2.
PESC-4: Kristina Kujundzic	Ch.6	80	2623	83	2782	The section on forest is quite clear, with a little summary section before moving to next section. Could we have the same for the section on agriculture?	The text has been substantially rewritten to better fit into the overall structure of the chapter.
Hanna Skryhan	Ch.6	80	2624	80	2644	cut the description of the forestry, but add the policy objectives in regards to the title of the paragraph	The forestry description has been shortened.
Germany	Ch.6	80	2630	80	2632	the processes mentioned are no processes for sustainable development but for the establishment of criteria and indicators for Sustainable Forest Management (SFM) which is a completely different focus. The process for SDG is the Agenda 2030 for Sustainable Development	The text has been adapted accordingly
Germany	Ch.6	80	2653	80	2653	"the hard legal instruments" are not so hard at all. There is no mechanism of sanctions to fulfill the CBD goals. In many decision from international processes the national capabilities and the national sovereignty are specifically addressed, thus this kind of internationalization of forest processes seems rather a theoretical construction.	The statement has been qualified
Germany	Ch.6	82	2701	82	2702	the example comes out of a sudden as is not further explained. Or delete the example or further elaborate on the linkages to the above-mentioned	The example is taken up in the next paragraph
Germany	Ch.6	82	2729	82	2731	Unclear to what country Sotirov et al. refer to when mentioning specific directives and strategies	They refer to EU countries which is now stated in the text
Germany	Ch.6	83	2774	83	2774	delete "process of"	Done
Hanna Skryhan	Ch.6	84	2785	84	2809	add the policy objectives in fishery and aquaculture	Policy objectives has been added
Mark Rounsevell	Ch.6	84	2803			Looks like the auto-correct has incorrectly modified the name of this fish	corrected
PESC-4: Jeroen Arends	Ch.6	85	2827	85	2835	In general, the Marine Strategy Framework Directive (MSFD) and Maritime Spatial Planning Directive do not specifically target ecosystem services or NCP but set descriptors (11), associates criteria (29) and 56 indicators in order to achieve "good environmental status" (GES). Although it seems logical to assume this, there is a gap on how ES can contribute to MSFD' GES and this needs to be further developed. For this, Marine and Coastal Ecosystem Services (MCES) indicators as well as models for MCES assessment (including fisheries and food webs) need to be further developed and they need to demonstrate how they can contribute to GES. Source for this: "Ecosystem Services sustainability in the Mediterranean Sea: Assessment of status and trends using multiple modelling approaches". Liqueete et al 2016. Another source related to MCES indicators and how they need to be developed: Current Status and Future Prospects for the Assessment of Marine and Coastal Ecosystem Services: A Systematic Review. Liqueete et al 2013	Added the line "In relation to the MSFD there is a gap on how ecosystem services can contribute to MSFD's GES target and this needs to be further developed. For this, marine and coastal ecosystem services indicators and models for assessment (including fisheries and food webs) need to be further developed in order to demonstrate how they can contribute to GES (Liqueete et al. 2013)." and reference "Liqueete C, Piroddi C, Drakou EG, Gurney L, Katsanevakis S, Charef A, et al. (2013) Current Status and Future Prospects for the Assessment of Marine and Coastal Ecosystem Services: A Systematic Review. PLoS ONE 8(7): e67737. https://doi.org/10.1371/journal.pone.0067737"
UNEP-WCMC: Elise Belle	Ch.6	85	2860	85	2860	"if they are involved in the management"	corrected
UNEP-WCMC: Elise Belle	Ch.6	86	2872	86	2872	Figure 6.9: "Marine ecoregions including". Explain what are the subdivisions in red.	added " (Subdivisions with red borders are ICES fishing zones)"
PESC-4: Arevik Mkrtchyan	Ch.6	86	2876	88	2951	The depletion of groundwater resources led to an environmental catastrophe for fisheries in Armenia. See: 1. USAID. 2014. Assessment Study of Groundwater Resources of the Ararat Valley: Final Report. March 2014. 2. USAID Analysis and Assessment of Groundwater in Ararat Valley. Interim reports 1 and 2, prepared under USAID Clean Energy and Water Program, 2013 3. Intensive Fish Farming as a Contributor to the Depletion of Underground and Surface Water Resources in the Ararat Valley/ Tatiana Trifonova. 2016 Eurasian Center for Food Security, Moscow, Russia	Have now added the sentence and reference ""It has also been shown that intensive fresh water aquaculture can deplete groundwater supplies. For example fish farming was found to be a major contributor to the depletion of underground and surface water resources in the Ararat Valley of Armenia (Trifonova, 2016)." Trifonova, T. (2016). Case Study #8-8, "Intensive Fish Farming as a Contributor to the Depletion of Underground and Surface Water Resources in the Ararat Valley". In: Per Pinstrup-Andersen and Fuzhi Cheng (editors), "Food Policy for Developing Countries: Case Studies." 15 pp.URL: http://cip.cornell.edu/dns/gfs/1489508722"

PESC-4: Jeroen Arends	Ch.6	88	2953	88	2969	There are still many issues with fisheries and fishing practices. It is generally well known that certain fisheries and fishponds cause environmental and ecological damage.	Agreed, and we have tried to highlight the main ones in this section with the limited space that we had. Have also added to summary "In a recent article, Colloca et al. (2017) point to "a worrisome picture where the effect of poorly regulated fisheries, in combination with the ongoing climate forcing and the rapid expansion of non-indigenous species are rapidly changing the structure & functioning of the ecosystem", and add "the management system implemented in the region appears too slow and probably inadequate to protect biodiversity and secure fisheries resources for future generations".
Audun Ruud	Ch.6	89	2979	95		On energy, pages 89-95 it could be considered to better distinguish between renewable and non-renewable energy resources extraction	A distinction between renewable and non-renewable energy is available in section 6.5.4.1. In the following sub-sections, we refer to them in different paragraphs.
Hanna Skryhan	Ch.6	89	2979	89	3003	add the bio-fuel production and its impact on the BES	This chapter is about policy responses; not drivers. Yet we deal with biofuels in section 6.5.4.3 (constraints and opportunities).
Finnish Government	Ch.6	89	3020			It says that marine mining don't have effects to human environment. That is true if we look at direct impacts, but surely there is potentially indirect impacts to humans also on marine mining.	We have corrected it by mentioning "limited direct impacts" in the corresponding sentence.
ECA values liaison group	Ch.6	90	3057			adapt wording "...greater share of income and participation...."	Corrected.
Audun Ruud	Ch.6	90	3063			Hydropower and reservoirs represent significant environmental challenges, but as part of the energy transition it could also be part of the solution – also as a back-up when more intermittent renewables are entering the market.	Thanks for your comment. However, we cannot write our judgements in the text. We are only supposed to provide an assessment of the existing literature on BES.
Audun Ruud	Ch.6	90	3063			And hydropower and water management is not extensively covered in the chapter..	We cover hydropower in the following sentences in 6.5.4.3: "There are also constraints regarding the use of the widely-established energy policies and policy instruments. As reviewed and demonstrated in Chapters 3 and 4, all known renewable energy sources can have consequences for biodiversity and animal migration. For aquatic and semi-aquatic fauna, hydropower presents by far the greatest array of problems in terms of diversity and severity of impacts (CMS, 2014; Hogan, 2011). Environmental policy of the largest Russian hydropower company Rushydro states that further development of the sector is constrained primarily by the fact that all most suitable dam locations are in wilderness areas known as key habitats for endangered species (PAO Rushydro, 2016). Oil, gas and coal extraction or exploration in many parts of Europe and Central Asia (e.g. Kazakhstan, Uzbekistan, Tajikistan) as well as extraction of uranium and other minerals (e.g. Kazakhstan) lead to biodiversity losses. Apart from the conventional sources of energy, mainly comprising of fossil fuels, hydraulic fracturing (or fracking) also puts pressure on the environment and ecosystems causing potential water and soil contamination from surface leaks or from improperly designed well-casing, spills of improperly treated water, increased competition for water usage, and so on (UNEP, 2012)."
Audun Ruud	Ch.6	90	3063			And wind power is not even mentioned as far as I can read..	We now mention wind as well as solar power in section 6.5.4.3.
Hanna Skryhan	Ch.6	90	3063	91	3088	add information about Bio-fuel Directive and its implementation in the ECA sub-regions	Added in the 6.5.4.2 section.
Audun Ruud	Ch.6	91	3068	91	3088	Besides, a focus is very much on impacts, but low-carbon transitions can also create new opportunities in terms of reduced GHG emission and beyond the minor reference on page 91	We now mention the opportunities that will be brought together via low-carbon transitions.
ECA values liaison group	Ch.6	92	3133			To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	It does not apply to the current version of the text.
ECA values liaison group	Ch.6	95	3242			adapt wording "... contain a high non-anthropocentric and cultural value."	Revised
ECA values liaison group	Ch.6	95	3244			adapt wording "preservation of these values..."	Revised
Oliver Lindecke	Ch.6	95	3246	3253	95	The executive, i.e. nature conservation agencies on different levels but most importantly on the lower levels in direct contact with stakeholders, need more regular education on taxon specific impacts which may arise from energy development. The level of expertise is often based on the personal interest in certain human-wildlife conflicts. An interface for communication of scientific findings must be established. Although English is a language used across ECA, local authorities and personal of agencies does not regularly update on scientific findings. Therefore results of relevance for a certain species are often considered only inside the range of the nations. I.e. in the best case scenario when the findings find there way to the nature conservation agencies.	We have omitted the related reference (Jones et al) and the corresponding paragraph due to length concerns.
ECA values liaison group	Ch.6	96	3282			adapt wording "to better govern nature's contributions to people..."	Revised
Audun Ruud	Ch.6	96	3297			Table 6.13 on page 96-97 should be better related to table 6.1	Table 6.1 is about governance modes, public and private actors and their interaction, whereas Table 6.13 only outlays business related risk and opportunities for BES. Instead of linking the two tables, we prefer to include an additional table on "policy options" (both public and private) in the Annex.
ECA values liaison group	Ch.6	96	3297	97	3298	Table 6.13: Adapt wording: "Business related biodiversity and NCP risk and opportunities";	Revised

						It should be mentioned, that attractive landscapes and nature play a crucial role to attract tourists. Hence, tourism strongly depends on biodiversity and ecosystem services (as natural capital) - while at the same time the tourism industry seldom supports the protection of biodiversity. The following references could be cited: Adamowicz, W. L.; Naidoo, Robin; Nelson, Erik; Polasky, Stephen und Zhang, Jing (2011): Nature-based tourism and recreation. In: Kareiva, Peter; Tallis, Heather; Ricketts, Taylor H.; Daily, Gretchen C. und Polasky, Stephen (Hrsg.): Natural Capital. Theory and Practice of Mapping Ecosystem Services. Oxford, Oxford University Press: 188-205. Mayer, Marius; Müller, Martin; Woltering, Manuel; Arnegger, Julius und Job, Hubert (2010): The economic impact of tourism in six German national parks. In: Landscape and Urban Planning 97: 73-82. Willis, Cheryl (2015): The contribution of cultural ecosystem services to understanding the tourism - nature - wellbeing nexus. In: Journal of Outdoor Recreation and Tourism: Article in Press.	
Roger Keller	Ch.6	98	3350	98	3355		The suggested references have been added.
UNEP-WCMC: Elise Belle	Ch.6	98	3350	98	3352	"coverage of protected areas observed over the last decades has been shown to be beneficial for biodiversity and ecosystem services, providing opportunities for tourism (UNEP-WCMC and IUCN, 2016). I would add the following reference, which is more recent: <i>UNEP-WCMC and IUCN (2016). Protected Planet Report 2016. UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.</i>	The suggested references have been added.
ECA values liaison group	Ch.6	99	3374			To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	The suggested changes have been made.
ECA values liaison group	Ch.6	101	3478			adapt wording "...and potential positive impact on biodiversity..."	The suggested changes have been made.
ECA values liaison group	Ch.6	102	3514			adapt wording "preserving future options related to the tourism sector."	The suggested changes have been made.
Audun Ruud	Ch.6	103	3567			And when discussing trends in governance modes (6.5.6), the table 6.1 could be better used as a reference and perhaps the discussion could be more specific on the ECA experiences	Thanks for this interesting information. Unfortunately at the moment the text needs to be shortened and this makes unlikely to include further detailed information
Jetske Bouma	Ch.6	104	3609			Again, if you discuss this at the beginning and then consider the current policies Europe and central asia the chapter becomes much easier and informative to read. A lot of the more descriptive information could then perhaps be transferred to an appendix so that the actual chapter could really focus on the challenges and opportunities of the governance of biodiversity and ecosystem services in Europe and central asia.	We assume 'discuss this' means 'discuss mainstreaming' at the beginning of chapter 6. However, we streamlined and shortened the text substantially, while not changing the overall structure of the chapter.
Christian Schleyer	Ch.6	104	3609	131	4567	Please consider Bouwma, I., Schleyer, C., Primmer, E., Winkler, K.J., Berry, P., Young, J., Carmen, E., Špulerová, J., Bežák, P., Preda, E. & Vadineanu, A. (2017): Adoption of the Ecosystem Services concept in EU policies. Ecosystem Services (Online available: 11 March 2017) (http://dx.doi.org/10.1016/j.ecoser.2017.02.014).	Reference is now included in 6.4.2.1
UNEP-WCMC: Elise Belle	Ch.6	104	3610	104	3610	Box 6.10 nor referenced in text.	Box 6.10 has been deleted
ECA values liaison group	Ch.6	104	3610			To improve clarity and consistence with other chapters in box 6.10, replace 'multiple' by 'diverse' values	Box 6.10 has been deleted
Markus Fischer	Ch.6	105	3640			I agree, but it sounds prescriptive, as do several such statements in this section. Please reword in the sense of "offers opportunities for improvement" or the like	Has been rephrased accordingly in 6.6.4.1
Germany	Ch.6	105	3642	105	3644	Here, you might refer to chapter 4 & 5, where drivers have been identified and further analysed, in order to integrate the chapters more	References has been made to ch. 4 and 5 where appropriate.
ECA values liaison group	Ch.6	105	3646			adapt wording "...multiple values of nature's contribution	Rephrased 'multiple services' 6.6.4.1
ECA values liaison group	Ch.6	105	3646			To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	Rephrased 'multiple services' 6.6.4.2
Germany	Ch.6	105	3648	105	3650	What about EE and CA?	It has been recognized by the EU but only few countries in the whole ECA region make intensive efforts
ECA values liaison group	Ch.6	105	3650			To improve clarity and consistence with other chapters, replace 'multiple' by 'diverse' values	we meant 'multiple services' thus we did not replace
Germany	Ch.6	105	3659	105	3666	Though this is an important message, it would be helpful to have examples or success story- how can this be reached in practice? In line 3649 you state that "a few countries have made intensive efforts" to integration	Unfortunately, we had to reduce the text. Thus, we have not been able to include more detailed examples.
Germany	Ch.6	106	3675	106	3680	compare chapter 1	Reference to chapter 1 has been made where appropriate
ECA values liaison group	Ch.6	106	3707			adapt wording "Responding to the multiple anthropocentric and non-anthropocentric values..."	This text has been deleted
Sigrid Kusch	Ch.6	108	3729			Figure 6.10: In the list of sectors, "manufacturing" should be added, as it is industry that consumes the largest share of resources. "Spatial planning" might be replaced by "Infrastructures"; more generally, the list of sectors could be harmonised with earlier lists in this chapter, such as the list of sectors in Figure 6.2. A second issue with Figure 6.10: "Systems" (last word in figure) is rather vague, this would benefit from being more precise.	Manufacturing and Services sectors have been added, in line with Figure 6.2 and sectors covered in sections 6.4 and 6.5. We changed "systems" to "ecosystems".
ECA values liaison group	Ch.6	108	3729			Fig 6.10: check whether BES can be replaced by NCP or whether these terms are fixed in SEA & EIA	changed to nature's contributions to people
ECA values liaison group	Ch.6	108	3729			Figure 6.10: You might try to include value categories in this figure by assigning different sector activities to N (biodiversity conservation), NCP (agriculture, forestry, fishery, energy and mining, manufacturing), GQL (health, education, tourism).	we are afraid this would become too complicated to implement.
Markus Fischer	Ch.6	108	3730			Prescriptive wording, please reword.	Title has been rephrased: 6.6.3 Raising awareness and participation
PESC-4: Jeroen Arends	Ch.6	108	3731	115	4029	Action 5 of Target 2 of the EU Biodiversity 2020 Strategy, could be mentioned in sections on national accounting and on spatial planning. It requires member states to map their ecosystem services - the so-called MAES initiative (for Mapping and Assessment of Ecosystems and their Services). Member States were expected to complete this by 2014 but there are delays in many countries: http://biodiversity.europa.eu/maes/maes_countries Target 2 also requires Member States to conduct Natural capital accounting by 2020. These requirements are applicable to all EU countries, but eventually also to candidate countries.	These are now mentioned in the text as suggested. (The text appears in the paragraph where SEEA and WAVES are explained.)
ECA values liaison group	Ch.6	108	3734			adapt wording "...based on the monetary value of output..."	Revised.
Sigrid Kusch	Ch.6	109	3759	109	3767	Does Figure 6.11 then suggest that the region's path is less sustainable than the global path (curve of region is below global one throughout last years)? Or what does this comparison of regional/global data reveal? As a second issue, please note that in the figure heading it is not clear why particulate emission is mentioned (was only damage caused by emission of particulate matter considered?...)- this could be presented in a clearer way.	As for Figure 6.11, we now have a comparison of ECA with the other regions in terms of ANS rates. We explain it between the lines as such: "... Another observation is that, since 2008, in the post-global crisis era, the region has experienced lower ANS ratios than those of the most regions. South Asia, East Asia and Pacific, Middle East and North Africa, and Latin America and the Caribbean have displayed higher ANS rates than the ECA region in the last couple of years." Second; as the World Bank data for particulate matter damage is only available from 1990, we noted down this detail in the figure heading.

Germany	Ch.6	109	3764	109	3766	Can you further disaggregate into the 4 ECA-subregions?	It was not easy to disaggregate into the ECA-subregions; however, instead, we now add a comparison of ECA with the other regions.
ECA values liaison group	Ch.6	110	3782			adapt wording "...the multiple types of value of natural capital..."	Revised.
ECA values liaison group	Ch.6	110	3801			adapt wording "...in which anthropocentric and non-anthropocentric value domains..."	Revised.
ECA values liaison group	Ch.6	111	3828			To improve clarity and consistency with other chapters, replace 'multiple' by 'diverse' values	Revised.
ECA values liaison group	Ch.6	111	3836			adapt wording "...the recognition of the multiple values of such services..."	Revised.
ECA values liaison group	Ch.6	111	3857			adapt wording: "...including integrated valuation methods..."	Revised.
Hanna Skryhan	Ch.6	112	3863	115	4029	strong bias to WE, the information about EE and CA is totally missing. The paragraph needs significant redevelopment. I could provide text of this paragraph including the missing part. To cut the text of the paragraph	Thank you! The reviewer provided some more information which has been considered in the revision. Essential information has been integrated as far as the text limitations allowed (we already needed to cut down overall length)
Finnish Government	Ch.6	112	3863			Could there be an example from Baltic Sea, the HELCOM- VASAB cooperation (http://www.helcom.fi/helcom-at-work/groups/helcom-vasab-maritime-spatial-planning-working-group/)	Website has been checked. It is an interesting example of collaboration in marine spatial planning. However, no new relevant information was found that could be taken up in the assessment.
ECA values liaison group	Ch.6	113	3948			adapt wording "...and have substantial advantages..."	Thanks for the comment. Has been implemented.
PESC-4: Hanna Skryhan	Ch.6	114	3952	114	3955	There is actually quite a lot of work on spatial planning in Eastern Europe, and on participatory approaches. I studied the case for Ukraine and Belarus and I can provide you with a little paragraph on that topic if you want.	Thanks you! We have now integrated more information on spatial planning in Eastern Europe, based on the new information provided (see response on comment 342 above).
UNEP-WCMC: Elise Belle	Ch.6	115	4003	115	4004	"climate adaptation and mitigation,"	Thank you. Has been changed.
Dan Faith	Ch.6	115	4003		4004	re "better integrating BES in planning" - would be useful to point out that key trade-offs are between B and ES...and even local synergies of the two can mean poor balance at regional scale - see references - Faith, Australian Zoologist	Thank you. A short note on this has been added: "Trade-offs between different NCP's as well as between biodiversity and NCPs need to be accounted for in decision-making about preferable spatial planning strategies and implementation actions."
UNEP-WCMC: Elise Belle	Ch.6	115	4007	115	4007	You could say a bit more about these two examples.	Thank you. Indeed we could say more, but we have been asked to substantially reduce the length of the manuscript and not to provide further detail. We therefore decided to refrain from adding further detail and hope that the reader will consult the provided references for more information.
Germany	Ch.6	115	4011	115	4021	very general- where is the link to ECA here?	We have considered this carefully in the revision and tried to be more specific to ECA throughout the entire section - as far as this was possible given the space limitations. Furthermore, one colleague from eastern Europe provided additional information that we incorporated in the manuscript. However, we needed to recognize that it is impossible to comprehensively address the breadth of formal and informal government and governance arrangements in place within ECA.
Sigrid Kusch	Ch.6	116	4030	117		Section 6.6.2.3 "Sustainable consumption and production" would benefit from some more specific information, as one example, circular economy could be mentioned.	Agree, but due to limited space and with the chapter being too long, we will have to limit this if at all.
Sigrid Kusch	Ch.6	116	4039	116	4047	This should be reviewed. One not correct issue is the statement that the first 4 items on the list refer to the production stage, and only item 5 to the final consumption stage. Note that item 3 heavily depends on the end-user. Later in this section, the list of "key contributors" seems rather selective - what is the basis of this list of "main contributors to these impacts"?	Yes agree. We rephrased the reference to the numbers, and rephrased the bullet list as follows: 1. Increase resource efficiency, including circular resource use (production) 2. Enhance sustainable resource production (production) 3. Design products with cradle-to-cradle-approach (production) 4. Promote consumption patterns with less environmental impacts (consumption) 5. Reduce waste at different stages (production & consumption)
Sigrid Kusch	Ch.6	116	4051	116	4052	It is stated: "The actual environmental impact should be verified by applying a (final) consumer responsibility approach". This is not clear without explanation, and furthermore the message of such a statement should be carefully rethought. A message that formulates a recommendation to shift responsibility to the final consumer does not seem appropriate, at least it should be carefully rethought if that is really what you wish to communicate. And do you at all mean the final consumer here, or the entity that makes use of resources? "Consumer" generally can have different meanings. Note that most resources are consumed by industries, therefore it will be absolutely vital to bring industry on board, acting out of a proactive attitude and responsibility. - That of course does not mean that the final consumer does not require more attention. Social innovation and consumer-oriented instruments are among the most difficult to implement.	The text of the 'key contributors' has been deleted
Germany	Ch.6	116	4061	116	4070	anything on EE, CA?	This text has been deleted
UNEP-WCMC: Elise Belle	Ch.6	117	4084	117	4084	Figure 6.12 not mentioned in the text (except in Executive Summary).	No specific information available to us
Audun Ruud	Ch.6	117	4086			On the final assessment (6.6.3) and referring to my third comment above, I am missing a more explicit reference to dialogue and engagement	Noted, reference added.
ECA values liaison group	Ch.6	118	4100			adapt wording "...the distribution of anthropocentric values..."	This aspect is now explicitly referred to in the sub-section on 'policy mix'
Finnish Government	Ch.6	118	4120	118	4121	Statement by the Harris should be questioned. It is very straightforward conclusion. See literature on adaptive law.	Done
ECA values liaison group	Ch.6	119	4140			adapt wording "...at reflecting monetary costs and benefits to society of the conservation..."	Harring's statement has been qualified.
							Done

