

REGIONAL ASSESSMENT REPORT ON BIODIVERSITY AND ECOSYSTEM SERVICES FOR EUROPE AND CENTRAL ASIA							
Comments external review second order draft - Summary for policymakers							
Reviewer Name	Chapter / SPM	From Page	From Line	To Page	To Line	Comment	Response
Robert Watson	SPM	0	0			The high-level summary is very linear and is not synthetic across the four sections of the report. Except for the four bolded paragraphs it is simply a collation of the bolded text in the main section of the SPM. So the first question is whether it could be more synthetic.	Agreed. The high level summary has been re-written around a revised narrative that is more synthetic across the key messages.
Robert Watson	SPM	0	0			The current style makes for a very repetitive report, i.e., the same words are used at least twice, and sometimes three times when the introduction also reports on some of the key findings. I would like to suggest a drastic edit. I would keep the bolded text in A, B, C and D (albeit revised and expanded a bit) and delete the rest of the text that is repeated verbatim later in the main part of the SPM. I would also add a fifth paragraph that summarizes Table SPM-1, which in my opinion is a critical table that will be of great interest to the policymakers. This would then provide a punchy one page summary that deletes all the repeated text.	The document has been edited down considerably and repetition removed, whilst maintaining the broad A, B, C, ... structure. This includes a revised high level summary. Table SPM 1 has been removed, but summarised in a box capturing the relevant evidence reported in the technical report.
Robert Watson	SPM	0	0			There is not a single mention of economic value (market or non-market) or any other values – this summary will not resonate with finance ministers – the success of the UKNEA was because the economics resonated with the finance ministers and the Cabinet Office – likewise the economics in the pollination report was a key element of its success.	Evidence on economic values has now been added.
Robert Watson	SPM	0	0			No links with the SDGs and only marginal links to the Aichi targets (summarize table SPM-1 as I suggested above)	This suggestion has been taken-up with the SDGs/ABTs now summarised in a box.
Robert Watson	SPM	0	0			The text falls back on using the generic NCP categories rather than specific NCP – hence this will miss the key ministries – the text needs more specificity.	The key messages do not only summarise information by broad NCP category, but also give information on individual NCPs.
Robert Watson	SPM	0	0			Almost no quantification – very qualitative statements – we need some quantification	Better quantification has been made throughout the document.
Robert Watson	SPM	0	0			No mention or discussion of quality of life and the elements of quality of life	Quality-of-life issues are now addressed in the document.
Robert Watson	SPM	0	0			Section D is well written but only addresses policies and governance, and ignores, technologies, practices and behaviour – also very generic statements, no specific policies or ensemble of policies mentioned - at least link to the tables	More emphasis has been put on non policy/governance issues in Section D, and on specific policies and policy mixes.
Robert Watson	SPM	0	0			NCP is plural, therefore do not use NCPs – please convert all NCPs to NCP	Corrected throughout
Robert Watson	SPM	0	0			The text keeps flip flopping about with the use of NCP and natures contractions to people – please use one or another not both, especially in the same sentence	Text has been standardised throughout, and checked.
Robert Watson	SPM	0	0			I would remove all findings from the introduction - it makes reading the SPM very repetitive - unless you agree with my suggested shortened High-level summary	The introduction has been considerable shortened/deleted by being replaced by a box showing the ECA region.
Robert Watson	SPM	0	0			Many of the figures are not mentioned in the text	This has been corrected.
Robert Watson	SPM	0	0			There is mismatch between the four scenarios shown in figure SPM 10 and the text in that section, i.e., the figure is not discussed in the text, and pathways shown in Table SPM 3 are totally different from the scenarios in Figure SPM-10 - these must be reconciled - the policies and scenarios must be linked	The mismatch has been corrected. The scenario text has been modified by providing a description of the scenario archetypes in a box.
Robert Watson	SPM	0	0			A table of potential responses for different actors would be very useful in the SPM and chapter 6	The document includes a table of potential responses through policy options.
André Mader	SPM	0	0			Across much of the document, language seems to assume a level of technical understanding beyond the (broad) target audience. In many cases this can be remedied by explaining concepts briefly when introducing them; providing illustrative examples; or explaining the difference between them (e.g., from chapter 5, the definitions of, and differences between, scenarios, scenario archetypes, pathways, futures and models may baffle the average reader).	We have attempted to simplify the language throughout and to provide definitions of key concepts where appropriate, e.g. scenario archetypes
André Mader	SPM	0	0			The high-level summary does not yet seem to fulfil its purpose of grabbing the attention of the reader with simple messages that encourage further investigation. If it were made more "punchy", there would be little risk of losing detail because that can all be captured in the subsequent sections. This approach may also help with media uptake of messages, if they are clearly stated and quotable.	The high level summary has been completely re-written to be more attention-grabbing.
André Mader	SPM	0	0			There are certain terms that are used more-or less interchangeably, but inconsistently. These include: biodiversity; biodiversity and ecosystems; biodiversity and nature's contributions to people; nature's contributions to people and biodiversity; biodiversity and other NCPs; NCPs and nature; NCP and quality of life. Consistency within and across sections could enhance readability.	Terms have been checked for consistency throughout the document
André Mader	SPM	0	0			There seems to be the need for a clear distinction between <u>use</u> of NCP, on the one hand, and nature's <u>capacity</u> to make those contributions, on the other.	This is an important point. The section on NCPs is concerned with the actually used ones. Biocapacity is explained as the capacity to provide such contributions and it is stated that the ecological footprint (which is also defined) is larger than biocapacity for the region and most countries.
André Mader	SPM	0	0			It will probably be necessary to expand the NCP acronym to "nature's contributions to people" throughout (as done, for example, for ILK in the completed assessments). In that case it will also be necessary, for example, to change "material NCP" to "nature's material contributions to people".	This has been done.
André Mader	SPM	0	0			The official term is "Aichi Biodiversity Targets", which are "of the Strategic Plan for Biodiversity 2011-2020", rather than "of the CBD".	Corrected throughout
André Mader	SPM	0	0			The use of confidence language may need to be more uniformly distributed across the SPM.	Corrected throughout
Robert Watson	SPM	0	0			An assessment of NCP under future scenarios in chapters 2 and 5 is needed. The key findings should be reflected in the SPM.	This has been done (also see fig SPM 9).
Brendan Coolsaet	SPM	0	0			No mention of genetic resources or access&benefit-sharing in the SPM, despite importance for EU	There are now multiple references to genetic diversity throughout the document. At several relevant places we mention how access to NCP is limited or unequal in the region.
Brendan Coolsaet	SPM	0	0			SPM does not cover the content of chapter 1. Eg. Summary of conceptual framework is missing	Some elements of Ch1 are included (the region definition and explanation of NCPs). Since the conceptual framework is reflected in the chapter structure and widely published, and to avoid repetition between assessment SPMs and to keep the SPM short, we have not included a further discussion of it here.
Brendan Coolsaet	SPM	0	0			Relation with the CBD and how it already (tries to) addresses some of the issues should be highlighted throughout the SPM. Policymakers will be looking for possible synergies	We have a box on the ABTs that covers what the CBD is attempting to achieve, and were we summarise evidence on whether these targets are likely to be achieved.
Brendan Coolsaet	SPM	0	0			I may be useful to add some sort of 'how to read' section for policymakers, including some clarification of the methodology and information of the evidence scales (well established; established, but incomplete; etc.)	We believe that the SPM is self-explanatory as it stands, and in the interests of brevity we have not included such a 'how to' section in the text itself. However, two appendices explain the concept of NCP and the confidence levels.
Bruno Fady	SPM	0	0	0	0	There is no reference to genetic diversity in non crop or farm animal species, i.e. in wild species such as trees, wild animals or plants. The genetic diversity of wild species is the corner stone of biodiversity. Genetic diversity is the basis of resilience in natural and man-made systems. Maintaining genetic diversity in wild species ensures that they can evolve over time and be resistant / resilient to environmental and man-made modifications. This needs to be highlighted and genetic diversity trends need to be monitored	We agree that genetic diversity is a very important component of biodiversity. However, despite many articles on patterns of genetic diversity, temporal trend data in genetic diversity constitute a knowledge gap.

Yorick Reyjol	SPM	0	0			Globally I think this SPM is a bit (perhaps more than a bit) difficult to apprehend for PM and I would clearly recommend some simplifications... in my opinion it is more a "summary for experts" at this stage, where different technical parts of the other chapter have been copied-and-pasted, which render its lecture very difficult, even for a technical expert as I think I am. More conceptual and pragmatic figures (and less complicated text) would clearly be beneficial (in the line of Table SPM 3 in annex).	The whole document has been simplified, including a revised high-level summary and simplified figures.	
Anna-Rosa Asikainen	SPM		0	0	0	0	SPM is too long. Information that is given in SPM is valid and interesting but it should be presented in a more compact way (max. 20 pages) so that only the key issues are mentioned. The assessment report as a whole should also be more compact in order to attract readers of different backgrounds. This is important when we are talking about sharing knowledge and raising the level of awareness.	The document has been shortened considerably.
Anna-Rosa Asikainen	SPM		0	0	0	0	Agriculture and forestry could be mentioned as a solution (not as a problem) in many parts of the assessment since they play a crucial role in creating a sustainable future. In agriculture and forestry, all different aspects of sustainability (ecological, economical, social and cultural) come together and are balanced.	The evidence indicates that intensive agriculture and forestry cause declines in biodiversity and many NCP. This implies that less intensive land use can reduce loss or even increase biodiversity and NCP.
Anna-Rosa Asikainen	SPM		0	0	0	0	The role of land owners and farmers should be highlighted when it comes to contributions related to biodiversity. E.g. farmers have a dualistic relationship to biodiversity: 1) Farmers are dependent on biodiversity and they will be among the first ones who will have to live with the consequences related to the loss of biodiversity; and 2) Farmers contribute to biodiversity in many ways and that work is not always noticed by e.g. policy makers.	NCP from farming are mentioned in the SPM as are biodiversity effects of agriculture. Moreover, the document refers to ILK throughout, with many local knowledge holders being farmers (e.g. herders)
Anna-Rosa Asikainen	SPM		0	0	0	0	The future is a matter of overall sustainability: all the aspects of sustainable development should be taken into account. It is not always possible to secure biodiversity as its highest because otherwise we would have to give up on e.g. social aspects of sustainability. New and innovative ways of balancing different elements are needed. The assessment should highlight not only the conflicts but also the importance of balancing.	We have attempted to provide a balanced view across sustainable development issues. This is especially the case for the futures analysis, which compares trade-offs and synergies across alternative development pathways
Anna-Rosa Asikainen	SPM		0	0	0	0	Are there enough indicators that are simple and cost-effective so that the trends and changes in e.g. biodiversity can be monitored in a reliable way? This issue could perhaps be discussed in this assessment.	We point out knowledge gaps, including lack of knowledge on trends in habitat intactness and species conservation status, and that these gaps differ between subregions.
Anna-Rosa Asikainen	SPM		0	0	0	0	Sources of information (references) should always be mentioned e.g. in footnotes.	Done, where appropriate, and the SPM of course references its statements back to the sections of the technical report.
Anna-Rosa Asikainen	SPM		0	0	0	0	Proprietary rights must always be respected and this should be mentioned in the text in relevant places.	This goes without saying.
Germany	SPM		0	0			A reference to the concept of NCPs as applies to IPBES is needed here. A short introduction to the concept and how it relates to the - more widely used and well recognized - concept of ecosystem services would be urgently needed right in the beginning of the SPM.	The concept has now been introduced in a box and an appendix.
Germany	SPM		0	0			The SPM presents a lot of highly relevant and necessary key messages. The structure into 4 sections is useful, but linkages between the chapters are not very visible. Please make sure that there is a stringend and convincing story line in the SPM that cuts across the 4 sections.	The SPM narrative has been updated and strengthened with cross referencing to the technical report chapter sections.
Germany	SPM		0	0			The key messages within each section sometimes appear to be more a collection of messages, but are not well linked with each other. The most obvious is when key messages of chapter 5 are "added". This makes the SPM read quite artificial sometimes. The messages arising from the scenarios and modelling chapter need to be more appropriately integrated in the SPM (and not necessarily be presented one after the other).	We have revised the document to better integrate all aspects of the technical report, especially the futures analysis, which are now embedded within various sections and boxes.
Germany	SPM		0	0			Please provide more targeted key messages under section D. 'Policy options, governance and management'. All the messages remain - though being important - at a rather broad and partly abstract level. Table SPM 1 presents a lot of interesting information about the progress towards reaching the Aichi targets for the 4 sub-regions and for ECA as a whole. However, the policy-related messages do not link back at all to the insights this table provides for the different sub regions. Having read Table SPM 1, policy makers might ask, which options they might draw from in order to improve specific targets, where they are not yet fully on track. Providing such kind of information could be highly beneficial for policy-makers but of course also for any other non-governmental actors.	This section contains a table presenting a broad range of options for governance and management speaking to many actors in all subregions. Suggesting individual responses related to each of the Aichi Biodiversity Targets would be prescriptive and is beyond our mandate.
Germany	SPM		0	0			You may also think of addressing different relevant groups of actors with specific key messages and policy options. Targeting different actors groups such as businesses, NGOs and Governments separately could help to develop more concrete options	This section contains a table presenting a broad range of options for governance and management speaking to many actors.
Germany	SPM		0	0			We request the co-chairs to ensure that all facts and figures inserted in the SPM have been checked regarding (1) their accuracy in wording (correct citation), (2) provision of their source, and (3) their up-to-dateness.	This has been done throughout.
Germany	SPM		0	0			We kindly request the co-chairs and chapter authors to ensure that the key findings emerging from each chapter are captured in the key messages of the SPM. Please avoid any inconsistencies.	This has been done throughout.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0				Overall - The readability and clarity of this SPM is rather poor; jargon is hard to understand. Often content only becomes clear when the reader goes back to the technical chapters. We understand that more thorough text editing will be done in a later phase, but reviewing the SPM as it currently stands is very tedious. Text should be strongly revised (story line, structure, language) with the help of communication professionals/native speakers. This might be a lesson-learned for next assessments (one: first impressions are essential; two: the feedback on content is severely hampered and three: this is probably the only time this many stakeholders will read the SPM thoroughly). SPM does not present a coherent story and largely misses out on its main aim: providing a clear set of policy recommendations. Level of detail defers throughout the SPM (some parts are rather exhaustive whereas others lack sufficient detail). E.g. - it seems quite some interest is given to the benefits of nature in urban environments	The document has been revised throughout to simplify the language and to strengthen the narrative and structure. This has led to a shorter and more concise text. We also avoid earlier unbalances in emphasis. Please note that the SPM does not provide 'policy recommendations', which would be prescriptive. However, section D summarises the evidence on options for governance and management for many actors.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0				It may be useful to add some sort of 'how to read' section for policymakers, including some clarification of the methodology and information of the confidence scales (well established; established, but incomplete; etc.). The more upfront, the better. For now - the figure on the confidence language is only given at page 28. This is too late in the text	See response given above.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0				No mention of genetic resources or access&benefit-sharing in the SPM, despite importance for EU; no reference to the Water Directive Framework	At several relevant places we mention how access to NCP is limited or unequal in the region; we now also mention the EU Water Framework Directive.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0				Entire doc very focused on NCP - less on the intrinsic value of biodiversity. Also, always mention 'biodiversity' first - then 'NCP' (not the other way around)	The SPM addresses diverse values of nature. The box on NCP explicitly refers to relational values.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0				SPM does not cover the content of chapter 1. Eg. Summary of conceptual framework is missing	
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0				Relation with the CBD and how it already (tries to) addresses some of the issues should be highlighted throughout the SPM. Policymakers will be looking for possible synergies	See response above
								See response above

Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0			Figures should be significantly improved to make them easy-to-interpret and insightful. They should also be referred to in the tekst itself, in the relevant sections	The figures have been simplified, improved by a graphic designer, and all are referred to in the text.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0			Not sufficient focus on inter-regional differences (quite a lot of generalisations)	Interregional flows are mentioned where relevant. Moreover, where appropriate, the text and supporting elements point out subregional differences.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0			Separate section on 'knowledge gaps' and maybe also 'actions for IPBES' (as was also the case for the methodological assessment on scenarios and models) would be very useful to have (cf. uptake by funding bodies/networks). E.g. knowledge gaps already visible: link between biodiversity & health (incl negative effects)	We have included a separate box on knowledge gaps.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	0	0			SPM lacks a section on the impacts of the ECA region on global biodiversity (footprint in other regions)	A message and figure on ecological footprint has been included.
Ben ten brink	SPM	0	0	0	0	This first draft SPM is still for a great deal of a qualitative and anecdotic character. It doesn't provide i) a concrete, quantitative and spatially explicit picture of the state of B and ES in past, present and future, ii) the relative contribution per driver, iii) the effect of individual measures of most promising measure combinations and adequate instruments, iv) major impacts on people, and v) relevant trade offs or synergies which have to be taken into account. The deviation from targets as in Table SPM 1 is badly specified (which component, dimensions, scales?) and not quantitative as well. Just 'increases' or 'decreases' in B and ES is not enough to support policymakers in balancing socioeconomic and ecological interests. After 46 pages summary the reader has no answer on the policy key questions: what is changing, by which drivers, why it is important and what he can do about it? being lost in the forest by the trees. This is not surprising however for a first order draft. The next step towards the final SPM should make it much more concise, policy focussed, distinguishing major from minor issues, and lifting it up towards a genuine synthesis based on the huge amount and diversity of information. This big picture becomes useful for policymakers and decision makers in the economic sectors of agriculture, forestry, energy, spatial planning, fisheries, water management and urban planning. Goal is to show the major directions in favour of B and ES, not to be all encompassing. A challenging and necessary task.	The text has been considerably revised and strengthened to improve the treatment of status and trends and attribution to drivers, as well as relevant policy instruments. There is also more quantification, and the text was shortened considerably to improve readability. SPM Table 1 has been removed and replaced with a concise text.
Ben ten brink	SPM	0	0	0	0	From my experience with interated assessments the major physical responses concern: <ul style="list-style-type: none"> • Less consumption of products per capita and in total such as meat, fiber material, water and energy use • Less use of energy, water, nutrients, material, and space per unit product. Close yield gap in food, fodder and fibre, • Halt further conversion of natural areas, preventing further loss of biodiversity and many the ecosystem functions. • Population policies, less relevant for ECA as such, but very relevant for surrounding regions and consequent impacts on ECA • Climate mitigation without biofuels • Reduce wasting food, re-use and recycle material • Do the right thing at the right place to avoid unsustainable or inefficient use: spatial planning • Establish large ecological network to prevent further loss of species and species populations, and to enforce more efficient and sustainable use of existing cultivated areas. Urbanisation might be to be preferred above unchecked rural urbanisation in low densities Having decided about the major physical responses, the next step can be made link these with the major governance reponses and instruments that make the above actions happen in the various ECA subregions, or if absent, to assess what enabling conditions have to be created first.	Effects of the drivers mentioned by the reviewer are mentioned in various messages. Response options by governance and management are pointed out in the last section and summarised in a table. For the sake of brevity we give less detail than possibly hoped for by the reviewer.
Ben ten brink	SPM	0	0	0	0	This lack of specificity and concrete figures also applies for ES such as food and fibre production, carbon storage and micro and macro climate regulation, and water regulation in terms of scarcity and floods. The figure SPM5 on reported trends is entirely qualitative, incomprehensible and probably uninformative. Figure SPM 10 may be promising but unclear in its present form. Tables SPM 2, 3 and 4 are promising, trying to link up with different target groups (sectors), but in this stage highly incomplete, sometimes incorrect, often administrative responses without direction or content ('encourage forest planning', 'strong innovations', 'mitigate climate change'), lacking major options and information on proven adequate instruments and enabling environment. Figures SPM 3 and SPM 4 may be interesting but lack explanation in terms of consequences (so what?). Figure SPM 8 and 9 are not very informative in this form, but would be if the major relationships were selected and quantified.	The figures and tables have been updated throughout the document taking account of these comments. Concrete numbers were given for various NCP, BD and driver trends.
EU: Karin Zaunberger, Anne Teller	SPM	0	0			In the scoping document the EU's mapping and assessing ecosystem services MAES initiative had been referred to. In spite of this the draft does not capitalise on the work of MAES which we find is a missed opportunity . The term 'nature's contribution to people' (NCP) makes the text heavy to read and hence decreases the attraction of the text. The abbreviation NCP also stands for Natural Capital Protocol and hence readers who will not read the text from the beginning to the end, but rather pick and choose specific sections risk being confused. Although it may be cumbersome, to avoid this confusion the term should be spelled out at least once in each section. Also a lot of 'nature's contribution' (e.g. climate regulation, water provision etc. ...) are not only for people, but also for other living creatures. We understand the term was introduced to replace 'ecosystem services', which some Members expressed to have a difficulty with. However, we find that the suggested replacement will likely decrease the overall impact of the SPM.	We have sought to utilise evidence from all published sources in compiling the technical report from which the SPM is derived, including MAES. NCP is now explained and spelt out throughout. The use of NCP was an overall IPBES decision and not that of the ECA assessment only.
EU: Markus Erhard (EEA)	SPM	0	0			This report covers a very heterogenous region in terms of drivers and pressures of change in ecosystem condition triggering their capacity to provide services or NCPs and their biodiversity. A short summary of the different patterns of drivers e.g. intensive land use in Central and Western Europe with high nutrient loads vs. overgrazing or even loss of NCPs (e.g. Aral sea) in Central Asia and the importance of land use history / human activity on biodiversity would be useful also explaining what makes ECA region different from others. It further implies that many ecosystems require appropriate human management to maintain or improve their biodiversity e.g. semi-natural grasslands, inland heathlands etc. see also Bohn potential natural vegetation vs. current diversity of ecosystems	Differences between subregions are reported throughout the SPM. For the sake of brevity, the box introducing the region was kept very concise.
EU: Frank Wugt Larsen (EEA)	SPM	0	0			Given current resource constraints, the review by the European Environment Agency (EEA) of the ECA assessment will focus on feedback to the SPM. Only exceptions are a) some general points on relevant EEA publications and EEA references; b) some State of Nature results in chapter 3; and c) check of the drivers overview table (figure 4.80) in chapter 4.	Point noted
EU: Frank Wugt Larsen (EEA)	SPM	0	0			Fully agree with the above. In addition, the use of NCP seems counterproductive to achieve clear communication that resonates well with European and Central Asian decision maker audience. If NCP is used a definition would need to appear in SPM.	NCP is now explained in the SPM.
EU: Katarzyna Biala (EEA)	SPM	0	0			The title of the document refers to 'biodiversity and ecosystem services', however, ecosystem services are replaced throughout the text with 'nature's contributions to people'. It is rather surprising to see that the well-established term 'ecosystem services' disappears from the assessment, in particular bearing in mind that the document comes for the Intergovernmental Platform on Biodiversity and Ecosystem Services. Moreover, there is no explanation in the introductory part (or elsewhere) of the background for such a change. Further on, 'nature's contributions to people' are divided into; regulating, material and non-material. This is a departure from the Millennium Ecosystem Assessment classification or CICES (https://cices.eu) for example. No background for this new classification is given either.	NCP is now explained in a box and appendix in the SPM, according to common IPBES definition. The term ecosystem services is still used in the technical report to summarise/synthesise literature. NCP is preferred, however, where appropriate for general statements in the SPM.

EU: Ole Ostermann, JRC	SPM	0	0	0	0	The SPM starts immediately and from the table of content with the acronym NCP. For a layman or policymaker this may be a reason not to look further. I suggest to replace NCP by its full text (nature's contributions to people) at least in the table of contents.	See above
EU: Ole Ostermann, JRC	SPM	0	0	0	0	The use of the term "futures" (plural) is a technical term of the stock markets; better use: "scenarios"; "future pathways" or "future dynamics" (as in Ch3). The term futures appears at least 20 times throughout the text.	Futures' is a commonly used term in the analysis of the future,. However, it's usage has now been reduced considerably.
Marie Stenseke	SPM	0	0			Do not abbreviate NCP and ECA	Done
Olesya Petrovych	SPM	0	0			Vocabulary section "Terms that are central to understanding the SPM" should be created.	A glossary has been created.
Switzerland: José Romero	SPM	0	0			General: there are a few "framing issues" for which we would require consistency across the regional reports (non-exhaustive list): 1) drivers of change: are the drivers of change considered in this report the same as in the other regions' reports?; 2) same question for the scenarios and models; 3) same question for the policy approach and actions considered to address loss of biodiversity and CNPs; 4) same question for the considerations about global trade; 5) same question about trade-offs	An attempt has been made to standardise approaches across the 4 regional assessments. While the same terminology has been applied everywhere, there are regional differences in evidence and emphasis.
Switzerland: José Romero	SPM	0	0			General: split section C in two: 1) current trends 2) projections. The rationale is that it would be clearer what is observed and what is projected.	The messages have been revised to make this distinction clear.
Switzerland: José Romero	SPM	0	0			General: we propose to merge Tables 2, 3 and 4 in order to provide only one place in the document where all scenarios, sectors and actions are coherently presented.	Tables have been designed to unpack sectors, scenario archetypes or options for action as appropriate. However, combining all tables into one would have led to unclarity.
Switzerland: José Romero	SPM	0	0			General: should the High Level Summary contain uncertainty statements in brackets?	It is common practice for the high level summaries of IPBES assessments to not include confidence language
EU: Karin Zaunberger, Anne Teller	SPM	0	0			the term 'nature's contribution to people' (NCP) makes the text heavy to read and hence decreases the attraction of the text. The abbreviation NCP also stands for Natural Capital Protocol and hence readers who will not read the text from the beginning to the end, but rather pick and choose specific sections risk being confused. Although it may be cumbersome, to avoid this confusion the term should be spelt out at least once in each section. Also a lot of 'nature's contribution' (e.g. climate regulation, water provision etc. ...) are not only for people, but also for other living creatures. I understand the term was introduced to replace 'ecosystem services', which some Members expressed to have a difficulty with. However, I find the suggested replacement will likely decrease the overall impact of the SPM.	See response to this comment above
EU: Jan-Erik Petersen (EEA)	SPM	0	0			Drivers of change' is a term that is similar to ones used in other well-established analytical frameworks, in particular the DPSIR framework that originated from EEA assessment work and includes 'Driving forces'. It would be worthwhile pointing this out as the 'direct drivers' in the SPM correspond more to 'Pressures' in the DPSIR framework, with most of the 'indirect drivers' corresponding to DPSIR ('driving forces'). Interestingly the text uses the word 'pressures' on page 25 for factors that elsewhere are classified as drivers.	The use of drivers here is referenced to the IPBES conceptual framework that is detailed in the full technical report (Ch 1). It would be confusing to equate with another conceptual framework, i.e. DPSIR
EU: Marco Fritz	SPM	0	0	0	0	Generally, when highlighting possible trade-offs and conflicts throughout the options, only negative possibilities and warnings are issued; positive developments through ecosystem-based approaches and nature-based solutions who might help to steer and mitigate these trade-offs should however be mentioned.	We have attempted to include more positive points.
Andrew Wade	SPM	0	0			Congratulations to all the authors and review editors on excellent work to collate and present the material.	Thank you
Andrew Wade	SPM	0	0			At present, the SPM seems patchy in noting the robustness of outcomes with only limited cross-references back to the supporting sections in the preceding chapters.	Agreed, and this has thoroughly been corrected in the final version.
The Netherlands: Astrid Hilgers	SPM	0	0	0	0	There could be a bit more elaboration on mainstreaming. Suggested reference: "Mainstreaming biodiversity in economic sectors: An analytical framework" (Karlsson-Vunkhuyzen et al 2017)	Mainstreaming is highly visible in the revised version of the text.
The Netherlands: Astrid Hilgers	SPM	0	0	0	0	The SPM/ECA should address: How is BES in ECA (state), what should change? And how can we do that? These policy related questions are currently not explicitly addressed.	The ECA assessment and SPM respond to the policy-relevant questions posed in the scoping document and state trends in BD and ES, underlying drivers, and options for governance and management.
The Netherlands: Astrid Hilgers	SPM	0	0	0	0	This SPM is predominantly qualitative and anecdotal, without explicit quantitative and spatial findings of the current and future state and trends of BES, not for the relative contributions of drivers, the effect of individual responses or promising reponse-combinations. Biodiversity is expressed in terms of risk of extinction of certain taxonomic groups, although this only shows a part of biodiversity. Changes in natural area, population size (main indicators in the CBD, UNEP and OECD Outlooks) provide a more nuanced and more spatial narrative, and are quantitatively related to the effect of drivers and responses. The impact on NCP, as shown in figure SPM1 are qualitative as well and not easy to comprehend. The objective of table SPM1 is sympathetic and systematic, but seems to be mainly expert judgement as well. All in all, please add quantitative results as well, from for instance the abovementioned Outlooks, or one on ECA level specifically (e.g. OpenNESS work).	See response to this point above
The Netherlands: Astrid Hilgers	SPM	0	0	0	0	It remains unclear from this SPM what policy makers could do and how. The tables provide some concrete action per sector, but do not seem to focus on institutional response. Several specific actions that were mentioned (e.g. increased biomass production) have large negative side-effects on B + NCPs and are often viewed as a threat. The fact that response options can and do undermine one another should be discussed and is currently not addressed.	We have attempted to point out evidence-based options for governance and management speaking to many actors (see Table SPM 4)
The Netherlands: Astrid Hilgers	SPM	0	0	0	0	In the creation of the SPM, some insight in main issues seem to have been lost. Although the chapters combined do provide a largely complete inventory of data, synthesis is still missing somewhat. In terms of drivers, synthesis could be something like: Agriculture and forestry are largest drivers, due to their area extent; large-scale bio-energy development could become number three if we allow it, and climate change will definitely become part of this list in the coming decennia. Urban development is therefore relatively small, although unregulated rural urbanisation (increase of build-up area) is a threat. Pollution is a large issue, but especially with regards to P and N eutrofication, as heavy metals are relatively well regulated in ECA. In terms of options: consumption change (amount and type), use of energy water, nutrients and space per unit of product, decreasing food waste, efficient and sustainable use of resources, climate mitigation without bio-energy.	We have re-written the SPM text to provide more synthetic information on drivers.
The Netherlands: Astrid Hilgers	SPM	0	0	0	0	Confidence levels seem overconfident	We have re-written the SPM text to provide more synthetic information on drivers.
ECA values liaison group	SPM	0	0			Please take care to change "biodiversity" to "nature"; "ecosystem services" to "NCP"; and "wellbeing" to quality of life, where appropriate.	Done
ECA values liaison group	SPM	0	0			we suggest to include a small box in the SPM that states: "ECA has assessed or refers to diverse types of values including non-anthropocentric, instrumental and relational values people associate with nature. Chapter 1 Table 1.X provides an overview and links to where and how these are assessed in the entire assessment." The purpose of this Box is not to provide definitions (that is done in chapter 1) but to let policy makers know (some of whom do care about different value types) that ECA has taken a broad approach to values and where the interested reader can find more. Based on this we suggest to delete many of the current specifications of different types of values that actually confuse rather than explain values and their importance, when included in broader messages that actually focus on something else	Reference to values has been embedded throughout the document and, to keep the number of boxes small and the SPM focussed on evidence rather than method, we consider this a better approach than having a separate box on the issue.
ECA values liaison group	SPM	0	0			we suggest to include separate subkey messages on the implications arising from the assessment of diverse values in each of the sections A-D. We believe this will communicate the importance and implications of diverse values much more clearly than when included in broader messages that actually focus on something else.	Reference to values has been made throughout the document.
ECA values liaison group	SPM	0	0			Check that all subregions are covered roughly equally in terms of values.	This has been done within the limitations of the available evidence for different sub-regions.
ECA values liaison group	SPM	0	0			Please consider providing clarification for what is meant by the following values terms: Bio-cultural value (line 128); High value species (line 879); High nature value (lines 1356, 1808, 3140); High value trees (lines 2223, 3224); Aesthetic value (lines 2246, 4999); Natural value (lines 2282, 2838); Landscape values (line 2500, Box 4.6 (line 2778)); Conservation value (lines 2839, 5029); Protected area value (line 2897)	The value terminology has been checked throughout the document.

ECA values liaison group	SPM	0	0	Key messages (A-D) in the SPM need to be better supported by submessages that explicitly feature what role values play, and how. These should probably be constructed jointly across several chapters. General message: values impact drivers and drivers impact values. In fact that all 'futures' approaches as well as policy instruments embed and have implications for different types of values. Finally we recommend to revisit steps 4&5 of the guidance document on diverse values (very first section of the document) for inspiration how to derive key messages on values within assessments.	We mention that the SPM is based on the consideration of diverse values.
ECA values liaison group	SPM	0	0	A chapter 1 perspective: ECA takes a multi-value approach for the first time. This should be highlighted even more. Generally, less info (in all chapters) on GQoL and linkages between value dimensions. Needed: integrate and visualize trade-offs between various dimensions: towards an inter-value approach. Plus a more detailed approach on which main trade-offs between which categories, in which regions, and how to do something about it. Message to include more explicitly: "Often, the way we use nature is aimed at an increase in (certain) NCP or certain aspects of GQoL, but this use provokes direct decreases in non-anthropocentric values and some categories of GQL, as well as long-term risks for the targeted values themselves."	We considered these points, and we explicitly mention the trade-offs across NCPs.
ECA values liaison group	SPM	0	0	A chapter 2 perspective: We can communicate a few of the value types we did find results for GQL, with for some also relations with NCP's. In ch 2 there is anecdotal evidence on the role of justice and equity on drivers such as land use change. It would be worthwhile to link this to chapter 4.	Many statements throughout the SPM are related to values, especially in the statements on NCP and QoL, and values are also mentioned in the context of knowledge gaps.
ECA values liaison group	SPM	0	0	A chapter 3 perspective: (QoL) There is a section on relationship between biodiversity and NCPs. This will allow some statements on instrumental values but it might not be formulated explicitly yet. One possible conclusion in terms of value could be to make explicit that the non-anthropocentric values are at risk. There is a need to explain how non anthropocentric values are dealt with within ECA very well. Not clear where exactly (e.g. here ch1 or ch2)?	Diverse values are mentioned in SPM. Intrinsic values are mentioned in chapter 1 of the technical report.
ECA values liaison group	SPM	0	0	A chapter 4 perspective: So far there is a section on impact of drivers on biodiversity/non-anthropocentric values, and on NCPs in general (so far still a gap on NCP). By analyzing drivers across sub-regions, the various contexts (world views?) are implied a bit, but mainly descriptive (cultural and religious drivers) rather than values. GQoL is also not really covered, but this should be linked with/build on CH2 material. But we may have to step out of the IPBES framework to capture drivers related to world view issues and things as ideology, corruption, ...We need also to better understand interactions among drivers. Next step: Try to highlight how values impact/form different drivers for the different regions. (maybe thickness of arrows could capture this). Weight different sets of values in different regions. Importance of relationships and their relationship to values could maybe be highlighted.	Many statements throughout the SPM are related to values, and values are also mentioned in the context of knowledge gaps.
ECA values liaison group	SPM	0	0	A chapter 5 perspective: Make more explicit in executive summary and conclusions, that: - Most types of values are mentioned in some Scenarios/models etc. however, all of them take partial look and many scenarios operate with very aggregated value types ('environment' / 'biodiversity'), very often values are treated only implicitly. - 'Futures' including models also embed values in their conception. Models have assumptions that are linked to certain values (and the values of the model developer) - 'Futures' favor certain values over others and show what the implications of this dominance of certain values over others might be. - None of the models/futures cover all interlinkages, some interlinkages are much better explored than others. An example of a regional integrated assessment platform is the CLIMSAVE IAP, highlighting the interlinkages between models and the ecosystem service (NCP) outputs produced. However the majority of assessment studies still rely on single component models. Most types values are mentioned, depending on section and available information. Non-anthropocentric values less covered in scenarios section, that focusses on anthropocentric values. Most studies refer only to a subset of values, different archetypes involve the different value dimensions in different proportions e.g. in hierarchical archetypes relational values are more dominant than instrumental in individualistic archetypes it is the other way around. The archetypes of futures also imply or target values or sets of values. Pathways and visions are very policy oriented and idealistic, identifying and describing targets very well. They also reflect values directly: by formulating a vision of the future they directly reflect the values of a specific stakeholder group. however, current models and scenarios do not permit to analyse trade-offs and impact pathways how to achieve these futures visions at the level of subregion (Western/Eastern Europe/ Central Asia). At the level of single countries... [Here we assumed that more detailed information including how to achieve pathways to future visions is available. This could maybe be used to illustrate the value of such approaches, for future work also at the subregional level.] Scenarios are more targeting instrumental values. So a lot of things are missing in research. => lacking tools to quantify QoL. Important as it bears a lot of potential for misunderstandings to distinguish clearly when a statement refers to actual impacts/quantities or proportions and when it refers to how often something is included in a particular group of futures i.e. frequencies. Crowd sourcing and big data might allow broader perspective than 20 people in the room, but avoiding bias remains a challenge in all Modelling needs to expand different representations of human behaviours in order to reflect diverse values	Many statements throughout the SPM are related to values, and values are also mentioned in the context of knowledge gaps.
ECA values liaison group	SPM	0	0	A chapter 6 perspective: The relation to the values is very vague. Connecting specific instruments with values is difficult because these relationships are very specific. We could show how sectors are linked to the values in a broader way. By nature these sectors are more related to NCP, some to QoL health, education, and also some (nature conservation) to non-anthropocentric values. Recommendation is to look at policy instruments by subregions also, not only by sectors. An important message is to state that each instrument and the way it is designed might be targeting certain values and usually affecting several others.	The section on options for governance and management considers sectoral and subregional differences where necessary and refers to cross-sectoral instruments and to policy mixes. We agree that many options address several values, but do not make this explicit for reasons of brevity and because values are largely dealt with in the previous sections.
ECA values liaison group	SPM	0	0	We should be careful not to aggregate too much, there are trade-offs within the subcategories too. These trade-offs need to be spelt out wherever possible and highlighted particularly for future work.	Trade-offs and synergies are mentioned at the appropriate level of aggregation.

ECA values liaison group	SPM	0	0		<p>Interesting ideas to link across chapters to construct a storyline: Interdependences of loss of biodiversity on foci of value (main groups of NCPs and values of GQL) could be presented as a timeline involving past, current and future trends. - Highlighting where changes have occurred and are expected to occur in the future. - How can this be related to the main drivers? - And what follows for policy Value articulation in society: which ones are heard which ones are not and the power dynamics behind that: Chapter 4 can contribute to this, chapter 6 could probably contribute in terms of Link between ch 2-3 : chapter 2 shows biodiversity in particular (as well as nature in general) are important for NCP, chapter 3 shows how biodiversity is at risk. Somewhere Time in Prague for chapter 2-3-4 and values : to establish connections on how different values impact drivers and how drivers impact on values.</p>	We improved the story line of the SPM to better reflect the logical links between messages from different chapters.
ECA values liaison group	SPM	0	0		<p>We suggest to include a small box in the SPM that states: ECA has assessed or refers to diverse types of values including intrinsic, instrumental and relational values people associate with nature. Chapter 1 Table 1.X provides an overview and links to where and how these are assessed in the entire assessment. The purpose of this Box is not to provide definitions (that is done in chapter 1) but to let policy makers know (some of whom do care about different value types) that ECA has taken a broad approach to values and where the interested reader can find more. Based on this we suggest to delete many of the current specifications of different types of values that actually confuse rather than explain values and their importance, when included in broader messages that actually focus on something else.</p>	For the sake of brevity we did not include such a methodological box, but we mention that diverse values were considered.
ECA values liaison group	SPM	0	0		<p>We suggest to include separate subkey messages on the implications arising from the assessment of diverse values in each of the sections A-D. We believe this will communicate the importance and implications of diverse values much more clearly than when included in broader messages that actually focus on something else.</p>	Values are mentioned in several relevant places and also in knowledge gaps.
France	SPM	0	0	0	<p>Include a section on knowledge gaps especially across the different subregions</p>	Done
France	SPM	0	0	0	<p>Add a reference to Nagoya protocol, SDG, MAES initiative. Though IPBES regularly makes the link between its work and the SDGs in the last scoping documents and general communications, the SPM of ECA assessment lacks references to the Agenda 2030, including a point on the scenario work undertaken at IPBES which contributes to progress towards the SDGs.</p>	The Nagoya Protocol is referred to and the SDGs are considered throughout. MAES is a source of evidence and so referred to in the main technical report, but not in the SPM.
France	SPM	0	0	0	<p>Avoid hasty conclusions between the provision of NCPs and human well-being in what regards health, security and such issues which are also determined by very diverse and complex social drivers. It is important indeed to recognize the contribution of nature to those aspects of human well-being but most sentences related to the topic in the SPM are too sharp and overlook the social contributions. This in turns discredits IPBES objective of raising awareness on biodiversity, because it is too caricatural.</p>	These statements have been revised considerably.
ECA MEP members	SPM	0	0		<p>Length: The current document does not greatly exceed the recommended length of the SPM in terms of number of words (but there are indications in the text that it might be lengthened). See specific recommendations about length in the letter from the Bureau, MEP and secretariat concerning the Regional Assessment SPMs (subsequently referred to as the SPM Letter). However, it does have i) a few too many key messages (see SPM Letter), ii) two of the tables are rather large, in particular Table 1 and iii) a considerable amount of redundancy between the High Level Summary and the background information. This all combines to make the SPM long in terms of number of pages and seem to have too much information when reading it.</p>	The length of the text has been reduced considerably to improve readability and Table 1 was cut and replaced by a much shorter box.
ECA MEP members	SPM	0	0		<p>Structure: The overall structure of the ECA SPM does not seem lend itself well to addressing the overarching policy relevant questions identified in the scoping document. See specific recommendations for addressing this issue in the SPM Letter.</p>	The SPM structure has been revised to better reflect the overarching policy questions and comments by MEP were taken into account.
ECA MEP members	SPM	0	0		<p>The SPM — in particular the High Level summary — is too general, does not highlight new findings and lacks powerful visuals. The High Level Summary is made up almost exclusively of very general statements. Most readers will learn little new from these statements. Statements like "A. Contributions of nature to people - Biodiversity and ecosystems underpin nature's contributions to people (NCP) and are thus fundamental for human existence..." are too general, especially since all of the sub-points (A1-A4) are also very general. The background information (SPM pages 7 and beyond) provides more specific findings, but these are frequently insufficiently highlighted and/or are presented in ways that are likely to be difficult for many readers to interpret. Examples: - the reiteration of the overly general key messages texts from the High Level Summary as the headline messages for the background text leads to a structure that comes across as overly general; - "spider diagrams" used to communication scenarios and models output may be appropriate in a technical document, but are poor communications tools for policy makers; - overly complex "wiring" diagrams to illustrate interactions between various components of systems can be useful, but must be much clearer than those currently presented (Figure 9), etc. The pollination assessment, although certainly not perfect, provides good examples of how general statements can be mixed with specific (and where possible quantitative) statements and Tables and Figures in order to provide powerful messages in the SPM summary. There is a considerable amount of information in the background text of ECA SPM and chapters that could be brought into the High Level Summary to provide more substance. Addressing this issue may also require making new graphics that synthesize information from individual chapters.</p>	The document has been considerably re-written to be more specific and quantitative. The high level summary, in particular, is now very different. The figures have been revised, simplified and improved throughout, and spider diagrams removed.
ECA MEP members	SPM	0	0		<p>The SPM should more explicitly address key policy issues and these policy issues should be treated with clearer language. This is perhaps the most critical issue with the SPM. The target audience of the SPM is somewhat different from the underlying chapters (which can be more technical in nature). The SPM needs to speak much more clearly to policy makers and other decision makers in the ECA region (see also SPM Letter). All sections of the SPM should be oriented more to this audience. Even section D in the High Level Summary, which specifically focuses on policy, is so general that is unlikely to be of much interest to policy makers. One way of making this more policy relevant would be to improve the treatment of indirect drivers. The importance of interactions between direct and indirect drivers of change in status and trends of biodiversity and NCP is not sufficiently highlighted. For example, the EU integration processes and the political commitment of some of the countries in economic transition to join the EU have heavily influenced Nature and NCP discussions, policies, etc. at the national and regional levels. Concrete numbers indicating the impact of indirect and direct drivers on biodiversity and NCPs in the region and/or sub-regional would help in creating a strong message. Some potential solutions would be to: - rethink the structure of the SPM since the current structure seems to impede easy communication on the overarching policy questions, as well as more specific policy questions (see SPM Letter). - work on "storylines" that would link different components of the conceptual framework and illustrate their relevance to policy (e.g., Figure 9 is an attempt at this, although it does not yet work convincingly). For example, the introduction of the background section does this to a certain extent. Making this work across sections will probably not be easy, so this may require several iterations of the SPM to find a good solution. - provide a much more prominent place in the High Level Summary section for specific policies such as Aichi Targets and SDGs or European goals based on these. For example, the analysis of all targets has been presented in the background document and could figure more prominently in the summary (currently only Aichi Target 12 is cited).</p>	The structure of the SPM was re-thought to provide a better narrative, but also to better reflect the policy questions. Also the key messages on drivers were reconsidered and revised in the next version. The other points raised here have been accommodated where possible

ECA MEP members	SPM	0	0		The SPM could do a better job of synthesizing information across chapters and telling compelling stories. This is very closely related to the comment above about the need to have "storylines". An example: - In order to understand and impacts and changes in nature and NCPs, their numerous relationships and the feedback effects, it is important to use the notion of cumulative impacts, since individual sub-regions/locations will be impacted by many factors including industrial development, environmental projects, climate change, etc. These cumulative impacts should be examined in terms of both their environmental and social components. In some/many cases this may show there is an urgent need for better governance, and perhaps less need for more policies.	See response to the comment above.
ECA MEP members	SPM	0	0		Treatment of sub-regional differences should be improved. There are some areas where sub-regional differences are discussed; however, many important sub-regional differences are not addressed even where they are very important. For example: - The bolded headline statement of section C is too general and does not reflect specific social and political context and processes happening on a sub-regional level. It is a general statement that can be written about other regions as well — Americas, Asia-Pacific or Africa. The text that follows should support and elaborate this statement but is overly general (sub-sections C1-C8 of the High Level Summary). Indirect drivers are specific to different sub-regions; for example, Central Asia should be mentioned in support to the headline statement of section C (over-exploitation of agro-ecosystems etc.) and more importantly linked to impact on status and trends biodiversity and NCPs. - In addition to treating differences across political sub-regions it is also important to treat other key sub-regional divisions. For example, Arctic and subarctic regions are nearly absent in the SPM although they have a very important subregional characteristics. They are culturally and biologically distinct from other regions. These sub-regions also face climate change at a much more rapid pace than other sub-regions, are subject to drastic social and economic changes, as well as extractivism due to their rich resources (e.g., forests, big rivers and megadams, gas, oil in Barents and the Arctic sea) and governance issues. They are also areas where cultural diversity interacts particularly strongly with biodiversity through ILPCs; for example, adaptive reindeer and other types of pastoralism, as well as hunting, fishing and gathering in different ecosystems.	Sub-regional differences are summarised throughout the SPM. However, due to reasons of brevity, variation within sub-regions could not be mentioned as often as variation between sub-regions.
ECA MEP members	SPM	0	0		All messages need to be clearly linked to the specific niche of IPBES assessments, which focus on issues relevant to Nature and NCPs. It is important to keep in mind that all messages should be related explicitly to the mandate of IPBES which focuses issues directly relevant to Nature and NCPs. For example, the section "C3. Large migration within the ECA region is expected to continue." The only text in this section that relates human migration explicitly to impacts on Nature and NCPs is the overly general statement "Large migration is expected to have profound effects on all other indirect drivers of biodiversity change." Well-sourced statements that concern the entire region, or specific sub-regional examples linking human migration to Nature and NCPs are essential. For example, the human migration from China to far east of Russia over the last century, as well work migration from Central Asia and Caucasus countries to north and European countries creates additional needs in local food and fiber production leading to conversion of (semi-)natural ecosystems and overexploitation of natural ecosystems. This has resulted in sub-regional loss of consumers, restructuring of land use, and reductions in the volumes of food production on sub-regional level. In case of Russia, this has resulted in intensification of agroecosystems using in southern regions and the loss of agroecosystems in northern part of Russia and large areas of Baltic countries.	For reasons of brevity this issue has not been addressed.
ECA MEP members	SPM	0	0		Consistency in language. The words "biodiversity" and Nature, as well as "ecosystem services" and Nature's Contributions to People are used interchangeably in the text without explanation of their relationships. Text (perhaps in a preface?) is needed to explain what the relationships are, but even then more consistency in their use would be important for clarity.	Consistency in language/terms has been checked throughout the document.
ECA MEP members	SPM	0	0		Treatment of ILK should be improved. ILK and IPLC require more substantial statements, and it would be good to avoid numerous statements without significant content. For instance concerning governance, one could add something like: "Local communities and indigenous peoples have a thorough knowledge of their environment on which they have developed specific ways of life and management systems. Not taking them into account or prohibiting them can lead to a loss of biodiversity and of well-being for the people, while their recognition can be the basis for co-management and even coproduction of knowledge between ILK and science."	Evidence from ILK is now referred to wherever available and relevant.
ECA MEP members	SPM	0	0		Treatment of values should be improved. The SPM — especially the High Level Summary — is very light on treatment of values; and therefore, does not respond to some of the overarching policy relevant questions identified in the scoping document. Specific suggestions on how to improve this should be provided by MEP members in their individual comments on the SPM and chapters.	Values are now considered more thoroughly and comments by MEP members were taken into account.
ECA MEP members	SPM	0	0		Evidence base for some work? Levels of confidence? There is some concern about the degree of evidence underlying several of the statements or figures in the SPM, even when trying to follow through to the chapters. For example: - It is not clear how the progress towards the Aichi Targets was evaluated (Table 1). It seems unlikely that there is documentation for many of the sub-targets, especially at the sub-regional level. This table either needs to be rethought or much better documented. This would include indicating levels of confidence (see GBO4). - It is not clear what literature backs up Figure 9 (even in the underlying chapter). Several sources of literature should be cited for the main elements of the figure. It is essential that i) all statements in the SPM are traceable to the chapters and ii) nearly all statements and figures should be backed up by multiple, reliable sources of evidence with clear indications of uncertainty.	The cross-referencing in the SPM of the evidence provided in the main technical report has been checked throughout, including the level of confidence. Table 1 has been removed and replaced by a narrative summary. All Figures and Tables are referenced back to source sections in the technical report.
Norway: Nina Vik	SPM	0	0	General	General comment: One general impression of the SPM is that this first draft does not "do justice" to the wealth of information in the chapters. Especially the high-level summary is quite general/broad and could benefit from some more concrete findings that will strengthen the messages.	Agreed and the document has been significantly re-written to better reflect the content of the main technical report.
ECA values liaison group	SPM	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.	World view is only mentioned in the appendix on NCP and there in a very clear manner.
Finnish Government	SPM	0	0	0	General: SPM is currently very long (too long for busy policymakers) and it would be more useful to have a much shorter SPM. Also in order to improve readability avoid using long sentences.	Agreed and the document has been shortened considerably
Finnish Government	SPM	0	0	0	General: Key messages from the table on aichi targets table SPM 1. should be elaborated also in the text	The table has now been replaced by a narrative summary of evidence related to the ABTs.
Finnish Government	SPM	0	0	0	General: There are very limited number of actual suggestions. It might be worthwhile to turn many more of the major conclusions into suggestions about what could be done if change is desired.	The options for governance and management are pointed out in the last section along with a comprehensive table. At the same time recommendations are not subject of the SPM, as they would be policy-prescriptive.
Finnish Government	SPM	0	0	0	The Arctic area of ECA is not once mentioned in the SPM.	There is now mention of the arctic
Dmitry Schigel	SPM	0	0		I am worried that summary does not reflect the essence of the chapters, especially of chapter 3. A lot of value is lost in compression, plus I am not sure that such kind of summary is politician friendly.	The SPM has been completely revised to capture the essential evidence, of all chapters, including chapter 3, and to present it in a precise and accessible way.
Senka Barudanovic	SPM	0	0	0	There is an inconsistency between the ECA Scoping document, Chapter 1 and other chapters of SPM. The inconsistency refers to geographic coverage of subregions in the ECA. According to the Scoping document, the countries of the Balkan peninsula belong to the sub-region of Central Europe. However, in many examples, these countries are classified into Eastern Europe. One example for this comment is C2 statement (line 600-603 of SPM, Chapter 4 of ECA)	The Balkan countries are consistently considered as part of CE throughout SPM and technical report.
Senka Barudanovic	SPM	0	0	0	Apart from B1 (line 377-380), socio-political, ie historical events are not enough (or in any way) related to the current status of biodiversity and NCP, as well as to the direct and indirect drivers. For example, in C1 (Status and Trends of Direct Drivers) on lines 575-577, "demography" is mentioned as an indirect driver of land use changes in Central Europe, without any deeper explanation of the cause of enormous demographic changes in this subregion. Here, but also in C2 (lines 613-615) and C3 (all lines) there is room for linking socio-political events with significant changes in the status of NCP, by abandonment of areas, loss of agricultural land, loss of genetic biodiversity and consequent loss of traditional knowledge. These events are also not considered as drivers for very slow development of institutional capacities for the protection and sustainable use of biodiversity.	We address abandonment, loss of agricultural land, loss of genetic diversity and loss of traditional knowledge and differences between subregions. For the sake of brevity we did not elaborate on the specific historical contexts.

Senka Barudanovic	SPM	0	0	0	0	ECA SPM needs to be better aligned with the Land degradation and restoration assessment, especially in the chapters 4, 5 and 6.	All SPMs have been largely revised. The regional assessment SPMs reflect the slightly different chapter structure of the regional assessments compared with the LDR assessment, however.
David González	SPM	0	0	0	0	A key mandate, especially regarding the summary for policy makers (SPM) associated with each of the assessments is to provide an assessment of the economic value of NCPs. This may reflect lack of attention to economic values in the assessments, although this varies across assessments.	Economic values have now been added to the SPM.
Harald Pauli	SPM	1	1	46	983	General comment on the SPM: Especially in the condensed SPM-form (and even more in its high-level summary), the fundamental significance of nature, its biosphere and diversity, for life and survival seems to me pretty much hidden in a rather long-winded way of explaining the points. The attempt to include different more or less related components in one sentence or paragraph appears to homogenise the messages across chapters and paragraphs, so that different levels of importance and urgencies are not easy to distinguish and to understand. For example, the term 'nature's contribution to people' is heavily used even in the condensed high-level summary, which not only lengthens the text, but makes it way more difficult to read and, thus, convincibility suffers. The assessment strongly builds on ecosystem services for human well-being, which of course is a commendable and potentially worthwhile effort. It holds the risk, however, that the role of nature and biodiversity is underrated as just equally important with other, non-nature, contributions to people. This concern is raised after having the impression that (1) overarching, fundamental functions of nature/biodiversity, which are essential for life, e.g. in the context of climate change (CO2 sink, provision of oxygen) or in the role of biodiversity as insurance against system failure, and (2) their unique/irretrievable values, also in the context of the vast spaces of time for the genesis, are not strongly emphasised. The text appears or tends to opposing humans against the rest of life, which, in fact is what is happening, but which might also fuel an old 'useful versus vermin creatures' thinking. Actually, in an anthropogenically rapidly transforming global biosphere, the value of its (remaining) still diverse components very much increases, all the more as the human population is growing. Consequently, measures including financial support on national and international levels, need to be increased adequately in favour of effective management and governance efforts. This will also essentially need the here underemphasised taxonomy and ecology experts for filling the still large knowledge gaps and for the continued monitoring and assessment of trends and the detection of critical dynamics and declines.	The SPM clearly presents evidence that important goals will not be achieved, because biodiversity and NCP are declining due to anthropogenic drivers. The intrinsic values of nature are mentioned as well. Options for governance and management are pointed out and knowledge gaps are presented, including gaps in monitoring.
Unai Pascual	SPM	1	1	6	181	The high level messages are too general in my view. This reduces their potential impact for policy uptake. I suggest these messages focus on more specific results, and when possible using some quantitative information.	These have been re-written with more quantification.
Rob Bugter	SPM	1	1	46	989	As a general comment: readability of the SPM is not great. The setup, with the short summarising intro-texts of the subjects of the chapter summaries repeated in the high level summary may be very methodic but does not work. In the sense that it gets in the way of the message. Moreover, the headings are hardly readable stand-alone. The formulations are often so cryptic that the high level summary reads like an encrypted message. Adding to this is the unnecessary use of abbreviations (ECA, NCP's) and unexplained jargon (e.g. existence value, Aichi target 12).	In response to several comments the SPM has been restructured in a less repetitive way, the story line has become much more apparent, and the SPM much more accessible. Abbreviations are avoided.
Rob Bugter	SPM	1	1	46	989	The level of English is not appropriate for a policy summary as it is far too academic.	The language has been edited throughout to make it more simple and accessible.
The Netherlands: Astrid Hilgers	SPM	1	1	46	989	As a general comment: readability of the SPM can be approved. The setup, with the short summarising intro-texts of the subjects of the chapter summaries repeated in the high level summary may be very methodic but does not work. In the sense that it gets in the way of the message. Moreover, the headings are hardly readable stand-alone. Adding to this is the unnecessary use of abbreviations (ECA, NCP's) and unexplained jargon (e.g. existence value, Aichi target 12).	In response to several comments the SPM has been restructured in a less repetitive way, the story line has become much more apparent, and the SPM much more accessible. Abbreviations are avoided.
The Netherlands: Astrid Hilgers	SPM	1	1	46	989	The level of English is not appropriate for a policy summary as it is too academic.	The language has been edited throughout to make it more simple and accessible.
Sweden: Ola Inghje	SPM	1	3	1	5	It is confusing to use "ecosystem services" in the title when it is consistently replaced by NCP in the rest of the text.	This was a choice made by IPBES.
Harald Pauli	SPM	2	27	2	27	the acronym 'NPCS' should be written in full at the beginning: 'A1 The relationship of Nature's Contributions to People, values and quality of life'; the acronym, however, should be 'NCS' in the plural and 'NCP' in the singular form; NCPs would mean 'Nature's contribution to peoples', which, I take, is not intended.	The use of NCP has been harmonised across all regional assessments.
Georgia: Salome Nozadze	SPM	3	55	3	62	Food security: Up to now, 80% of global food supply comes from just 20 kinds of plant. Although many kinds of animal are utilised as food, again most consumption is focused on a few species. This is high risk as the genetic diversity of these few species is also declining and the ability for future adaptation processes to a changing environment (new pests, climate change) will be limited. Many flowering plants rely on the activities of various animal species (bees, butterflies, birds, etc.) to help them reproduce through the transportation of pollen or the dispersal of seeds. More than one third of food crops depend on this process of natural pollination	Pollination is now mentioned in key message A2 and the other issues raised are discussed in the main report
Robert Watson	SPM	3	56			I would suggest a much shorter structure – 5 bold paragraphs – an expansion of the current bolded paragraphs plus one that addresses the Aichi targets and hopefully the SDGs	The structure has been changed and simplified around a stronger narrative.
Anna-Rosa Asikainen	SPM	3	56	6	181	High-level summary is useful since it is really compact (around 3 pages). However, the concrete outcomes of the assessment could perhaps be mentioned in this part more clearly (e.g. some actions proposed in Table SPM 2, page 37-39).	The summary has been considerably revised, making the SPM contents much more accessible.
Germany	SPM	3	56	3	56	Instead of "high-level summary" it should be named "key messages" to be in line with the IPBES Pollinators SPM as well as the LDRA SPM.	The headings have been harmonised across all regional assessments.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	3	56	6	181	High-level summary does not make any reference to the new framework of the UN Sustainable Development Goals (Agenda2030)	The SDG are now referred to.
EU: Karin Zaunberger	SPM	3	56			question what is meant by 'high-level' summary. Would it not be sufficient to say Summary ?	The headings have been harmonised across all regional assessments.
Olesya Petrovych	SPM	3	56	3	56	The name of the part "High-level summary" should be changed to "key messages".	The headings have been harmonised across all regional assessments.
France	SPM	3	56	6	181	Specify that all the messages are detailed in the following summary, which specifically refers to the report. As the messages are often rather vague, the ways to get precisions should be clear for the reader.	In response to several comments the SPM has been restructured in a less repetitive way, the story line has become much more apparent, and the SPM much more accessible.
France	SPM	3	56	6	181	There could be more figures (numbers) in the SPM, especially about the contribution of nature to people and about reference targets, to be more punchy.	We include more specific numbers in the SPM.
France	SPM	3	56	6	181	The High-level summary should mention that the biodiversity related Sustainable Development Goals will not be met for the region in reference to the statement page 7 lines 186-187 in a similar manner as done for the Aichi targets.	The SDGs are now referred to in the high level summary, but treatment of the SDGs is less comprehensive than for the ABTs, since SDGs are much broader, 2030 is farther away than 2020 and ABT are more focused on biodiversity-related issues.
Sweden: Hannah Östergård	SPM	3	56	45	972	In general key findings need to more specific, distinct, concrete and interpretable. Although NCP is attractive by a more inclusive perspective its broader spectrum poses a huge challenge as to communicate simplified key findings and measures. Shorten the text in high level summary; eg. A1. " Various NCP are fundamental for human existence and and the base for people's demands, knowledge and worldviews in ECA".	Text has been modified considerably to improve on this point, including shortening and more explanation of NCP.
Sweden: Hannah Östergård	SPM	3	56	45	972	Important to keep the message of the importance of biodiversity clear throughout the SPM. Both in regards to the loss of BD and in regards to the benefits of NCPs, land- and water use has to be recognized as the main drivers and when effects of climate change are considered these have to be considered in addition with land- and water use options, i. e. indigenous plants and genotypes in forestry and cultivated forests may to a larger extent halt BD loss and increase NCPs in several aspects, e. g. LinkTree http://www.biodiversa.org/322	Drivers of biodiversity and NCP change are subject of a wholesession of the SPM.

Sweden: Cecilia Lindblad	SPM		3	56	3		There should be an explanation of NCP	NCP is explained in a box and an appendix.
Finnish Government	SPM		3	56	6	181	There is nothing about status, trends and drivers of urban biodiversity in the high-level summary	We refer to effects of urbanisation where relevant.
Harald Pauli			3	57	3	57	The title seems to me not suitable: 'Contribution of nature to people' seems to me a weakening of the actual importance of nature, being pretty much all what the planet and its biosphere provides; it is not just a contribution among others which make up human's quality of living - without plants, for example, humans would not survive for more than some minutes in the absence of oxygen. I think, an assessment such as IPBES is the very place to call to mind the overarching importance of nature and its biodiversity, ever more so in the SPM.	The NCP concept has been adopted widely across the IPBES assessments as a means of standardising disparate concepts.
	SPM							
ECA values liaison group	SPM		3	57	3	62	It is probably not necessary to introduce the message separately to stating the message. These could be combined and, in order to make the point more immediately and in a more straightforward way, shortened to something like "Nature provides essential contributions to people and, hence, to good quality of life in Europe and Central Asia".	This is addressed in the opening section to a new key message A1
Graciela Rusch	SPM		3	57	3	74	The language in this part is a bit too technical (e.g. I would avoid using 'instrumental and relational values, for instance). Use ordinary language. And the conclusions or messages are a bit abstract or at least, they sound a bit abstract (intergenerational inequity.). I think it is mainly a question of using a more accessible language.	Yes, we now avoid these terms and use cultural, economic and social
UK: Mark Stevenson	SPM		3	58	6	181	The High Level summary could do with an introduction that better sets out what this report is for	The story line of the SPM has been improved in response to comments and is apparent from the first message.
UK: Mark Stevenson	SPM		3	58	6	181	There is inconsistency in terminology throughout the high level summary, which makes things very difficult to follow. The document starts with a reference to 'biodiversity and ecosystems' as separate entities (although actually I think it means 'biodiversity and ecosystem services'). By p 3 line 80 the document is saying 'biodiversity is species and ecosystems' and therefore 'biodiversity and ecosystems' becomes redundant. Slowly the term 'nature' appears in relation to ecosystem services but still sticking with 'biodiversity'. I like the term 'nature's contribution to people' as a non-technical way of expressing ecosystem services, but then it doesn't sit neatly with 'biodiversity'. Again for consistency we should say 'nature and its contribution to people' or 'biodiversity and its contribution to people' or possibly 'ecosystems and their contributions...'	Consistency of terms has been checked throughout.
UK: Mark Stevenson	SPM		3	58	6	181	There are some very strong and forthright statements in the summary, and it would be helpful if there was some signposting to the chapters that contain the evidence. Eg. 5,139 and 5,159.	We refer to sections of the technical report throughout the SPM.
Robert Watson	SPM		3	58			Suggest to rephrase as follows: Biodiversity and ecosystems underpin nature's material, non-material and regulating contributions to people (NCP) and are thus fundamental for human existence and contribute to quality of life...	Now, it is rephrased as Biodiversity loss impairs ecosystem functioning and, hence, nature's contributions to people'
Harald Pauli			3	58	3	59	this sentence does not really make sense and is not convincing: 'Biodiversity and ecosystems underpin nature's contributions to people (NCP) and are thus fundamental for human existence.' It sound such as NCPs are the source (having evolved over millions of years), which however is the case for biodiversity and ecosystems. Shouldn't it rather be: 'Biodiversity and ecosystems are fundamental for human existence. By providing NCPs, biodiversity and...'	Now, it is rephrased as Biodiversity loss impairs ecosystem functioning and, hence, nature's contributions to people'
	SPM							
Bruno Fady	SPM		3	58			Nature's contributions to people (NCP) is an all encompassing fuzzy concept central to the IPBES process. It could be argued that Nature does not contribute to people per se, people use Nature for their benefits. The NCP concept should be better defined at the beginning of the summary	The NCP concept is now explained on page 7
Germany	SPM		3	58	3	58	How can biodiversity and ecosystem "underpin" nature's contribution to people, since NCPs are part of (coming out of) the biodiversity and ecosystem?	Yes, "to underpin" is meant to express that biodiversity is indispensable for NCP.
Germany	SPM		3	58	3	74	Only 2 messages (namely A2 and A3) address specifically the ECA region- or subregions. If possible, make sure that the key messages target specifically the region considered here.	The high level summary now has an introduction that indicates the assessment specifically addresses the ECA region and as result the high level messages no longer mention ECA in order to reduce word length to the limits prescribed
EU: Ole Ostermann, JRC	SPM		3	58	3	59	Please explain relationship of nature's contributions to people (NCP), to other well-known concepts as ecosystem services (ES) and to nature-based solutions (NBS)	Page 7 now explains the NCP concept and the relationships of NCP to ES is discussed in chapter 1
EU: Karin Zaunberger	SPM		3	58		62	include after in terms of: food provision and quality, water provision and quality, air quality	These issues are now discussed in key message A1 and A2
Thomas Brooks	SPM		3	58	3	59	Very important to retain consistency with IPBES definition of "biodiversity", which includes "ecosystems" (http://www.ipbes.net/sites/default/files/downloads/IPBES_2_INF_2_Add.1.pdf ; also Pollination assessment p481, and Africa assessment SOD Chapter 1, Page 5, Lines 142-145).	This sentence has been removed. It may still be noted that in the IPBES conceptual framework the "nature" box is also denoted "biodiversity and ecosystems".
							Therefore, delete "and ecosystems" twice here.	
UK: Andrew Stott	SPM		3	58	3	59	using NCP terminology in the first line is not helpful to the unfamiliar reader, it just complicates the sentence	Using NCP was an IPBES-wide decision. To explain the concept and its relation to ecosystem services the SPM contains a box and an appendix.
Sweden: Hannah Östergård	SPM		3	58	3	58	Insert functions: Biodiversity and ecosystem functions underpin nature's contributions to people (NCP) and...	High level message A has been rephrased; it now say that Biodiversity loss leads to impaired ecosystem processes and thus impaired NCP.
EU: Markus Erhard (EEA)	SPM		3	60			various values propose to mention 'social cultural and economic' values instead	social, cultural and economic values are now mentioned
UK: Andrew Stott	SPM		3	60	3	60	Refer to people rather than societies	done
EU: Ole Ostermann, JRC	SPM		3	61	3	62	Biodiversity loss, not only severely impairs nature's capacity to contribute to human quality of life, in terms of security, health, cultural identity and heritage and equity. but also to so-called Good Life (or happiness or joy), see: ESER, Uta; NEUREUTHER, Ann-Kathrin; SEYFANG, Hannah; MÜLLER, Albrecht (2014): Prudence, Justice and the Good Life. A typology of ethical reasoning in selected European biodiversity strategies. Bonn-Bad Godesberg, Gland (BfN, IUCN). - URL: https://portals.iucn.org/library/node/44639 see also SPM p11 "Figure SPM 2: Empirical evidence for the interlinkages between NCPs and quality of life."	The term good quality of life is now used in high level message A
Robert Watson	SPM		3	62			Add a couple of examples of regulating NCP	A reference to Box SPM.2 has been inserted where all regulating NCP are listed
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM		3	62	3	62	According to the IPBES conceptual framework human well-being and quality of life denote the same box. Health is one component of well-being/QoL, i.e. not the same level as "total" well-being. In the SPM the term QoL is now used consistently.	The term well being is not used in the SPM and the term good quality of life is used instead. This is discussed in chapter 1
EU: Frank Wugt Larsen (EEA)	SPM		3	62			yes, expand list with other NCPs	A reference to Box SPM.2 has been inserted where all NCP are listed
Yildiz Aumeeruddy-Thomas	SPM		3	62	62		"in terms if security, health etc...": food is missing	Food has been added
Robert Watson	SPM		3	63			I suggest to rephrase as follows: A1. The various NCP, which effect the quality of life reflect significant...	This has been completely rewritten
Robert Watson	SPM		3	63			Almost no reader will know what "instrumental" and "relational" mean - please use alternate language or define the two terms	These terms have been removed
Robert Watson	SPM		3	63			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Harald Pauli	SPM		3	63	3	65	The fundamental contributions of the various NCPs...' this is repeating 'contribution' and the whole sentence is confusing - what is meant here?	This has been completely rewritten
Unai Pascual	SPM		3	63			I suggest to be more specific about what instrumental values and explain what kind of relational values. Otherwise policy makers will not use such messages.	These terms have been removed
Marie Stenske	SPM		3	63			A1 is very general. Can be deleted.	This has been completely rewritten

Rob Bugter	SPM	3	63	3	65	Even after repeated reading of this statement I'm not sure what it is supposed to mean. The most likely meaning seems to be that NCP's are what they are supposed to be, which is no surprise given the fact that they are defined like that. Or is this supposed to define them? The summary is in dire need of a clear and understandable definition -and an explanation why this new term is now used and why it is different from e.g. ecosystem services- but this hardly seems an appropriate way to present one.	These terms have been removed and the message has been completely rewritten
The Netherlands: Astrid Hilgers	SPM	3	63	3	65	this statement is unclear. The summary is in need of a clear and understandable definition -and an explanation why this new term is now used and why it is different from e.g. ecosystem services	The message has been completely rewritten and the NCP concept defined on page 7 and the difference to ecosystem services discussed in appendix 2
UK: Andrew Stott	SPM	3	63	3	65	Too much jargon for a high level summary	The message has been completely rewritten and certain terms removed
Norway: Nina Vik	SPM	3	63	3	65	What does this mean? Unclear message	The message has been completely rewritten and certain terms removed
Finnish Government	SPM	3	63	3	65	Key message A1 is difficult to understand. Pls clarify	The message has been completely rewritten and certain terms removed
Robert Watson	SPM	3	66			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Unai Pascual	SPM	3	66			So how are these benefits distributed differently in space? Can this be explained in terms of share/percentages of different NCP benefits?	Distributional issues are discussed in key message A3
UK: Andrew Stott	SPM	3	66	3	67	Is there an implication that should be delivered equally. Better to refer to more neutral terms 'evenly'.	The phrase equal access is now used and Distributional issues are also discussed in key message A3
UK: Andrew Stott	SPM	3	66	3	67	Intra' is not an appropriate term for such an amorphous region as ECA as there is no political identity, or any other identity to the region	This has been removed from this high level message and Distributional issues are discussed in key message A3
Finnish Government	SPM	3	66	3	67	Can anything be said about geographical inequity?	This is discussed in key message A3
Robert Watson	SPM	3	68			I suggest to rephrase as follows: A3. The ECA region uses more than its equitable share of renewable natural resources and it imports more NCP than it exports. There are significant differences in flows of NCP into the ECA sub-regions;	This has been rephrased here and these issues are discussed more fully in key message A4
Robert Watson	SPM	3	68			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Unai Pascual	SPM	3	68			Not clear what imports of NCP mean. Can we import for instance regulating NCP or non-material ones? There needs to be more specificity.	This has been rephrased here and these issues are discussed more fully in key message A4
France	SPM	3	68	3	71	As for now, the idea of « its share » is a controversial claim that could be avoided here. Rather state « The ECA region uses more renewable natural resources than is produced on its area ».	This has been rephrased and the word share removed
UK: Andrew Stott	SPM	3	68	3	68	What would ECA's 'share' of renewable natural resources be? Needs more neutral language 'uses more than it produces'	This has been rephrased and the word share removed
UK: Andrew Stott	SPM	3	68	3	69	The ECA does not function as region. Better to refer to 'as a whole the countries in the ECA area'	This has been rephrased to avoid this inference
UK: Vin Fleming	SPM	3	68	3	71	The figures from which this statement is derived, in lines 317-321, could have been used to provide a more tangible expression of this conclusion (ie the difference between our footprint and our available bio-capacity).	This has been rephrased here and these issues are discussed more fully in key message A4
Sweden: Cecilia Lindblad	SPM	3	68	3	71	use the concept of ecological footprint for the explanation of high imports of NCP	Ecological footprint has been used
Denmark	SPM	3	68		69	please specify 'exports'	This phrase has been removed here
Robert Watson	SPM	3	69			Delete inter-regional – many readers confuse "inter" and "intra" – my suggested language ensures there is no ambiguity	These terms have been removed
Robert Watson	SPM	3	69			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Yildiz Aumeeruddy-Thomas	SPM	3	69			In the idea that ECA imports more NCPs than it exports, I would find it important to say that: because of this, ECA exerts a very high pressure on many social groups in other parts of the world, especially among the poorest sections of developing countries. Indeed it is a specificity of ECA to be one of the biggest consumers of NCPs at the global level and the negative impacts have to be highlighted	This has been rephrased here and these issues are discussed more fully in key message A4
Robert Watson	SPM	3	70			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Harald Pauli	SPM	3	70	3	71	This given the (probably wrong) impression that Central Asia is similar to Western and Central Europe in consumption of benefits. What is obviously meant here is the biocapacity deficit or reserves per capita of the subregion. Therefore, it may be adjusted by mentioning: "Highest ecological footprints are in Western and Central Europe, followed by Eastern Europe and are lowest in Central Asia. Biocapacity, however, is also lowest in Central Asia, followed by Western and Central Europe, and is highest in East Europe, especially given the extensive resources in North Asia".	These issues are now discussed more clearly in key message A4
UK: Andrew Stott	SPM	3	70	3	70	"import more benefits derived from NCP" is quite impenetrable language for the lay reader	These issues are now discussed more clearly in key message A4
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	3	71	3	71	Add: these regions are thus exploiting other regions' NCP	
Robert Watson	SPM	3	72			I suggest to rephrase as follows, as the second sentence is redundant with the first: A4. Biodiversity loss negatively affects nature's contributions to people from terrestrial, freshwater and marine systems and destabilizes them over time	This message has been completely rewritten
Unai Pascual	SPM	3	72			state what are the pathways by which data suggests biodiversity loss "destabilizes" NCP, which ones? How quickly? Anything on tipping points and irreversibility?	This message has been completely rewritten
EU: Karin Zaunberger	SPM	3	72		74	include after to people : and decreases resilience and increases vulnerability	This message has been completely rewritten
Marie Stenseke	SPM	3	72			A4 is very general. Can be deleted	This message has been completely rewritten
Germany	SPM	3	73	3	73	Why "strongly"? This is explained in the full report, but is here not well backed up.	This message has been completely rewritten
Sweden: Hannah Östergård	SPM	3	73	3	74	This key message is not consistent with figures in Table SPM 1. Moreover, an example of clear, interpretable message.	This message has been completely rewritten.
Finnish Government	SPM	3	73	3	73	Is the word mostly right here? When biodiversity loss would positively affect to NCP?	This message has been completely rewritten.
Harald Pauli	SPM	3	76	3	76	sentence is confusing; it should obviously mean: 'Status and trends in biodiversity for nature's contributions to people'	No, was correct. But headings were dropped to harmonise between regional assessment SPMS.
ECA values liaison group	SPM	3	76	3	83	It is probably not necessary to introduce the message separately to stating the message. These could be combined and, in order to make the point more immediately and in a more straightforward way, shortened to something like "Nature's capacity to contribute to people in Europe and Central Asia has mostly declined over the past 50 years, and is expected to continue declining with current trends of biodiversity loss".	This message has been completely rewritten
Sweden: Hannah Östergård	SPM	3	76	3	83	Suggestion to start with status and trends in BD. Possibly key message would be easier to interpret if BD and NCPs are discussed in reverse order.	This message has been completely rewritten
Harald Pauli	SPM	3	77	4	120	Do the subpoints B1-B6 explain in more detail of what is said above in bold or are these additional point? If the first is the case, point would need to be rearranged by shifting the more immediate biodiversity concerns to the top; otherwise, readability suffers, because of the strong break from risks of biodiversity loss to food production and use of biodiversity products.	The bolded text was a general statement and the points more specific key messages about this statement. The structure has been retained but biodiversity and NCPs have been split between A and B.
Germany	SPM	3	77	3	77	Are these categories of NCPs coherently used among all regional assessments? This would be very important in order to ensure that they can easily feed into the global assessment. Where do these categories come from Please provide a reference and explain the categories briefly.	A reference in the text is now provided to Box SPM.2 where the NCP categories are listed and they are defined in chapter 1. They are used in all regional assessments

Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	3	77	3	77	Change order according to tekst: Material, non-material and regulating contributions		
EU: Frank Wugt Larsen (EEA)	SPM		3	77		Give examples of regulating, material and non-material contributions. In this high level summary you can't assume that this is widely known.	This has been rewritten to remove mention of the NCPs A reference in the text is now provided to Box SPM.2 where the NCP categories are listed and they are defined in chapter 1	
EU: Frank Wugt Larsen (EEA)	SPM		3	77	3	83	It is unclear whether this section only look at the use of material NCP inside the ECA region or whether it also consider net import of NCP. I suspect the former in which case it should be explicit and link to the statements in A3. For example, recent falls in the wild capture of seafood (fisheries?) should be seen in this context since the EU's reliance on fish imports has increased while its domestic production has fallen. (see e.g.. EC, 2012. Identification and mitigation of the negative impacts of EU demand for certain commodities on biodiversity in third countries. (DG Env No. ENV.B.2/ETU/2012/0045r). (No. ENV.B.2/ETU/2012/0045r). European Commission, Brussels.)	These issues are now discussed more clearly in key message A4
UK: Diana Mortimer	SPM		3	77	3	77	It is confusing to state 'The regulating, material and non-material contributions...' as it suggests to the layman there might be other contributions - sentence would be better worded as 'Nature's contributions from marine, freshwater and terrestrial ecosystems to people...'	The opening bold section to high level message B has been rewritten to be shorter and clearer
UK: Diana Mortimer	SPM		3	77	3	77	There needs to be a footnote explaining the three NCPs - otherwise people will not understand.	A reference in the text is now provided to Box SPM.2 where the NCP categories are listed and they are defined in chapter 1
UK: Andrew Stott	SPM		3	77	3	78	Better to spell out "regulating, material and non-material contributions of marine, freshwater and terrestrial ecosystems to people" at first use in a paragraph	A reference in the text is now provided to Box SPM.2 where the NCP categories are listed and they are defined in chapter 1
EU: Anne Teller	SPM		3	78		78	delete the second 'generally' at the end of the sentence	This has been removed
Thomas Brooks	SPM		3	78	3	78	Replace "ecosystems" with "biodiversity". These NCPs come from genetic and species levels as well as from ecosystems.	This phrase has been removed
Robert Watson	SPM		3	79			I suggest to rephrase as follows: This is underpinned by declines in biodiversity as species and ecosystems of Europe and Central Asia are threatened and declining, with 30% of species that live exclusively within Europe and Central Asia (i.e., endemic) at high risk of extinction.	very good suggestion, the link between NCPs and biodiversity (beginning of the sentence) has been removed because we have now dedicated section B exclusively to biodiversity. The latter part of the sentence has been retained but edited taking this comment on board
Rob Bugter	SPM		3	79	3	82	Unreadable sentence with a logic I can't follow	the sentence has been entirely revised and part of it is now within the caption of figure SPM 5
The Netherlands: Astrid Hilgers	SPM		3	79	3	82	please clarify and rephrase.	the sentence has been entirely revised and part of it is now within the caption of figure SPM 5
Sweden: Hannah Ostergård	SPM		3	79	3	79	Replace underpinned with reinforced. Underpinned implies a positive conotation	very good suggestion, however it doesn't apply anymore here as the link between NCPs and biodiversity has been removed because we have now dedicated section B exclusively to biodiversity.
Robert Watson	SPM		3	80			Add the concept of diversity elsewhere - not relevant for this bullet point	we have separated NCP and biodiversity into two sections which addresses this comment
EU: Anne Teller	SPM		3	80		80	the statement that biodiversity is 'not extremely diverse' in ECA is in contradiction with line 99 which states that terrestrial biodiversity is 'extremely diverse' in ECA?	The statement is "not only". At any rate, the sentence has been removed as value-laden, we preferred just giving the numbers rather than arguing that the region is extremely diverse, all IPBES regions are.
Thomas Brooks	SPM		3	80	3	80	Delete "not only extremely diverse, but also". They are not particularly diverse compared to tropical regions.	The whole sentence has been removed
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM		3	81	8	82	Excellent use of these data; very important to retain. Add "according to the IUCN Red List of Threatened Species" after "extinction".	Thank you
Thomas Brooks	SPM		3	81	8	82	Excellent use of these data; very important to retain. Add "according to the IUCN Red List of Threatened Species" after "extinction".	Thank you
Adriano Mazziotta	SPM		3	81	3	81	Do you refer to 30% of vertebrate species here? This should be stated.	No, it's all taxa comprehensively assessed by IUCN, at any rate the sentence has been deleted in favour of reporting population trends.
UK: Andrew Stott	SPM		3	81	3	81	Is this language intended to exclude migratory species?	Not exactly, there are several migratory species that are endemic to ECA. We wanted to report on ECA endemics as the conservation status of these species is exclusively responsibility of ECA countries. That is, pressures and conservation actions affecting these species are under direct control of ECA countries, as opposed to species that cross ECA border and whose extinction risk and conservation efforts may be mostly a matter concerning countries outside ECA. The 30% for terrestrial species has now been replaced by a figure for all species in figure SPM 5 and associated caption.
Stuart Butchart	SPM		3	81			Important to keep this text on status and trends in extinction risk.	Thank you
Robert Watson	SPM		3	83			Why only mention Aichi target 12?	The scope of chapter 3 was Aichi target 12 and 13, which we have added to the key message
Germany	SPM		3	83	3	83	This is a very strong deterministic statement. Under which conditions is it unlikely that this target will be met? If current trends continue? If lack of implementation of current policies?	It is certainly not going to be met as there are documented extinctions (2 fish species in Turkey at least). This is at odds with Aichi target 12.
EU: Karin Zaunberger	SPM		3	83			include a footnote to the Aichi Target	There is now an entire box on them.
Thomas Brooks	SPM		3	83	3	83	Is this the right place to discuss Aichi Targets and the likelihood that they'll be met or not? Seems that that should be in Section D below. Also, NB that the Aichi Targets do not belong to the CBD alone (so delete "Convention on Biological Diversity" here); and if Aichi Target 12 is mentioned with respect to species, Aichi Target 5 also be mentioned with respect to ecosystems.	Valid point, now all targets are in a separate box where progress towards their achievement is reported for ECA.
UK: Andrew Stott	SPM		3	83	3	83	Just Aichi Target 12?	Now also Aichi target 13 but moved to a separate box
Robert Watson	SPM		3	84			I believe the correct word is production and not use. Use conflates production and trade – so one can have significant increases in use without any change in production in ECA – so biodiversity loss is linked to production not use	The phrase provision is now used in high level message A
Robert Watson	SPM		3	84			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Sweden: Cecilia Lindblad	SPM		3	84	3	89	B1. Lift the last clear and important sentence up as a start in B1	This issue is now mentioned earlier and is the focus of high level message a
Sweden: Ola Inghe	SPM		3	84	3	89	B1. Be more consistent in the description of the trends. För example, for roundwood, the stability of the long-term trend is emphasized, while for medicinal resources a recent upsurge is (over?)emphasized while nothing is said about the long-term declining trend.	These trends are now discussed more consistently in high level message B and in key message a2

Robert Watson	SPM		3	85			This is inconsistent with the introduction, which states that biomass-based energy is increasing – which is correct	This mention of biomass based energy has been removed and biomass based energy is discussed consistently in key message A2
France	SPM		3	85	3	86	"stabilization in biomass-based energy": we doubt this conclusion, see for instance DG-ENVI-study-imports-from-US-Final-report-July-2016.pdf	This mention of biomass based energy has been removed and biomass based energy is discussed in key message A2
Finnish Government	SPM		3	85	3	86	What comes to biomass-based energy the statement is in conflict with what is said in page 7 line 197	This mention of biomass based energy has been removed and biomass based energy is discussed consistently in key message A2
UK: Diana Mortimer	SPM		3	86	3	87	the following ' and recent increases in demands for medicinal resources associated with urban societies' doesn't make sense - what relevance to NCP are you suggesting?	This has been removed
Robert Watson	SPM		3	87			Why only urban societies – rural societies do not use medicinal resources!	This has been removed and medicinal resources discussed in general in key message A1
UK: Andrew Stott	SPM		3	87	3	87	What is the connection between demand for medicinal resources and urban societies? Also may need further explanation that medicinal resources are provided by wild plants and animals?	This has been removed and word limits mean that the features of medicinal resources have to be discussed in chapter 2
Yildiz Aumeeruddy-Thomas	SPM		3	87			Demands for healthy food at the ECA level have also increased (Ex: Salep, orchid bulb drink putting major pressures on specific NCPs). Furthermore, medicinal resources do not necessarily come from ECA: same issue as above. May be useful to show that ECA is affecting NCPs beyond its frontiers due to this increase in demand of natural medicine and healthy food.	Word limits prevent a detailed discussion of these issues here but NCP and human health and dietary diversity are discussed in key message A1 and the influence of ECA on NCP in other regions is discussed in key message A4
Robert Watson	SPM		3	88			Replace 'use' by 'production' (see previous comment)	This sentence has been rewritten and incorporated within high level message A
Robert Watson	SPM		3	88			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Robert Watson	SPM		3	90			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Harald Pauli	SPM		3	90	3	93	many different things packed in a short paragraph - therefore confusing, e.g. 'the use of nature ... as a source of existence value of biodiversity'	This has been removed and these trends are discussed more clearly in key message A2
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	3		90	3	94	Para B2 very hard to understand (rephrase)	This has been removed and these trends are discussed more clearly in key message A2
UK: Andrew Stott	SPM		3	90	3	93	"Consumption" rather than "use"	The sentence has been removed and these trends are discussed more clearly in key message A2
UK: Andrew Stott	SPM		3	90	3	93	Is it possible to 'use' a source of existence values?	This has been removed and these trends are discussed more clearly in key message A2
UK: Andrew Stott	SPM		3	90	3	93	This may suggest a relationship? Better to say 'has occurred concurrently with'	The term accompanied is now not used to discuss trends
Denmark	SPM		3	90		93	please elaborate '...learning.' - learning about what?	Word limits prevent a detailed discussion of types of learning here but this is covered in chapter 1 and s
Yildiz Aumeeruddy-Thomas	SPM		3	90			This has also been accompanied in increased travels beyond ECA, adding pressure on NCPs in far away destinations and sometimes jeopardizing local networks of food security (e.g. nature tourism!)	The influence of ECA on NCP in other regions is discussed in key message A4
Unai Pascual	SPM		3	91			I suggest not mixing "existence values" with non-material NCP. Existence values may be associated with species, landscapes, etc. but NCP are flows, not resources or assets.	The sentence has been removed and existence values covered in key message A1
UK: Mark Stevenson	SPM		3	91	3	93	use of nature for physical and psychological experiences and as a source of existence value' is likely to turn off many policy makers, although I think all these points are important. All of this is about how people value and benefit from access to nature/biodiversity to provide physical and mental health benefits as well as a sense of being connected to the World.	The sentence has been removed and values discussed more clearly in key message A1
UK: Vin Fleming	SPM		3	92	3	93	I don't really understand what the second half of this sentence (has been accompanied by a decline etc) actually means – or why the decline is linked to ILKN.	The sentence has been removed and trends and ILK are discussed more clearly in key messages A1 and A2
Yildiz Aumeeruddy-Thomas	SPM		3	92			Do you mean linked to "decline" in local and indigenous knowledge	The sentence has been removed and ILK is discussed more clearly in key message A1
Robert Watson	SPM		4	95			Replace 'NCPs' by 'NCP'	NCP acronym now not used
EU: Ole Ostermann, JRC	SPM		4	95	4	95	Please refer to "Figure SPM 1: ECA subregions and Seas" on p.8, and spell out the ECA sub-regions which are Western Europe (WE), Central Europe (CE), Eastern Europe (EE) and Central Asia (CA).	This has been replaced by Box SPM.2 which has a revised title and text mentioned sub regions and seas
UK: Andrew Stott	SPM		4	95	4	95	Which sub regions are data available for?	Sub regions are discussed in key message A2 and the reference to temporal data availability has been removed
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4		96	4	96	Add 'natural' in front of habitat	This has not been done as habitat maintenance is a named NCP which is listed in Box SPM.2 and defined in chapter 1
UK: Andrew Stott	SPM		4	96	4	96	Is habitat maintenance an NCP?	yes
Harald Pauli	SPM		4	97	4	97	freshwater quality: you may consider, however: 'Europe's waters are much cleaner than 25 years ago, e.g. through many years of investment in sewage systems and wastewater treatments' Ref: https://www.eea.europa.eu/soer-2015/europe/freshwater#tab-based-on-indicators	Word limits prevent a detailed discussion of these investment issues here but the issue of freshwater quality is discussed in more detail in chapter 2
Robert Watson	SPM		4	99			I suggest to rephrase as follows, as not all terrestrial species and ecosystems are threatened and declining: 'B4. Terrestrial species and ecosystems of Europe and Central Asia are extremely diverse, and some are...'	Thank you, now entirely rephrased, following this and other comments
Jean-Pierre Arnauduc	SPM		4	99	4	100	this sentence is erroneous: not all species and ecosystems are threatened and declining. Add "some" between "diverse" and "threatened" and replace "and" before "declining" by "or".	The vast majority are. This is based on the EEA assessment for EU 27 and the IUCN Red List global assessment for all of ECA although only for some taxonomic group (all terrestrial vertebrates, some fish and plant groups, very few invertebrates).
Harald Pauli	SPM		4	99	4	99	change to: 'B4. Terrestrial biota and ecosystems ...'	We have chosen to retain the original wording in the spirit of reducing jargon
Unai Pascual	SPM		4	99			any sign of increase or reversing downward trend for any species, e.g., wolves, or some birds, etc. somewhere in ECA?	Indeed, just 4 lines below
Germany	SPM		4	99	4	100	"terrestrial species are declining"--> Are all terrestrial species declining and only those on the EU habitats and birds directive tend to increase in number? This is not clear and based on this assessment a more precise statement would be expected for the SPM	The whole key message has been substantially revised. We now clarify just how many species and ecosystems have declining trends in conservation status
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4		99	4	99	Add 'including inland water' after terrestrial	There is a specific key message for freshwater and marine systems

EU: Karin Zaunberger	SPM		4	99		103	include footnotes to Habitats and Bird Directives	We had to remove the EU directives from the text so this no longer applies
EU: Anne Teller	SPM		4	99		99	the statement that terrestrial biodiversity is 'extremely diverse' in ECA is in contradiction with line 80 which states that biodiversity is 'not extremely diverse' in ECA?	Agreed, and it has been removed
Thomas Brooks	SPM		4	99	4	99	As above, delete "extremely diverse". This is not the case compared to the tropics, i.e. compared to the other three IPBES regions.	See comment just above
UK: Andrew Stott	SPM		4	99	4	103	"Terrestrial species and ecosystems of Europe and Central Asia" should say "Terrestrial species and ecosystems within Europe and Central Asia" - 'of' may suggest some sort of regional identity	Removed the geographical attribution as it is implicit that are within ECA
UK: Andrew Stott	SPM		4	99	4	103	Threatened' may need clarification for the lay reader - this is a reference to 'threatened status'	We now clarify what we mean by threatened in message B1 and the caption of figure SPM 5. We adopt the term consistently, i.e. threatened with extinction, across all key messages in section B
UK: Andrew Stott	SPM		4	99	4	103	Are all species and ecosystems declining? For which species and ecosystems is there sufficient information to draw this conclusion? Over what timescale has a decline been observed?	We now report on just how many are declining for all 3 key messages, and for both species and habitats
UK: Andrew Stott	SPM		4	99	4	103	Only target 12? Target 5?	This was in section C, but now in a separate box
UK: Andrew Stott	SPM		4	99	4	103	Final point about species listed in the HD and BD having improved conservation status is at odds with first sentence in this paragraph about declines	We don't think there is any contradiction, we just say that not all species are declining, the first sentence states that overall there is a biodiversity decline, but is not universal. In the last sentence we clarify which habitats or species are fairing better, and why
UK: Andrew Stott	SPM		4	99	4	112	B4 and B5 are structured differently. B5 refers to pressures and recovery, B4 does not refer to pressures, only vaguely 'threatened'. But pressures should be discussed in the following section C.	We now have given the same structure to B4,B5, B6, now renamed to B1,2,3
Sweden: Hannah Östergård	SPM		4	99	4	103	Elaborate as below, to what extent has status improved, there is also lots of negative trends even though target is being met	Now supported with all relevant quantitative figure (key message B3)
Thomas Brooks	SPM		4	100	4	101	As above, NB that the Aichi Targets do not belong to the CBD alone (so delete "Convention on Biological Diversity" here); and if Aichi Target 12 is mentioned with respect to species, Aichi Target 5 also be mentioned with respect to ecosystems.	Good point, and it has been taken on board throughout the SPM
Harald Pauli	SPM		4	101	4	101	suggest to change to 'However, some species and habitats benefitted from conservation...'	It has been entirely rewritten
UK: Vin Fleming	SPM		4	101	4	101	Okay so target 12 will not be met but neither, from pages 29-33, will several others. Not sure why this target alone gets such prominence in the high level summary (in bold in line 83) but accept and recognise the target won't be met. A paragraph in the high level summary summarising progress across all the targets might be useful (ie to note that most won't be met but some will) rather than a selective referral to a few in the summary.	Goal C of the Strategic Plan encapsulates the mission of the CBD to "take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services". Aichi target 12 is arguably the key target towards achieving this mission. Targets under section A and B are means to an end, and targets in D are enabling actions, but those in C are really summarizing the goal.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4		102	4	102	should be more nuanced! we quote from mid term review of the EU biodiversity strategy, add: "The latest report on the state of nature in the EU shows that the number of species and habitats in secure/favourable or improved conservation status has increased slightly since the 2010 baseline. However, many habitats and species that were already in unfavourable status remain so, and some are deteriorating further. " see http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0478 ; further more, this only applies to EU countries and not to the others from ECA.	Thanks for pointing out, we have now given the full picture here despite the word limitation. The chapter give more in-depth and nuanced information and we refer the reader to the relevant section for an in-depth analysis of progress towards EU targets
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM		4	103	4	103	Add a sentence along the lines of "Protected areas cover only a little more than a quarter of the ECA's key biodiversity areas (specifically, 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas)" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	We have a full paragraph on this in section C
Thomas Brooks	SPM		4	103	4	103	Add a sentence along the lines of "Protected areas cover only a little more than a quarter of the ECA's key biodiversity areas (specifically, 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas)" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	We have a full paragraph on this in section C
Thomas Brooks	SPM		4	103	4	103	It's not clear what "conservation" refers to here. Delete - unnecessary.	The Habitat Directive talks about conservation status, not status, and we wanted to reflect the same language
Stuart Butchart	SPM		4	103			Add a sentence along the lines of "Protected areas cover only a little more than a quarter of the ECA's key biodiversity areas (specifically, 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas)" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	We have a full paragraph on this in section C
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4		104	4	104	Add 'natural' in front of habitat	corrected
EU: Ole Ostermann, JRC	SPM		4	104	4	129	Please harmonise text between B5 and C, otherwise priorities are not clear. If "Land use change and climate change are the main direct drivers that adversely affect biodiversity and nature's contributions to people", then this should correspond to B5 ("Unsustainable fishing, habitat degradation, invasive alien species, eutrophication and climate change have increased exponentially during the 20th century causing further widespread declines in marine biodiversity, changes in species distribution, and homogenization of biological communities."). Land Use change needs to appear in B5 as well.	These messages were rewritten and contents harmonised.
France	SPM		4	104	4	105	Climate warming is obvious but neither climate change neither eutrophication has increased exponentially during the 20th century. There has been varying rates of change all along the 20th century and beyond, included periods exhibiting temporary temperature decrease.	Agreed. This has been changed completely.
Robert Watson	SPM		4	105			Can we really justify "exponentially" rather than "significantly"? Suggest to replace exponentially by significantly.	Agreed. This has been changed completely.
Robert Watson	SPM		4	105			Further tha what? – I suggest deleting further	Agreed. This has been changed completely.
Harald Pauli	SPM		4	105	4	105	suggest to change: "...during the 20th century and the recent decades, causing..."	Agreed. This has been changed completely.
Harald Pauli	SPM		4	107	4	108	I'm not sure if the Black Sea is a good example for exceptions from negative trends, cf.: https://www.eea.europa.eu/soer-2015/countries/black-sea	This has been specified.
Robert Watson	SPM		4	108			Are all three aspects recovering, i.e., declines in biodiversity, changes in species distribution, and homogenization of biological communities – please be specific what you mean by recovery	This has been specified.
Denmark	SPM		4	109		112	the regional assessment is not mandated to conclude, analyse and assess neither the CBD nor SDG targets. The aichi-targets will be assessed including the National reports and in GBOS. Delete sentence	not according to the scoping document of this is assesment, approved by the plenary, I quote "The overall scope of the regional/subregional assessments is to assess the status and trends regarding biodiversity and ecosystem services and their interlinkages, the impact of biodiversity and ecosystem services and threats to them on human well-being and the effectiveness of responses, including the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets and the national biodiversity strategies and action plans developed under the Convention on Biological Diversity"
Norway: Nina Vik	SPM		4	109	4	112	For the whole region?	This has been changed and specified.
Thomas Brooks	SPM		4	110	4	110	It's not clear what "conservation" refers to here. Delete - unnecessary.	This has been changed.

Robert Watson	SPM		4	112			Link this sentence to specific Aichi and SDG targets	This has been changed and relation to SDG/ABT specified in a box.
							B6 needs to be significantly rewritten – the main message should be that freshwater systems are highly degraded and species are in terrible shape (see section B6 later) – the fact that CBD target 5 may be met is almost irrelevant compared to the fact that most freshwater systems are not achieving conservation status and most species are threatened – please note the degraded status in this paragraph and quantify the % of fish with known population trends that are threatened – please see my comments later on B6 (e.g., 70% of fish with good data have declining populations)	Thank you for the constructive comment. We have substantially rewritten the key message to reflect this and other comments.
Robert Watson	SPM		4	113				
Germany	SPM		4	113	4	113	Compared to what?	To all non-freshwater habitats, we have slightly revised, without explicitly mentioning other habitats as we think is clear than saying the most threatened, implies a comparison with everything else in ECA.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4	113	4	120		B6 para should also say something about the conservation status of freshwater habitats and species	That's what it does. It has now been also revised and expanded with additional numerical figures, see B2
UK: Andrew Stott	SPM		4	113	4	120	Ensure consistent terminology - use 'habitats' in B6 but 'ecosystems' in e.g. B4	Now habitats throughout
UK: Andrew Stott	SPM		4	113	4	120	Need to describe what species and ecosystems are threatened by, not just say they are threatened	We refer to the chapter for specific examples, but divide by wetlands and everything else here.
UK: Andrew Stott	SPM		4	113	4	120	least well-monitored seems like a gross oversimplification	Yet true.
UK: Andrew Stott	SPM		4	113	4	120	What are the regional targets? Are there any other than EU and national targets?	Now eliminated
UK: Andrew Stott	SPM		4	113	4	120	Target 5 mentioned here - why not mentioned in paras B4 and B5?	It has now been moved in a separate box, together with all other Aichi targets
Robert Watson	SPM		4	114			76% and 83% are very precise numbers given poor monitoring	It's exactly how many species have unknown population trends, we know well what we don't know
Germany	SPM		4	116	4	116	The prognosis is "negative" in which way?	Now removed
Denmark	SPM		4	116		120	same rationale as previous. Delete both sentences.	Done
Robert Watson	SPM		4	117			Be specific – which Aichi targets	We referred to 12 here, but now removed from this key message
Robert Watson	SPM		4	117			What is meant by halving the rate of habitat loss for freshwater systems – I understand the concept for wetlands and mires, but not rivers and lakes – please rephrase or be more specific	clarified that this is about wetlands now
EU: Frank Wugt Larsen (EEA)	SPM		4	117	4	120	Unclear how this conclusion is reached. See page 98 of EEA, 2015, State of Nature Report 2015 for status of species and habitats associated with rivers and lakes.	there was an error in calculation, now rectified thanks to double-checking with the State of Nature report.
Norway: Nina Vik	SPM		4	118	4	118	Only on track to be met by the EU countries, or also other countries in the sub-regions defined in the IPBES ECA assessment, such as Norway, Switzerland and others?	Only the EU
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4	120	4	120		this last fact is confusing as it talks about CBD SP obj 5 on halving the rate of habitat loss and gives as a response a protection status or a UE regulation; more info on the positive effects of these on freshwater biodiversity and on the % of fresh water habitats covered by positive conservation measure should then be given (it does not appear page 19 either).	
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4	122	4	129		this section does not give a good and complete overview of the drivers; some specific one are pointed out (migration) and many others are completely missing (agriculture, urbanisation, the use of pesticides, consumption patterns, unsustainable production, tourism.....)	See response at line 316 This has been substantially improved. Now land use change is emphasised and we have tried to say something about each direct and indirect driver.
EU: Karin Zaunberger	SPM	4	122		129		also include natural resource extraction, pollution and IAS in the bold text as in C1 lines 130-133	We have included these drivers now
EU: Marco Fritz	SPM	4	122	5	155		The extent and role of urban areas on hosting and impacting nature and its contributions has changed in Europe and Central Asia, and will even more in the future. This is not reflected yet in section C	Urban areas are now mentioned under C1.
ECA values liaison group	SPM	4	122	4	129		It is probably not necessary to introduce the message separately to stating the message. These could be combined and, in order to make the point more immediately and in a more straightforward way, shortened to something like "Human activities drive the loss of biodiversity in Europe and Central Asia. The way in which its loss continues will depend on how well the drivers and their interactions are understood and managed".	Yes, this has been re-worded
UK: Andrew Stott	SPM	4	122	4	129		Are these comments about decision making in the right place? Should be covered in section D?	Which comments? Here we assess existing policies because they are institutional drivers
UK: Andrew Stott	SPM	4	122	4	129		Final sentence in this paragraph doesn't make sense	Has been changed
Robert Watson	SPM	4	123				Is this sentence referring to historical, present day or projected contributions – I am surprised if climate change has been one of the two main drivers to date – certainly not the case in the UK. Please clarify	Has been changed
Germany	SPM	4	123	4	123		In the paragraph further below, LUC, Climate change, natural resource extraction, pollution and IAS are referred to as main drivers. Are they listed in terms of their current impact on Biodiversity? Does this sentence here then imply that LUC and CC are the ones impacting ecosystem services and biodiversity most?	We have deleted this and avoid saying which direct driver is most significant, because this depends on context and sub-region.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	4	123	4	123		line 123 should be aligned with line 130 and add "natural resources extraction, pollution, and invasive alien species".	Has been done in new C3
Thomas Brooks	SPM	4	123	4	130		Statements not consistent between these two lines. Add "natural resource extraction, pollution, and invasive alien species" into line 123.	Yes, see new C3
UK: Diana Mortimer	SPM	4	123	4	130		The first paragraph in this section starting line 123 seems to be contradicted by the paragraph starting on line 130. It also makes the reading very repetitive.	Has been changed
Ruslan Novitsky	SPM	4	123	4	130		The identification of the main drivers are not clear, in the title 2 main drivers and in the text 5 main direct drivers.	Has been changed
Robert Watson	SPM	4	125				Please list the key indirect drivers – decision-makers need to know the indirect drivers: ... interacting indirect drivers (demographic, economic, socio-political, technological and cultural).	C3 and C4 deal with economic and institutional drivers mainly but also cultural drivers (awareness of ecosystem degradation and the belief in economic growth). Our assessment of science and technology and demographic drivers are summarised in the new table.
Harald Pauli	SPM	4	125	4	129		One could consider the main drivers such as land use and climate change in decision making, but if we speak of comprehensive combinations of drivers and their interactions, research is very often not yet at the point, where decisions could be made upon. Large degrees of uncertainty remain, which should not deter from taking measures, but it very much calls for the need of filling the gaps. These even exist for the status and trends for many diverse and functionally important organism groups (e.g. arthropod groups), where experts are often unavailable (and even less a targeted financial support). Similar is the case for the maintenance of monitoring systems of biodiversity changes, e.g. for climate change impacts where international approaches are important. The IPBES assessment is an important place to underpin these demands - filling these gaps will be essential for assessing future trends.	We have identified research data gaps separately.
Sweden: Cecilia Lindblad	SPM	4	125	4	126		...as well as effects of additive drivers.	Yes, this has been re-worded
EU: Markus Erhard (EEA)	SPM	4	127	4	127		type missing blank 'trade-offs between'	OK

Robert Watson	SPM	4	128			Replace 'NCPs' by 'NCP'	OK
Robert Watson	SPM	4	129			The text keeps flip flopping about with the use of NCP and natures contricutions to people – please use one or another not both, especially in the same sentence	OK
Robert Watson	SPM	4	130			What about ocean acidification for marine systems?	We did not include this as a direct driver, instead it has been discussed as an impact from climate change (see new C2)
Unai Pascual	SPM	4	130			to what extent there are confidence levels for the impact of say, climate change?	has been added (see new C2)
EU: Markus Erhard (EEA)	SPM	4	130	4	132	Propose to add 'including intensification' as mentioned below (page 21 line 567 pp) to be more explicit in the message	has been added (see new C1)
Marie Stenseke	SPM	4	130			C4. The drivers mentioned are stated to be the main direct drivers, but they seems more to be a categorisation of drivers since they are broad and covers most potential drivers. Specify or reformulate.	Yes, this has been re-worded
UK: Andrew Stott	SPM	4	130	4	133	Better to say that climate change interacts with other drivers - perhaps it does not accelerate in all cases?	Yes, this has been re-worded
Yildiz Aumeeruddy-Thomas	SPM	4	130			What about agriculture with high levels of chemical inputs? If what I know is correct, Europe (Germany is the first industry at the global level of agricultural chemicals) is a major exporter of anthropogenic assets (chemical inputs for agriculture, that may have a negative impact on NCPs beyond ECA.This is a major driver which is known to have already major impacts on pollination.	Yes, this is the meaning of intensification in C1, has been expanded.
Robert Watson	SPM	4	132			Climate change is of particular importance: Historically, present day or in the future?	In the future, see new C2
EU: Karin Zaunberger	SPM	4	132		133	Climate change accelerates, interacts and exacerbates other drivers such as ...	Yes, this has been re-worded
Thomas Brooks	SPM	4	132	4	132	Delete "is of particular importance since it" unless there is explicit evidence for this. The fact that it accelerates other drivers does not make it "of particular importance" per se.	Yes, this has been re-worded
Zsolt Molnár	SPM	4	132	4	133	Not only climate change but as written in several places in the assessment, at present mostly land-use change is responsible for many changes in BD and NCPs, and it has many indirect effects. The suggested text: Climate change and land-use change are of particular importance.....	Yes, this has been re-worded
Sweden: Cecilia Lindblad	SPM	4	133	4	133	There is also a combination effect caused by interctions between the main direct drivers.	Yes, interactions and delays play an important role, see new C3. Text on interaction among drivers was shortened.
Unai Pascual	SPM	4	134			what are these institutional drivers? Too general statement. Are these policies, markets? Values/norms? Land property rights?	This has been expanded in the new KM C1-4. We givoe examples of institutional drivers (regulations) and awareness as well as the belief in economic growth (cultural drivers)
Germany	SPM	4	134	4	134	Why explicitly mentioning traditional land use? What about commercial/intensive agriculture?	New text focuses on intensification
Harald Pauli	SPM	5	136	5	138	suggest to separate 'Armed conflicts exacerbate the marginalisation of people and damage on nature.' from 'C2.' and combine it with 'C3. ...', otherwise, C3 would be a bit stand-alone and the link to biodiversity is not easy to grasp. Further, other important reasons for continued migration, such as 'global economy and market practices leading, to inequality of economic wealth...' should be added here.	We have a totally new structure now
UK: Diana Mortimer	SPM	5	136	5	137	The sentence 'armed conflict...on nature.' needs work - yes conflict marginalises people but I'm guessing you mean their interaction with NCP and damage to nature from conflict is not always the case - conflict can mean anthropogenic impacts are decreased.	Yes, this has been re-worded
Zsolt Molnár	SPM	5	136	5	136	Traditional land use is rapidly disappearing in the Eastern new member states of the European Union, this should also be included. The suggested text: especially in Central European EU member states, Eastern Europe and Central Asia...	It is disappearing in all ECA region
EU: Karin Zaunberger	SPM	5	137			include after ... damage on nature: <i>jeopardising livelihoods</i>	Changed to: Eastern Europe, the Balkans and Central Asia have recently experienced armed conflicts, which negatively affect nature and its contributions to people (4.5.4.2).
Robert Watson	SPM	5	138			I suggest to rephrase as follows: C3. Large-scale human migration within the ECA region is expected to continue impacting all indirect and direct drivers.	Agree, this is in the Executive Summary of the Chapter. For space reasons we did not include anything on demographic drivers in the SPM.
Brendan Coolsaet	SPM	5	138	5	138	Unclear how migration contributes to biodiversity loss. Add a sentence explaining the relationship	We have done this in the Executive Summary. In the SPM we deleted this discussion
Unai Pascual	SPM	5	138			it is important to be able to connect (causality or correlation) the drivers with biodiversity or/and NCP. Stating that migration is increasing and likely to continue increasing does not suggest any specific impact over biodiv or NCP. These type of statement needs to be more specific. e.g., also what kind of migration, refugees? economic migrants? intraEU migration flows?	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
Germany	SPM	5	138	5	138	here is a break in the logical flow of the text. Obviously, elements discussed in chapter 5 are presented in the following but this needs to be introduced and explained.	We have a totally new structure now
Germany	SPM	5	138	5	138	Key message C3 is not a stand-alone message as the links to biodiversity and NCPs are missing here. Please be more specific about migration flows and in particular its impacts on biodiversity and ecosystem services. Out-migration of people might even be beneficial for biodiversity.	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	5	138	5	138	Unclear how migration contributes to biodiversity loss. Add a sentence explaining the relationship	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
EU: Ole Ostermann, JRC	SPM	5	138	5	138	Is the migration mentioned the one of human populations?	Yes
EU: Anne Teller	SPM	5	138		138	add 'population' in front of 'migration' to clarify the type of migration referred to (cf.)	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
EU: Markus Erhard (EEA)	SPM	5	138		138	migration of whom or what? Is it related to people or to species?	people
Marie Stenseke	SPM	5	138			C3 is not relate to the topic of the assesment. Reformulate or delete	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
WWF Norway	SPM	5	138	5	138	This needs further specification. Large migration of people? And is it in general or will it mostly be in specific parts of the region?	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
France	SPM	5	138	5	138	This high level message should be fleshed out since the link between this statement and biodiversity and ecosystem services issues is missing at the moment.	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
UK: Andrew Stott	SPM	5	138	5	138	In what way is migration relevant?	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
Finnish Government	SPM	5	138	5	138	C3 probably refers to migration of humans?	yes
Ruslan Novitsky	SPM	5	138	5	138	The migration as a process must be estimated more carefully and related with subregional problems. In the WE - Africa, in EE - migration from CA and China. Also work migration have a place from Ukraine and Moldova to Russia and Belarus and so on.	We have included conclusions for demographic drivers in the Executive Summary. In the SPM we deleted this discussion
Robert Watson	SPM	5	139			What do you mean by linear?	no recycling. Has been changed
Harald Pauli	SPM	5	139	5	139	Linear resource extraction ...' should be a bit more specified	has been changed
Unai Pascual	SPM	5	139			Not clear what resource efficiency refers to. Suggest to be more specific and avoid jargon. Also, how is green fiscal policies affecting biodiv or NCP. Stating that low env. taxes has a impact does not explain what is the connection. Env taxes may mean lots of different things, e.g., over private water consumption, production of industrial waste, etc. can this be more specific?	Has been substantially elaborated in new C3 and C4.

Germany	SPM	5	139	5	140	this is a very general and not very insightful statement; maybe the regions which are the largest affected by resource extraction could be identified?	For mining this is Central Asia, see new C3	
EU: Karin Zaunberger	SPM	5	139			include after linear resource extraction: <i>leading to overexploitation and pollution</i>	Yes, this has been re-worded. The connection between extraction and pollution is made clear in the Executive Summary but not in the SPM.	
UK: Andrew Stott	SPM	5	139	5	140	Explain what you mean by linear resource extraction	Yes, this has been re-worded.	
UK: Andrew Stott	SPM	5	139	5	140	This seems quite a blanket statement and it is also value laden.	Yes, this has been re-worded.	
Ruslan Novitsky	SPM	5	139	5	140	the sentence need specify subregionally oriented reflection. Linear using more typical for the EE and CA.	Yes, this has been re-worded.	
Robert Watson	SPM	5	141			It is the impact that can be masked by trade – not the depletion. Suggest to rephrase as follows: C5. The impact of the depletion of natural resources and the loss of biodiversity on nature's contributions to people	Yes, this has been re-worded.	
UK: Diana Mortimer	SPM	5	141	5	154	Are the terms 'nature' and 'biodiversity' being used interchangeably? - consistency or an explanation of the different usage is needed.	Yes, this has been re-worded.	
UK: Andrew Stott	SPM	5	141	5	143	Should use more neutral language. 'may not be apparent'	"masking feedbacks" is commonly used in the reviewed literature.	
UK: Andrew Stott	SPM	5	141	5	143	Use a more neutral statement than 'impeding' e.g. 'lack of'	"masking feedbacks" is commonly used in the reviewed literature.	
UK: Andrew Stott	SPM	5	141	5	143	Seems to over simplify institutional responses - many institutions (trade bodies) are set up for this purpose. Needs a much more neutral analysis.	This has been elaborated to: Demand for fish in the European Union causes fishing above sustainable yield limits, which is masked by increased fish imports. Depletion of local mineral reserves and fish stocks is not immediately apparent due to global trade, which delays effective responses. While awareness of local resource shortages, e.g. of cod in Europe, would be expected to be prompted by increased prices, substitution masks these feedbacks in price and awareness in a global economy with inter-regional imports (established but incomplete) (4.2.5, 4.3.1, 4.4.1).	
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	5	144	5	151	replace the first notion of 'nature' by 'biodiversity'	Nature is the agreed IPBES term	
France	SPM		5	144	5	146	Cumulative impacts could also be mentioned here. Provided this is consistent with the report, we suggest to add at the end of the sentence « (e.g. pollution) that may significantly aggravate their impacts. ».	Added as suggested
UK: Andrew Stott	SPM		5	144	5	146	Do you have the evidence to say that they have been under estimated?	The few studies that we reviewed that took into account drivers of pollution or IAS generally had detrimental effects on biodiversity. Hence, we imply that the fact that these drivers are under-studied in the literature means that impacts are likely to be underestimated
Jeroen Arends	SPM		5	146	5	146	There is also a lack of data on possible drivers of changes	This comment is unclear, and so we are unable to respond to it
Unai Pascual	SPM		5	147			this is evident. Different development pathways will always have different impact on biodv. Can this be stated with some more detail?	The detail is given in the non-bolded text. The SPM has been restructured so that the bolded message is no longer separated from this detail. This has been expanded to provide detail on which elements of the different development paths lead to which impacts
Sweden: Hannah Östergård	SPM		5	147	5	148	to inspecific	The detail is given in the non-bolded text. The SPM has been restructured so that the bolded message is no longer separated from this detail.
Ruslan Novitsky	SPM		5	147	5	149	The comment to general and in the current edition have not a sense. Probabil it is needed to specify, or another case - delete.	The detail is given in the non-bolded text. The SPM has been restructured so that the bolded message is no longer separated from this detail.
Robert Watson	SPM		5	148			This is one of the few places where good quality of life is mentioned – we need the issue of good quality of life discussed in more detail – all the discussion has focused on NCP	Good quality of life is discussed much more in the new structure for the SPM, particularly in section A
Robert Watson	SPM		5	150			None of the plausible futures for Europe and Central Asia are without trade-offs between nature and different nature's contributions to people and good quality of life	Sentence no longer exists in new SPM
Robert Watson	SPM		5	150			Too general – need some specifics	The detail is given in the non-bolded text. The SPM has been restructured so that the bolded message is no longer separated from this detail. The message on trade-offs has also been rewritten in the new SPM.
Ruslan Novitsky	SPM		5	150	5	154	the point of view must be more strong and clear whitten down. The collaboration between countries must be identified via mechanism of transboundary and pan-european cooperation.	The detail is given in the non-bolded text. The SPM has been restructured so that the bolded message is no longer separated from this detail. Examples of trade-offs are given as well as types of collaboration/cooperation
UK: Diana Mortimer	SPM		5	152	5	152	societal development choices' why use 'development' here?	We meant choices in how society develops in the future. We have rewritten the key message to avoid this term
Robert Watson	SPM		5	156			A great section on policies and governance – but what about technologies, practices and behaviour – this section must address these three issues	The target of policies and policy instruments is to change/have an impact on practices and behaviour. Technology can either be seen as a driver to change or a method to achieve change. It is thus included in policy options and opportunities for mainstreaming and policy integration.
Unai Pascual	SPM		5	156			All the policy options seem rather vague and thus unlikely to be of much use for policy makers.	The text has been substantially revised to be more precise and useful
Germany	SPM		5	156	5	181	While all these key messages are correct, they are very generic and hence less tangible. Without examples or links to the region these messages might fail to stimulate action by policy makers.	The key messages has been substantially revised and linked to the region with specific examples.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	5	156	5	156		add "biodiversity and" after "supporting": Options for policy, governance and management in supporting Biodiversity and nature's contributions to people	The text has been substantially revised and edited.
EU: Marco Fritz	SPM		5	156	6	181	Section D: The development, use and integration of ecosystem-based approaches into policies is not reflected yet as an option for using nature's benefits for people.	EBA is only one of many approaches dealt with in the chapter. We have developed a section based on the need for adaptive and transition management which are key to any of these approaches.

ECA values liaison group	SPM	5	156	5	160	It is probably not necessary to introduce the message separately to stating the message. These could be combined and, in order to make the point more immediately and in a more straightforward way, shortened to something like "Policies and policy instruments are not yet being implemented effectively and innovatively enough to reverse the loss of biodiversity in Europe and Central Asia".	Thank you for the comment. The text has been substantially revised to take this into consideration
France	SPM	5	156	6	181	The options suggested here remain very general and even vague. It is difficult to see how they can reverse the trend of biodiversity loss observed in the ECA region as noted in this SPM. We face here one of the limits of the IPBES assessment work: while the finding is clear, the means that could lead to a more sustainable balance between human and nature in the ECA region are not clearly identified and no qualitative or quantitative objective is given for decision-makers' consideration. It is difficult at this stage to see whether this report will be really useful in guiding public decision-making. It would be desirable that, in the final version, part D, on options, is strengthened. Note: This comment refers to the current status of this part in the SPM high-level summary. Part D of the background information text is much more developed and contains text and draft tables which, once finalized, should be very useful.	Thank you, the text has now been substantially revised to be more precise and useful for policy-makers.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	5	157	5	160	The bold section only refers to existing policies; no reference to possibly new (innovative) approaches. Overall, this section does not give a clear idea of options that could be applied (section not well formulated for policy makers)	We have developed a section where we highlight the need for adaptive management or transition management which is key to achieve change.
Thomas Brooks	SPM	5	157	5	157	Change "not been able to" to "reduced but not yet been able to".	Text has been revised
UK: Andrew Stott	SPM	5	157		160	Is it the governance, or actions taken by governments?	The text has been revised.
Robert Watson	SPM	5	158			Why is this limited to existing policies and instruments – what about new policies and instruments?	The task, in accordance with the scoping documents, is to assess the current state of the art. We have included innovative solutions when possible.
Germany	SPM	5	158	5	159	This seems to be a very important point. So it is mainly an issue of policy implementation rather than a lack of (effective) policies to address causes of biodiversity loss? Is this an outcome of chap. 6?	Based on the many international conventions we think that the policies are in place, however they need to be implemented more effectively.
Robert Watson	SPM	5	159			Delete "further" -- we have not made any real progress to date, so further is inappropriate	Text has been revised
France	SPM	5	159	5	160	« with innovative governance solution » seems to contradict D3. As it is said in D3, « legal and policy instruments are the backbone of policy mixes » and they are traditional, not innovative. Some caution is required in recommending innovative solutions when the backbone should first be strengthened.	Thank you, the text has been substantially revised to take these aspects into consideration.
Germany	SPM	5	161	5	169	for some countries this message will be far too general, e.g. western EU countries; whereas for Eastern countries, this may be important to know.	Thank you the text has been substantially revised.
UK: Andrew Stott	SPM	5	161	5	162	Do you have the evidence to say that proactive policies and governance strategies based on target-setting are more effective than reactive strategies?	The text has been revised and confidence language is included.
Denmark	SPM	5	161		162	Please provide examples of 'policy instruments'	The text has been revised to include examples.
Anna-Rosa Asikainen	SPM	5	163	5	163	Mainstreaming is important not only in different policy sectors but also among general public. This could be mentioned.	Mainstreaming is a specific method, similar to gender mainstreaming, used to integrate biodiversity into policy sectors.
The Netherlands: Astrid Hilgers	SPM	5	163	5	164	Section D2: If the main objective of this paragraph is to look at 'how nature relates to sectors', that is not clear from the text right now. It seems to be strongly biased from an ecological point of view.	The text has been substantially revised and clarified.
France	SPM	5	163	5	164	Message D2 could be sharper. We suggest to highlight this other sentence from the background information (page 35 lines 824-826): "By mainstreaming biodiversity into sectoral strategies, plans and programmes, the crucial role of biodiversity for human well-being is recognised and resources may be used more sustainably."	Thank you for the comment, we have substantially revised the message with this in mind.
France	SPM	5	163	5	164	This should be made more precise and it should be specified how. Identifying Nature contribution to people could be useful for promoting relevant Nature-based solutions, but also to foster support for protecting and restoring nature through the demonstration of all the related material and non-material benefits. The assessment of Nature contributions to people at all scale could be proposed as one way to explore the paths for mainstreaming biodiversity in other sectoral policies. Such initiative are under way in the region with the MAES initiative of the European commission.	Thank you for the comment. Since the assessment builds upon scientific literature and so called grey literature we have tried to include as many innovative solutions as possible. But we have not been able to assess solutions that are "under way"
Mersudin Avdibegović	SPM	5	165	5	169	The observation on importance of well-designed and context-specific mixes of policy instrument for sustainable governance of NCP is highly relevant. On the other hand, only regulatory instruments are recognized as crucial ones. What about economic and information instruments in the context of smart-regulation and environmental governance as an overarching paradigm? There are some evidences (e.g. EU Timber Regulation vs. forest certification) where soft laws and voluntary initiatives contribute (at least) as much as legally-binding instruments (laws, regulations etc.) in solving of specific problems (in this case sustainable forest management and combating illegal logging)	The text has been substantially revised to identify the importance of policy mixes.
UK: Diana Mortimer	SPM	5	165	5	167	This sentence needs reworking - it's too wordy and I don't think you mean 'sustainable governance'.	The text has been substantially revised
UK: Andrew Stott	SPM	5	165	5	169	Should also refer to voluntary and market-led approaches	These approaches are now included.
Finnish Government	SPM	5	165	5	166	what is sustainable governance?	Sustainable governance and associated indicators is a well known term to measure each country's ability to respond to current social and political challenges.
Ruslan Novitsky	SPM	5	165	5	169	to general comment. It must be specify and increased on subregional level if are the differences.	The text has been substantially revised and specified.
Sweden: Cecilia Lindblad	SPM	5	167	5	168	Sentence " Legal and regulatory instruments are the backbone of policy mixes" should be in the first row in para D3	The text has been substantially revised.
Jeroen Arends	SPM	5	169	5	169	what is needed is that the adoption of policy instruments are in timely manner followed up by organizational units with sufficient resources and mandates in order to ensure compliance. In short, policy instruments should be followed up by an institutional and regulatory framework.	We think that it is the policies that should be evaluated based on criteria such as effectiveness, efficiency and equity. This will also include the evaluation of the measures (policy instruments) to achieve e.g. effectiveness.
UK: Andrew Stott	SPM	5	170	5	173	What do you mean by "wide range of actors is increasingly integrated into governance processes"	The text has been substantially revised and clarified to explain the role of actors
Finnish Government	SPM	5	172	5	173	add: and processes then adapted based on evaluation	Thank you for the comment, we have substantially revised the text to clarify the role of mainstreaming processes.
Georgia: Salome Nozadze	SPM	6	168	6	170	The sentence is not clear to understand completely	The text has been substantially revised and specified.
UK: Diana Mortimer	SPM	6	174	6	176	This can be written more clearly and needs to be less prescriptive - eg the word 'without' could be replaced.	The text has been substantially revised and specified.
Sweden: Hannah Östergård	SPM	6	174	6	176	inspecific	The text has been substantially revised and specified.
Ruslan Novitsky	SPM	6	174	6	176	C8 explain the close mechanisms for cooperation between countries, so it must be more clear divided or joint	This message has been deleted in the final version of the SPM.
Germany	SPM	6	175	6	175	What are examples of innovative governance approaches, how can innovation in governance be stimulated?	Examples and how they can be stimulated are now mentioned in the text.
Finnish Government	SPM	6	175	6	175	delete innovative (not necessarily)	We think that this is an important aspect, however the text has been substantially revised to further explain the need to stimulate change.
UK: Diana Mortimer	SPM	6	177	6	177	Do you mean 'governance options' or 'policy options'?	Rewritten to avoid this term. Written in terms of actions that can be taken to move towards a sustainable future

Ruslan Novitsky	SPM	6	177	6	181	too general, it must be oriented on a more specify audience of decision makers, or precify potential branch of them	The detail is given in the non-bolded text. The SPM has been restructured so that the bolded message is no longer separated from this detail. Examples of actions are given that should be useful to decision-makers.
Germany	SPM	6	178	7	178	It is incomprehensible how a trade-off between biodiversity and NCP is possible, since NCP is part of the biodiversity. More details need to be given.	NCP are underpinned by biodiversity, but there are many different types of NCP. A strong focus on material NCP, such as food production, can result in trade-offs with other NCP (e.g. regulating NCP) or biodiversity due to limited land resource availability or land management practices focused on specific NCP. Examples of such trade-offs from the literature are given in the non-bolded text in the new SPM structure
Germany	SPM	6	178	6	179	While scenarios are very helpful tools when decisions under uncertainty need to be taken they do have limits and might not per se avoid path dependencies and mal-adaptive situations. They definitely can play a role but most likely they need to be combined with other tools in order to make informed choices.	We agree with the reviewer that scenarios and pathway studies are only one tool of many that can help inform choices. They help to reveal possible path dependencies and mal-adaptive situations, but avoiding these is dependent on actions taken and many other limiting or integrating factors that are not included in such studies. Hence, they can only act as a guide.
Jeroen Arends	SPM	6	181	6	181	Perhaps something about the lack of knowledge on NCP within policy and decision makers and that education, training and awareness raising on NCP at all levels of governance is required?	The SPM has been restructured so that detailed non-bolded text is provided next to the Key Message. In this the Transitions Movements pathway illustrates the needs for education and awareness raising. It is the most successful group of actions in meeting policy goals similar to the SDGs.
Sweden: Cecilia Lindblad	SPM	7	182	7		Introduction should start with a short "The aim of this assessment" with text from Ch 1 Setting the scene.	The introduction has been mostly removed with only the geography of the region retained
Robert Watson	SPM	7	183			I suggest a very significant rewrite of the introduction, removing all assessment conclusions from the introduction – it makes very repetitive reading to see the same text three times - in the in the high-level summary, the introduction and in the supporting text. Make it a true introduction and road map for the rest of the SPM.	Done. This text has been removed
André Mader	SPM	7	183	9	247	The 2nd, 3rd, and 5th paragraphs of the introduction are all comprehensively covered under key message sections, and therefore probably redundant here. Perhaps more could be said about the structure of the SPM here, including the context of the high-level messages and how they were chosen.	Done. This text has been removed
UK: Andrew Stott	SPM	7	183	9	248	This section is not so much an introduction, but rather a summary of conclusions? It should instead provide some background to the purpose of the assessment, its scope, its geography, its methods etc.	The introduction is now limited to introducing the region (geography)
Thomas Brooks	SPM	7	184	7	193	Very important to retain consistency with IPBES definition of "biodiversity", which includes "ecosystems" (http://www.ipbes.net/sites/default/files/downloads/IPBES_2_INF_2_Add.1.pdf); also Pollination assessment p481, and Africa assessment SOD Chapter 1, Page 5, Lines 142-145). Therefore, delete "and ecosystems" (line 184), "and ecosystem" (line 188), and "and ecosystem integrity" (line 189), and change "ecosystem management" to "management of nature" (or "management of biodiversity") (line 193).	Done. This text has been removed
France	SPM	7	184	7	187	Those statements are conclusive and not introductive as they should be	Text has been removed
UK: Andrew Stott	SPM	7	184	7	186	"continuing to decline in Europe and Central Asia at an unacceptable rate" is a value judgement. Unacceptable to whom?	Text has been removed
Norway: Nina Vik	SPM	7	184	7	191	Consider use of the following words: "unacceptable", "recognize the potential benefits" and "thus decision-makers and other decision-makers have opportunities". I realize that this is an introduction, but are the chosen words based on facts? The sentences are a bit general/vague	Text has been removed
Robert Watson	SPM	7	185			Unacceptable is a judgement call that goes beyond the remit of us scientists – I suggest "significant"	Text has been removed
Germany	SPM	7	185	7	185	"unacceptable". This is judgemental. Please describe the intensity of the decline differently	Text has been removed
EU: Karin Zaunberger	SPM	7	185			include at an unprecedented and unacceptable rate	Text has been removed
France	SPM	7	185	7	185	"at an unacceptable rate". What would be an acceptable rate? Definition?	Text has been removed
France	SPM	7	185	9	247	The consequences of loss of biodiversity are presented only from the perspective of the NCPs, which is very reductive and very anthropocentric. It would be useful to discuss the consequences of these biodiversity losses on the long-term functioning of ecosystems and the evolutionary fate of species ("non-humans") in the introduction.	The introduction has largely been removed (except for the description of the region), and these points are picked up in the main body of the text (key messages)
UK: Mark Stevenson	SPM	7	185	7	185	Suggest avoid value judgements ('unacceptable') and replace with objective comparators. i.e. what are the implications of the current rate of decline - how is it affecting people?	Text has been removed
Robert Watson	SPM	7	186			The sentence as written suggests non of the targets will be met – so is it some/most/or all	Text has been removed
Germany	SPM	7	186	7	187	This contradict the table, which presents progress for many Aichi targets. The SDGs are not explicitly assessed in this table. There this statement might insufficiently backed up.	The text and the table have been removed
UK: Andrew Stott	SPM	7	186	7	187	All Aichi and SDGs won't be met?	Text has been removed
UK: Andrew Stott	SPM	7	186	7	187	There is no 'regional ambition' to meet these targets. There are only EU and national level ambitions.	Text has been removed
Sweden: Cecilia Lindblad	SPM	7	186	7	187	Sentence "The Aichi biodiversity targets and the BD SDG will not be met in the ECA region" should be in A p. 3 as an A5	Agreed and done
Denmark	SPM	7	186			as a consequence...'. Delete sentence. The regional assessment is not mandated to do this analysis	Done. This text has been removed
Robert Watson	SPM	7	187			Be more specific, give some examples to deshow how biodiversity and ecosystems contribute to specific SDGs	The introductory text has been removed, with these points covered elsewhere in the document
EU: Anne Teller	SPM	7	187			add 'by 2020' after 'region' at the end of the sentence (since most SDGs are for 2030)	Text has been removed
France	SPM	7	187	7	187	If the first sentences of the paragraph are moved in Conclusion, replace « will probably not be met » by « may not be met » as the latter suggests there remain possibilities to meet them, which is also what is suggested in the SPM.	Text has been removed
Harald Pauli	SPM	7	188	7	188	suggest to skip 'potential'	Done. This text has been removed
Robert Watson	SPM	7	189			I believe this should read Governments and other decision-makers	Text has been removed
Jeroen Arends	SPM	7	189	7	190	This line should be corrected.	Text has been removed
EU: Anne Teller	SPM	7	189			what does 'decision-makers and other decision-makers' means?	Text has been removed
France	SPM	7	189	7	190	there is a mistake in the repetition of "decision-makers". Do you mean "decision-makers and other stakeholders"?	Text has been removed
UK: Diana Mortimer	SPM	7	189	7	190	Decision makers and decision makers?	Text has been removed
Robert Watson	SPM	7	190			I suggest to rephrase as follows: ...have opportunities to mitigate the negative impacts of the loss of biodiversity and to realise the positive effects...	The introduction has largely been removed (except for the description of the region), and these points are picked up in the main body of the text (key messages)
France	SPM	7	191	7	191	"the regional..." could be the first sentence of the introduction	Text has been removed
UK: Diana Mortimer	SPM	7	191	7	192	Not sure how the assessment can change the past. 'present' might be better worded 'current'.	Text has been removed
Robert Watson	SPM	7	192			Replace 'for' by 'from' in ...for the past...	Text has been removed

EU: Anne Teller	SPM		7	194	195	could you explain what you mean by 'incorporating concepts such as ecosystem goods and services within a broader conceptual framework', what are the consequences for policy-makers	Text has been removed
EU: Ole Ostermann, JRC	SPM		7	196	7	199	Text has been removed
UK: Andrew Stott	SPM		7	196	7	198	Text has been removed
UK: Andrew Stott	SPM		7	196	7	198	Text has been removed
Robert Watson	SPM		7	197			Text has been removed
Marie Stenseke	SPM		7	197		198	Text has been removed
Anna-Rosa Asikainen	SPM		7	198	7	199	The benefits of food production and agroecosystems have been referred to in the document key messages
EU: Anne Teller	SPM		7	198			Text has been removed
France	SPM		7	198	7	198	Text has been removed
France	SPM		7	198	7	199	The text has been removed, but these issues are addressed elsewhere in the key messages of the document
UK: Andrew Stott	SPM		7	198	7	199	Text has been removed
Finnish Government	SPM		7	198	7	198	Text has been removed
Robert Watson	SPM		7	199			Text has been removed, and these issues covered elsewhere in the key messages of the document
Yorick Revjøl	SPM	7	201		203		text has been removed
WWF Norway	SPM		7	201	7	201	ILKP replaced by ILK and now defined in the main body of the document
Adriano Mazziotta	SPM		7	201	7	203	text has been removed
France	SPM		7	201	7	203	Agreed and the text has now been removed
UK: Diana Mortimer	SPM		7	201	7	203	text has now been removed
UK: Andrew Stott	SPM		7	201	7	203	text has now been removed
Marie Stenseke	SPM		7	202		203	text has now been removed
WWF Norway	SPM		7	202	7	203	text has now been removed
Sweden: Hannah Östergård	SPM		7	202	7	203	text has now been removed
Graciela Rusch	SPM		7	202		202	text has now been removed
Robert Watson	SPM		7	203			text has now been removed
Robert Watson	SPM		7	203			Deleted as proposed
EU: Anne Teller	SPM		7	203			text has now been removed
Robert Watson	SPM		7	204			text has now been removed
Germany	SPM		7	204	7	204	text has now been removed
EU: Markus Erhard (EEA)	SPM		7	204	7	205	text has now been removed
France	SPM		7	204	7	204	text has now been removed
France	SPM		7	204	7	204	text has now been removed
UK: Andrew Stott	SPM		7	204	7	205	text has now been removed
Robert Watson	SPM		7	205			text has now been removed
Harald Pauli	SPM		7	205	7	205	text has now been removed
Yorick Revjøl	SPM	7	205				text has now been removed
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM		7	205	7	205	text has now been removed
EU: Ole Ostermann, JRC	SPM		7	205	7	205	text has now been removed
Thomas Brooks	SPM		7	205	7	205	text has now been removed
UK: Andrew Stott	SPM		7	205	7	206	text has now been removed
UK: Mark Stevenson	SPM		7	205	7	206	text has now been removed, and these issues covered elsewhere in the key messages
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM		7	206	7	206	These data have been retained, but are now covered elsewhere in the document
Thomas Brooks	SPM		7	206	7	206	As above
Denmark	SPM		7	206		208	text has now been removed
WWF Norway	SPM		7	207	7	207	text has now been removed
France	SPM		7	207	7	207	text has now been removed

UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	7	208	7	208	Add a sentence along the lines of "Protected areas cover only a little more than a quarter of the ECA's key biodiversity areas (specifically, 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas)" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	These issues are now covered elsewhere in the document
Thomas Brooks	SPM	7	208	7	208	Add a sentence along the lines of "Protected areas cover only a little more than a quarter of the ECA's key biodiversity areas (specifically, 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas)" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	As above
WWF Norway	SPM	7	208	7	208	"...many types of habitats decrease..." is very vague. This statement should be further specified. What's the estimated % of other types of habitats that decline?	Text has now been removed
Stuart Butchart	SPM	7	208			Add a sentence along the lines of "Protected areas cover only a little more than a quarter of the ECA's key biodiversity areas (specifically, 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas)" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	As above
Thomas Brooks	SPM	7	209	7	209	It's not clear what "conservation" refers to here. Delete - unnecessary.	Done. This text has been removed
Jeroen Arends	SPM	7	210	7	210	Something about the geographical context: "Often countries in these regions share a coming natural border in the forms of rivers, lakes, mountain ranges, etc. but often lack a joined transboundary or cross border management of these areas"	Not clear what this comment is asking for.
France	SPM	7	211	7	217	There must be also great differences in the amount and quality of available literature on biodiversity and ecosystems. It should be mentioned, and it should be explained how it has been dealt with.	This is discussed extensively in the full technical report, and in the 'knowledge gaps' box of the SPM
UK: Andrew Stott	SPM	7	211	7	213	It would be useful to describe what some of these differences are in the introductory section - and avoid mixing with the conclusions of the assessment	text has now been removed
UK: Andrew Stott	SPM	7	213	7	214	There is not necessarily a direct link between land management intensity and population	text has now been removed
EU: Anne Teller	SPM	7	214	8	221	Avoid repetition of 'Moreover' at the beginning of sentences	text has now been removed
Finnish Government	SPM	7	214	7	215	please name the 4 subregions	These are given in the SPM box describing the region
Robert Watson	SPM	7	215			This is the first time sub-regions have been mentioned in the introduction, so please list them and refer to figure SPM 1 – I cannot see where it is referred to in the text	This is now covered in the SPM box describing the region
Jeroen Arends	SPM	7	217	7	217	In general in this part of the report, could something more about the context be added such as "how historical and current (uncontrolled) urban sprawl, illegal settlements, industry, transport, etc. led to pollution and habitat fragmentation causing loss and damages to biodiversity and ecosystems and seriously affected NCP?"	The effects of these drivers are covered in the key messages part of the document
UK: Andrew Stott	SPM	8	219	8	219	The extent of the NE Atlantic isn't clear. The island groups in the Atlantic should also be named. There should be a reference to an annex which lists the countries in each sub-region. It would also be useful to include a physical map of the region - and to name the adjacent regions.	A map, and list of countries in the sub-regions is now included in a box describing the region
Finnish Government	SPM	8	219	8	219	no reference to Figure SPM 1 in the text	Corrected
Robert Watson	SPM	8	221			I suggest to rephrase as follows: Moreover, Europe and Central Asia have a large influence and depend strongly on the rest of the world.	text has been removed, but the point is covered elsewhere in the SPM key messages
France	SPM	8	221	8	228	We are not sure that the impact is mostly explained by trade on commodity markets. Indeed the ecological footprint is also supposed to capture the surface required to compensate the GES emissions. For France, an expertise concluded that the ecological footprint and its variations were mostly driven by this component and we presume this extends to the region. If this is the case, this figure is not accurate to support the claim and should be changed. See : CGDD, 2010. Une expertise de l'empreinte écologique. Études et documents n°16, janvier 2010 : http://www.statistiques.developpement-durable.gouv.fr/fileadmin/documents/Produits_editoriaux/Publications/Etudes_et_documents/2010/etudes_documentsN16.pdf	This text has now been removed, and the issues is covered more comprehensively elsewhere in the SPM key messages
Norway: Nina Vik	SPM	8	221	8	221	What is meant by "a large influence"? In all matters?	text has been removed
UK: Andrew Stott	SPM	8	222	8	224	"These influences arise from inter-regional material flows via global commodity markets (food, fibre and other goods) that displace impacts on biodiversity and ecosystems from Europe and Central Asia to other parts of the world." - This should not be stated as an assertion, but rather as the conclusion from assessment of the evidence.	text has been removed
Yorick Revjøl	SPM	8	223		224	Very important point; I would insist on this from a historical and socio-economic point of view by adding Figures/Tables	The text has been removed, but these issues are addressed elsewhere in the key messages of the document
EU: Ole Ostermann, JRC	SPM	8	223	8	223	...global commodity markets (food, fibre... please add "feed".	The text has been removed, but these issues are addressed elsewhere in the key messages of the document
Thomas Brooks	SPM	8	223	8	232	Very important to retain consistency with IPBES definition of "biodiversity", which includes "ecosystems" (http://www.ipbes.net/sites/default/files/downloads/IPBES_2_INF_2_Add.1.pdf ; also Pollination assessment p481, and Africa assessment SOD Chapter 1, Page 5, Lines 142-145). Therefore, delete "and ecosystems" twice (lines 223-224 and lines 231-232).	Definitions have been checked throughout the document
Germany	SPM	8	224	8	224	Briefly explain what the ecological footprint encompasses	The text has been removed, but these issues are addressed elsewhere in the key messages of the document, including a definition of ecological footprint
UK: Chris West	SPM	8	224	8	226	As an example of the region's impact overseas, I find the primary usage of the Ecological Footprint in this context a little bit strange (specifically: "The region's ecological footprint in 2011 was 3.8 global hectares per person, while its biocapacity was only 2.9 global hectares".) Firstly, without additional information it is not clear whether this is due to an exceedance of intra-regional biocapacity (which is technically possible to have if local biocapacity is lower than the EF) or a dependence on the biocapacity of other regions (via trade; which is what is inferred). It is probably a mix of both. (Having checked the main chapter for this information it is also not really described; rather a 'fair share' analogy is used without detailing the potential for the deficit to be driven by local or transboundary drivers.) Secondly, the EF is not particularly good proxy for biodiversity impact; especially without further contextual information of the type of consumption/production activity that is occurring - as complex mix of different land types (some of which like agricultural land can be increased in biocapacity via intensive agriculture with likely negative impacts on biodiversity). Finally, just quoting 2011 EF outside of any temporal information gives no impression on whether the overall exceedance of biocapacity is increasing or decreasing over time.	The text has been removed from the introduction, but the issue is treated more comprehensively elsewhere in the SPM key messages
France	SPM	8	225	8	225	Add a reference for the figures on the ecological footprint	References to the literature are not used in the SPM, but references are made to the full technical report where this literature is discussed
Norway: Jørund Braa	SPM	8	225	8	225	There should be a definition of "biocapacity"	Now given in the relevant key message
UK: Chris West	SPM	8	226	8	226	Following from above, the next sentence says "Imports also lead to..." inferring that the Ecological Footprint stats relates only to imports, but my sense is that it also includes local exceedance of biocapacity??	This text has now been removed, and the issue is covered more comprehensively elsewhere in the SPM key messages
UK: Chris West	SPM	8	226	8	228	Is this a positive or negative effect on consumption patterns? As it stands its vague. Arguably Europe is more 'environmentally aware' than most other regions of the world, although clearly the manifestation of this is not necessarily reduced impact... I couldn't find the corresponding section of the main report that this statement was based upon, but more detail is warranted here I think.	This text has now been removed, and the issue is covered more comprehensively elsewhere in the SPM key messages
Robert Watson	SPM	8	228			Text comes across as very colonial	This text has now been removed, and the issue is covered more comprehensively elsewhere in the SPM key messages
UK: Diana Mortimer	SPM	8	229	9	247	These paragraphs need to come earlier as they set the scene for the section.	This text has now been removed, and the issue is covered more comprehensively elsewhere in the SPM key messages
Robert Watson	SPM	8	230			Replace 'compiling' by 'assessing'	Text has been removed

Robert Watson	SPM		8	230			Does this include a critical assessment of technologies, practices and behaviour?		Text has been removed
Denmark	SPM		8	230		234	please provide examples of "...knowledge gaps and opportunities for sustainable development..."		The SPM now includes a 'knowledge gaps' box
Harald Pauli	SPM		8	231	8	231	... comprehensive analysis of the statuses, trends, dynamics of, and interplay...		Text has been removed
UK: Mark Stevenson	SPM		8	231	8	232	Biodiversity and ecosystems - as above - does this mean biodiversity and ecosystem services (aka nature/ecosystems/biodiversity and its contribution to people)		Definitions have been checked throughout
Robert Watson	SPM		8	232			Like the high-level messages there is lack of mention of "quality of Life" and Human wellbeing		This has been addressed in the key messages
EU: Karin Zaunberger	SPM		8	237			include after SDGs, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement.		The SPM does not make reference to specific literature. This is included in the full technical report
Marie Stenseke	SPM		8	238			Unclear how this sentence relates to the following text in the paragraph. Reformulate or delete		Text has been removed
France	SPM		8	238	8	238	Not clear		Text has been removed
Sweden: Hannah Ostergård	SPM		8	238	8	238	Does this statement hold when it comes to decision making in true every day situations?		Text has been removed
Germany	SPM		8	240	8	240	While appreciating the role that ILK plays in the assessment where there any shortcomings of difficulties in accessing and incorporating those forms of knowledge?		These shortcomings are now addressed as 'knowledge gaps' in a box
Robert Watson	SPM		8	241			No mention of values in the High-level summary and even here the mention of values is cursory at best – the issue of values must be expanded		The 'values' issues has been addressed comprehensively throughout the SPM
EU: Frank Wugt Larsen (EEA)	SPM		8	242			probably more correct to use 'comprehensive' rather than 'complete'		Text has been removed
UK: Diana Mortimer	SPM		8	242	8	242	complete picture' really?		Text has been removed
Georgia: Salome Nozadze	SPM		8	248	8	255	Brief explanation of what are possible ways to adapt concept of New 252 transnational legal concepts such as "ecological solidarity" ?		Text has been removed
UK: Mark Stevenson	SPM		9	244	9	247	This paragraph explains the structure of the document. I'm not sure 'messages' is the right word. Maybe set out in four sections. A and B could be re-worded to better differentiate - I know what they mean but only because I read the sections. A is probably better termed 'the relationship between changes in the extent, quality and spatial configuration of components of biodiversity and their value to people. Also I think the paragraph needs to start with a clearer statement of purpose and signposting to the progress assessments with Aichi targets (which will be of particular interest to policy makers)		The text has been removed from the introduction
Ruslan Novitsky	SPM		9	244	9	247	it could be useful include in list of high-level messages also financial regional and global mechanisms needed or exist to cover deficit of resources and financial mechanisms of stimulation.		The key messages now include more on economics and monetary valuation
Harald Pauli	SPM		10	249	10	251	see comment SPM, p 3 lines 57-59.		Now, it is rephrased in key message A5 as Biodiversity loss impairs ecosystem functioning and, hence, nature's contributions to people'
EU: Karin Zaunberger	SPM		10	249		267	Provision and Filtering of breathable Air, Water provision and purification and Food provision are missing NCPs. (Note that water and food are included in figure SP 2 on page 11)		NCP are now listed in Box SPM.2
Robert Watson	SPM		10	250			I suggest rephrasing as follows: Biodiversity and ecosystems underpin nature's regulating, material and non-material contributions to people (NCP) and are thus fundamental for human existence (well established) and contribute to human quality of life...		Now, it is rephrased in key message A5 as Biodiversity loss impairs ecosystem functioning and, hence, nature's contributions to people'
Germany	SPM		10	250	10	255	The whole section is incomprehensible. How can biodiversity and ecosystems underpin NCP, since NCP is part of the biodiversity and is the same as ecosystem services?		This paragraph has been removed and these issues are discussed in the opening bold section to key message A5
Germany	SPM		10	250	10	255	766 please explain "well established" when cited for the first time; in the text, the explanation for the confidence level categories "well established" etc. are given only on p. 28 in lines 761 to		Now done with a footnote in key message A1
Thomas Brooks	SPM		10	250	10	251	Very important to retain consistency with IPBES definition of "biodiversity", which includes "ecosystems" (http://www.ipbes.net/sites/default/files/downloads/IPBES_2_INF_2_Add.1.pdf ; also Pollination assessment p481, and Africa assessment SOD Chapter 1, Page 5, Lines 142-145). Therefore, delete "and ecosystems" twice here.		This paragraph has been removed and these issues are discussed in the opening bold section to key message A5
UK: Andrew Stott	SPM		10	250	10	255	See comments on summary text above		This paragraph has been removed and these issues are discussed in the opening bold section to key message A5
Graciela Rusch	SPM		10	250		255	This paragraph is a good summary, could be moved to the very first page on A. (kind of values are not mentined here).		This paragraph has been removed from this location and these issues are now incorporated in high level messages especially high level message A
Robert Watson	SPM		10	251			Replace 'NCPs' by 'NCP'		NCP acronym now not used
ECA values liaison group	SPM		10	251			Link between biodiv and GQL is too narrow, maybe take out second sentence altogether because it can be read as biodiversity contributes to GQL only via NCPs which is too narrow. Overall we suggest to emphasize in this first key message the fundamental and underlying importance of biodiversity (and functioning ecosystems) to maintain Nature's ability to provide contributions to people and to GQL)		This paragraph has been removed from this location and these issues are now incorporated in high level messages especially high level message A
Robert Watson	SPM		10	255			No mention of regulating contributions		Now covered in key message A2
EU: Anne Teller	SPM		10	255			what about the biodiversity contribution to the economy?		Now covered in key message A1
EU: Frank Wugt Larsen (EEA)	SPM		10	255			Expand list with other NCPs		NCPs listed in Box SPM.2
ECA values liaison group	SPM		10	256			Would be good to replace NCPs by understandable language in the title		Changed to a new title
Robert Watson	SPM		10	257			Replace 'NCPs' by 'NCP'		NCP acronym now not used
Harald Pauli	SPM		10	257	11	285	The bold text is rather confusing. The following paragraph, I think, is not very strong in underpinning nature's relevance for quality of life. On the other hand, I'm missing is to communicate the 'absolute, essential relevance of nature for (human) life.' Acronyms such as ILKP should be explained.		This has been completely rewritten as revised key messages A1 and A2
Graciela Rusch	SPM		10	257		257	I think this summary has to be less technical in the use of terms.(e.g. kind of values in IPBES terminology). It will be hard for policy makers to digest this.		This has been completely rewritten as revised key messages A1 and A2
Robert Watson	SPM		10	258			Rephrase: A1. The various NCP, which affect the quality of life, reflect...		This has been completely rewritten as revised key messages A1 and A2
Robert Watson	SPM		10	258			Replace 'NCPs' by 'NCP'		NCP acronym now not used
André Mader	SPM		10	258	10	261	It is not clear what is meant by "relational and instrumental values".		This has been completely rewritten as revised key messages A1 and A2
ECA values liaison group	SPM		10	258			A1 Message is difficult to understand. Consider something like Nature contributes to quality of life in many different regards such as...people relate to nature according to demands, knowledge and worldviews. terms "instrumental and relational" are not required and potentially confusing we suggest to delete and only refer to "values". Be aware just like in line 251, Nature matters to people and societies in different regards, it is not sufficient to link nature and GQL only via NCPs		This has been completely rewritten as revised key messages A1 and A2
UK: Mark Stevenson	SPM		10	258	10	260	Is 'reflect' the right word? It seems quite vague about the relationship between biodiversity and people. Put simply, is it not the case that the value to people is determined by the type and location of the biodiversity asset and by the nature of the relationship between that asset and the people who benefit from it, including their set of cultural or human values.		This has been completely rewritten as revised key messages A1 and A2 and the word reflected used in relation to market prices

Norway: Nina Vik	SPM		10	258	10	260	What does this mean? Unclear message	This has been completely rewritten as revised key messages A1 and A2
Robert Watson	SPM		10	259			Most readers will not understand the terms instrumental and relational – you need to explain these terms (use a footnote to define them)	This has been completely rewritten as revised key messages A1 and A2 and these terms are not used
Robert Watson	SPM		10	261			Most readers will not understand the terms instrumental and relational – you need to explain these terms (use a footnote to define them)	This has been completely rewritten as revised key messages A1 and A2 and these terms are not used
Unai Pascual	SPM		10	261			I am not sure whether one can say nature's contributions to values. Instead it should be the value of nature's contributions. These values then arise due to NCP effects on security, health etc. the concepts of ncp, values and quality of life seem a bit mixed.	This has been completely rewritten as revised key messages A1 and A2 and this has been rephrased as nature's contributions to people
Yorick Revjøl	SPM	10		261		267	Regarding 'Health': it is a bit strange to mix 'medicinal resources' and 'green space in urban areas' in the same category...the interest of E and CA are very far from each other in this case...	Green space is still mentioned in key message A1 in a sentence discussing health as much research has indicated the potential contribution of green space to physical and mental health as discussed more fully in chapter 2
France	SPM		10	261	10	282	This part could be better structured around the 4 component of quality of life : start a new paragraph after the first sentence that deals with the linkage with health and add a paragraph about justice and equity.	This has been completely rewritten as revised key messages A1 and A2 and justice and equity are discussed in key message A3
France	SPM		10	261	10	282	Some (ideally) aggregate figures would be particularly helpful in this section.	These are now included in key message A1
France	SPM		10	261	10	261	Keep the same order for the qualificatives	This has been completely rewritten as part of key message A1
France	SPM		10	261	10	262	It seems to us that the sentence "Nature's contributions (...) and justice and equity" should be the key message here. It is more concrete and deals with issues very important for decision-makers.	This is now covered in a separate key message as message A3
Sweden: Cecilia Lindblad	SPM		10	261	10	261	N C to relational and instrumental ? Unclear formulation	This has been completely rewritten as revised key messages A1 and A2 and these terms are not used
Graciela Rusch	SPM		10	261		267	I think again, there is too much jargon in this text, for ES - IPBES community, but little understandable by others, not least policy makers. I suggest to leave only what is 'recognizable' by anyone and to explain better the basis for these conclusions. ILKP: in addition, these acronyms make the whole text sound that it is for a restricted community.	This has been completely rewritten as revised key messages A1 and A2 and certain terms are not used. The ILK acronym is now not used
Robert Watson	SPM		10	262			Add: 'In many instances' there is evidence...	removed
Brendan Coolsaet	SPM		10	262	10	262	justice/equity already mentioned here, but only covered under A2 (unlike security, health, heritage & identity)	This is now covered in a separate key message as message A3
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	10		262	10	262	justice/equity already mentioned here, but only covered under A2 (unlike security, health, heritage & identity)	This is now covered in a separate key message as message A3
Robert Watson	SPM		10	263			Rephrase: For example, the nutritious value of food species, the essential role of ILKP associated with medicinal resources and the relevance of recreational experiences in nature. Access to nature in general, including to green spaces around and within urban areas, improves mental and physical health	This has been completely rewritten as revised key messages A1 and A2
Robert Watson	SPM		10	263			Replace 'NCPs' by 'NCP'	NCP acronym now not used
ECA values liaison group	SPM		10	263			Nutritious content instead of value	Removed
France	SPM		10	263	10	263	The end of the sentence is unclear.	This has been completely rewritten as part of revised key messages A1
UK: Andrew Stott	SPM		10	263	10	265	Need to explain ILK acronym first time it is used	The ILK acronym is now not used
Norway: Nina Vik	SPM		10	263	10	264	A bit unclear why nutritious value of wild food species is mentioned here and not in the next para on food-energy-water	This has been removed
Robert Watson	SPM		10	264			Delete "wild" say wild and domesticated – the sentence should refer to all food (domesticated or wild)	Mention of wild food removed
Germany	SPM		10	264	10	264	why only wild food species?	Mention of wild food removed
EU: Anne Teller	SPM		10	264			spell out ILKP	The ILK acronym is now not used
Adriano Mazziotto	SPM		10	264	10	264	Spell out for the first time ILKP	The ILK acronym is now not used
France	SPM		10	264	10	264	Indicate what ILK stands for.	The ILK acronym is now not used
France	SPM		10	265	10	265	What « relevance » means here is unclear.	Rewritten and the word relevance removed
EU: Frank Wugt Larsen (EEA)	SPM		10	266		267	Relevant refs include: UNEP; CBD; WHO 2015 Connecting Global Priorities Biodiversity and Human Health; IEEP 2016 on health and social benefits of nature and biodiversity protection;	Some of these are included in chapter 2 section 2.3.2
Jeroen Arends	SPM		10	267	10	267	Perhaps something about how regulating processes/services contribute to human health? (air, water purification, climate regulation)	This is discussed in chapter 2 and not here due to word limits
Robert Watson	SPM		10	268			Add: 'In some instances' there is also evidence...	This has been completely rewritten as part of revised key message A2
Robert Watson	SPM		10	268			Which regulating NCP does this sentence refer to as food, water and energy are material NCP – please be specific	This has been completely rewritten as part of revised key messages A2 with a more detailed discussion of different regulating services
Robert Watson	SPM		10	268			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Graciela Rusch	SPM		10	268		268	Again, remove 'material' and 'regulating'... go directly to the functions.	This has been completely rewritten as part of revised key message A2
UK: Andrew Stott	SPM		10	269	10	270	This period is almost 10 years ago - what has happened since then?	This data has been removed
Robert Watson	SPM		10	270			Less self – sufficient – define before and later in % terms	Moved to key message A4 percentage figures not included due to word limits but are in chapter 2
Robert Watson	SPM		10	270			Please make sure the reader does not confuse being food secure and being self sufficient in food production – food security is a combination of production and imports, hence a region can be food secure even with low domestic production. I would modify the sentences	To avoid possible confusion food security is discussed in key message A2 and self-sufficiency in A4
Robert Watson	SPM		10	270			What about EE and CA?	Now included in key message A4
Brendan Coolsaet	SPM		10	270	10	272	Text seems to imply a relationship between crop production and food security. But little evidence exists to support that relationship	To avoid possible confusion food security is discussed in key message A2 and self-sufficiency in A4
Germany	SPM		10	270	10	272	Where is the connection of being able to afford a nutritious meal and food security?	Discussion of nutritious meal has been removed
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	10		270	10	272	Text seems to imply a relationship between crop production and food security. But little evidence exists to support that relationship	To avoid possible confusion food security is discussed in key message A2 and self-sufficiency in A4
EU: Anne Teller	SPM		10	270		272	It is not clear to me whether the inability to afford nutritious meals is because of decrease in production or in incomes?	Discussion of nutritious meal has been removed
UK: Andrew Stott	SPM		10	270	10	272	But what about longer term trends?	Longer term data only available for parts for ECA so not included
UK: Vin Fleming	SPM		10	270	10	270	States 'WE became less self-sufficient in food production' but gives no indication why this was the case and what drove the change? Worth summarising in a few words.	Due to word limits this is discussed in chapter 2

Germany	SPM		10	271	10	271	please define 'ILKP' and add reference to IPBES ILK	The ILK acronym is now not used
France	SPM		10	271	10	272	It is very unclear whether the quantity of children that cannot afford a nutritious meal is related to regional NCP or rather to economic transactions	Discussion of nutritious meal has been removed
Robert Watson	SPM		10	272			What was a special about 2007-2009 – a recession in these countries, hence imported food was unaffordable?	Discussion of cost of nutritious meal has been removed
Robert Watson	SPM		10	274			What about EE?	This data has been edited as part of key message A4 and only WE and CA are include to make the contrast between the two clear
France	SPM		10	275	10	275	trend : precise the period of time	This is cross sectional data not a trend over time
Brendan Coolsaet	SPM		10	276	10	276	2.2.1.9 doesn't exist in technical chapter	Thank you and reference to 2.2.1.9 has been removed
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	10	276	10	276	276	2.2.1.9 doesn't exist in technical chapter	
Robert Watson	SPM		10	277			Replace 'NCPs' by 'NCP'	Thank you and reference to 2.2.1.9 has been removed
UK: Andrew Stott	SPM		10	278	10	279	This is not singular to the ECA region	NCP acronym now not used
ECA values liaison group	SPM		10	279			outstanding universal value' should be replaced by 'outstanding international importance' which is the official language and easier to understand.	This is true of a number of issues discussed and is noted in chapter 1
UK: Andrew Stott	SPM		10	279	10	281	Not sure what this says - other than that ECA govts are prepared to nominate such sites.	This data and this term have been removed in the revised key messages
Robert Watson	SPM		11	284			Replace 'NCPs' by 'NCP'	NCP acronym now not used
Yorick Reyjol	SPM	11	284				What is 'empirical evidence' and what is the 'number of studies'? scientific publications?	Yes, it meant number of publications. However, we dropped this figure out of the SPM in the current version
Germany	SPM		11	284	11	285	This table depicts the number of studies that provide evidence for the linkages between NCPs and quality of life. This should be better placed in the chapter, because this does not tell anything about the relevance or nature of those interlinkages.	We dropped this figure out of the SPM in the current version
EU: Anne Teller	SPM		11	284			I don't understand Figure SPM2?	We dropped this figure out of the SPM in the current version
Thomas Brooks	SPM		11	284	11	284	Clarify in Fig SPM 2 legend whether these are studies that show positive interlinkages, or whether they are studies that show any interlinkages (positive or negative). Also clarify whether these are studies from ECA specifically.	Yes, it meant number of publications that shows positive interlinkages. However, we dropped this figure out of the SPM in the current version
France	SPM		11	284	11	284	interlinkages could be replaced with "contributions of"	We dropped this figure out of the SPM in the current version
France	SPM		11	284	11	284	It is unclear whether this Figure is a rigorous "empirical evidence". Consider deleting it... Or complete the table with "factors contributing to the quality of life"; characterize the literature corpus	We dropped this figure out of the SPM in the current version
France	SPM		11	284	11	284	is the work of the MAES working group part of the study mentioned in this table ?	
UK: Andrew Stott	SPM		11	284	11	284	See e.g. : http://biodiversity.europa.eu/maes and more particularly http://catalogue.biodiversity.europa.eu/uploads/document/file/1227/lbna27143enn.pdf	Yes, it has included. However, we dropped this figure from the SPM
UK: Andrew Stott	SPM		11	284	11	284	Are these studies limited to the ECA area? Are they biased towards some sub-regions/countries in ECA?	Yes. However, we dropped this figure from the SPM
Norway: Nina Vik	SPM		11	284	11	285	Not sure this gives value to the SPM. Can delete here (and only use in chapter)	We dropped this figure out of the SPM in the current version
Finnish Government	SPM		11	284	11	285	Fig SPM 2. The contents of this figure are not obvious. What is the message of the figure?	We dropped this figure out of the SPM in the current version
Robert Watson	SPM		11	286			Replace 'NCPs' by 'NCP'	Done
Brendan Coolsaet	SPM		11	286	11	286	Justice/equity is reduced to distributive issues. Yet, much of recent work on environmental justice has shown that distributive justice is not enough to address the complexity of justice claims (see eg. Norwich Declaration on Environmental Justice). This section should draw more closely on the content of chapter 2 and highlight the other dimensions of justice	We are aware about this constrain and because word limitations (we must reduced the wording) and also because we did not have so much empirical evidence on procedural equity, we focus on message A3 on distributional equity.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	11	286	11	286	286	Justice/equity is reduced to distributive issues. Yet, much of recent work on environmental justice has shown that distributive justice is not enough to address the complexity of justice claims (see eg. Norwich Declaration on Environmental Justice). This section should draw more closely on the content of chapter 2 and highlight the other dimensions of justice	We are aware about this constrain and because word limitations (we must reduced the wording) and also because we did not have so much empirical evidence on procedural equity, we focus on message A3 on distributional equity.
ECA values liaison group	SPM		11	286	11	309	The ways in which Nature and NCPs contribute to well-being can be very varied and deeply depend on the conceptualizations of the human-nature relationships and well-being. While it is clear that there is a large demand for recreational uses of nature in eastern Europe, and probably in some parts of western Europe, this might not be true for some stakeholders in western Europe and in central Asia. Is this recreational use also relevant across all economic sectors or is it a phenomenon for people with a certain income level and above? While the role of Nature, language, inspiration and learning and linguistic diversity is stated clearly in Ch2 and in several sections of the SPM there is a disconnect of the different views along the SPM. In fact, all this discussion is very nicely framed in lines 234-291 of Ch2 but not conveyed in the SPM. In fact, the drivers Chapter highlights in lines 755-758 that the growth of ecotourism is an important driver of change in nature, but of course in many countries of central Asia, e.g. in Georgia, this is not an activity that the local populations undertake but is rather an option for economic growth	Thank you for the nice words regarding the chapter. In the SPM though we could not convey the message about distributive issues taking into account wealth or social groups because of the word limitation. We were requested to reduce it to half, so this message in particular has been shortened considerably. We only provide the basic information about distributional inequity across subregions.
Robert Watson	SPM		11	287			Replace 'NCPs' by 'NCP'	Done
UK: Mark Stevenson	SPM		11	287	11	289	Some of these high level statements are in quite opaque language. Does this one mean that the benefits from NCPs are not equitably distributed geographically or across social groups?	This precisely what it meant. In the new version, we shorten the text and make the language easier to grasp
Germany	SPM		11	288	11	288	What is meant by "intergenerational inequity"?	It means between generations. But in the new version we avoid this kind of difficult words
Robert Watson	SPM		11	289			I am surprised by several of the strong causality statements made below – it would appear to me that too much is being attributed to a lack of NCP – so many other factors affect clean water, health, etc.	We reduce down the tone in the new version to avoid strong causality statements
Robert Watson	SPM		11	290			Replace 'NCPs' by 'NCP'	Done
Olesya Petrovych	SPM		11	290	11	309	Subpart A2 should be transformed, the usage of ecosystem services should be highlighted and connected into a logical string leading up to NCPs	Now the message is framed around NCP
Olesya Petrovych	SPM		11	290	11	291	There is a markedly unequal possibilities to use ecosystem services and distribution of the benefits derived from NCPs between the ECA between the subregions and across social groups.	Sorry, we do not understand this comment. In any case this message was completely rephrased
France	SPM		11	290	11	296	There is a confusion between "NCP's benefits" and macroscopic observations on the quality of life of people, that results from the integration of various factors, including economics, development, security, etc.	We now broaden to 'Nature's contributions to people, and their influence on quality of life'
Olesya Petrovych	SPM		11	291	11	291	There should be a brief explanation of the reasons why there is such an inequality in access to ecosystem services. For example, the biodiversity and diversity of ecosystems and natural resources existing in certain areas, if they can provide ecosystem services or not, the varying level of technological advance, traditions, legislation, etc. Only then it'll be appropriate to move on to the examples.	Unfortunately, we were requested to shorten the text by half, so we could not add more information and rather we reduce the wording.
Graciela Rusch	SPM		11	291			I wonder whether it is so, in this context that the problem of different degrees of access to clean water is a problem of unequal distribution of benefits. I would say that these are different context and problem situations, not a single system with competing interests over the same benefits.	We agree, but as a regional assessment we bring the global picture and we could not explain the details of different contexts
Robert Watson	SPM		11	292			But how much of this is due to a deficiency in the water NCP – surely there are many other more important factors	In the new version we avoid to explain the reasons because of the wording limitation and because there are manifold.
Germany	SPM		11	293	11	293	Land grabbing in Central Asia, particularly Kazakhstan, is prominent, but it is not western Europe. Please be more specific.	We now are more specific in message A4 regarding the countries. However, because of the limitation of words we cut this part down.

UK: Andrew Stott	SPM	11	293	11	294	Need to use more neutral language than 'land grabbing'.	We now use large-scale land acquisition when referring to land grabbing.
UK: Andrew Stott	SPM	11	293	11	294	I don't think it is 'western Europe' that is purchasing or managing land, but private/multi-national companies some of which are based in western Europe.	Right, but data we collected from literature shows that these companies are based on Western Europe. In any case, we cut this part down in the new version.
Robert Watson	SPM	11	294			Health is not distributed nor are levels of health – please try and rephrase – also there are many factors unrelated to NCP that affect human health (communicable diseases and non-communicable diseases) both in causing poor health and the ability to address poor health (i.e., health care facilities are much worse in regions outside of western Europe)	Right! We avoid this kind of statements in the new SPM
EU: Anne Teller	SPM	11	294			delete 'also' at the beginning of the sentence starting with 'Health' since there is already 'also' in the preceding sentence.	This part of the SPM has dropped down
EU: Ole Ostermann, JRC	SPM	11	297	11	299	"...participation in these activities is lower in Central Asia and Eastern Europe than the other sub-regions because of fewer protected areas and less infrastructure for access. ..." Is this an established causality? Or is this an artefact due to the proxies available, i.e. less PAs and infrastructure suggest less use but people may enjoy ordinary nature in their surroundings?	We have considerably change the messages and this text does not appear anymore
Marie Stenseke	SPM	11	297		301	The differences in recreational activities are most likely also related to differences in economic wealth	We agree, but as a regional assessment we bring the global picture and we could not explain the details of different contexts. Anyway, We have considerably change the messages and this text does not appear anymore
UK: Andrew Stott	SPM	11	297	11	299	Not sure what the connection is between recreation and protected areas - recreation does not rely on protected areas	We have considerably change the messages and this text does not appear anymore
UK: Andrew Stott	SPM	11	297	11	299	less infrastructure for access, yes but also rights?	We agree. We have considerably change the messages and this text does not appear anymore
Robert Watson	SPM	11	298			Because of fewer protected areas: Is this really true – I spend lots of recreational time in Europe communing with nature and never in a protected area – rivers, beaches, woodlands, mountains – none were protected areas. In the UK NEA peoples favorite nature places were beaches – none protected areas. Are you sure the problem is a lack of protected areas	Totally right. This message has changed in the new version and we avoid this kind of statements
Jeroen Arends	SPM	11	299	11	299	This is also due to lack of income enabling people to visit these sites as well as cultural perceptions of what recreational experiences are.	We agree, but as a regional assessment we bring the global picture and we could not explain the details of different contexts. Anyway, We have considerably change the messages and this text does not appear anymore
Germany	SPM	11	299	11	299	it is not only the number of protected areas but also the management of these areas that influences the NCP; e.g. Uzbekistan - the concept of biosphere reserve is not fully known (e.g. Khorezm/Karakaplastan), so the benefit is seen as hunting ground of animals for special prestigious groups; also the concept of NCP is not necessarily known to the population - especially where there is an economic survival conflict (e.g. wood vs recreation); also in the South Caucasus, there are ethnical issues (access to land) important factors to NCP	We agree, but as a regional assessment we bring the global picture and we could not explain the details of different contexts. Anyway, We have considerably change the messages and this text does not appear anymore
UK: Andrew Stott	SPM	11	299	11	301	Is this assessment concerned about social justice? The concern should be expressed in turns of uneven access to benefits such that some sectors of society have a poorer quality of life.	We rephrased the whole message and we hope that we are now able to convey this idea
Robert Watson	SPM	11	302			Can you be more specific – which NCP	We have considerably change the messages and this text does not appear anymore
Robert Watson	SPM	11	302			Replace 'NCPs' by 'NCP'	Done
Unai Pascual	SPM	11	302			the sentence about effects of current use of NCP on intergenerational justice is too broad and I guess that unless data shows that people feel there are justice issues, it would be too speculative to bring this idea without proper justification.	We have considerably change the messages and this text does not appear anymore
Olesya Petrovych	SPM	11	302	11	303	The sentence "The current use of NCPs may destroy the basis for future supplies of NCPs resulting in global intragenerational and intergenerational injustices" is not necessary. The next part talks about this.	We have considerably change the messages and this text does not appear anymore
UK: Andrew Stott	SPM	11	302	11	303	Not sure what 'destroy the basis for' means?	We have considerably change the messages and this text does not appear anymore
Dan Faith	SPM	11	302		302	good reference to intragenerational and intergenerational injustices and trade-offs	Thanks
Robert Watson	SPM	11	303			Replace 'NCPs' by 'NCP'	Done
UK: Andrew Stott	SPM	11	303	11	304	This requires more explanation and an example.	We have considerably change the messages and this text does not appear anymore
Robert Watson	SPM	11	304			True but very generic statements – can we have more specifics	We have considerably change the messages and this text does not appear anymore
Robert Watson	SPM	11	304			Replace 'NCPs' by 'NCP'	done
Robert Watson	SPM	11	305			Replace 'NCPs' by 'NCP'	Done
Brendan Coolsaet	SPM	11	305	11	307	Lack of participation is a form of injustice in its own right. It's about having a voice in decision-making and was foundational to the environmental justice movement. Should not be reduced to being an 'instrument' to achieve a particular outcome (distributive or other).	We have considerably change the messages and this text does not appear anymore
Yorick Reyjol	SPM	11	305		309	Complicated...	????
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	11	305	11	307	Lack of participation is a form of injustice in its own right. It's about having a voice in decision-making and was foundational to the environmental justice movement. Should not be reduced to being an 'instrument' to achieve a particular outcome (distributive or other).	We have considerably change the messages and this text does not appear anymore
ECA values liaison group	SPM	11	305			language needs to be checked: marginalizing groups or views of groups 2343 Sentence would benefit from simplification.	We have considerably change the messages and this text does not appear anymore
UK: Andrew Stott	SPM	11	307	11	309	but in many cases it isn't fundamental - its missing?	We have considerably change the messages and this text does not appear anymore
Robert Watson	SPM	11	308			Replace 'NCPs' by 'NCP'	Done
EU: Karin Zaunberger	SPM	11	308			spell out ILKP	Done for other parts of the text. This phrase has been dropped out
Jeroen Arends	SPM	11	309	11	309	To elaborate more on inequality: This also has to do with the unequal enjoyment of benefits obtained by users and their compensation. Some ecosystems provide benefits to far away places and the compensation for it does not go to the area that provides these benefits. And when it does, it is not equally distributed.	We have considerably change the messages and this text does not appear anymore
EU: Frank Wugt Larsen (EEA)	SPM	11	310	12	338	The topic in A3 is an important one and I think it can be strengthened in several ways. First, this section might provide a good opportunity to highlight the importance of the biosphere as our life-support system and as the foundation for society and the economy and the need to stay within environmental limits as conceptually captured by the planetary boundaries framework and the safe operating space for humanity on Earth. Second, the example of flows in traded wood doesn't seem to be the most illustrative. For many environmental issues the European footprint is increasing, not decreasing, e.g. when it comes to land footprint (see e.g. Yu, Y. et al., 2013. Tele-connecting local consumption to global land use. Global Environmental Change 23, 1178–1186; Tukker, A., et al., 2016. Environmental and resource footprints in a global context: Europe's structural deficit in resource endowments. Global Environmental Change 40, O'Brien, M., et al. 2015. The land footprint of the EU bioeconomy: Monitoring tools, gaps and needs. Land Use Policy 47, 235–246).	Due to the word limitation we could not add more details but we try to make this message clear enough through the differences between biocapacity and ecological footprint

Robert Watson	SPM	11	311			Rephrase: A3. The ECA region uses more than its equitable share of renewable natural resources and it imports more NCPs than it exports (well established). There are significant differences in flows of NCP into the ECA sub-regions; Central and Western Europe and Central Asia import more benefits derived from NCP than Eastern Europe	Now it reads as: The population of Europe and Central Asia uses more renewable natural resources than are produced within the region, indicated by an ecological footprint that exceeds the region's biocapacity (well established) (2.2.4).
Olesya Petrovych	SPM	11	311	11	312	It would be great to enhance the key message and use the exact numbers in lines 315-316.	We have updated the figures to the last date. See new message A4
France	SPM	11	311	12	338	Overall, this message could be made more precise and relevant. Instead of using the ecological footprint, the impacts could be detailed (at least) between : (i) the sustainable character of biological resource (fish, wood, Net Primary Productivity - NPP) withdrawal (Human Appropriation of Net Primary Productivity - HANPP) and consumption (taking into account imports and exports); (ii) GES emissions.	Due to the word limitation we cannot add all of these indicators in the message.
UK: Andrew Stott	SPM	11	311	12	314	The ECA region is not a political entity - should refer to countries in the ECA. What is its 'share' and who decides? This needs to be expressed in more neutral terms.	Now it reads as The population of Europe and Central Asia uses more renewable natural resources than are produced within the region, indicated by an ecological footprint that exceeds the region's biocapacity (well established) (2.2.4).
Robert Watson	SPM	11	312			Replace 'NCPs' by 'NCP'	done
Ruslan Novitsky	SPM	11	377	11	380	very strange, that the collaps of former Soviet Union and associated countries economical crisis have not reflected as a on of the factors restructure of consumption and provision production. During this collaps all countries involved in union lost a specialisation and became to crisis about ten years long.	We have considerably change the messages and this text does not appear anymore
Robert Watson	SPM	12	313			Replace 'NCPs' by 'NCP'	done
Robert Watson	SPM	12	314			Replace 'NCPs' by 'NCP'	done
André Mader	SPM	12	315	12	315	Words like "ecological footprint" and "biocapacity" might need to be described briefly in the text, rather than relying on the glossary.	Now it is explained in the figure caption of SPM4
Germany	SPM	12	315	12	330	it would be helpful to have an explanation what the difference between biocapacity and ecological footprint means; Figure SPM 3: font size of legend too small	Now it is explained in the figure caption of SPM4
Olesya Petrovych	SPM	12	315	12	329	This subpart should explain why "Central and Western Europe and Central Asia import more benefits derived from NCPs than Eastern Europe" and what that means. The lower level of import in Eastern Europe is caused by the economical limitations of these countries. Import will increase with improvement of the economical situation. Meanwhile, the existing state causes higher levels of local natural resources and ecosystem services usage which leads to decreased levels of biodiversity and worsened conditions of ecosystems. While the "additional" level of natural resources and ecosystem services import improves the welfare of the citizens and reduces the pressure on local ecosystems. The considerable level of import in Central Asia is caused by the limited options for NCPs in these countries and it will go up along with the life standards. Such explanation will also logically connect parts A3 and A2.	Due to the word limitation we cannot expand that much. However we indicate where in the chapter readers can find more information
UK: Chris West	SPM	12	315	12	321	This more detailed overview of the EF states that biocapacity is exceeded in Western and Central Europe and Central Asia but (see above comment) does not explain whether this is due to local exceedence or import-induced exceedence. The para in the Introduction infers its to do with imports which is slightly misleading. Furthermore I "suspect" (?) the reserve in Eastern Europe is driven by the large 'forest' component of these areas, which supports the point above about the EF not necessarily being a good proxy for pressure on biodiversity and ES as this having a high biocapacity for forests will not be a good marker for other impacts that might be being felt in these regions.	This is why we complement the information of ecological footprint and biocapacity with other statements: e.g. 'Central and Western Europe import more of nature's contributions to people than Eastern Europe and Central Asia (well established) (2.2.4). Food availability in Central and Western Europe relies significantly on cropland in Brazil, Argentina, China and the United States (well established) (2.2.4).'
Robert Watson	SPM	12	316			Delete 'accountable for'	done
Unai Pascual	SPM	12	317			including carbon sinks, etc. (not just renewable resources)?	We rephrased completely the message
France	SPM	12	320	12	321	What are the levels of uncertainty for these data? Should we not use them with caution? Is the term "reserve" the most adequate? It seems to open the possibility to use it further.	We rephrased completely the message
Robert Watson	SPM	12	322			Replace 'NCPs' by 'NCP'	done
Germany	SPM	12	322	12	322	What about non-wood products?	We could not expand more this message due to word constrains. But we include food as an example.
UK: Andrew Stott	SPM	12	322	12	325	Example is from 10 to 5 years ago - anything more up to date?	We deleted this paragraph and data for ecological footprint was updated
UK: Chris West	SPM	12	322	12	327	The human-appropriation of NCP presents 'time-series' information that I think would be interesting for the reader in the 'Introduction' section. It would be nice also to include information on land-use/deforestation embedded in this wood (and other) production, particularly as LUC is identified as the major driver of biodiversity loss later in the text. Some of this information appears to be available from the other studies detailed in Chapter 2 of the report, so it should be possible to pull this out.	we deleted this paragraph
Robert Watson	SPM	12	323			Delete interregional – you mention flows within Europe – they are intra-regional not inter-regional	We now avoid this jargon
France	SPM	12	326	12	326	"Human appropriation of net primary productivity" is a concept with which non-economists are not familiar. It would be good to find another unit or indicator which is better known by a broad audience, or at least to explain what it is.	We deleted this part of the message
Germany	SPM	12	328	12	330	Figure SPM 3: For now the information given by this figure is quite one-sided. At least reference should also be made to the population per square kilometer or hectare in the respective sub-region in lines 315-321. Above the figure should follow the explanations in lines 315-321.	We have now explained better both concepts and change the figure to make it clearer
EU: Markus Erhard (EEA)	SPM	12	328	12	329	you may consider to add source as in Figure SPM 4	We made it and the sources can be found in the chapter as indicated
Switzerland: José Romero	SPM	12	328	12	330	Figure SPM.3 is difficult to read. Explain: red: bad; green: good.	We have now explained better both concepts and change the figure to make it clearer
France	SPM	12	328	12	330	This figure seems to reflect population density more than anything else. It could be more relevant here to only represent the average ecological footprint to get an idea or an index of human appropriation of net primary productivity (HANPP).	We have now explained better both concepts and change the figure to make it clearer
UK: Mark Stevenson	SPM	12	328	12	332	I suspect policy makers would welcome a bit more information on the assumptions behind the production of the Global Footprint Index - I know this might sound to technical, but a simple box or paragraph summarising the data sources and method of combining them would be helpful.	We have now explained better both concepts and change the figure to make it clearer
Olesya Petrovych	SPM	12	329	12	330	The map is not correct. The green colouring of Russia is connected to the low number of population in relation to the area of the country. While the population is spread through the country unevenly and considerable territories with low population have high levels of industrial pollution or usage. To my mind, the difference between biocapacity and ecological footprint in Russian Federation should be defined individually for each federative unit.	We have now explained better both concepts and change the figure to make it clearer
Unai Pascual	SPM	13	333			on imports nad exports of wood show teleconnections? What impacts do they create in the source countries? It would depend on whether forests are sustainable harvested or not, etc. so not clear what is the main message by means of the wood trade. What is it trying to say?	It is now deleted
Yorick Reyjol	SPM	13	333			Is it possible to provide other examples than simply "Wood", which is wellknown? The conclusion may not be the same from one good to another...	It is now deleted
Germany	SPM	13	333	13	337	this information for wood and wood products is quite specific might not be appropriate for the SPM	It is now deleted
Switzerland: José Romero	SPM	13	333	13	337	Figure SPM.4: difficult to read.	It is now deleted
France	SPM	13	333	13	337	We doubt the relevance of such a figure in the SPM because it does not look like much changed between 1997 and 2012. If there is a difference of flow, a map illustrating the difference would be more useful.	It is now deleted
France	SPM	13	334	13	335	It is surprising to have explicit scientific references for this Figure only	It is now deleted

Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	13	335	13	337	Figure SPM4: Legend & Figure should be clear.	It is now deleted
Germany	SPM	13	339	13	357	relationships between biodiversity and NCPs should also include dynamics and potential trade-offs. However, these issues are not mentioned here in the SPM	This message referred to evidence from comparing more and less diverse systems, as no dynamic information is available for NCP before and after species loss. Trade-offs between NCP are mentioned elsewhere in SPM.
Robert Watson	SPM	13	339			Replace 'NCPs' by 'NCP'	done
Olesya Petrovych	SPM	13	340	13	342	Both sentences have the same sense. I suggest to rewrite them like this: The loss of biodiversity has negative influence on the ecological state of the terrestrial, freshwater and marine systems and destabilizes them over time. Therefore, biodiversity loss strongly, and mostly negatively, affects the volumes of ecosystem services and the capacity of nature's contributions to people.	This message has been completely rewritten.
EU: Jan-Erik Petersen (EEA)	SPM	13	340			Biodiversity loss has many negative consequences but the consequences of (some) loss of species for ecosystem functioning seem overstated in the general fashion it is presented. First of all, ecosystem resilience is partly built on the redundancy in terms of functional roles between species- hence ecosystems continue to function even if some species are lost. Secondly, favouring certain sets of species for achieving particular outcomes in terms of ecosystem services / contributions of nature to people is part and parcel of farming systems that aim to rely on ecological principles as much as possible (e.g. organic farming) and yet they achieve biological activity and (farm) productivity with a much reduced set of species compared to natural systems. Hence to equate loss of biodiversity with an automatic reduction of 'ecosystem functioning' seems overstated (which is acknowledged on p 14).	This message has been completely rewritten.
UK: Mark Stevenson	SPM	13	340	13	357	I think I struggle with the term 'biodiversity loss' as it is so generic. This would incorporate loss of habitats, species and genetic diversity. It covers loss of extent, degradation or loss of quality, and changes in spatial distribution. Is there any chance this could be set out more clearly in this section. I think the really critical thing for a policy maker, given that they make decisions about resources, is which aspects of this loss have the greatest impact. This answers a question of where do we prioritise effort? I also think this needs qualification. Loss of a natural habitat and replacement with a cropped habitat usually results in loss of wildlife value, and perhaps some non-material and regulating services. But a big gain in provisioning or material services. And so what we do is trade-off. In that sense, biodiversity loss results in loss of some NCPs and gains in others. The ones that are lost are usually the ones that do not have direct economic values.	This message has been completely rewritten.
Graciela Rusch	SPM	13	340		342	Any mention that it is the way that NBP are used and the level of appropriation that leads to the loss of biodiversity and that is eroding the capacity of nature to continue to generate benefits in the future.	Drivers of biodiversity loss are dealt with in other messages.
Robert Watson	SPM	13	341			Second sentence is redundant with the first. Delete: Therefore, biodiversity loss strongly, and mostly negatively, affects nature's contributions to people (well established).	The message has been rewritten.
Jeroen Arends	SPM	13	342	13	342	Perhaps the paragraph can start with a line that states that there is a clear link between high levels of biodiversity and NCP (established but not complete) and then continue with adding that biodiversity loss impairs NCP.....etc.	The message has been rewritten.
Germany	SPM	13	342	13	342	Why is the loss of biodiversity mostly affecting NCP negatively? Are there positive effects?	For some NCP largely depending on one or few species it may be more their presence that matters. The message has been rewritten.
Finnish Government	SPM	13	342	13	342	delete word mostly	see above response
EU: Karin Zaunberger	SPM	13	343		347	include after capture resources: to sequester CO2	This message has been completely rewritten.
UK: Andrew Stott	SPM	13	343	13	347	Not clear what this term refers to? Abundance and/or diversity of wild species, extent and/or condition/integrity of ecosystems/habitats?	This message has been completely rewritten to be more specific.
Robert Watson	SPM	13	348			Not sure what this is saying	This message has been completely rewritten.
France	SPM	13	348	14	352	This paragraph is a bit too vague and general. Could you please rephrase or illustrate with examples what are "simultaneous contributions of NCPs" (is it when the same ecosystem provides several NCPs)? Could you also specify whether for the trophic levels you mean "several levels of animal consumers"? With "consumers" standing alone here, one would tend to think about human consumers.	This message has been completely rewritten to be more specific.
UK: Andrew Stott	SPM	13	348	13	349	Not sure what 'this' refers to?	This message has been completely rewritten.
UK: Andrew Stott	SPM	13	348	13	349	Needs greater clarity/simplicity - what does simultaneous contributions mean?	This message has been completely rewritten to be more specific.
Sweden: Ola Inghe	SPM	13	348	13	349	Unclear - does "This" refer to biodiversity loss or to its effects on NCP?	This message has been completely rewritten to be more specific.
Finnish Government	SPM	13	348	13	349	unclear sentence	This message has been completely rewritten to be more specific.
Robert Watson	SPM	13	349			Delete this text - redundant with text in previous paragraph: and with increases in the period of time considered	This message has been completely rewritten to be more specific.
UK: Andrew Stott	SPM	13	349	14	352	Policy makers won't necessarily know what 'trophic levels' are.	The language has been kept as simple as possible throughout.
UK: Andrew Stott	SPM	13	349	14	352	Useful to explain why this occurs	This message has been completely rewritten to be more specific.
Sweden: Ola Inghe	SPM	13	349	14	352	I doubt this. It is probably worse to lose a trophic level entirely (e.g. top predators), than lose the same number of species distributed over many trophic levels.	The message was not on losing entire trophic levels, but on losing species across trophic levels. This message has been completely rewritten to be more specific.
Yorick Reyjol	SPM	14	352		354	Not always true in my opinion (e.g. forest of pines maximize wood production but homogenize biodiversity...). Be careful not to be counter-productive by mentioning things not well established, or criticized...	For some NCP largely depending on one or few species it may be more their presence that matters. The message has been rewritten.
UK: Andrew Stott	SPM	14	352	14	354	Useful to explain why	This message has been completely rewritten to be more specific.
Graciela Rusch	SPM	14	352		354	The evidence presented in the full report is limited regarding this aspect.	The chapter 3 section on these issues has been completely rewritten.
UK: Andrew Stott	SPM	14	354	14	357	Quite a lot hidden in this sentence. Needs to be more clearly explained what this means.	This message has been completely rewritten to be more specific.
Robert Watson	SPM	14	357			Replace 'NCPs' by 'NCP'	Language was harmonised throughout.
Jeroen Arends	SPM	14	357	14	357	Perhaps to expand more on what is written in the paragraph is that different NCP or ES influence each other and also have an impact on biodiversity. On top of that, different drivers (direct or indirect as well as human or external put pressures on biodiversity and its capacity to provide NCP. At the same time - and probably increasing with socio-economic developments in ECA- different sectors of society will compete for the same natural resources, putting a lot of pressure on biodiversity to provide for NCP.	Effects of drivers are summarised in other parts of the SPM. The message here has been completely rewritten to be more specific.
Olesya Petrovych	SPM	15	359			In all subparts of division B there should be mentioned not only the trends of NCP but also clearly noting what exact ecosystem services are used and the connected trade-offs.	In IPBES, ecosystem services are framed as NCP
UK: Andrew Stott	SPM	15	359	15	360	Reads oddly, better to refer to trends in biodiversity and nature's contributions to people.	Now it reads as 'Trends in nature's contributions to people and how these contributions are underpinned by biodiversity'
Thomas Brooks	SPM	15	362	15	362	Very important to retain consistency with IPBES definition of "biodiversity", which includes "ecosystems" (http://www.ipbes.net/sites/default/files/downloads/IPBES_2_INF_2_Add.1.pdf ; also Pollination assessment p481, and Africa assessment SOD Chapter 1, Page 5, Lines 142-145).	We have changed considerably this message and now it matches with IPBES framework
Robert Watson	SPM	15	363			Delete 'corresponding'	This message has been reworded.
UK: Andrew Stott	SPM	15	363	15	366	Is it not the decline in biodiversity that has caused to decline in ecosystem services?	Yes. The message has been completely rewritten.
UK: Andrew Stott	SPM	15	363	15	366	Don't understand why the reference to diversity is included here?	Agreed. The message was reworded.
UK: Andrew Stott	SPM	15	363	15	366	But is this an increasing trend - or was it always the case?	The SPM summarises evidence for trends in NCP and in biodiversity. Whether BD-NCP relationships change with time is not known.

UK: Andrew Stott	SPM	15	363	15	366	avoid abbreviation in sub-titles	There were no abbreviatios in these lines. In general abbreviatios ahave been avoided completely and message titles were cut.
Robert Watson	SPM	15	364			Delete 'not only extremely diverse, but also.'	Agreed. The message was reworded.
Thomas Brooks	SPM	15	364	15	365	Delete "not only extremely diverse, but also". They are not particularly diverse compared to tropical regions.	Agreed. The message was reworded.
Robert Watson	SPM	15	365			Replace 'live' by 'are found'	The message has been completely rewritten.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	15	365	15	366	Excellent use of these data; very important to retain. Add "according to the IUCN Red List of Threatened Species" after "extinction".	The message was rewritten. The very useful IUCN red list data are presented in messages on species trends.
Thomas Brooks	SPM	15	365	15	366	Excellent use of these data; very important to retain. Add "according to the IUCN Red List of Threatened Species" after "extinction".	The message was rewritten. The very useful IUCN red list data are presented in messages on species trends.
UK: Mark Stevenson	SPM	15	365	15	365	This point about 30% of species being at high risk of extinction keeps coming up. It seems to me that this is an important NCP because people value threatened wildlife. However, there is a danger of it being seen as a proxy of wider NCPs. Again, as above, I'm not sure this is the case and therefore not sure it can be used as a proxy for change that undermines NCPs more generally. And so a broader range of examples of loss of value would be helpful	The message has been completely rewritten.
Robert Watson	SPM	15	366			After Central Asia add', i.e. endemic,'	The message has been completely rewritten.
UK: Andrew Stott	SPM	15	366	15	368	Ecosystem integrity is not included in Target 12. Refers more to Target 5 and 14?	The sentence has been entirely rewritten and this has been corrected
Robert Watson	SPM	15	367			Surely other Aichi targets will not be met	We now have an entire box on progress towards Aichi targets
EU: Karin Zaunberger	SPM	15	367			include footnote to Aichi Target 12	We now have an entire box on progress towards Aichi targets
Thomas Brooks	SPM	15	367	15	367	As above, NB that the Aichi Targets do not belong to the CBD alone (so delete "Convention on Biological Diversity" here); and if Aichi Target 12 is mentioned with respect to species, Aichi Target 5 also be mentioned with respect to ecosystems.	Thanks for reminding us, we have now corrected
Robert Watson	SPM	15	370			This section assesses observed trends but there is no attribution of why these trends are occurring – please try and make some attribution sttaments – also limited quanification	We added some of the drivers of change of NCP trends. We also make sure to provide quantification to our statements
Robert Watson	SPM	15	370			Replace 'NCPs' by 'NCP'	Done
Robert Watson	SPM	15	371			I believe the correct word is production and not use. Use conflates production and trade – so one can have significant increases in use without any change in production in ECA – so biodiversity loss is linked to production not use	In the new version we avoid any term that can be mislead or misunderstood.
Robert Watson	SPM	15	371			Replace 'NCPs' by 'NCP'	done
André Mader	SPM	15	371	15	376	The words "use" and "production" are used more-or less interchangeably. However, use is probably more closely equated with <i>consumption</i> .	In the new version we avoid any term that can be mislead or misunderstood.
UK: Andrew Stott	SPM	15	371	15	375	Spell out acronyms in titles and subtitles	done
UK: Andrew Stott	SPM	15	371	15	375	Not clear what the link is with natural assets - seems more like a reference to pharmacology	We do not find natural assets in the text. Anyway, it has been rephrased completely this message
Graciela Rusch	SPM	15	371		374	The mention of cotton here is too specific; there are many crops which may be referred across the entire region. The question about fuel wood is quite contentious still; as is the issue of bio-fuels. Also, the issue of renewable energy. the question about sources of renewable energy (including bio-wood fuel) is not resolved fully in Europe.	We changed completely the message and simplify
Buslan Novitsky	SPM	15	371	15	391	The NCPs trends must more be focused on a biomass-based production from boreal and mixed forests in energetic purpose. Boreal forests traditionally used in energetic purpose. Also, last years a pilettes production and alternative sources of energy are increasing and partly decline the participation of organic-based energy in frames of subregions of ECA.	We changed completely the message and simplify
Ruslan Novitsky	SPM	15	371	15	391	some of countries (Belarus and less Russia and Ukraine) uses in different reasons pit boggs and marres, including 'energetic purposes. It is not reflected in relevant section of SPM. A cost-benefits of emission and energy volume can have a negative relations. So, it should be assessed.	We deleted this part of the message and changed it completely
Finnish Government	SPM	15	372	15	372	check stabilization in biomass-based energy (see comment page 3 line 85)	We deleted this part of the message and changed it completely
EU: Anne Teller	SPM	15	373		374	delete 'recent' before 'increases' since there is already 'recent' in the preceding sentence.	We deleted this part of the message and changed it completely
Robert Watson	SPM	15	374			Why only urban societies – rural societies do not use medicinal resources! Or is it that rurla populations have stayed constant?	We deleted this part of the message and changed it completely
Philippe Charrier	SPM	15	374	15	374	(eg, the expression is found several times) « medicinal resources associated with urban societies » : an explanation on what are those medical ressources would be good.	We deleted this part of the message and changed it completely
UK: Diana Mortimer	SPM	15	374	15	374	As above - I don't see the link between increased demand for medicinal resources associated with urban societies - need to explain what is meant by this.	We deleted this part of the message and changed it completely
Norway: Nina Vik	SPM	15	374	15	374	"Medicinal resources associated with urban societies" - what is this? I am aware that it is explained in the chapter but consider giving a short example as it is not intuitive	We deleted this part of the message and changed it completely
Robert Watson	SPM	15	375			See earlir comment on use versus production	In the new version we avoid any term that can be mislead or misunderstood.
Robert Watson	SPM	15	375			Replace 'NCPs' by 'NCP'	done
UK: Andrew Stott	SPM	15	375	15	376	Is this a reference to countries? At what level are the data available?	We collected data for all the countries of ECA with literature review and many indicators from FAO as you could see in the chapter. Anyway, due to reorganization of the SPM and word limitations this message has completely changed and collated with other messages of NCP
Robert Watson	SPM	15	376			Replace 'NCPs' by 'NCP'	done
Robert Watson	SPM	15	377			Food – what food – crops, meat, fish – be more specific	We collected data for all the countries of ECA with literature review and many indicators from FAO as you could see in the chapter. Anyway, due to reorganization of the SPM and word limitations this message has completely changed and collated with other messages of NCP
Robert Watson	SPM	15	377			Rephrase – only CAP and CFP have affected food production since the 1960s – the fall of the iron curtain and yugoslav wars only affected production since about 1990	due to reorganization of the SPM and word limitations this message has completely changed and collated with other messages of NCP
Germany	SPM	15	377	15	380	It's stated that three social-political "events" affected the food provision. However, the CAP itself cannot be referred to as an event - either name certain aspects / modifications of the CAP or adjust the sentence accordingly. In how far did these events and policies (CAP) strongly affect food production? Why is only one conflict addressed (Yugoslav Wars), but not other armed conflicts in the ECA region?	due to reorganization of the SPM and word limitations this message has completely changed and collated with other messages of NCP
EU: Anne Teller	SPM	15	377		380	this paragraph is not clear. You cannot mix the fell of iron curtain, the Yugoslav wars and EU CAP/CFP without a bit of explanations, especially since it is both about increase and decrease of food provision?	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
EU: Markus Erhard (EEA)	SPM	15	377	15	380	not to forget the technical dimension, the "Green Revolution" boosting food production by increasing land use intensity and nutrient /pesticide intake at the cost of biodiversity	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part

Olesya Petrovych	SPM	15	377	15	380	The "B1" unit does not include a trend analysis in food production from the point of view of NCPs. The sentence on lines 377-380 applies only to socio-political events. It is necessary to start from the words such as: Trends of food production during the last century indicate a general increase due to the expansion of agricultural areas and the improvement of technology of agricultural production, the use of pesticides and agrochemicals, etc. Intensification of agricultural production and increased use of food services reduces the natural areas, pollution, loss of biodiversity and genetic diversity of crops and potentially useful wildlife, etc., which leads to a number of trade-offices and the reduction of the ecosystem's ability to accomplish regulatory functions.	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
Adriano Mazziotta	SPM	15	377	15	380	The fall of Soviet Union did not have any major consequence in trends in food provision?	Yes, it had indeed. However, due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
France	SPM	15	377	15	380	Are the CAP and the CFP of the EU a "socio-political event" comparable to the fall of the iron curtain and the yugoslav war?	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
UK: Andrew Stott	SPM	15	377	15	380	There is no detail provided about food production. How much has it increased? What changes in production systems? How much land is used? What is the value of production?	Due to word limitations we cannot expand the message. Indeed, we had to cut down the number of words by half. Yet, we tried to give some numbers, e.g. Wild fish catches decreased since the 1990s, with more sustainable management practices being introduced only recently. Fish production from aquaculture increased by 2.7% since 2000 (established but incomplete) [2.2.2.1.2].
UK: Andrew Stott	SPM	15	377	15	380	But what about technology advances - mechanisation, agro-chemicals, bio tech etc?	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
UK: Vin Fleming	SPM	15	377	15	380	Not clear why the three factors referred to caused increases in food production up to 1990 but then declines subsequently – what changed or what was the respective impact of each driver? Maybe this is in the underlying chapter but policy makers will not read that.	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
Robert Watson	SPM	15	378			Were the increasing trends achieved through intensification or extensification – what were the implications for other NCP and biodiversity	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part. Yet, we tried to convey the message about trade-offs in the SPM
Robert Watson	SPM	15	378			Please quantify both increases and decreases	we tried to convey the message about trade-offs in the SPM
Jeroen Arends	SPM	15	380	15	380	How about the transition from centrally planned and led economies towards the market economy and consumerism? or that falls under the fall of the Iron Curtain? We should also not forget the historical decisions concerning food production such as land consolidation (destruction of natural areas in and around agricultural lands, soil erosion due to wind breakage), cooperative farms, bad practices (too much fertilizers, pesticides, soil compacting, etc.)	due to reorganization of the SPM and word limitations this message has completely changed and we deleted this part
Olesya Petrovych	SPM	15	381	15	382	I don't agree with the the claim that the decline in production from wild capture seafood since 2000. Because the changes in species diversity and the amounts of caught fish near the shores and in the seas of ECA have been observed as early as the 1960-s. It is important to show that decline in production from wild capture seafood is caused by trade-offs through the decreasing productivity of the marine ecosystems caused by overexploitation, pollution, anthropogenic transformation of the shores and regulation of rivers as places for breeding of the valuable fish species. Implementation of aquaculture is a necessary step towards the satisfaction of humanity's demand of seafood which marine ecosystems aren't able to satisfy as of now.	We now rephrased as: Wild fish catches decreased since the 1990s, with more sustainable management practices being introduced only recently. Fish production from aquaculture increased by 2.7% since 2000 (established but incomplete) [2.2.2.1.2].
EU: Jan-Erik Petersen (EEA)	SPM	15	381			This paragraph seems to imply that marine aquaculture production is a (more) sustainable management practice - in relation to what? And why? Since much of marine aquaculture causes severe environmental impacts.	We now rephrased as: Wild fish catches decreased since the 1990s, with more sustainable management practices being introduced only recently. Fish production from aquaculture increased by 2.7% since 2000 (established but incomplete) [2.2.2.1.2].
France	SPM	15	381	15	382	We doubt a little bit this conclusion. Are there some references? What is the level of confidence? The picture of overexploitation of fisheries is not as clear as this sentence of the SPM indicates. As mentioned in Chapter 3 page 15 line 499, exploitation of fisheries in Mediterranean is still very high and worrying. But indeed, there is improvement in the North-East Atlantic (as stated in Chapter 3 page 11 line 350 and page 13 line 436). The emphasis should be made on the proportion of fisheries assessed and the proportion that are found overexploited, with a focus on the most worrying areas (a figure where the fisheries are weighted according to their MSY could be proposed). It is the sustainable management of fisheries and not the decrease of the aggregate production that is the relevant objective here. Besides, the decline of production is not caused so much by market demand than by an overexploitation of stocks, as shown by Pauly & Zeller. The sentence as it currently stands in the SPM is therefore wrong. See references: Pauly D. & Zeller D., Comments on FAOs State of World Fisheries and Aquaculture (SOFIA 2016) in Marine Policy 77 (2017) 176-181. DOI: http://www.sciencedirect.com/science/article/pii/S0308597X16305516 Ye Y. et al, FAO's statistical databases and the sustainability of fisheries and aquaculture: Comments to Pauly and Zeller 2017, Marine Policy (2017), DOI: http://www.sciencedirect.com/science/article/pii/S0308597X17300921 Pauly D. & Zeller D., The best catch data that can possibly be? Rejoinder to Ye et al. "FAO's statistic data and sustainability of fisheries and aquaculture" in Marine Policy (2017) DOI: http://www.sciencedirect.com/science/article/pii/S0308597X17301380	This material has been rewritten and is now considered under High level message B, key message A2 and B1
UK: Andrew Stott	SPM	15	381	15	382	As above, no detailed description of amounts, types, values of seafood capture?	This material has been rewritten and is now considered under High level message B, key message A2 and B1
UK: Andrew Stott	SPM	15	381	15	382	Just market demand? Isn't due to the need to better manage stocks?	This material has been rewritten and is now considered under High level message B, key message A2 and B1
Robert Watson	SPM	15	382			Is this correct – that the decline is due to more sustainable management practices due to market demand – really market demand led to more sustainable practices – what about the role of quotas and regulations?	This material has been rewritten and is now considered under High level message B, key message A2 and B1
Germany	SPM	15	383	15	384	"...an average rate of 2.7%" <- a year?? Pls specify	Rephrased
UK: Andrew Stott	SPM	15	383	15	385	How certain is rate of growth?	This material has been removed
Germany	SPM	15	384	15	384	"...in terrestrial ecosystems," <- in ECA?	This material has been removed
Olesya Petrovych	SPM	15	384	15	385	It should be noted that the stability in woodfuel and roundwood production is accompanied by the transformation of natural forests into artificial industrial mono-special forests which leads to loss of biodiversity and lower levels of regulating ecosystem services.	This material has been removed
EU: Mark Diamond	SPM	15	384			The unsustainable nature of increased aquaculture should be noted, as it requires large inputs and has large impacts.	Due to word limits in the SPM this is discussed in chapter 2
EU: Markus Erhard (EEA)	SPM	15	385	15	388	I wonder if water scarcity visible in the extreme decline of the Aral sea together with political changes didn't had any impact on cotton production but definitively should have affected food production in this area (at least fishery)	This material has been removed and is discussed in chapter 2
UK: Diana Mortimer	SPM	15	385	15	388	What is the point of noting these differences in production - it is as much to do with climate, soils etc as anything else - what message are you trying to get across?	This material has been removed
Germany	SPM	15	388	15	388	because diversification of the economies has become part of the national programmes, e.g. Kazakhstan after 2014	This material has been removed and is discussed in chapter 2
Germany	SPM	15	389	15	391	what about Central Asia and Caucasus? Still quite some plants being used for medical purposes in Central Asia (starting from tea from wild licorice to juice from dried apricots, etc.)	Due to word limits this is discussed more fully in chapter 2 but key message A1 notes that Unsustainable exploitation threatens the survival of some medicinal plants
France	SPM	15	389	15	391	Decline since when?	This has been edited to say and key message A1 notes that Unsustainable exploitation threatens the survival of some medicinal plants

André Mader	SPM	16	418	16	452	The bold text seems somewhat "removed" from the following detailed text. For example the non-bold text begins on marine habitats, which are not mentioned in bold.	In the new version this is corrected. But, please note that messages have changed considerably
André Mader	SPM	16	418	16	421	Nature's contributions to people cannot "decline in capacity". Rather, nature's <i>capacity to contribute</i> to people can decline.	Rtigh. We consider this comment throughout the new text of NCP messages
Sweden: Cecilia Lindblad	SPM	16	418	17	452	In section B Short text explaining the interlinkage between terrestrial, freshwater(river runoff) and coastal marine ecosystem., Land -Sea interactions (e.g. LOICZ project)	Due to word limitation we cannot explain the interlinkages between terrestrial and marine systems. We anyway change the messages.
André Mader	SPM	16	425	16	425	The word "occurrence" is redundant if "abundance" and "diversity" are both being used here.	Agree, we now rephrased it
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	16	426	15	427	Excellent use of these data; very important to retain.	Thanks
Thomas Brooks	SPM	16	426	15	427	Excellent use of these data; very important to retain.	Thanks
UK: Andrew Stott	SPM	16	426	16	427	Do the IUCN Red Lists have information about abundance of pollinators, rather than about distribution? It is difficult to establish a relationship between range and diversity reductions and the level of pollination which may depend on a few abundant species.	We have built this message based on the Assessment of pollinators. To clarify it now reads as 'Since 1961, Mediterranean and Central Asian countries have increased production of pollinator-dependent fruits (established but incomplete) (2.2.1.2). However, the diversity and abundance of wild insect pollinators have declined since the 1950s and severe losses of the western honeybee have occurred in Europe since 1961 (established but incomplete) (2.2.1.2).'
Jeroen Arends	SPM	16	427	16	427	Other recent research indicates that the overall number of insects has declined in Europe by 70%	As there are different sources with different trends, we do not provide the percentage in the SPM
France	SPM	16	428	16	428	Do you mean "surface water extraction"?	We has rephrased this part completely. Now it reads as: Water security depends strongly on the regulation of water quality and quantity by ecosystems, which is impaired by pollution, decreasing floodplain and wetland area, overexploitation of freshwater bodies, and climate change (established but incomplete) (2.2.1.6, 2.2.1.7).
Robert Watson	SPM	16	429			The trend is stable: Do you mean that there is no trend—a stable trend can be a stable increase or decrease	We meant constant trend. We rephrased accordingly and change the figure SPM5
Robert Watson	SPM	16	431			Water quality has not decreased in all European rivers since 1990—many UK rivers have improved at least with respect to chemical contamination	We has rephrased this part completely. Now it reads as: Water security depends strongly on the regulation of water quality and quantity by ecosystems, which is impaired by pollution, decreasing floodplain and wetland area, overexploitation of freshwater bodies, and climate change (established but incomplete) (2.2.1.6, 2.2.1.7).
Andrew Wade	SPM	16	431	16	434	The comment on water quality deterioration seems to contradict preceding chapters which note that water quality has improved due to wastewater treatment.	We has rephrased this part completely. Now it reads as: Water security depends strongly on the regulation of water quality and quantity by ecosystems, which is impaired by pollution, decreasing floodplain and wetland area, overexploitation of freshwater bodies, and climate change (established but incomplete) (2.2.1.6, 2.2.1.7).
France	SPM	16	431	16	434	The capacity of regulating water quality : needs a few words of explanation, examples, or hints on how the conclusion is obtained	We has rephrased this part completely. Now it reads as: Water security depends strongly on the regulation of water quality and quantity by ecosystems, which is impaired by pollution, decreasing floodplain and wetland area, overexploitation of freshwater bodies, and climate change (established but incomplete) (2.2.1.6, 2.2.1.7).
France	SPM	16	431	16	431	The text reads : «Since the 1990s, water quality in European rivers and floodplains has deteriorated». This is not the case for all parameters and for all countries. This statement is only nuanced by «...although the capacity of nature to remove pollutants varies between countries », which gives the impression that the improvements of water quality observed for some parameters in some countries are only due to the capacity of nature to remove pollutants, whereas they are also due to (sometimes significant) reductions in pollutants releases.	We change the SPM and this phrase does not appear anymore
Germany	SPM	16	432	16	434	This statement seems to be unbalanced and the reference to Germany is taken out of context (compare to chapter 2, p. 32, l. 855f and p. 4, l. 93-94). Rather than referring to individual countries in Western Europe, it would be more appropriate for the SPM to compare capacity for water quality regulation at the sub-regional level.	We change the SPM and this phrase does not appear anymore
Graciela Rusch	SPM	16	432		434	I suggest to indicate how good the knowledge coverage is. The statement that e.g. in Germany, Spain and Romania, water quality has deteriorated. Does this mean that water quality has not deteriorated in other countries. Is there full coverage of data? I would modulate this a bit, for instance indicating first a more general statement and then indicating, for instance the water quality inhas deteriorated.	We change the SPM and this phrase does not appear anymore
UK: Diana Mortimer	SPM	16	433	16	433	the capacity to regulate water...' whose capacity - nature's, man's ?	Nature's capacity. Now we phrase as regulation of water quality by ecosystems
Philippe Charrier	SPM	16	435	16	437	about soil erosion : there should be a very brief explanation on the subregional sources/causes of erosion.	Due to word limitation we cannot explain the drivers of NCP losses. We anyway change the messages.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	16	435	17	440	Importance of soil biodiversity (especially microbial biodiversity) for soil fertility should be stressed. Technical chapters should make reference to methodology used for measuring soil fertility	We change the SPM and this phrase does not appear anymore
EU: Jan-Erik Petersen (EEA)	SPM	17	439			observed loss of soil fertility' across all of ECA? Or what do you mean? And please provide evidence for this statement!	Yes, correctly. However, We change the SPM and this phrase does not appear anymore
Robert Watson	SPM	17	440			Is the improvement due to afforestation or reforestation or agro-forestry – reforestation is on lands that were once covered by forests whera-as afforestation is on lands that were never previously covered by forests	We change the SPM and this phrase does not appear anymore

						Rephrase: The capacity to regulate extreme flood events in Europe has declined because most floodplains have been markedly transformed (well established). This transformation, coupled with an increase in the frequency of extreme precipitation events, has resulted in an increase in the number of severe flood events in Western and Central Europe over the period 1980–2010		We change the SPM and this phrase does not appear anymore
Robert Watson	SPM	17	441					We change the SPM and this phrase does not appear anymore
Germany	SPM	17	441	17	444	The number of severe flood events increased not only because of transformed floodplains but also due to changing rainfall pattern.		We change the SPM and this phrase does not appear anymore
UK: Andrew Stott	SPM	17	441	17	442	Is the transformation the cause of severe flooding, or is severe flood damage the consequence of development of floodplains.		We change the SPM and this phrase does not appear anymore
						While the transformation of floodplains will have contributed to more floods – another major factor is an increase in heavy precipitation events due to human-induced climate change – text should recognize the increase in floods is due to both factors		We change the SPM and this phrase does not appear anymore
Robert Watson	SPM	17	442					We change the SPM and this phrase does not appear anymore
Germany	SPM	17	442	17	445	are there more recent data?		We change the SPM and this phrase does not appear anymore
WWF Norway	SPM	17	444	17	445	Does this mean there are no other ECA countries among the top 20?		We change the SPM and this phrase does not appear anymore
UK: Andrew Stott	SPM	17	444	17	445	Germany and France... 'are reported to be', rather than 'are'		We change the SPM and this phrase does not appear anymore
Jeroen Arends	SPM	17	445	17	445	This likely to increase due to climate change.		We change the SPM and this phrase does not appear anymore
France	SPM	17	446	17	448	idem for the air quality regulation by vegetation : needs a few words of explanation, examples, or hints on how this is evaluated		We change the SPM and this phrase does not appear anymore
						What are you trying to tell the reader in this paragraph? Why are forests now better at regulating air quality? Why is that important? And what is meant by 'decreases in air quality regulation involving rivers, lakes and wetlands'? Do you mean the ability of these systems to regulate air quality? be careful with the word 'regulation', and again why are these ecosystems changing and why is that important?		We change the SPM and this phrase does not appear anymore
UK: Diana Mortimer	SPM	17	446	17	448			We change the SPM and this phrase does not appear anymore
Robert Watson	SPM	17	448			I am being slow but how do rivers and lakes impact on air quality		Totally right. This message has changed in the new version so there is no difficult links between NCP and ecosystems anymore
						A difference should be made between carbon sequestration in absolute or relative terms. It is well established that wetland absorbs 30 times more carbon than forest but surfaces are smaller, so this should be stressed, especially since wetland is under severe threat in Europe (cf. line 524) while forest is expanding.		We rephrased this message in the new version and this phrase does not appear anymore
EU: Anne Teller	SPM	17	450		452			We changed the representation of this diagram to make it clearer. We also cite it in the main text
Robert Watson	SPM	17	453			I do not see where this figure is referenced in the text. The figure is very good but the time period is needed as trends change over time		We changed the representation of this diagram to make it clearer. We also explain the figure caption
André Mader	SPM	17	453	17	462	Might it be viable to simplify this figure by using arrows for as for the ILK column? No colour key would be required then.		We changed the representation of this diagram to make it clearer. We also explain the figure caption
Yorick Reyjol	SPM	17	453			Figure a bit difficult to apprehend. Is it possible to simplify it because it is very interesting...		We changed the representation of this diagram to make it clearer. We also explain the figure caption
						Figure SPM 5: (1) explanation of the figure should be given in the text and not so extensively in the title ("Overall, 67% of publications providing evidence on the status and trends of NCPs reported decreasing trends, which was similar to the trends reported by ILKP sources. 22% of publications reported increasing trends. There was variation between NCPs and ECA sub-regions, but not across NCP categories."); (2) Explanation should be developed further. (3) Also, to the reader it is not clear, what the numbers mean (for mixed, decreased, stable and increased means), upper left. Number or proportion (of what) of publications?		We changed the representation of this diagram to make it clearer. We also explain the figure caption
Germany	SPM	17	453	17	462			We changed the representation of this diagram to make it clearer. We also explain the figure caption
WWF Norway	SPM	17	453	17	462	Figure SPM 5: It's not clear if the ECA bar is a summary of the 4 previous bars (WE, CE, EE & CA), or if it is a summary of studies done specifically in the ECA region as a whole.		We changed the representation of this diagram to make it clearer. We also explain the figure caption
France	SPM	17	453	17	460	Complete the captions : needs a unit (%?), comment why for some items, there is only a regional value, comment the fact that central Asia is not well documented; comment the corpus		We changed the representation of this diagram to make it clearer. We also explain the figure caption
						This figure is important but difficult to read. Summary tables on similar topics can be found in the recent interim report of the French national ecosystem assessment : http://www.ecologie.solidaire.gouv.fr/sites/default/files/Th%C3%A9matique%20-%20Rapport%20interim%20-%20A9diestre.pdf		We changed the representation of this diagram to make it clearer.
France	SPM	17	453	17	462	Is the work of the MAES working group part of the study mentioned in this table? See e.g. : http://biodiversity.europa.eu/maes and more particularly http://catalogue.biodiversity.europa.eu/uploads/document/file/1227/lbna27143enn.pdf		All the literature is part of this figure, including MAES
UK: Andrew Stott	SPM	17	453	17	462	This is a helpful summary but a bit overwhelming. Would it be better to separate out each sub-region and not compress into five columns?		We changed the representation of this diagram to make it clearer.
UK: Mark Diamond	SPM	17	453	17	462	SPM5: the use of the proportion of literature that showed increasing trends seems, without more information, to be potentially biased.		We changed the representation of this diagram to make it clearer.
Norway: Nina Vliik	SPM	17	453	17	461	Fig SPM 5: not so easy to grasp, not intuitive. Are there ways to make this easier to understand? I understand from the text what it is meant to illustrate (trends in NCPs) but the figure itself is not easy to understand		We changed the representation of this diagram to make it clearer.
						Fig SPM 5. There is no reference to the figure in the text. It is not clear how the results from different ECA subregions lead to the overall ECA result. Is ECA an average or sum of the subregions? In hab creation there is only one subregion (W Europe) but the ECA looks different. Why are they not the same?		We changed the representation of this diagram to make it clearer. Now it is well cited in the text
Finnish Government	SPM	17	453	17	462			Done
Robert Watson	SPM	17	454			Replace 'NCPs' by 'NCP'		Done
Robert Watson	SPM	17	456			Replace 'NCPs' by 'NCP'		Done
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	17	460	17	461	Figure SPM5: 67% + 22% = 99%; what about the remaining 1%?		We changed the representation of this diagram to make it clearer.
Switzerland: José Romero	SPM	17	460	17	460	Figure SPM 5 is too complicated. Please simplify it.		We changed the representation of this diagram to make it clearer.
EU: Markus Erhard (EEA)	SPM	17	461			The use of blue colors for "mixed" vs. Red - yellow - green for bad to good is a bit confusion. May be grey instead of blue would be a better choice because blue in this context usually indicates "very good"		We changed the representation of this diagram to make it clearer.
Robert Watson	SPM	17	462			Replace 'NCPs' by 'NCP'		Done
Yorick Reyjol	SPM	18	463	19	536	Too much text, not enough Tables/Figures...		It is now extensively revised for clarity, style and content. All paragraphs are also much shorter.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	18	463	19	533	Sections B4/B5/B6 - and especially the bold sections should be written in an as systematic and structured way as possible, and that the paragraphs are carefully checked on whether they do not convey hidden unwanted messages. For instance if the introductory sentences to these paragraphs differ it suggests that the mechanisms differ. It would be good to also list the COMMON mechanisms of biodiversity threats in terrestrial, marine and freshwater systems. There is clear evidence for some common threats across terrestrial, marine and freshwater systems such as habitat destruction, pollution, climate change, overharvesting and exotic species. In a second sentence it might then be good to focus on biome-specific causes of biodiversity decline (eg deforestation in terrestrial, overfishing in marine systems, ...)		Thank you for this valuable comment. We have now revised with the intent to follow the same structure and type of key messages throughout.
						Sections B4, B5 and B6 on Status and trends of terrestrial, marine and freshwater biodiversity: All three of them need to be thoroughly revised and rewritten, in particular in parts re. the Habitats and Birds Directives: <ul style="list-style-type: none"> • reporting results are expressed as % of assessments, and not % of species or habitats as in the text. • the word 'ecosystem' is used in some places instead of 'habitat', which is particularly misleading due to the use of 'ecosystems' in another context in other parts of the text. • all the values of status and trends should be re-checked with the EEA 2015 report 'State of nature in the EU' (https://www.eea.europa.eu/publications/state-of-nature-in-the-eu). 		We have checked all values to ensure they are as reported in the EEA report, and have replaced the term ecosystem with habitat following terminology in the EU Habitat Directive and the EU biodiversity plan. We also now clarify that we refer to assessments as opposed to population or species
EU: Katarzyna Biala (EEA)	SPM	18	464		489			Deleted "extremely diverse"
Thomas Brooks	SPM	18	464	18	464	Delete "not only extremely diverse, but also". They are not particularly diverse compared to tropical regions.		Deleted "extremely diverse"
WWF Norway	SPM	18	464	18	465	This should be specified further. How large % of terrestrial species and ecosystems are threatened and declining?		Now reported
Norway: Nina Vliik	SPM	18	464	18	464	Consider the word "extremely". As compared to? Seems a bit value laden		removed

Thomas Brooks	SPM	18	465	18	466	As above, NB that the Aichi Targets do not belong to the CBD alone (so delete "Convention on Biological Diversity" here); and if Aichi Target 12 is mentioned with respect to species, Aichi Target 5 also be mentioned with respect to ecosystems.	Agreed, and corrected in the box where they are now all treated.
Denmark	SPM	18	465		466	delete sentence. The assessment is not mandated to conclude on the progress on aichi-targets	It is actually as per the scoping document
Robert Watson	SPM	18	466			Why only mention Aichi target 12	we now report on Aichi target 12 and 13, as per scoping document we have to follow
UK: Andrew Stott	SPM	18	466	18	469	Within the EU?	Across all ECA, we feel in the revised version is clearer
Robert Watson	SPM	18	470			Please list the 4 hot spots	Deleted
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	18	470	18	471	Add "species within" to read "ca. 25% of species within selected animal and plant groups", surely?	deleted
Thomas Brooks	SPM	18	470	18	471	Add "species within" to read "ca. 25% of species within selected animal and plant groups", surely?	deleted
WWF Norway	SPM	18	470	18	470	How many global biodiversity hotspots are there in total? Saying that ECA hosts 4 of the global biodiversity hotspots might not mean much to policy makers without a reference frame	we deleted the reference altogether
Stuart Butchart	SPM	18	470			Important to keep this text on status and trends in extinction risk.	Thank you for this valuable comment. We have now revised with the intent to follow the same structure and type of key messages throughout.
Robert Watson	SPM	18	471			What does selected mean?	it has been deleted
Robert Watson	SPM	18	471			After in the region add ', i.e., endemic'	we felt that it was not necessary to introduce a word if the level of endemism was only going to be reported here
UK: Andrew Stott	SPM	18	471	18	473	is regional extinction when applied to ECA a meaningful concept?	Yes as it downscales the global targets to the ECA level and reports on the ECA share of responsibility towards global biodiversity targets. However we have eliminated the text on extinctions and focussed on extinction risk and population trends of extant species
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	18	472	18	474	Excellent use of these data; very important to retain. Add "according to the IUCN Red List of Threatened Species" after "extinction".	thank you
Thomas Brooks	SPM	18	472	18	474	Excellent use of these data; very important to retain. Add "according to the IUCN Red List of Threatened Species" after "extinction".	thank you
Robert Watson	SPM	18	473			What is the total number of invertebrate species and what about trends in other terrestrial species	that number is unknown. We have now removed all text on extinctions anyway.
Adriano Mazziotta	SPM	18	473	18	473	Do you refer to 30% of vertebrate species here? This should be stated.	it referred to comprehensively assessed terrestrial species, from all taxonomic groups endemic of ECA but now revised to report only global estimates (39%)
UK: Andrew Stott	SPM	18	473	18	474	Excludes migratory species	It doesn't actually, only those that spend part of their life-cycle outside ECA. There are several ECA endemics that are migratory.
Norway: Nina Vik	SPM	18	473	18	473	Considering the 500 year perspective used as a base for number of extinctions in the region. Have the other regional assessments used a similar baseline?	We believe so as it's the standard level for IUCN assessments
Robert Watson	SPM	18	475			Can you be more specific – please quantify the changes in extent of some specific ecosystems	we now do so for all 3 realms
UK: Andrew Stott	SPM	18	475	18	476	This is rather vague statement. Some further examples of %decline would be useful. Over what timescale.	we now do so for all 3 realms
Adriano Mazziotta	SPM	18	477	18	477	Replace "sets" with "communities"	done, and now in A5
André Mader	SPM	18	481	18	482	Are these percentages of the subregions that are mentioned, or of the region as a whole?	the sub-regional share of all specie
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	18	481	18	485	Excellent use of these data; very important to retain.	thank you
Thomas Brooks	SPM	18	481	18	485	Excellent use of these data; very important to retain.	thank you
Robert Watson	SPM	18	483			Why are there high percentages of threatened in Macaronesian islands when the earlier sentence noted that the ecosystems in Macaronesian Islands were not in decline	Being threatened and declining are different matters, they can be improving but still highly threatened with extinction, which is indeed the case here
Adriano Mazziotta	SPM	18	486	18	489	It would be informative to know the period for which the trends were evaluated.	now reported (2007-2012 relative to the 6 years earlier)
UK: Andrew Stott	SPM	18	486	18	488	Need to be clear than Annex I and II trends are only within the EU	yes, revised now
UK: Andrew Stott	SPM	18	486	18	488	Provide a time period for these trends	done, see reply to line 948
Robert Watson	SPM	18	487			Ecosystem types: Which ecosystems are improving which are still declining – policymakers need details not just general statements	we give the detail in SPM figure 5 and in the chapter
EU: Sophie Condé	SPM	18	487		488	Facts related to EU Habitat directive: Difficult to understand how the different categories have been summed; but seems wrong, if the point is to sum up "Unfavorable-improving and Unfavourable-stable", it should be: "37% of habitats assessments and 24% of species assessments related to annexes I and II of the EU.... versus 30% and"	Correct, we have extensively revised, clarified that we refer to assessments and checked and edited the numbers where needed
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	18	488	18	488	add "this is a first step to put EU Countries" otherwise it seems we will reach the target doing business as usual.	sentence now removed
UK: Andrew Stott	SPM	18	488	18	489	Reference to Aichi target rather than/as well as EU biodiversity target	following this we now refer only to Aichi targets
Robert Watson	SPM	18	489			Why mention a EU target versus the Aichi targets – must be an easy target as you have said that the EU will not achieve Aichi target 12.	We have now dropped the EU target, and yes, it's easier to achieve
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	18	489	18	489	Add a short paragraph along the lines of "In the ECA region, the total coverage of protected areas is 10%, with 14% of its terrestrial area and 4% of its marine area being protected (well established). Much more important than protected area coverage per se, however, is the degree to which important sites for biodiversity are covered by protected areas (well established). As of 2015, the proportion of key biodiversity areas fully covered by protected areas in the ECA region is 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas (well established)." based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	we report on PA extent in section C now, but not on KBA coverage which is left for the chapter due to space constraints
Thomas Brooks	SPM	18	489	18	489	Add a short paragraph along the lines of "In the ECA region, the total coverage of protected areas is 10%, with 14% of its terrestrial area and 4% of its marine area being protected (well established). Much more important than protected area coverage per se, however, is the degree to which important sites for biodiversity are covered by protected areas (well established). As of 2015, the proportion of key biodiversity areas fully covered by protected areas in the ECA region is 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas (well established)." based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	we report on PA extent in section C now, but not on KBA coverage which is left for the chapter due to space constraints

Stuart Butchart	SPM	18	489			Add a short paragraph along the lines of "In the ECA region, the total coverage of protected areas is 10%, with 14% of its terrestrial area and 4% of its marine area being protected (well established). Much more important than protected area coverage per se, however, is the degree to which important sites for biodiversity are covered by protected areas (well established). As of 2015, the proportion of key biodiversity areas fully covered by protected areas in the ECA region is 37.5% of Alliance for Zero Extinction sites and 26.44% of Important Bird & Biodiversity Areas (well established)," based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	we report on PA extent in section C now, but not on KBA coverage which is left for the chapter due to space constraints
Robert Watson	SPM	18	491			What about ocean acidification which is a separate issue from climate change	This message has been completely rewritten. Ocean acidification is considered in a different message.
EU: Katarzyna Biala (EEA)	SPM	18	491	19	513	Sections B4, B5 and B6 on Status and trends of terrestrial, marine and freshwater biodiversity: All three of them need to be thoroughly revised and rewritten, in particular in parts re. the Habitats and Birds Directives: • reporting results are expressed as % of assessments, and not % of species or habitats as in the text. • the word 'ecosystem' is used in some places instead of 'habitat', which is particularly misleading due to the use of 'ecosystems' in another context in other parts of the text. • all the values of status and trends should be re-checked with the EEA 2015 report 'State of nature in the EU' (https://www.eea.europa.eu/publications/state-of-nature-in-the-eu).	see response to comment at line 919, the comments are identical
France	SPM	18	491	18	492	Climate warming is obvious but neither eutrophication nor climate change has increased exponentially during the 20th century. There has been varying rates of change all along the 20th century and beyond, included periods exhibiting temporary temperature decrease. Use the word "drastically" which is more accurate	Agreed. The message has been completely rewritten and this statement clarified.
Robert Watson	SPM	18	492			Replace 'exponentially' by 'significantly'	The message has been completely rewritten and this statement clarified.
Robert Watson	SPM	18	492			Delete 'further'	The message has been completely rewritten and this statement clarified.
Switzerland: José Romero	SPM	18	492	18	492	Is the growth of these drivers really "exponential"?	No. The message has been completely rewritten and this statement clarified.
Robert Watson	SPM	18	495			Define recovery – which aspects are recovering	This has been clarified.
Robert Watson	SPM	18	499			Implications for Aichi targets and SDGs	Such implications are now summarised in a specific box.
Robert Watson	SPM	18	500			Is fishing down the trophic chain, i.e., changes in the size distribution and age structure, included in the issue of distribution or is that simply spatial distribution	Here, spatial distribution was meant. Body size is treated elsewhere.
André Mader	SPM	18	501	18	501	This is the only time that the term "native biodiversity" is used in the SPM. Perhaps it should be used more consistently throughout?	Terms were checked for consistency.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	19	505	19	511	Excellent use of these data; very important to retain.	The message was rewritten. The very useful IUCN red list data are presented in messages on species trends.
Thomas Brooks	SPM	19	505	19	511	Excellent use of these data; very important to retain.	The message was rewritten. The very useful IUCN red list data are presented in messages on species trends.
Robert Watson	SPM	19	507		511	I would significantly rephrase this sentence because it underplays the seriousness of the situation. I would suggest text along the following lines – "Of the 31% of fish species with good trend data, 8.4% have declining populations (i.e., 27%), 21.5% show no trend (i.e., 70%) and only 1.7% are increasing (i.e., 3%). This reformulations shows that of those fish species with good data, nearly a third are in decline.	The message was rewritten. The very useful IUCN red list data are presented in messages on species trends.
Robert Watson	SPM	19	515		533	I would significantly rewrite these messages – the seriousness of the problem is obscured by the presentation of the numbers. The bolded paragraph highlights the fact that the habitat loss target is likely to be met but far more important is that almost none of the systems are near conservation status – that is what should be highlighted. Also the key message is not that 76% of freshwater fishes and 83% of freshwater molluscs have unknown populations – the key message is that of the 24% of fish that have good data, 70% of them are declining. These are the messages for the bold paragraph. I suggest some of the following text is used: Freshwater species and habitats are in general the most threatened in the ECA region (established but incomplete). The prognosis for freshwater ecosystems in ECA is, in general, negative and none of the respective regional and global biodiversity targets are on track to be met. 66% of freshwater habitats in the EU have an unfavourable conservation status, with 86% of wetlands, mires and bogs having an unfavourable conservation status (well established). Of the 24% of fish species that have good data, 70% of their populations are declining, and amphibians and freshwater invertebrates are in critical condition. Also please use this approach to the numbers in the unbolded paragraph.	the whole key message has been entirely rewritten following this and other comments.
EU: Katarzyna Biala (EEA)	SPM	19	515	19	533	Sections B4, B5 and B6 on Status and trends of terrestrial, marine and freshwater biodiversity: All three of them need to be thoroughly revised and rewritten, in particular in parts re. the Habitats and Birds Directives: • reporting results are expressed as % of assessments, and not % of species or habitats as in the text. • the word 'ecosystem' is used in some places instead of 'habitat', which is particularly misleading due to the use of 'ecosystems' in another context in other parts of the text. • all the values of status and trends should be re-checked with the EEA 2015 report 'State of nature in the EU' (https://www.eea.europa.eu/publications/state-of-nature-in-the-eu).	see response to comment at line 919, the comments are identical
WWF Norway	SPM	19	515	19	515	This sentence is ambiguous. Are freshwater species and habitats more threatened in the ECA region than in the other three regions (Africa, the Americas, Asia & the Pacific), or are freshwater species and habitats more threatened in the ECA region than other species and habitats in the ECA?	it is about other species and habitats, it should be evident now
France	SPM	19	517	19	520	The text reads : «none of the respective regional and global biodiversity targets are on track to be met. The only exception to this is CBD target 5 (halving the rate of habitat loss by 2020), which is on track to be met in EU countries (...). It would be useful to clarify which are the regional and global targets that are not on track to be met, in order to better understand what is not included in the exception» (which seems fairly large, if one considers only freshwater ecosystems in Europe).	now deleted
Denmark	SPM	19	518		522	delete both sentences. Same rationale as above.	deleted
EU: Sophie Condé	SPM	19	523			Facts related to EU Habitat directive: Difficult to understand how the different categories have been summed; but seems wrong, if the point is to sum up "Unfavorable-inadequate and Unfavourable-bad" it should be: "73% of freshwater habitats assessments in the EU have an unfavourable conservation status"	thank you, now corrected
Thomas Brooks	SPM	19	523	19	524	It's not clear what "conservation" refers to here. Delete (twice) - unnecessary.	conservation status is a term used by the EU for its directive, at any rate we removed the sentence
EU: Sophie Condé	SPM	19	524			"... of which 85 % of assessments have an unfavourable conservation status."	replaced with "mire and bogs being the most critical"
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	19	525	19	530	Excellent use of these data; very important to retain.	thank you
EU: Ole Ostermann, JRC	SPM	19	525	19	527	"At least 37% of European freshwater fishes are threatened and 4% are near threatened. 17% of European freshwater fish species are declining, while 1% is increasing and 6% are stable. There is insufficient knowledge to assess population trends for the remaining 76% of the species." This adds up to more than 100%? Please review.	sentence removed, at any rate this should not add to 100% as some figures are about status (threatened or not) and other about population trend (increasing, decreasing)
Thomas Brooks	SPM	19	525	19	530	Excellent use of these data; very important to retain.	thank you

						What do the percentage intervals represent, and why are they being used rather than fixed percentages? If the intervals represent scenarios, what are these scenarios?	they reflect the uncertainty given by the species that are data deficient, now clarified with the sentence (depending on whether or not Data Deficient species are considered threatened)
WWF Norway	SPM	19	529	19	530		
Germany	SPM	19	530	19	532	River engineering is another important reason for the destruction of freshwater habitats.	thank you, now included
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	19	531	19	532	it is important to also list "habitat destruction by agriculture". Agricultural intensification can have devastating impacts on freshwater systems, and may worldwide be perhaps the strongest threats on freshwater systems, e.g. destruction of wetlands by direct conversion into agricultural land (a key problem in many areas around the world), the absence of buffer zones in riparian habitats, ...	indeed, now included
Robert Watson	SPM	20	537			Link this figure to some text. Figure caption needed that explains the categories, i.e., Ex means extinct, CR means critically threatened, EN means endangered, ext. I do not understand the numbers on the right hand side of the figure – how do I relate the ECA numbers to the sum of the CWE, EE and CA numbers? Also how was the % threatened numbers calculated – they appear to be the sum of CR+EN+VU plus a percentage of NT	we have entirely revised the caption for clarity. The numbers are CR+EN+VU plus a proportion of DD equal to the proportion of data-sufficient that are threatened (CR, EN, VU). This assumes that DD are threatened in the same proportion as data sufficient
André Mader	SPM	20	537	20	543	It may be more effective to stick to one graphic (the simpler SPM 7?). For both graphics it may be helpful to state whether they refer to terrestrial species, freshwater, marine or all.	we decided to keep separated status from trends to not mix together very different indicators and narratives but they are now 2 panels of the same figure (SPM 5)
Germany	SPM	20	537	20	539	Figure SPM 6: What do the abbreviations "EX, CR, EN, VU, NT, DD, LC" stand for?	now explained in the caption of figure SPM 5
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	20	537	20	539	SPM6: Legend needs to be expanded	we have entirely rewritten the caption of SPM 6 (now 5) for improved clarity
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	20	537	20	544	Excellent use of these data in Figs SPM 6 and SPM 7; very important to retain.	
EU: Ole Ostermann, JRC	SPM	20	537	20	538	"Figure SPM 6: Overview of conservation status assessed as IUCN extinction risk of species in the 537 Europe and Central Asia region". I presume this refers to freshwater species?	this is for all species
EU: Ole Ostermann, JRC	SPM	20	537	20	542	The text does not refer to Figure SPM 6 and Figure SPM 7.	now addressed, (new fig SP5)
Thomas Brooks	SPM	20	537	20	544	Excellent use of these data in Figs SPM 6 and SPM 7; very important to retain.	thank you
France	SPM	20	537	20	539	Absolutely unclear, though this is probably one of the most interesting Figure of the report. Reword and make captions more precise. This could be presented on a map. To the extent that halting the extinction of species is the related objective, this figures should clearly emphasize where the extinction of species is taking place. The choice of also presenting the conservation status of endemic species seems to be a good choice. Is there a reason to distinguish animal and vegetal species ?	we have entirely revised the caption for clarity and also added a map with pie-charts of extinction risk distribution for each subregion
Stuart Butchart	SPM	20	537			Important to keep Figures SPM6 & SPM7 on status and trends in extinction risk	thank you
Robert Watson	SPM	20	541			Please link this figure to some text, and to be candid I do not understand the figure – it needs some text and a legend.	we have entirely revised the caption for clarity and also added a map with pie-charts of extinction risk distribution for each subregion. The figure is now cited in the text.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	20	541	20	543	SPM7: by showing change since 1993 is potentially misleading, because biodiversity was already severely threatened in 1993. It would be important to, in one way or another, visualize that the threat of extinction in 1993 was already very high compared to "background levels". It may perhaps not be easy to do this (probably need to refer to other studies or instances than IUCN ?) but it is important to visualize this so that the message cannot be wrongly interpreted: the situation in 1993 was far from ideal and things did not become better.	we agree that the baseline could be misleading but this is the first data-point we have for extinction risk across large species groups for ECA, and for the whole world actually
Adriano Mazziotta	SPM	20	541	20	541	Explain in the legend of Figure SPM6 what is the red bar in each group of species	done now
France	SPM	20	541	20	542	Definition of the index displayed?	included in the caption of new figure SPM 5
Sweden: Hannah Östergård	SPM	20	541			This figure would be too hard to interpret for many actors and policy makers	we have entirely redesigned the figure for clarity and added a caption that now clearly describe the index and its trend
Yorick Reyjol	SPM	20	544			Is it possible to provide scenarios related to climate change? it seems to me they are clearly lacking...	key messages C2,C5,C6 deal extensive with this topic for biodiversity and NCPs
Robert Watson	SPM	21	545			Overall a good section	thanks!
Philippe Charrier	SPM	21	545			Whole section C: There should be a quantification/percentage of the causes that are illegal for each paragraph, when it can be done.	Illegal causes =? We have added lots of quantifications.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	21	545	27	749	Pressure from different sectors (beyond agriculture)/activities should be listed - e.g. International trade; Industrial activities	International trade is mentioned in all new KMs C1-4.
Sweden: Hannah Östergård	SPM	21	545	21	545	Entire paragraph C. In regards to biodiversity land use change need to be in focus when the additive effects of other drivers are discussed. Effects of climate change will never be correctly interpreted if separated from land use change. Mitigation of climate effects on BD will indeed involve management through land use change and BD as one of the most important tools in climate change adaptation needs to be highlighted	Thanks. We have stressed land use change in new C1. The interplay between LUC and climate change and other drivers are much more spelled out in the Executive Summary, there was too little space in the SPM. However, how to use LUC for CC adaptation belongs to Chapter 6.
Robert Watson	SPM	21	547			Land use change and climate change: This is inconsistent with line 567 – I do not believe the evidence supports climate change being one of two main drivers to date or possibly at present for most ecosystems – I recognize that climate change could be one of the two main drivers in the future.	Has been changed
André Mader	SPM	21	547	21	548	The first sentence might be unnecessary, as it is already stated in C1. Instead, it might be useful to start by simply stating that direct and indirect drivers of biodiversity loss exist.	Has been changed
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	21	547	21	547	"main": is it well established that out of the "big five" these two are the main ones?	Has been changed. We no longer emphasise these two although they get one whole KM on their own (C1 and C2).
EU: Karin Zaunberger	SPM	21	547			also include natural resource extraction, pollution and IAS	yes, see new C3
Marie Stenseke	SPM	21	547		561	References needs to be added	Yes, has been changed
Thomas Brooks	SPM	21	547	21	563	Statements not consistent between these two lines. Add "natural resource extraction, pollution, and invasive alien species" into line 547.	Yes, has been changed
André Mader	SPM	21	549	21	549	According to the figure, direct drivers are also influenced by other direct drivers (not only by indirect drivers).	Yes, correct.
UK: Andrew Stott	SPM	21	549	21	550	Not sure what 'comprehensive combinations' means?	Yes, has been changed
UK: Andrew Stott	SPM	21	550	21	554	"and between different NCPs" rather than "and NCPs"	Yes, has been changed

Norway: Nina Vik	SPM	21	550	21	550	"have hardly been considered in decision making". Has this been studied? Consider language	Yes, has been changed
Robert Watson	SPM	21	552			Replace 'NCPs' by 'NCP'	Yes, has been changed
Robert Watson	SPM	21	555			Good figure but label the individual boxes (direct and indirect drivers)	Figure has been deleted
Germany	SPM	21	555	21	560	The linkages between drivers look very generic. Can you clarify in the graph box for direct and indirect drivers if there are some aspects which are specific for the ECA region as compared to other regions?	Figure has been deleted
EU: Karin Zaunberger	SPM	21	555		561	Figure SPM8 is rather confusing: question about the added value	Figure has been deleted
Thomas Brooks	SPM	21	555	21	555	Very important to retain consistency with IPBES definition of "biodiversity", which includes "ecosystems" (http://www.ipbes.net/sites/default/files/downloads/IPBES_2_INF_2_Add.1.pdf ; and Africa assessment SOD Chapter 1, Page 5, Lines 142-145). Therefore, change "ecosystem" to "biodiversity" here.	We have done this in most parts. Sometimes however the reviewed literature uses the word ecosystems and then we also do.
France	SPM	21	555	21	556	The figure does not reflect the text. Is it necessary?	Figure has been deleted
UK: Mark Stevenson	SPM	21	555	21	561	Interesting figure (SPM 8) although wondered why not link this to the CBD drivers, pressure, state, benefit framework?	Figure has been deleted
UK: Diana Mortimer	SPM	21	555	21	fig 8	Economic drivers also affect cultural drivers - eg as people become more affluent and urbanised their cultural requirements change.	Figure has been deleted
Norway: Nina Vik	SPM	21	555	21	558	Fig SPM 8. Such a figure could be useful, but needs to be more "concrete". As it stands it is a bit "vague" and not so useful for decision makers	Figure has been deleted
Senka Barudanovic	SPM	21	555		559	Fig SPM 8: What is the basis, ie the level of confidence for the preparation of this figure?	Figure has been deleted
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	21	557	21	559	SPM8: not sure whether this figure is necessary; it is a bit vague in its message. It would probably need a lot of explanation, which is not given. We, for instance, do not understand the arrow from "invasive alien species" to "natural resource extraction"	Figure has been deleted
Marie Stenseke	SPM	21	557		559	Some arrows seems to be missing: in the upper left box arrows from economic drivers, institutional drivers and Science & technology drivers to cultural drivers. In the bottom left box: one arrow from invasive species to land use change, and arrows from natural resource extraction as well as pollution to land use change. Overall, the arrows needs, however, to be based on scientific literature.	Figure has been deleted
Robert Watson	SPM	21	562			C1 should be preceded by a new C1 for indirect drivers – the current text attempts to link some of the indirect drivers to the direct drivers but it could be strengthened and with more quantification – quantification of historic and projected trends in both indirect and direct drivers would significantly strengthen this discussion – use figures or tables	The four new KMs treat different direct drivers but all mention some indirect drivers. C4 focuses on indirect drivers.
André Mader	SPM	21	562	22	593	This message seems to merit more detail on each five drivers.	Has been elaborated
Sweden: Hannah Östergård	SPM	21	562	26	709	Important to distinguish between, negative and positive, direct and indirect, societal and natural drivers on BD and NCPs. Suggest that figures are simplified and more distinctly associated to IPBES contextual framework.	Figure has been deleted
Robert Watson	SPM	21	563			What about ocean acidification	Ocean acidification is treated as an effect of climate change in C2
Germany	SPM	21	563	22	577	The suggestion is to separate agriculture and forestry in this key message. In contrast to the agricultural sector, in forestry in general there is no such thing as intensification, when it comes to technology, fertilizer use, pesticides, etc. In the forest sector more natural forests are currently under management, however this is according to commonly agreed codes of sustainable forest management. And natural forests often stay natural forests. In many countries the document pointed out that the forest area is increasing. Forests stocks are increasing also in many parts of CE, EE and WE which also indicates that there is no such thing as intensification. There is a tendency towards less primary forests but this shouldn't be mixed with the intensification in the agricultural sector.	There are different trends in forest management across Europe and Central Asia. We stressed one of the trends - intensification of forest management, which was highlighted in many peer-reviewed publications, especially, because it affects biodiversity and NCPs.
UK: Diana Mortimer	SPM	21	563	21	563	"natural resource extraction", natural how?	"natural" as opposed to human resources and financial resources
Robert Watson	SPM	21	565			Climate change is of particular importance: Past, present or future?	Has been clarified
EU: Karin Zaunberger	SPM	21	565		566	Climate change accelerates, interacts and exacerbates other drivers such as ...	Has been clarified
Thomas Brooks	SPM	21	565	21	566	Delete "is of particular importance since it" unless there is explicit evidence for this. The fact that it accelerates other drivers does not make it "of particular importance" per se.	Has been clarified
France	SPM	21	565	21	566	And land-use change impact is impacted by climate change. We suggest to delete the last sentence in bold and to replace by a statement about the complex interactions of all the drivers mentioned. Interactions between climate change and IAS and between land degradation and climate change could be briefly developed as examples in the following paragraphs.	Has been clarified in the Executive Summary of the Chapter 4 but there was no space for this in the SPM.
UK: Andrew Stott	SPM	21	565	21	566	This invasion may also be considered adaptation as species adjust distributions to new ranges?	Yes, we discuss that invasive alien species react to climate change in C2-3 but mainly it is a result of global trade and global tourism
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	21	566	21	566	We propose to add "Habitat destruction is the main direct driver of terrestrial biodiversity loss". This is stated literally in line 568 but in the summary through the way of formulation it seems that attention is drawn to climate change. It is important for policy makers to realize that direct habitat destruction is a key threat to biodiversity – efforts are needed to deal with that threat that will be at least equally important as mitigating climate change.	Yes, it is highlighted in the first sentence of C1 now.
Anna-Rosa Asikainen	SPM	21	567	21	568	Even though some human actions have negative impacts on biodiversity, many of those actions also benefit nature. E.g. agriculture is needed in order to maintain some rare habitat types and their species. In addition, sustainable forest management can contribute to climate change mitigation. In general, these positive impacts should be mentioned in SPM and in the assessment report more often.	Yes, highlighted now under C1
UK: Andrew Stott	SPM	21	567	21	569	But this green area may have low biodiversity?	Has been deleted
Robert Watson	SPM	21	569			What % of green area does this represent – how much green area has been converted since world war 2 – and what are the projected changes over the next 50 years - please define green area	Has been deleted
Henk van Zeijts	SPM	21	569	22	572	This is not well-established. In Chapter 4, little evidence is provided for the statement that globalisation (low and unstable prices) has driven to intensification of agriculture. It is also contrary to the statement that agricultural protection under the CAP (high, stable prices) has also led to intensification. So which one is true? To overcome this, it is important to be more precise about what is meant by intensification in both cases (e.g. farm enlargement with globalisation and increased inputs and yields per hectare under CAP protection).	Thanks. We try to cover both aspects. Since 1995 the CAP support are decoupled from harvest levels, therefore NOT directly supporting intensification. Loss of traditionally farmed land is due to low prices. This is better summarised in the Executive Summary of chapter 4.
EU: Anne Teller	SPM	21	569			What does mean the sentence 'In the EU alone, 86000 ha of green area are lost every year'? What is a 'green area'?	Has been deleted
EU: Frank Wugt Larsen (EEA)	SPM	21	569			Yes, please clarify 'green area' and consult latest result in the land take indicator of the EEA https://www.eea.europa.eu/data-and-maps/indicators/land-take-2/assessment-1 (published 2017)	Has been deleted
The Netherlands: Astrid Hilgers	SPM	21	569	22	572	This is not well-established. In Chapter 4, little evidence is provided for the statement that globalisation (low and unstable prices) has driven to intensification of agriculture. It is also contrary to the statement that agricultural protection under the CAP (high, stable prices) has also led to intensification. So which one is true? To overcome this, it is important to be more precise about what is meant by intensification in both cases (e.g. farm enlargement with globalisation and increased inputs and yields per hectare under CAP protection).	Thanks. We try to cover both aspects. Since 1995 the CAP support are decoupled from harvest levels, therefore NOT directly supporting intensification. Loss of traditionally farmed land is due to low prices. This is better summarised in the Executive Summary of chapter 4.
UK: Andrew Stott	SPM	21	569	22	572	Cause of intensification is not just globalisation?	True. Has been clarified
Robert Watson	SPM	22	571			Should the comma be after land or after extensification – I cannot quite understand the sentence as written.	Has been deleted
Marie Stenseke	SPM	22	571		572	"and abandonment of less productive and/or more remote land" refers only to agricultural land (4.5.2), not to forest land as it is indicated in the beginning of the sentence. Reformulation needed	Yes, done.
Robert Watson	SPM	22	572			Define semi-natural land	changed to semi-natural grasslands = semi-natural habitats.
UK: Andrew Stott	SPM	22	572	22	573	Important to say what the end point is for this trend (200 to when?) because the most recent data may be several years old.	Has been deleted

Senka Barudanovic	SPM	22	573		574	Communities that are currently in abandoned agricultural areas can not be considered as forests. These are in most cases the vegetation stages, which will take a long time to develop the functions of forest ecosystems	Has been deleted
WWF Norway	SPM	22	574	22	575	The timeframe should be specified. Forest cover has increased from 1990 to when?	Has been deleted
UK: Andrew Stott	SPM	22	574	22	575	1% seems quite a lot in 20 years?	Has been deleted
Marie Stenseke	SPM	22	575		577	Clarify that this sentence refers only to agricultural land.	Has been deleted
UK: Andrew Stott	SPM	22	575	22	577	As above, need the end point to this increase - is it 1990 - 2017?	Has been deleted
UK: Andrew Stott	SPM	22	575	22	577	Yes - so not just globalisation as is stated above.	Has been deleted
UK: Tom Oliver	SPM	22	578	22	581	Climate change exacerbates habitat loss' is a statement that is only sometimes true. The context is crucially important. In some cases, the opposite may be true (e.g. for species which are at the edge of their fundamental niche and for which conditions are generally too cold, then warming trends may bring them closer to the centre of the fundamental niche, increasing their population sizes and habitat breath. Therefore this statement needs clarification. E.g. 'Climate change exacerbates habitat loss for many species'. I do not believe there is yet a robust assessment of the proportion of species for which climate change will have negative versus positive impacts, although a recent UK assessment looked at >3000 species and went some way towards this: Pearce-Higgins, J.W., Ausden, M.A., Beale, C.M., Oliver, T.H. & Crick, H.P.Q. (2015). Research on the assessment of risks & opportunities for species in England as a result of climate change. Natural England Commission Report (NECR175) http://publications.naturalengland.org.uk/publication/4674414199177216 .	Thanks. Now we write: "Climate change shifts seasonal timing, growth and productivity, species ranges and habitat location, which impacts biodiversity, agriculture, forestry, and fisheries (well established)" (4.7.1.1, 4.7.1.3)
UK: Andrew Stott	SPM	22	580	22	581	Habitat change as well?	Yes, this is a main finding in new C1
Robert Watson	SPM	22	581			Add 'and invasive species'	Done in new C3.
Jeroen Arends	SPM	22	581	22	581	This can be expanded with indicating what sort of dramatic effects CC will have on ecosystems, i.e. prolonged periods of drought; extreme weather events such as violent storms, hail, late season frost; dramatic alterations in temperatures etc. leading to losses to biodiversity and habitats thereby seriously impeding the delivery of NCP.	Thanks. Now we write: "Climate change shifts seasonal timing, growth and productivity, species ranges and habitat location, which impacts biodiversity, agriculture, forestry, and fisheries (well established)" (4.7.1.1, 4.7.1.3)
EU: Jan-Erik Petersen (EEA)	SPM	22	582			This paragraph seems to overstate the impact of hunting on species in western Europe at least. What's your evidence for calling it 'unsustainable'? However, one sees hunting ethically I would say it is pretty well regulated in western Europe and much fo Eastern Europe at least and does not really threaten species any longer (minus the illegal catch of songbirds in the Mediterranean but even then the relative role of habitat change for their population trends seems bigger). And hunting of reptiles - where and when did that happen ?!	Has been deleted
UK: Andrew Stott	SPM	22	582	22	583	How extensive are these? Are they the same through ECA?	Has been deleted
Jeroen Arends	SPM	22	583	22	583	"and often illegal hunting and fishing using a variety of damaging methods threaten....."	Has been deleted
Anna-Rosa Asikainen	SPM	22	583	22	583	"Unsustainable hunting and fishing": The sentence should be formulated so that it is clear that all hunting and fishing is not unsustainable. Hunting and other ways of using natural resources are a question of balance.	Has been deleted
UK: Andrew Stott	SPM	22	583	22	584	Again, very generalised. Need to give more specific examples of both the species and the locations. Not a universal issue.	Has been deleted
André Mader	SPM	22	584	22	584	This seems to imply that it is unsustainable purely because of the number.	Has been deleted
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	22	584	22	584	100M birds shot > all legal or also illegal hunting?	Has been deleted
Switzerland: José Romero	SPM	22	584	22	584	Are these 100 million birds hunted under legal provisions or poached?	Has been deleted
UK: Diana Mortimer	SPM	22	584	22	584	100 million birds shot- wildbirds or all birds shot? It makes a difference given how many are raised for sporting purposes and what message you are trying to convey.	Has been deleted
Sweden: Ola Inghe	SPM	22	584			The example of over 100 million birds shot is irrelevant without information on what the sustainable hunting level is. As it stands, it is pure sensationalism.	Has been deleted
UK: Andrew Stott	SPM	22	585	22	587	Yes, but on what scale? What % of water bodies are eutrophic?	Replaced by: "Phosphorous and nitrogen (except ammonia) pollution is decreasing but, due to time lags, many lakes, rivers and coastal areas in Western and Central Europe still do not have good ecological status (4.6.1, 4.6.2).
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	22	587	22	587	We disagree with the statement that "Major toxic pollutants are highly regulated in the ECA region"(p. 22, l. 587). Pollutants like endocrine disruptors, among which pesticides, are still not fully regulated (moreover: official risk assessment requirements should be reviewed in order to better integrate potential toxic effects on microbial biodiversity - amongst others)	Has been deleted
France	SPM	22	587	22	587	What are "major toxic pollutants"?	Has been deleted
Thomas Brooks	SPM	22	588	22	588	"substances" is rather vague - it would be useful to know what kinds of "substances" are being referred to here.	Has been deleted
France	SPM	22	588	22	588	what does "new substances" mean? Emerging ones might be ancient ones, the effects of which one has just become aware	Has been deleted
Yorick Reyjol	SPM	22	590			A list of the most impacting Exotic species would be useful here (at least for EU).	Has been deleted
Germany	SPM	22	590	22	593	this paragraph should be strengthened; land-locked countries in Central Asia should experience also lots of invasive /alien species traffic given the transportation pathways; also subject to increase with New Silk Road	Replaced by: " In Western and Central Europe, invasive alien species are increasing despite regulations (4.8.2, 4.8.3). In Eastern Europe and Central Asia, rates of invasion are lower than in Western and Central Europe, but are expected to increase with increasing gross domestic product and trade (established but incomplete)" (4.8.1, 4.8.2)
EU: Karin Zaunberger	SPM	22	595		596	welcome the proposed simplification of Figure SPM9	Figure has been deleted
André Mader	SPM	23	595	23	597	It might need to be reconsidered whether to include graphics in the SPM that are for Western Europe alone, especially if there is an alternative that is more broadly relevant.	Figure has been deleted
André Mader	SPM	23	595	23	597	There are actually two separate figures here, which are not linked by any arrows. This also makes for a fairly complex graphic overall.	Figure has been deleted
Unai Pascual	SPM	23	595			this diagram is difficult to follow. I suggest to simplify it.	Figure has been deleted
Yorick Reyjol	SPM	23	595			Is this complicated figure really useful in a SPM?... how does it serve <i>in fine</i> ?	Figure has been deleted
EU: Ole Ostermann, JRC	SPM	23	595	23	595	"Figure SPM 9: Causal loop diagram for land use and land cover change in Western Europe. This figure will be simplified by identifying the core group of drivers and showing their interactions." Explanation or simplification is indeed needed for a SPM. Please explain AES = agri environmental schemes ?	Figure has been deleted
France	SPM	23	595	23	596	Simplify	Figure has been deleted
Senka Barudanovic	SPM	23	595		597	Fig SPM 9: What is the basis, ie the level of confidence for the preparation of this figure?	Figure has been deleted
Marie Stenseke	SPM	23	596		599	The figure needs to be based on scientific results. Not sure it is needed if it is simplified, since it will probably then be similar to figure 8.	Figure has been deleted
EU: Markus Erhard (EEA)	SPM	23	597	23	597	missing role of subsidies / policies for intensification since significant parts of arable land is used because of subsidies and would not be competitive under global market conditions as also mentioned further down page 24 line 643	Subsidies are discussed in new C1 (agriculture) and C3 (fishing)
Norway: Jørund Braa	SPM	23	599	23	599	Consider defining "traditional land use"	Done in Executive Summary in Ch 4.
UK: Diana Mortimer	SPM	23	600	23	602	But what if these people no longer want to undertake traditional land uses (eg they want to intensify to increase profit and well-being) then material NCP are increasing. This is a loaded sentence it needs more thought on what you are trying to tell policy-makers. This introduces new, more complex terminology 'material and non-material contributions to people'. Is this different from NCPs?	More neutral language now: "Ceasing traditional land-use reduces semi-natural habitats of high conservation value (well established) and associated indigenous and local knowledge and practices

André Mader	SPM	23	602	23	603	The two concepts treated here (armed conflicts and ILK) seem disconnected. Armed conflict is an indirect driver, which could be treated separately if there were a <i>message/finding dedicated to indirect drivers</i> ; while ILK is a theme that cuts across virtually all messages/findings.	Has been changed
UK: Andrew Stott	SPM	23	604	23	607	This is sweeping generalisation and it suggest that no innovation is possible? Stick to accepted language of IPLCs and ILK. These do apply universally across the ECA. IPLCs are not present in many areas.	More neutral language now: "Ceasing traditional land-use reduces semi-natural habitats of high conservation value (well established) and associated indigenous and local knowledge and practices"
Jeroen Arends	SPM	23	607	23	607	Traditional land use is often associated with small scale and subsistence farming. But some big farms are emerging leading to loss of traditional land use and leading to land consolidation. Also, much traditional land is abandoned because people move away from the countryside to the big cities or abroad. Some villages in the countryside are dying out. On the one hand that leads to loss of traditional land use but on the other hand leads to restoration of biodiversity (although with its own sets of problems).	Yes, there could be many effects including re-wilding. We discuss this much more in the chapter and Executive Summary
Zsolt Molnár	SPM	23	607	23	607	Please add local communities. The suggested text: indigenous people and local communities to support nature.	Done (see new C1)
Robert Watson	SPM	23	608			Join this paragraph to the previous one	OK
André Mader	SPM	23	608	23	608	Use of the phrase "inappropriate policy implementation" in this context may be regarded as prescriptive.	Has been changed
UK: Andrew Stott	SPM	23	608			What does 'inappropriate mean'. Depends on perspective. Need to keep the language neutral.	Has been changed
Zsolt Molnár	SPM	23	608	23	608	Please add text on the importance of agricultural regulations and subsidies. The suggested text: Conservationists in Central and East European countries have many problems of declining traditional land use (abandonment often causes diversity decline). National and international agricultural regulations (e.g. agri-environmental schemes) are often culturally and ecologically not specific and adaptive enough. These regulations are of crucial importance for local rural livelihoods but also for the continuation of at least some traditional practices e.g. in newer EU member states. Local people need schemes that help them maintain traditional practices that are still viable in their land and also help develop tradition-based, site-specific new practices that are sustainable in our modern world especially in high nature-value areas and protected areas.	Has been changed to: "The economic viability of indigenous peoples and local communities can be supported by green tourism, demand for products derived from traditional practices and subsidies for traditional land uses (well established) (4.5.5) (Table SPM.2). Agri-environmental schemes, ecological restoration and sustainable approaches to agriculture mitigate some adverse effects of intensive agriculture (established but incomplete) (4.5.1, 4.5.2).
Jeroen Arends	SPM	23	612	23	617	Often, there is a lack of policy instruments, regulatory framework and compensation schemes to maintain the traditional landscape.	Yes. New text in C1: "The economic viability of indigenous peoples and local communities can be supported by green tourism, demand for products derived from traditional practices and subsidies for traditional land uses (well established) (4.5.5)"
Jeroen Arends	SPM	23	613	23	615	Also in Central Europe (according to the geography used by IPBES), most notably in the former Yugoslavia: pollution due to hazardous chemical and nuclear waste caused by the use of weapons and bombs.	Yes. New text in C1: "Eastern Europe, the Balkans and Central Asia have recently experienced armed conflicts, which negatively affect nature and its contributions to people (4.5.4.2)"
Germany	SPM	23	613	23	613	what about armed conflicts in Central Asia (Ferghana Valley Uzbekistan/Kyrgyzstan, but also civil war Tajikistan?)	Yes. New text in C1: "Eastern Europe, the Balkans and Central Asia have recently experienced armed conflicts, which negatively affect nature and its contributions to people (4.5.4.2)."
Germany	SPM	23	617	23	624	Central Asians comig to Europe? What about Russia? Please elaborate more on this section, as it is not clear. what is the role of migration for biodiversity? This does not become clear; what are the current trends? This paragraph is too general and vague. Please avoid value judgements ("dramatic")	Message on demographic change has been deleted due to word limits
Georgia: Salome Nozadze	SPM	23	629	23	633	Current agricultural and livestock farming practices in the South Caucasus mean that heavy rainfall and winds, unsustainable land management and agriculture practice, overgrazing, illegal cutting of windbreaks cause severe soil erosion. This is exacerbated by the impact of climate change. The result is an irretreivable loss of productive arable land and pasture, leading to natural disasters and a rural exodus.	If these "current agricultural and livestock farming practices" can be named intensive agriculture, we have assessed this in the new C1.
André Mader	SPM	24	616	24	624	Could this be part of a consolidated message/finding on indirect drivers, rather than on migration specifically? Also it lacks any information on why migration is an issue for biodiversity/NCP in ECA.	Message on demographic change has been deleted due to word limits
André Mader	SPM	24	616	24	624	This message does not link explicitly to biodiversity or NCP.	Message on demographic change has been deleted due to word limits
Switzerland: José Romero	SPM	24	616	24	624	We propose to redraft completely section C3 (in particular deleting references to potential for migration, etc.) and make reference to demographic considerations and per capita consumption.	Message on demographic change has been deleted due to word limits
France	SPM	24	616	24	616	"the role of migration" is not described as announced. Migrations play a role and migrations occur. The role is not analysed.	Message on demographic change has been deleted due to word limits
Robert Watson	SPM	24	617			Rephrase: C3. Large-scale human migration within the ECA region is expected to continue impacting on other indirect and direct drivers.	Message on demographic change has been deleted due to word limits
Brendan Coolsaet	SPM	24	617	24	624	Add a few sentences clarifying how "large migration is expected to have profound effects"	Message on demographic change has been deleted due to word limits
Unai Pascual	SPM	24	617			not clear how migration is a driver. I guess it is but needs to be shown the pathways by which different types of migration affect nature or NCP.	Message on demographic change has been deleted due to word limits
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	24	617	24	624	Add a few sentences clarifying how "large migration is expected to have profound effects"	Message on demographic change has been deleted due to word limits
Finnish Government	SPM	24	617	24	624	should climate change be considered here as having effect on migration	Message on demographic change has been deleted due to word limits
Robert Watson	SPM	24	618			Can you provide a small table that shows the historic poulation every 25 years from 1950 to 2000, and projected to 2050 for ECA and the sub-regions	Message on demographic change has been deleted due to word limits
France	SPM	24	618	24	624	So the population trends between Central Asia and Eastern Europe on one hand, and Western Europe on the other hand, will change in opposite directions. Could you describe briefly what are the different effects these opposing trends will have on biodiversity and ecosystem services?	Message on demographic change has been deleted due to word limits
UK: Andrew Stott	SPM	24	619			From 123 to 104 million. Usual to put lowest figure first?	Message on demographic change has been deleted due to word limits (it refers to a decrease in pop from 123 to 104 M)
Senka Barudanovic	SPM	24	620		621	What is the level of confidence for the statement There is a high potential for migration from Turkey and Central Asia to Eastern and Central Europe in the coming decades ? Here is necessary to look more closely at migrations within the subregion of Central Europe, as well as migrations from all subregions to the Western Europe	Message on demographic change has been deleted due to word limits
Robert Watson	SPM	24	622			Add: Turkey 'and Germany have' 3 million 'and x million' refugees...	Message on demographic change has been deleted due to word limits
Robert Watson	SPM	24	623			Add: indirect 'and direct' drivers...	Message on demographic change has been deleted due to word limits
Sweden: Cecilia Lindblad	SPM	24	623	24	624	"Large migration is expected to have profound effects:....." in what way? Explain!	Message on demographic change has been deleted due to word limits

André Mader	SPM	24	625	24	625	If there were a <i>separate message dedicated to indirect drivers</i> , this could be included there, but it may need to go beyond just the EU.	Yes, see new C4. For harmful subsidies have data also from Russia (C3). The point here is not to suggest EU is worse, only that taxes are inconsistent to the policy goals of the EU (resource efficiency, sustainable growth etc.)
Switzerland: José Romero	SPM	24	625	24	635	This section C4 contains a number of issues that have to be improved: 1) if the section is about resource efficiency, put it in the title; 2) "linear" is not sufficient to say that there is a "Linear increase..."; 3) "inconsistent policies": what is it meant? Policies that are not able to address efficiently resource efficiency? Please say it more clearly; 4) why to select only environmental taxation as one of the main drivers for resource inefficiency? Why in lines 631 and 632 make the tax system the unique responsible of the resource extraction? What about other drivers such as proactive export policies and demand side approaches? 6) make the figures and the terminology consistent with OECD data on environmental taxes.	Thanks. We do not suggest that the lack of tax reforms is the sole driver of resource extraction, there are important global trade drivers too and these are mentioned in C2 and C3. Environmental taxes are however highlighted as crucial in most reports on the Green Economy and also in EEA reports on resource efficiency, hence we include it in our assessment.
France	SPM	24	625	24	625	"the role of inconsistent policies..." is not described as announced. They play a role and they occur. The role is not analysed.	Clarified in new C4. Environmental taxes are however highlighted as crucial in most reports on the Green Economy and also in EEA reports on resource efficiency.
Robert Watson	SPM	24	626			What does linear mean?	Has been deleted (means lack of recycling)
Jeroen Arends	SPM	24	626	24	635	There is also a lack of stimulating incentives to improve efficiencies in resource use and for promoting energy efficiencies and insulation.	Yes. Tough standards could be an alternative to monetary incentives
André Mader	SPM	24	626	24	626	What is meant by "linear resource extraction"?	Has been deleted (means lack of recycling)
Unai Pascual	SPM	24	626			not clear what linear resource extraction means. Also not clear how this is associated with env. tax evolution.	Has been deleted (means lack of recycling)
EU: Karin Zaunberger	SPM	24	626		627	include after linear resource extraction: leading to overexploitation and pollution	Has been deleted (means lack of recycling)
UK: Diana Mortimer	SPM	24	626	24	627	linear resource extraction - you need to explain what you mean by that or introduce circular resource use ideas otherwise the concept will not be understood and why you are using this terminology. Language should be appropriate for non-specialist policy makers.	Has been deleted (means lack of recycling)
UK: Chris West	SPM	24	629	24	630	"Hence decoupling has not occurred when imports and exports are considered" - need to specify whether this means absolute or relative decoupling. I think the former as there is evidence of relative decoupling in some sub-regions? According to Chapter 4, this is also a whole-region summary, and some countries have may even achieved absolute decoupling?	Has been changed to: "Domestic material consumption has increased in almost all European Union countries since 2000 (except for the economic contraction in 2008), supported by growth-oriented policies (4.3.2).
André Mader	SPM	24	636	24	636	Should this not also include flows <i>within</i> the region (between countries and between subregions)?	Yes, this is emphasised in earlier parts of the SPM, here we focus on one particular inter-regional flow. Text has been changed.
Germany	SPM	24	636	24	648	is this the same across all ECA? Or more pronounced in certain subregions? Otherwise rather general	Has been changed
Switzerland: José Romero	SPM	24	636	24	648	We have serious doubts about the messages that this section provides. In fact, in a globalised world, not only global trade and circulation of goods and material CNPs promoted by the economy is a fact, but also information, advocacy and international treaties are present on matters related to material CNPs. In other words, excessive harvest levels e.g in fisheries, wood and agriculture are noticed by local populations, media, NGOs and even sometimes under regulation of international treaties, and pertinent information circulates around the world at that respect. An indicator that is increasingly referred to is the environmental footprint of nations related to imports and consumption. Therefore the statement in this section that over-harvesting and consumption is masked by global trade and substitution is not true because the information is available and circulates. What is true is that not much is done so far to prevent this over-harvesting and consumption in importing countries (you signal this in line 645 indicating that there is a delay in policy response). Therefore, what should be prominently pointed out in this section is: global trade and over-harvesting is accompanied by global circulation of information on over-harvesting; global trade by itself is not responsible of lack of policy action; it is the national and international levels (with e.g. quantified objectives for ecological footprint) and political willingness that may provide approaches for addressing this situation.	Yes, information is present and consumers may choose to buy less fish, even if prices are much lower than they would have if the consequences of overfishing in European waters could not be "masked" by imports. This is not an argument against trade. We are not a policy chapter so we don't speculate on what policy measures have the best potential to solve this issue. We just assess the drivers. Over-consumption of imported resources in rich countries is a very sensitive political issue. We have re-worded the text and we hope it is better now.
France	SPM	24	636	24	636	"the role of inter-regional flows..." is not described as announced. They play a role and they occur. The role is not analysed.	The heading of the key message has been changed, we no longer focus on inter-regional flows.
Robert Watson	SPM	24	637			Rephrase: C5. The impact of the depletion of natural resources and biodiversity and hence on nature's contributions to people	OK
Robert Watson	SPM	24	637			It is the impact that can be masked by trade – not the depletion	OK
Unai Pascual	SPM	24	637			I suggest the term off-stage ES burdens is used following http://iopscience.iop.org/article/10.1088/1748-9326/aa7392/meta	We considered this but chose: "Depletion of local mineral reserves and fish stocks is not immediately apparent due to global trade, which delays effective responses.
UK: Andrew Stott	SPM	24	637	24	639	Can this point be expressed more directly? Consumers in ECA may not be aware of impacts of their consumption on natural resources in area of production because of complex global trade patterns.	Changed to: "Depletion of local mineral reserves and fish stocks is not immediately apparent due to global trade, which delays effective responses.
Robert Watson	SPM	24	638			Should the text below note that this substitution of imported goods does two things – (i) it safeguards food security in ECA, and (ii) transfers the ecological footprint abroad – I know this footprint issue has been addressed earlier	Changed to: "Depletion of local mineral reserves and fish stocks is not immediately apparent due to global trade, which delays effective responses.
André Mader	SPM	24	639	24	639	Also national and subnational scales, where most institutions exist?	Yes. We deleted the mentioning of regional scale
Robert Watson	SPM	24	640			Replace 'excessive' by 'unsustainable'	Done.
France	SPM	24	640	24	640	replace "would" by "may". There is no proof.	True. We deleted this
France	SPM	24	646	24	648	This sentence is not very clear, mostly because of the word "technological" which today evokes informatics, computing... The sentence would be more relevant if worded as follows: "These economic drivers (tilted price signals) are exacerbated by some management practices, engineering and other technical solutions, which result in sustained harvest levels despite declining stocks, and institutional drivers such as harmful subsidies."	Thanks! We changed the formulation to: "Depletion of local mineral reserves and fish stocks is not immediately apparent due to global trade, which delays effective responses. While awareness of local resource shortages, e.g. of cod in Europe, would be expected to be prompted by increased prices, substitution masks these feedbacks in price and awareness in a global economy with inter-regional imports (established but incomplete) (4.2.5, 4.3.1, 4.4.1). Harmful subsidies to fishing and mineral extraction reduce prices and exacerbate unsustainable extraction levels despite declining stocks (well established) (4.4.1, 4.4.4). The European Union and the Russian Federation continue to pay about 6 billion USD annually in such fishing subsidies (well established) (4.4.1.3).
Switzerland: José Romero	SPM	24	649	25	676	In Chapter 5.2.2 it is explained that the majority of scenarios include direct and more prominently indirect drivers. And biodiversity conservation does not constitute the majority of the model studies. Under such circumstances, it is not the main interest of modellers. Section C6 page 24 in this section use of uncertainty qualifiers is an appropriate because it refers not finding substance but finding all documentation for example scenario studies are dominated by climate change as a single driver well established	The Key Message which is number C6 in the SOD is based on literature review of scenario studies on biodiversity in Chapter 3 as well as in Chapter 5. Across all reviews of futures studies in Chapters 2, 3 and 5, climate change was found to dominate as the single most studied driver.
EU: Karin Zaunberger	SPM	24	650		652	include <i>and the interaction between drivers is also not considered</i>	An additional sentence on interaction between drivers has been added to this Key Message in the new SPM structure
Robert Watson	SPM	24	651			This appears to be inconsistent with lines 665/666 which state that "single driver scenarios may under- or over-estimate impact	Removed from revised SPM

André Mader	SPM		24	652	24	653	Is there a contradiction here with two different confidence terms being used for apparently the same thing?	Changed to well established for both statements
France	SPM		24	653	25	676	Paragraph C6 is particularly interesting and could be the subject of more developments, inasmuch as it could usefully feed Part D	We have made the link stronger between Section C and Section D so that the governance options draws on the Key Messages on drivers, scenarios and pathways
Robert Watson	SPM		24	655			Replace 'also' by 'primarily'	Done
EU: Markus Erhard (EEA)	SPM		25	656	25	658	propose to mention land use change and intensity explicitly here because of its relative importance	Land use change and land use intensity specifically mentioned in next paragraph
France	SPM		25	659	25	661	What we understand from that sentence is that scenarios including land-use change as "a driving force on nature and NCP" would be better suited to support decision-making. Could you please provide examples of what it concretely represents (e.g. which type of data or models this requires to represent "a driving force on nature")?	We mean land use change and land use intensity acting as a driving force on nature and NCP through habitat degradation and overexploitation. It requires land use change scenarios and/or land management scenarios linked with models of biodiversity which are sensitive to changes in these land use drivers (e.g. species distribution, dispersal, composition, etc). Sentence changed to clarify meaning "land use change is overwhelmingly represented in scenarios in terms of pressures exerted on land use by policy, social, economic or environmental drivers, rather than land use change driving impacts on nature and NCP"
UK: Andrew Stott	SPM		25	663	25	663	biodiversity and ecosystem services/NCP? This assessment is not just about biodiversity.	Changed to nature and NCP to be consistent with IPBES terms
André Mader	SPM		25	664	25	665	"...between and among indirect and direct drivers...?"	Changed as suggested
Robert Watson	SPM		25	665			Bolded text states "underestimates"	This sentence has been removed from the revised SPM
Switzerland: José Romero	SPM		25	666	25	666	It is not clear why there is a need for "mitigation" (of what) and also e.g. synergies. It seems that the whole paragraph refers only (implicitly) to climate change scenarios, and not in general to single-drivers scenarios that are not climate-driven.	This sentence has been removed from the revised SPM
Robert Watson	SPM		25	668		669	This compares a single direct driver (climate change) with a broad category of indirect drivers (socio-economic) and of course climate change itself is strongly dependent on socio-economic drivers. Please rephrase.	This sentence has been removed from the revised SPM
André Mader	SPM		25	668	25	670	Is it correct to say that scenarios influence or modify something? Rather (in this case), it is the climate that may influence; or the socio-economic situation that may modify. The scenario is simply a means of demonstrating those possibilities.	This sentence has been removed from the revised SPM
Robert Watson	SPM		25	669			Please you need to link the socio-economic drivers to the direct drivers – i.e., land use change and over-exploitation, as well as pollution and invasives	This sentence has been removed from the revised SPM
Jeroen Arends	SPM		25	671	25	676	This might not be the right place for this comment but still here it is: That is true and is due to a number of reasons. First, policy making and decision taking is often sector based and not 'holistic' or interdisciplinary. Overall at all policy levels there is a lack of knowledge of and experience with NCP or ecosystem services. NCP and ES is lacking in national, regional and local policy, legislative and regulatory cross sectoral frameworks. NCP is lacking for instance in EIA and SEA. Often it appears in NBSAP but the regulatory framework and policy instruments behind it have not yet been incorporated and implemented.	These issues are covered in the revised SPM section D, particularly KM D2
Harald Pauli	SPM		25	671	25	671	siloe'd?	Removed from revised SPM
EU: Anne Teller	SPM		25	673		676	the need to better integrate biodiversity-explicit scenario and modelling with climate-explicit scenario and modelling should be a top priority (cf. French initiative of having IPBES/IPCC yearly discussions)	Thank you we agree and have maintained this statement as the final sentence of the Key Message
Robert Watson	SPM		25	677			The following section should be re-structured around the four quadrants of figure SPM-10. Discuss each in turn.	Figure has changed and key message has been restructured
André Mader	SPM		25	677	26	708	To make it easier to understand that this message deals with possible outcomes, it could written in "if/then" or "probable" language rather than implying certainty. For example language such as this (from C8 line 741 on pg 27) might be easier for the reader to follow: "Policy and management strategies to mitigate trade-offs between NCPs ... <u>are projected</u> to be more effective in scenarios that include ...".	Language revised to include "projected" or "projects" impacts
Yorick Reyjol	SPM		25	677			Is it possible to provide scenarios related to climate change? it seems to me they are clearly lacking...	Scenarios related to climate change were included in the review (see table in box on scenario archetypes where trends in the indirect and direct drivers are given)
UK: Mark Stevenson	SPM		25	678	25	681	Wide ranging future impacts on what?	Nature and NCP, but sentence now removed
EU: Karin Zaunberger	SPM		25	682		684	this is a key message	Key message rewritten to focus on how trade-offs are dealt with in the scenarios. This message has been kept as part of the description of trade-offs under scenarios with a strong focus on economic growth
Switzerland: José Romero	SPM		25	682	25	684	It is not clear why if environmental problems are dealt with by economic policy instruments there is forcefully a decline in nature and regulating NCPs. Are, in the views of the authors, economic policy instruments intrinsically bad for environmental protection?	sentence removed
Finnish Government	SPM		25	682	25	684	can it really be concluded that future, where environmental problems are dealt with by economic instruments, leads to increases in the provision of most material NCP's, but declines in nature and regulating. And what is decline in nature?	sentence removed
Robert Watson	SPM		25	683			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM		25	684			Add: ... regulating 'and non-material' NCP.	Impacts are mixed for non-material NCP with learning and inspiration increasing, supporting identities decreasing and physical and physiological experiences stable. This detail is shown in the Figure.
Robert Watson	SPM		25	684			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Adriano Mazziotta	SPM		25	684	25	684	Replace "nature" with "biodiversity"	Nature is the agreed IPBES term
Robert Watson	SPM		25	685			Rephrase: In futures where market mechanisms are assumed to fail...	Rephrased in the scenario archetypes box
UK: Diana Mortimer	SPM		25	685	25	685	in futures assuming market mechanisms to fail' need to explain what market mechanism is failing. I assuming you mean the one that considers the environment.	This part of the sentence has been removed
Robert Watson	SPM		25	687			Replace 'most' by 'mostly'	Sentence rephrased
Robert Watson	SPM		25	690			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM		25	692			Replace 'including' by 'e.g.'	Sentence no longer exists in revised SPM
Robert Watson	SPM		25	692			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM		25	693			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM		26	695			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
EU: Anne Teller	SPM		26	698		702	This paragraph is repeating para 673-676 and is not necessary. If it is I would also repeat my comment	Removed
Robert Watson	SPM		26	703			This figure will need a very good caption to describe it	Figure has been significantly simplified
Yorick Reyjol	SPM		26	703			Really not obvious to identify the differences in the the four figures, and what are the interest for PM...	Figure has been significantly simplified
Germany	SPM		26	703	26	708	Figure SPM 10: The indicators on the axes need to be explained.	Figure has been significantly simplified
EU: Karin Zaunberger, Anne Teller	SPM		26	703		708	Figure SPM 10 needs a better caption; it is difficult to understand; spell out the abbreviations in the graphic	Figure has been significantly simplified

France	SPM	26	703	26	707	Improve the legend. Does the Figure refer to the text before ? If so, use the same terms.	Figure has been significantly simplified
UK: Mark Stevenson	SPM	26	703	26	708	Look forward to seeing SPM 10 once populated with data - looks a useful tool for assessing trade-offs	Figure has been significantly simplified
Sweden: Cecilia Lindblad	SPM	26	703	26	707	Figure SPM 10 difficult, explain the message with words	Figure has been significantly simplified
Norway: Jørund Braa	SPM	26	703	26	707	Figure SPM 10 could be hard to understand - maybe give some examples how to read it	Figure has been significantly simplified
Switzerland: José Romero	SPM	26	707	26	707	Figure SPM 10 is too complicated. Furthermore, the names of the scenarios in the figure should correspond with the names of the scenarios in pages 25 and 26. C8 scenarios models studies don't show unavoidable trade-offs they contain ingredients that are used as parameters	Figure has been significantly simplified
Graciela Rusch	SPM	26	707		707	The graphs are a bit difficult to read. It is difficult to see differences among scenarios.	Figure has been significantly simplified
André Mader	SPM	26	708	26	708	[Acknowledging that this is only a representation of what the figure will look like]: Could the data be more simply presented in a more comparable type of chart like a bar cluster, looking only at the NCP for which all or most archetypes have data? Also please note that the names of the various quarters of this figure do not correspond with the names in the relevant message.	Figure has been significantly simplified
Robert Watson	SPM	27	710			I like this section but there is some duplication of words with C7 - please try to eliminate the redundancy.	C7 and C8 have been merged into a single Key Message to remove any redundancy
Yorick Revjøl	SPM	27	710			Again, it would be very, very interesting for PM to have elements regarding gaps in regulation (e.g. soils) or how the existing regulations may be somehow antagonistic or synergistic.	As trade-offs between different policy or economic sectors can often not be avoided, mainstreaming, policy integration and policy mix analyses are highlighted in new section D (Governance options and opportunities) to take account of such trade-offs to the extent possible.
Norway: Nina Vlik	SPM	27	710	27	748	Consider language to make more easily understandable, especially the last two paras on page 27	Paragraphs have been restructured and we have attempted to make the language more understandable
Robert Watson	SPM	27	711			Replace 'is' by 'are'	Sentence rewritten
UK: Diana Mortimer	SPM	27	714	27	716	surely co-operation between countries is only one mechanism to mitigate undesirable impacts - I am unclear why this is singled out here - better to be inclusive of all mitigation routes or leave it out. Not sure what point is being made? Some parts of ECA have a political and economic union, others do not.	Several are mentioned including mainstreaming, proactive decision-making, holistic (i.e. non-siloed) approaches as well as cooperation. The latter has been clarified as referring to solving transboundary or cross-scale issues.
Robert Watson	SPM	27	717			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
André Mader	SPM	27	717	27	719	This sentence may be hard to understand for those unfamiliar with this ground. Here is an attempt at making it more explicit: "Scenario and modelling studies show that the quality, quantity and variety of contributions that nature makes to people is determined partly by how it is managed and utilised. Management for particular contributions may preclude others, and may decrease the nature's capacity to continue contributing. For example,..."	Thank you for the suggested text. We have merged the C7 and C8 key messages in the SOD version of the SPM and attempted to make the language more understandable, including providing examples.
Switzerland: José Romero	SPM	27	717	27	717	In our view, scenario and modelling studies don't "show unavoidable" trade-offs: they may contain some ingredients and reconciliation of divergent views (trade-offs) that are decided by the modellers. If the sentence refers to the output of the scenarios, then it should read along: the results of modelling show divergent pathways that are left to the choice of policymakers on the basis of value and political judgements.	Trade-offs are revealed by the modelling outputs which result from the scenario assumptions. We have reworded the Key Messages to reflect the suggestions given.
UK: Diana Mortimer	SPM	27	717	27	719	you don't need a model or a scenario to know there are trade-off between different sectors and uses - not sure what the purpose of this paragraph is.	Rewritten to focus on the solutions to resolving trade-offs that emerge from the scenario and modelling studies. These are then picked up and expanded in Section D on governance options.
Robert Watson	SPM	27	719			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM	27	721			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
ECA values liaison group	SPM	27	725			maybe consider replacing "cultural and recreation values" by "value for cultural and recreational purposes"	Done
Robert Watson	SPM	27	733			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
France	SPM	27	735	27	736	The text reads : «For example, reforestation to improve climate regulation, natural hazard regulation and to produce a « greener » environment can reduce surface water resources (...). This sentence is true, but the opposite is true too (reforestation can increase water resources) – it is therefore not a very convincing illustration of the notion of « dilemma » between two environmental causes. The case of bioenergy croplands developed at the expense of biodiversity-rich forests would be a more telling example.	Example has been removed as suggested and a short example of competition for land is provided (biofuels vs food/feed)
EU: Karin Zaunberger	SPM	27	738			add 'if strategically deployed' at the end of the sentence. Restoration activities may have adverse effects (e.g. increasing IAS, net loss if replacement of a peatland by a forest, etc.) if not strategically planned.	Example has been removed based on suggestion from another reviewer.
Robert Watson	SPM	27	739			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Jeroen Arends	SPM	27	742	27	742	And that include multiple stakeholders and that provide positive incentives for compliance (instead of only tax, fines, etc.)	This is dealt with in new Key Message C7 which refers to actions that decision-makers can take to move towards a sustainable future. Mainstreaming of nature and NCPs, and integrated approaches that cut across sectoral boundaries are emphasised together with the use of awareness raising tools, education and participation to facilitate multi-actor governance are mentioned. These are further elaborated in Section D.
Robert Watson	SPM	27	743			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM	27	746			Replace 'NCPs' by 'NCP'	NCPs changed to NCP throughout
Robert Watson	SPM	28	751			This should not be a box, but section C-9 which sets up Table SPM-1. There also needs to be text that summarizes and synthesizes the results – I would synthesize at the level of the four strategic goals for ECA and the sub-regions – the results from this table should be much better used in A1 through D-6.	The tables were converted to a shorter box, without icons, which summarizes the results. For the Aichi Biodiversity Targets it does this at the level of the Strategic Goals
André Mader	SPM	28	752	28	753	"...achievement of the Strategic Goals of the Strategic Plan of the Convention on Biological Diversity and the Aichi biodiversity targets..." should be "...achievement of the Strategic Goals and Aichi Biodiversity Targets of the (United Nations) Strategic Plan for Biodiversity 2011-2020..." The UN part can be included or excluded.	The tables were converted to a shorter box, without icons. This text has been replaced and corrected where appropriate
Thomas Brooks	SPM	28	753	28	753	As above, NB that the Aichi Targets do not belong to the CBD alone (so delete "Convention on Biological Diversity" here).	The tables were converted to a shorter box, without icons. This text has been replaced and corrected where appropriate
France	SPM	28	758	28	763	Say a few words on the diversity of available knowledge in various sub-regions.	The tables were converted to a shorter box, without icons. The diversity of available knowledge in various subregions is acknowledged as a knowledge gap in a new box on knowledge gaps. The tables were converted to a shorter box, without icons.
EU: Markus Erhard (EEA)	SPM	28	759	28	759	typo should be 'representation'	The tables were converted to a shorter box, without icons. The new version lacks this typo
Germany	SPM	28	761	28	768	The abbreviations "EBI, WES, INC, UNR" should be added to the table in line 767-768.	The tables were converted to a shorter box, without icons.
Germany	SPM	28	761	28	761	What does it mean if the level of confidence is not indicated in the table on page 29-33 at all?	The tables were converted to a shorter box, without icons. This box includes confidence language.

WWF Norway	SPM	28	761	28	769	The terms for level of confidence are being used extensively throughout the SPM. The table should be placed in the beginning of the document, so the readers know what the terms mean the first time they encounter them.	The tables were converted to a shorter box, without icons. This box includes confidence language.
Robert Watson	SPM	28	763			There are numerous examples of inconclusive – in these cases it is appropriate to show the arrows – given what inconclusive means – e.g., for WE you have the arrows showing that WE is on target for goals such as 1b, 2a, 11f, etc	The tables were converted to a shorter box, without icons. This box includes confidence language.
EU: Markus Erhard (EEA)	SPM	28	767	28	768	Would it be possible to move this graph and text upwards before the terminology is used?	The tables were converted to a shorter box, without icons.
EU: Anne Teller	SPM	28	767		768	Add the abbreviations (EBI, WES, INC, UNR) in the graph to help understand Table SPM1.	The tables were converted to a shorter box, without icons.
Switzerland: José Romero	SPM	28	767	28	767	This figure is important for explaining the metrics used to estimate uncertainty in the ipbes and in this report, and deserves a better placement, e.g. in a box, with explanations.	The tables were converted to a shorter box, without icons. This box includes confidence language, with the full terms used.
Germany	SPM	29	771	33	774	Table SPM 1: The design of the table is the same as in CBD's GBO. Therefore this table will receive a lot of attention. We urgently recommend to contact the CBD secretariat to ensure enlgment with ongoing discussions and processes under the CBD. We urgently request the chapter authors to ensure that the information presented in this table is properly backed up by scientific findings. Please cross-check that the assessment of the status of progress for each of the Aichi targets and for the different sub-regions fully takes into account all scientific evidence. Please also provide some explanation on the methodology that you used to develop this table.	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions. These are based on the information gathered to compile the chapters.
Unai Pascual	SPM		29	772		table should show confidence levels for each of the trends, e.g. based on quality of data, etc. e.g., using a scale of 1(low certainty)-3 (high certainty) of level of uncertainty	The tables were converted to a shorter box, without icons. This box includes confidence language.
Yorick Reyjol	SPM	29	772	33		How a PM could really make his opinion regarding these Tables?...too much information, not enough pragmatic (even if I understand the intention...)	The tables were converted to a shorter box, without icons.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	29	772	33	774	What is the origin of the table (CBD Secretariat? EC?)	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions. These are based on the information gathered to compile the chapters.
EU: Anne Teller	SPM	29	772	33	774	The trends for WE seem over-optimistic as compared to the trends monitored on the basis of indicators for the EU???	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
EU: Frank Wugt Larsen (EEA)	SPM	29	772	33	774	The rationale for the progress assessment for each of the goals should be substantiated to add credibility and transparency. Many assessments for WE appear overly optimistic.	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
EU: Katarzyna Biala (EEA)	SPM	29	772	33	774	Table SPM1, Progress toward achieving the 2020 global biodiversity goals and their Aichi targets; Progress towards Aichi targets for Western and Central Europe seems to be overly optimistic in several cases, and it is not clear what the basis was for assessing the current targets achievement. Examples of 'green arrow' assessments, which might need to be re-evaluated Target 3, on incentives (1st arrow) Target 5, on the loss of habitats (2nd arrow) Target 6, on 'overfishing avoided' (4th arrow) Target 7, on agriculture and forestry managed sustainably (1st and 3rd arrow) Target 11, on protected areas (2 last arrows) Target 12, on threatened species (2nd arrow) Target 15, on resilience (1st arrow)	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
Marie Stenseke	SPM	29	772	33		This table communicates well and is very informative!	Thank you. However, a number of other comments, and further reflection and development, have led to a different approach. The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
France	SPM	29	772	29	772	Target 15.9 of SDG rather refers to Aichi target 2, and not 1. This should be corrected.	The tables were converted to a shorter box, without icons. The comment, while appreciated, is therefore no longer relevant.
France	SPM	29	772	29	773	A lot of levels of confidence are missing	The tables were converted to a shorter box, without icons. This box includes confidence language.
UK: Mark Stevenson	SPM	29	772	33	774	Table SPM 1 This is a useful summary, but it is not clear how these assessments have been and on what data they are based. There are no references to the underpinning chapters in the assessment. Without this information it is very difficult to comment on the trajectories shown. The purpose of the cross-reference to key findings isn't very clear? It would be a bit circular to refer to the key findings as an evidence sources as you might expect the the key findings to be based on this chart?	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions. It also includes various references to the relevant chapters, accompanied by confidence language.
UK: Diana Mortimer	SPM	29	772	29	table 1	Aichi target 3.2 'positive incentives...' I am surprised the WE symbol is shown as no significant overall progress given pillar II of CAP, LIFE schemes	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions. It references incentives just to say that increasing positive incentives for conservation (Target 3) remains an important task
Sweden: Hannah Östergård	SPM	29	772	33	774	Important to review that trend figures are consistent with key messages, there are several examples where the trend is green and where correlated key messages suggests a negative trend.	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
Norway: Nina Vik	SPM	29	772	33	774	Considering progress towards the Aichi biodiversity goals is useful, however, there is some concern as to how precise table SPM 1 is. A bit unsure if this table gives a clear picture of differences across the sub-regions and also the exact status in each sub-region	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions. Another box in the SPM covers knowledge gaps, where the geographical gap in the eastern parts of the region is acknowledged
Graciela Rusch	SPM	29	772		772	The legend of the table needs to be more informative (contain acronyms and abbreviations).	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
Finnish Government	SPM	29	772	33		Table SPM 1. the various acronyms should be explained in the table legend	The tables were converted to a shorter box, without icons but with fully-written-out confidence language

Zsolt Molnár	SPM	29	772	29	Target 3	Target 3 first line: Why is it green for CE? In may experience it is yellow.	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
André Mader	SPM	29	773	29	774	Are the ABTs and the SDGs comparable if they are working on different timeframes? For example, a subregion/region can be on track to achieving something by 2030, but not by 2020, which means that a different progress indicator arrow will be relevant to the SDGs and the ABTs.	The tables were converted to a shorter box, without icons. This approach also deals with the Aichi Biodiversity Targets and the Sustainable Development Goals more discretely
UK: Diana Mortimer	SPM	30	772	30	table 1	aichi target 6.4 'the impact of fisheries...' surprised WE fisheries are seen as sustainable.	The tables were converted to a shorter box, without icons. Now the only reference to the impact of fisheries is to say that more effective fisheries management and increasing protected areas could improve progress towards Target 6
UK: Diana Mortimer	SPM	30	772	30	table 1	Aichi target 7.1 'areas under agriculture...' WE is seen as sustainable which goes against much of the text in the SPM	The tables were converted to a shorter box, without icons. The implication pointed to by this comment has been removed.
Zsolt Molnár	SPM	30	772	30	Target 5	Target 5 loss of habitats: It is yellow for CE.	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
Zsolt Molnár	SPM	30	772	30	Target 7	Target 7 line 1: Why is it green for WE and CE? I think, it is yellow.	The tables were converted to a shorter box, without icons. The new version is more conservative and, consequently, less detailed, in its assertions.
Georgia: Salome Nozadze	SPM	30	873	30	881	It should be noted that in some cases the soil acidity is anomalous, where the pH of the wetland soils should be low, according to the highest quality. Such cases are found in the areas where the agricultural lands around the wetlands are located. Presumably, it is the areas of carbonated fertilizer or lime where farmers are trying to increase the yield of soil pH, which heavily influences the wetland ecosystems.	The tables were converted to a shorter box, without icons. The implication pointed to by this comment has been removed.
France	SPM	31	772	31	Table SPM	In the line of the table related to Aichi target 12, more specifically «Extinction of known threatened species has been prevented»: in this particular case, it would be useful to help the reader (by a footnote?) interpret the information given by the symbols «no significant overall progress» or «progress towards target but at an insufficient rate» without having to refer to the complete report; indeed, it is not obvious what «making progress» or «not making progress» towards «preventing extinction» mean – the question being: « have extinctions occurred, and if so, how many?»	The tables were converted to a shorter box, without icons. The implication pointed to by this comment has been removed.
UK: Diana Mortimer	SPM	31	772	31	table 1	Aichi target 11.5 - really WE PA are effectively managed?	The tables were converted to a shorter box, without icons. The implication pointed to by this comment has been removed.
UK: Diana Mortimer	SPM	31	772	31	table 1	Aichi target 11.6 - PA well integrated and connected in WE?	New text says that the ecological representativeness, connectivity and management of marine protected areas have improved, but most still lack management measures to protect biodiversity, such as no take or no fishing zones, for marine areas. There is no longer any implication of integration with regard to terrestrial protected areas
Zsolt Molnár	SPM	31	772	31	Target 10	Target 10 line 1: Does CE has coral reefs?	The tables were converted to a shorter box, without icons.
Zsolt Molnár	SPM	31	772	31	Target 11	Target 11 line 5: It is far from equitable managed, should be yellow.	The tables were converted to a shorter box, without icons.
Zsolt Molnár	SPM	31	772	33	Target 18	Target 18 line 2: It is red for CE if you read the Fifth report.	The tables were converted to a shorter box, without icons.
Zsolt Molnár	SPM	31	772	33	Target 18	Target 18 line 3: It is red for CE if you read the Fifth report.	The tables were converted to a shorter box, without icons.
Robert Watson	SPM	34	775			A good section on policies and governance – but what about technologies, practices and behaviour – this section must address these issues	The target of policies and policy instruments is to change/have an impact on practices and behaviour. Technology can either be seen as a driver to change or a method to achieve change. It is thus included in policy options and opportunities for mainstreaming and policy integration.
Robert Watson	SPM	34	775			While this section is well written I found the bolded text rather generic with the substance often within the unbolded text – I have not made any specific suggestions but the CLAs might want to consider strengthening the bolded text – a bit longer with some specifics	Thank you for the comments, the bolded text has been revised to better capture the substance of the unbolded text.
Robert Watson	SPM	34	775			This section needs more confidence limits	Confidence terms has been added.
Yorick Reyjol	SPM	34	775			Again, the lack of a soil strategy in EU could be emphasized here.	We are not really sure how it would fit here.
Anna-Rosa Asikainen	SPM	34	775	46	982	The assessment could perhaps present and propose even more concrete actions. It is not enough to state that "innovative governance solutions" are needed. Concrete examples should be given in the text.	Concrete examples have been added in the text and in table SPM 2
Germany	SPM	34	775	45	972	There are still many gaps, and work in progress under section D. 'Policy options, governance and management'. That makes it very difficult to provide more specific and relevant comments on that section.	The text has now been developed based on the finalised assessment of chapter 6
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	34	775	36	867	more should be said about the difference in needs and impacts between constraining or voluntary governance instruments. (Does for ex. the private sector respects non constraining instruments developed to protect ILK and concerned people? ...)	Voluntary governance modes (which include the private sector) such as through certification schemes have been able to include and integrate ILK. However there is a need to develop the monitoring of these schemes to make them more effective. The text has been developed to take this into account.
Zsolt Molnár	SPM	34	775	34	general fo	general for section D: IPLCs are only explicitly mentioned in the Table but not in the text.	The text has been developd to take this into account.
Switzerland: José Romero	SPM	34	777	34	780	This chapeau should be rewritten as follows: "Past and current governance of biodiversity and NCP has not been able to reverse trends in biodiversity loss. Strengthening the implementation of existing policies including with the help of innovative governance solutions may help achieving further progress in support of biodiversity protection and NCP."	The text has been developd to take this into account.
UK: Diana Mortimer	SPM	34	777	34	777	The governance of biodiversity ... governance is not being correctly used here and it makes the reading confusing (remember this is for a lay audience). It could read 'Policies and mechanisms to protect biodiversity and NCP...' This point applies to the rest of this section.	The text has been changed to take the meaning of this into consideration
UK: Mark Stevenson	SPM	34	777	34	780	This is quite a strong statement; in fact more like a recommendation (ie policy prescriptive) - that existing policy instruments should be implemented more effectively. I struggled to find evidence in the subsequent section that they weren't implemented effectively. Not saying they are, just that the evidence doesn't appear or isn't well signposted. I think a few case studies might give policy makers a better sense of what is not being implemented and what impact it would have if they were. (Noting too that there is no confidence rating assigned to this statement - so it comes across as an opinion). I also found that generally in this section 'policy instruments' were treated rather generically, and the section would benefit from differentiating between different policy measures - legislation to protect; incentives, voluntary initiatives and so on	The text has been changed to take the meaning of this into consideration
UK: Andrew Stott	SPM	34	777	34	809	This section does not read like a policy review. What assessment of effectiveness has been made? What level of confidence is attached to these assertions?	The text has been developed and specified with confidence statements.
Robert Watson	SPM	34	778			Why focus only on existing	The text has been changed to also include future options.
Robert Watson	SPM	34	779			Delete 'further'	Done
Robert Watson	SPM	34	780			The conclusion of the UKNEA was that each issue needed the right ensemble of policies, fiscal support and behaviour change – if the authors agree with this conclusion from the UKNEA, then I am not sure that message is coming quite as clearly as it should	We agree with the statement and has clarified the text.

André Mader	SPM	34	782	29	809	It might enhance readability if a clear distinction is made between governance, governance strategies, policy, policy instruments, institutional arrangements, etc.; and consistent use of these depending on the specific focus of the finding.	We have tried to be more consistent throughout the text.
André Mader	SPM	34	782	29	809	There is some very complex language in this section, and some complex terms (e.g. "vision narratives", "synergetic objectives"). It might enhance readability if these were simplified, even if that requires extra wording.	The text has been rewritten with this in mind.
André Mader	SPM	34	782	34	809	The options provided here might be extra convincing if the text included stronger and more specific reference to what has worked in the past; where; and why.	The text has been rewritten and specified.
André Mader	SPM	34	782	34	809	The body of this section does not make a comparison between practice and reactive policies/strategies, which is stated in the bold text.	The text has been rewritten with this in mind.
Marie Stenseke	SPM	34	783		784	This clear statement should be given a confidence term	All the sections now include confidence terms
Marie Stenseke	SPM	34	783		809	This passage can be written more effectively, and, hence, shortened	The text has been rewritten with this in mind.
EU: Frank Wugt Larsen (EEA)	SPM	34	785		785	What is considered 'promising' and 'appropriate' is rather subjective. Please be specific.	The text has been rewritten and made more specific.
France	SPM	34	785	34	788	The sentence is not clear and not very informative. We suggest to delete.	The text has been rewritten with this in mind.
UK: Andrew Stott	SPM	34	785	34	788	this sentence doesn't quite make sense?	The text has been rewritten with this in mind.
Finnish Government	SPM	34	785	34	788	unclear sentence	The text has been rewritten with this in mind.
Finnish Government	SPM	34	789	34	789	replace the word options with possibilities etc. As those options do not exclude each other	The choice of words is based on the recommendations from the scoping documents.
Anna-Rosa Asikainen	SPM	34	792	34	792	"strengthening participation": in this process, the role of stakeholders, land owners and farmers is crucial. Cooperation-based practices need to be developed.	The text has been developed to take this into account.
France	SPM	34	792	34	794	"vision narrative": please define the concept, especially the scale at which it applies. Then, this sentence could be included somewhere in part D of the High Level Summary	The text has been rewritten to take this into account.
UK: Diana Mortimer	SPM	34	792	34	794	vision narratives' - jargon - re phrase	The text has been rewritten to take this into account.
Jeroen Arends	SPM	34	795	34	802	Participatory processes also increase the chances of acceptance by stakeholders of policy decisions. It can also contribute to ownership and can expedite policy implementation and adherence to it.	The text on participation has been developed and specified.
France	SPM	34	795	34	797	This sentence could be included somewhere in part D of the High Level Summary	The sentence has been rewritten and is considered for inclusion in the High level summary.
France	SPM	34	803	34	804	Begin the sentence with "the third category"	The text has been rewritten to meet this comment.
UK: Diana Mortimer	SPM	34	803	34	806	These two categories are simply well known ways of making policy for any sector. They could be combined and I think lose the 'category' definition.	The text has been developed to enhance the role of mainstreaming
Finnish Government	SPM	34	805	34	806	add one more category which is to adapt policies based on evaluation	We agree that evaluation is important, however the text has been rewritten to fit the purpose of mainstreaming. Hence, we think that evaluation should focus on the policy per se on not on the mainstreaming efforts.
Jeroen Arends	SPM	34	807	34	809	Important is Education. Actors of various kinds at all levels of policy making should be educated in NCP, ecosystem services and inter/multidisciplinary. Perhaps this could be mentioned.	We agree and education is highlighted in table SPM2 as part of the need to raise awareness of biodiversity and NCP.
UK: Diana Mortimer	SPM	34	807	34	809	this applies to all policies not just 'proactive' ones.	The sentence has been rewritten.
André Mader	SPM	34	810	35	835	This section seems very theoretical. It might be strengthened by the inclusion of examples of what has worked in the past.	The section has been revised to include examples.
Henk van Zeijts	SPM	34	810	35	835	Here the notion of the importance of linking to the core values of economic sectors is missing; I don't know where to put this. Furthermore, in 821-827 'biodiversity' is mentioned without ncp's, while ncp's are more relevant for mainstreaming.	This section has been rewritten to take both biodiversity and NCP into account. Table SPM2 specify options and opportunities for mainstreaming of biodiversity and NCP which indirectly and directly target the core values of these sectors.
The Netherlands: Astrid Hilgers	SPM	34	810	35	835	Here the notion of the importance of linking to the core values of economic sectors is missing; Furthermore, in 821-827 'biodiversity' is mentioned without ncp's, while ncp's are more relevant for mainstreaming.	This section has been rewritten to take both biodiversity and NCP into account. Table SPM2 specify options and opportunities for mainstreaming of biodiversity and NCP which indirectly and directly target the core values of these sectors.
EU: Anne Teller	SPM	34	811		812	D2 key message for policy-makers should be strengthened by adding a new sentence at the end. 'A first step would be the integration of goals from the biodiversity strategies and action plans into sectoral policies' (cf. 827) 'and the mixes of policy instruments which apply participatory tools and procedures that allow for trade-off analysis and multiple-criteria design.' (cf. 833-835)	Thank you for the comment, we have rewritten several of the sections and the content of the comment is taken into account while revising the text.
UK: Andrew Stott	SPM	34	811	34	812	integrated approaches should 'join up' rather than 'cut across'	Text has been revised and edited by native english speakers.
Heino Meessen	SPM	34	811	35	835	This section will benefit from the addition of a text box about "Challenges of Biodiversity conservation and management of Large Protected Areas in TRANSITION countries of Eastern Europe including this text: Challenges of conservation and management of Large Protected Areas in Transition countries of Eastern Europe: Main recommendation is about participation The overall aim is to foster local-level cooperation on bio- and agro-diversity conservation by establishing sustainable partnerships between researchers, local residents, and natural resource experts working in academia and on the ground in agriculture and forestry. For reaching this aim existing participatory methods have to be adapted to the transition context of Eastern Europe, and especially to the remote and mountain regions of the Carpathians, the Caucasus and Central Asia, e.g. the "learning for sustainability" L4S tools. Living standards and the quality of life, economic activity and creativity, the contribution of gender-age groups to livelihoods, conservation habits, economic claims, and the development priorities of stakeholder groups are recommended to research in detail – as in parallel to the data collection about biodiversity conservation and protection of rare species for the LPA's. To create income alternatives cooperation and participation with the local population in and around Large Protected Areas (LPA) is crucial. A detail analysis of current local conditions on biodiversity conservation and management of LPA must also take into account existing social-ethnographic data such as settlement patterns, ways of life, public hierarchy and religion, which are crucial to understanding the current transition period. Combined methods aiming at nature conservation and local development and participation should bridge the gap between systems knowledge and target knowledge – bringing in the local needs of population to be basis for a joint learning process for participatory conservation and LPA management – reaching by this more sustainable biodiversity conservation specifically for the transition countries of Eastern Europe, the biodiversity hot spots of Carpathians, Caucasus and Central Asian mountain regions and as to say it with words of local residents in the biodiversity "hot spot" region of Lagodekhi in Georgia: "There have been reached international goals of biodiversity conservation related to international convention like CBD- But local-level resource management and participation of and benefits for local people is another story. Many villagers in Azerbaijan and Georgia, for example, feel that their local situation is not given enough attention. As one villager put it, "Much is done in [the capital cities] Tbilisi and Baku, but what about natural resources use Wood, water, pastures – restricted by the governmental regulation on nature conservation in our villages?"	Thank you for the comment. While revising the text we have tried to take the content of the comment into account.
UK: Andrew Stott	SPM	35	813	35	814	this sentence doesn't quite make sense?	Language has been checked and streamlined
André Mader	SPM	35	815	35	820	Cross reference key finding C8?	Sentence has been deleted

Anna-Rosa Asikainen	SPM	35	817	35	820	Possibilities related to sustainable management practices in agriculture and forestry are underestimated in this part of the text. The text is written using a negative tone: "Agriculture and forestry cause negative impacts unless...". However, the tone could be more positive, e.g.: "The use of sustainable practices ensures that agriculture and forestry are not a threat to biodiversity". Acknowledging the positive things is needed in order to create a responsive atmosphere among different stakeholder groups.	Thank you for the comment we have now changed the sentence to acknowledge sustainable practices.
Switzerland: José Romero	SPM	35	817	35	817	Please, explain what is meant by "mitigation measures"?	This has been deleted
UK: Andrew Stott	SPM	35	817	35	820	very generalised. There are many types of agriculture and forestry and they do not all have negative impacts on water quality. What is 'industrial forestry'?	This has been deleted
Switzerland: José Romero	SPM	35	818	35	820	Please, explain what is meant by industrial forestry: is it a reference to plantations?	This has been deleted
UK: Andrew Stott	SPM	35	821	35	835	Again this reads like policy guidance rather than an assessment of evidence. What evidence is there of the effectiveness of mainstreaming?	We have developed a separate key message on mainstreaming to clarify on this point.
André Mader	SPM	35	826	35	827	"A first step towards mainstreaming would be the integration of goals from the NBSAPs and more generally the Aichi (Biodiversity) Targets (across) sectoral policies." It may be more useful to know how this will be achieved and which sectors to focus on.	The sentence has been deleted
Switzerland: José Romero	SPM	35	827	35	827	What is the NBSAP?	This abbreviation has been deleted.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	35	828	35	830	Although we recognize that there will be few situations where all stakeholder needs are simultaneously met - we feel the phrasing "dealing with trade-off decisions will remain the rule rather than the exception when striving for synergies to the extent possible through multifunctional policies" could be toned down. The vital importance of biodiversity must be stressed throughout the SPM - and mainstreamed in various sectors, in order to reach integrated approaches and decisions	We have toned it down and developed a new key message on mainstreaming.
France	SPM	35	832	35	832	Trade-offs are given and they should be arbitrated transparently. Participatory tools and multiple criteria design should not be used to conceal the trade-offs and their arbitration. At least, replace « Options to avoid this... » by « Options to deal with this... ». Besides, it could be proposed that « Such innovative tools should be designed and implemented with caution as they may reduce transparency and increase the possibilities of manipulation ». This is precisely the role of reference values for socio-economic assessment in France to provide an information of some stakes that can be discussed but cannot be manipulated. See e.g. : Chevassus-au-Louis B. et coll., 2009. Approche économique de la biodiversité et des services liés aux écosystèmes : contribution à la décision publique. Documentation française.	This has been rephrased, unfortunately we have to cut down and don't have the space for this.
Norway: Nina Vik	SPM	35	832	35	835	In general the SPM needs to be shortened down, so I hesitate to give this advice. But this statement could benefit from an example - could be useful in the SPM. There seems to be some duplication of messages with the first para in D3, so perhaps merge and highlight the examples in D3	This has been rephrased, unfortunately we have to cut down and don't have the space for this.
André Mader	SPM	35	836	36	867	The body text discusses different kinds of policy instruments but does not discuss how to mix them (as suggested in bold). Also, there are terms here that might require explanation and/or example: economic and financial instruments; rights-based instruments; social and cultural policy instruments.	These are defined in the scoping document and throughout the chapter.
Jeroen Arends	SPM	35	837	35	841	Policy instruments and mixes should include a number of measures including 'punishing ones' such as taxing and fining but also 'rewarding ones' such as tax breaks, subsidies, incentives (investments, education), Market Based Instruments and public-private partnerships.	We have expanded the messages in this regard
Mersudin Avdibegović	SPM	35	837	35	841	The same as previous comment	We have expanded the messages in this regard
Marie Stenseke	SPM	35	837		841	This clear statement should be given a confidence term	This has been provided
EU: Ole Ostermann, JRC	SPM	35	842	35	843	The technical term "ecosystem services" in use in the EU and also the TEEB project should be set into relation with the IPBES' term "nature's contributions to people" NCP.	The link between these terms is explained in the introduction.
UK: Andrew Stott	SPM	35	842	36	867	Again this reads like policy guidance rather than an assessment of evidence. How strong is the evidence that these instruments are effective?	This part has been changed.
Anna-Rosa Asikainen	SPM	35	843	35	844	Regulation is not the only effective option! Voluntary-based approaches e.g. in nature conservation need to be highlighted. The assessment report could be a useful tool to spread information about "best practices" used in different areas. E.g. in Finland we have had really positive results in a "METSO" programme that aims to increase nature conservation in forests on a voluntary basis (see: http://metsonpolku.fi/en-US).	We cover all the policy instruments including the voluntary measures which is defined as social and information based instruments in accordance with the scoping documents.
Switzerland: José Romero	SPM	35	849	35	853	In general, the economic and the financial sectors are so important in all countries that the instruments related to these sectors fall under the category of "regulatory" instruments. With the rough classification of instruments in: regulatory, and non-regulatory and voluntary, the intention of this paragraph to provide incentives (i.e. regulations) to change consumers' and business' behaviour places the "economic and financial instruments of line 849 in the category of regulatory instruments. Therefore, it is surprising to find the word "voluntary" in line 853. A clarification is necessary. Furthermore, in line 852, it is supposed that these instruments can provide cost-effective means. Nevertheless, if the economic and financial instruments internalise the externalities, in view of protection of biodiversity and NCPs, they are not forcefully cost-effective if they do not apply to the whole economic system (risk of leakage, etc.).	We are not writing about the economic and financial sectors but the categories of economic and financial instruments in biodiversity conservation. Furthermore we have provided more detail in the current version to avoid misunderstanding.
Finnish Government	SPM	35	853	35	853	economic and financial instruments are not always voluntary	The paragraph has been changed.
EU: Anne Teller	SPM	36	861			Add after Social and cultural policy instruments; are increasingly being developed at multinational level'. Public authorities have less and less influence on trade and corporate policies, which creates additional difficulties.	The different levels are included in the (bold) key message.
Switzerland: José Romero	SPM	36	861	36	867	It would be worthwhile mentioning that the instruments referred to in this paragraph are non-regulatory instruments, therefore voluntary. Should labels be explicitly mentioned?	This has been addressed in the new version.
Robert Watson	SPM	37	868			This table is not referred to or discussed in the text. The text needs to make the point that the different ministries within a country must work together and that MEAs and other international agreements need to work together for multi-sectoral policies	The table which is synthesising the findings in chapter 6 has been changed substantially. The table includes options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Jeroen Arends	SPM	37	868	37	868	Comments related to table SPM2. Perhaps the following is of interest and can be included in the table: Agriculture: Much of this has to do with promoting good agricultural practices (GAP). Also a reference could be made to the FAO's Climate Smart Agriculture and to agro-ecology. Further, educate farmers on good practices, climate change mitigation and adaptation. Make use of extension services and develop value chains related to GAP, CCA and NCP. Forestry: Also, look at NTFP and local stakeholders. Fishery and aquaculture: Development of sustainable and environmentally correct fish farming practices. Resource extraction sector: Tax breaks, incentives, investments in green energies, energy efficiency, proper insulation. Move away from coal and oil. Also, hydropower plants have a huge impact and many of them are planned in South East Europe (Balkan). For all sectors in the table: For all, including agro, forestry and resource extraction: training and education, awareness raising	The table which is synthesising the findings in chapter 6 has been changed substantially. The table includes options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Ilja Gasan Osojnik Črnivec	SPM	37	868			Table SPM2 - recommend to include e.g. "Encouraging the conservation of native plant varieties and animal breeds."	The table which is synthesising the findings in chapter 6 has been changed substantially. The table includes options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.

Yorick Reyjol	SPM	37	868	39		In my opinion, this is the only real PM-friendly elements, and this should be used earlier in the text, and be built upon. This could help to lighten the document of 50% of text...	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Germany	SPM	37	868	39	869	Table SPM 2: Please finish the table and provide a reference to the table in the text. it could be interesting for policy makers if an estimation on the implementation possibilities or challenges for the different options would be added	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Germany	SPM	37	868	37	868	Setting up and implementing monitoring and evaluation methods and instruments might be an important aspect of successful options for biodiversity governance	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	39	869	"Nature Conservation" is not seen as a "sector". It would be stronger if that sector could also get a column, so that also "active" action can be made to protect biodiversity and nature contributions to people, rather than it being dependent on the actions of other sectors	The conservation sector has been included in the table.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	39	869	Table SPM2: 'In several places, stimulating biomass for bio-energy is mentioned as an option for good governance of NCP - but this is hard to understand from a nature conservation perspective? there is much debate on whether investments in bioenergy are the way forward, precisely because this may interfere with biodiversity and NCPs. It is strange to read this here. From a climate change mitigation perspective, investment in biomass for bioenergy may seem a logic step, but especially with respect to biodiversity it may develop in a key threat. Having this here as an option without any further specifications is risky. Imagine an "increase in efficiency in production" in agriculture through stronger investments in fertilization and agrochemicals combined with the production of biomass for bioenergy on the land that can be freed from food production: that scenario is probably one of the worst possible ones for biodiversity and the safeguarding of NCPs... Of course stimulating the use of waste biomass for bioenergy can be stimulated. The same comment holds for "stimulating production of biomass for bioenergy" under "Forestry"	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	37	868	Table SPM2/agriculture: "Increasing crop and grassland yield and feed efficiency >> of course increased efficiency can contribute to free more land for biodiversity conservation, but at the same time history has thought us that increases in "efficiency" often come at a severe cost of biodiversity. It is the increase in "efficiency" that has led to any species associated with agricultural land being threatened. Also how is "efficiency" defined?: per unit land surface, per energy unit invested. The real relevant unit for efficiency should here be "per unit of natural contribution to people destructed"... The "option" on increasing efficiency could be interpreted by policy-makers that investment in further industrialization of agriculture and the breeding of genetically engineered crops is the way to go. While we can imagine that increasing efficiency can contribute to the preservation on NCPs on remaining land, it is crucially dependent on the fact that indeed this increased efficiency is coupled to an increase in the area of protected area. This should be made clear.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	39	869	Table SPM2/agriculture: No explicit mention of agro-ecology? Also - several items to be added?: <ul style="list-style-type: none"> • Add something on incentives such as "using an appropriate mix of regulatory and incentive measures aligned with national biodiversity objectives, including the elimination, phasing out and reform of incentives harmful to biodiversity in order, inter alia, to reduce habitat loss, degradation and fragmentation and to increase the efficiency of use of water, fertilizer and pesticides and to avoid their inappropriate use", • production and consumption such as "reducing loss and waste at all stages of production and consumption in the food system, including reducing post-harvest losses" • Add something on genetic diversity of resources for food and agriculture and their landraces/farmers' varieties and wild relatives • Add: "Develop, implement and enforce sustainability criteria's taking duly biodiversity into account for biomass production for bioenergy" ☹ 	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	37	868	Table SPM2/forestry: Stimulating the establishment and implementation of nation-wide Forest Programmes add "that takes biodiversity into account"	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	39	869	Table SPM2/forestry: • Add something on management practices such as "promote the adoption of sustainable forest management practices that include biodiversity measures in the forest sector" <ul style="list-style-type: none"> • Add something such as "to encourage sustainable forest management to achieve biodiversity outcomes, including by promoting sustainable consumption and production of forest products" • "Setting up protected areas to maintain forest ecosystems" Add "and promote, establish and maintain and/or develop connected national or regional forest protected area networks, • Add something on forest restoration • Add something on promoting the use of indigenous species for reforestation. • Add something on illegal logging such as to use, develop and enhance governance, policies, and practices to promote legally and sustainably sourced forest products and to combat illegal logging and associated trade. • Add: "Develop, implement and enforce sustainability criteria's taking duly biodiversity into account for biomass production for bioenergy" • Add something on incentives 	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	39	869	Table SPM2/Fisheries and aquaculture: • Add "coastal" after marine in "Setting up permanent or temporary Marine Protected Areas (MPAs) to maintain aquatic ecosystems, managed under co-management arrangements"; <ul style="list-style-type: none"> • Add something about spatial or temporal fisheries closures to help maintaining stocks; • Add "establish measures and regulations with a view to promoting the conservation and recovery of endangered species" 	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	37	868	39	869	Table SPM2/Resource extraction sectors (energy & mining) and manufacturing: • This section is too general, not biodiversity oriented; should have real options to take biodiversity into account for these sectors. <ul style="list-style-type: none"> • Cannot support "Promoting economic policy instruments (direct payments, taxes or payments for ecosystem services) to support the transition to bioenergy" • Para on incentives/subsidies not clear enough for biodiversity 	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.

UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	37	868	39	868	Under "Agriculture", add "Establish protected areas to safeguard key biodiversity areas from negative impacts of agriculture" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	37	868	39	868	Under "Forestry", revise existing text to read "Setting up protected areas to maintain key biodiversity areas in forest ecosystems" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	37	868	39	868	Under "Fisheries and aquaculture", revise existing text to read "Setting up permanent or temporary Marine Protected Areas (MPAs) to maintain key biodiversity areas in aquatic ecosystems, managed under co-management arrangements" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
UNEP-WCMC: The Biodiversity Indicators Partnership (BIP)	SPM	37	868	39	868	Under "Resource extraction sectors (energy & mining) and manufacturing", add "Establish protected areas to safeguard key biodiversity areas from negative impacts of extractive and manufacturing industries" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
EU: Peter Löffler	SPM	37	868	39	868	Forestry column: The options for forestry on pages 37-39 are for most parts humdrum with no practical application or consequence (so what?). There are two options with a significant potential to further degrade forest ecosystems and their biodiversity: 1) stimulating production of biomass for bioenergy (NO WAY! Please can the authors read carefully e.g. the brand new EASAC report on Europe's forests, and especially the chapter on 'forestry in EU climate and energy policy', which directly contradicts their suggestion; 2) Stimulating technological innovation in use of residual and 'low quality' (soft) woods to new products (e.g. chemicals, tissues). NO. This option may open new value chains for forest-based industries. But the increased production and/or removal of these wood fractions will likely translate into land use intensification (short rotation forestry, plantations) and forest degradation (dead wood removal = loss of biodiversity, loss of nutrients, loss of soil organic matter, loss of water retention capacity).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
EU: Karin Zaunberger, Anne Teller	SPM	37	868	39	869	Table SPM 2 is difficult to understand and needs to be developed further (as is indicated); there are several actions which seem to be valid across sectors, these should be highlighted; lines should be synchronised/aligned (cf. para 6 in Agriculture on page 37 corresponds to para 4 in forestry and fisheries?)	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Thomas Brooks	SPM	37	868	39	868	Under "Agriculture", add "Establish protected areas to safeguard key biodiversity areas from negative impacts of agriculture" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Thomas Brooks	SPM	37	868	39	868	Under "Forestry", revise existing text to read "Setting up protected areas to maintain key biodiversity areas in forest ecosystems" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Thomas Brooks	SPM	37	868	39	868	Under "Fisheries and aquaculture", revise existing text to read "Setting up permanent or temporary Marine Protected Areas (MPAs) to maintain key biodiversity areas in aquatic ecosystems, managed under co-management arrangements" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Thomas Brooks	SPM	37	868	39	868	Under "Resource extraction sectors (energy & mining) and manufacturing", add "Establish protected areas to safeguard key biodiversity areas from negative impacts of extractive and manufacturing industries" based on section "3.2.2.4 Protected area coverage in ECA" (in Ch. 3).	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
EU: Jan-Erik Petersen (EEA)	SPM	37	868	39	868	Agriculture column: you list many different options in this table with out any evaluation or logical structure. How is this meant to help the reader? In particular as several of them are contradictory in terms of objectives and measures to be taken. As an example: what are the consequences of 'Stimulating production of biomass for bioenergy' ?? Practical experience in Europe shows that they are fundamentally opposed to the objectives you seem to advocate through most of the SPM; so at the minimum you would have to specify what kind of bioenergy to promote. As written this example is useless, if not outright counterproductive!	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Adriano Mazziotta	SPM	37	868	37	868	The clarity of this table would be improved by categorizing options with a distinction among different types of actions.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	37	868	39	868	Table SPM 2 is interesting and potentially useful but it will be necessary to review carefully each statement because they do not all seem to relate to the same type or level and some can create misunderstandings.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	37	868	39	868	Table SPM 2 Those options should be analysed in terms of mutual interactions or synergies between each sector. Tradeoffs probably need to be identified through Table display	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.

France	SPM	37	868	37	Column 1	What are the potential social impacts of such a recommendation? "in pastoral communities, setting up pasture fees and taxes."--> we understood that pastoral communities are actually good managers of lands and that grasslands are decreasing in ECA region. However, taxes and fees could provide a disincentive to maintain the pastoral activities. Could you please explain?	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	37	868	37	Table SPM	In the column «agriculture», 3d paragraph, the text reads : «Increase crop and grassland yield and feed efficiency», it could be useful to mention, as an option, a more balanced approach to sustainable agricultural production, for example drawing from the following extract from CBD decision XIII/3 : «promoting and supporting (...) sustainable agricultural production, that may include increases in productivity based on the sustainable management of ecosystem services and functions, diversification of agriculture, agro-ecological approaches and organic farming».	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	37	868	37	Table SPM	In the column «fisheries and aquaculture», 3d paragraph, the text reads : «setting up permanent or temporary marine protected areas». It would be appropriate to remove the words «permanent or temporary», which puts on an equal footing permanent and temporary MPAs, whereas temporary MPAs are exceptions, for which the scientific rationale is questionable.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	37	868	37	Column 4	Transition to bioenergy can be detrimental to biodiversity if natural areas are turned into cropland for biofuel, or if biofuel is imported from countries with deforestation. Wood is also included in bioenergies but depending on how the concession is managed, this could have a negative impact on biodiversity.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
UK: Diana Mortimer	SPM	37	868	37	869	very pleased this is being developed further it is currently rather weak. This is just a list of options. Is it possible to assess the extent to which these options have been evaluated and whether they are effective?	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
UK: Diana Mortimer	SPM	37	868	37	868	Do you mean to use the term 'governing' in the table title? Managing is more appropriate.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Finnish Government	SPM	37	868	39	869	table needs further work, for instance there are numerous options in the form of policy target rather than governance option such as. increasing crop and grassland yield and feed efficiency. A governance option would suggest how this will be done.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
Senka Barudanovic	SPM	37	868		956	Tables SPM 2 and 3 will not have much effect on improving policy options unless they are linked to the current state of implementation in subregions	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
EU: Anne Teller	SPM	38	868		869	There is no mention of agro-ecology in the column on Agriculture? Reforestation should bein priority with with indigenous species in Forestry column; Delete 'meat, dairy and' in the sentence on 'Lowering consumption of meat, dairy and fish' in Fisheries column	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	38	868	38	Column 1	Again, bioenergy can be an issue and this option should be considered carefully. Stimulating the production of biomass for bioenergy can help addressing the issue of land-use change for biofuels and lessen the impact of agriculture on biodiversity. It is relevant to have such an option here, but the final table should acknowledge the drawbacks for biodiversity that an energy policy relying too heavily on biomass could cause.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	38	868	38	Column 3	Only "lowering consumption of fish" should appear in this column. Meat and dairy would rather belong to the "agriculture" column.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM	38	868	38	Column 4	"Discouraging contra-productive subsidies and taxes" is also a relevant option for agricultural policies. Could you consider an option relying on reducing energy demand and enhancing energy efficiency as relevant for the sector of resource extraction and manufacturing?	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
UK: Diana Mortimer	SPM	38	868	38	table 2	Agriculture column, first paragraph. 'expansion of agriculture into natural habitats' do you really mean to say that - what is meant by 'natural habitats'?	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
EU: Anne Teller	SPM	39	868		869	Delete 'fish' in the sentence on 'Lowering consumption of meat, dairy and fish' in Agriculture column para before last.	The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.

										The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
France	SPM		39	868	39	869	Column 1	Only "lowering consumption of meat and dairy" belongs here. "Fish" should be included in column 3.		
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	39		869	39	869		Table SPM2/agriculture: "Lowering consumption of meat, dairy and fish". We propose to change this into "Setting targets for maximum consumption of meat, dairy and fish so as to lower consumption in high-consumption countries". We should probably not "reduce" meat consumption in low-income countries where large groups are deprived from protein-rich diets. It is clear that meat consumption in industrialized and upcoming countries needs to be reduced, but whether this should be the target in all regions of the world is not so clear.		The table which is synthesising the findings in chapter 6 has been changed substantially. The table include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
André Mader	SPM		40	872	40	872		Throughout this section the tone is somewhat theoretical. For example: "...integration can have a positive impact...". If this has been shown to the the case in the past, it might be more powerful to say "...integration has had a positive impact...". There is some guidance in this vein in Ash et al. 2010, which was used to inform the IPBES guide to assessments: "If data were used in the assessment, what do they say about what "is" happening?".		In general this is not straightforward, but need to carefully adress in every case.
Robert Watson	SPM		40	873				I agree with the conclusion, but the text below should address the issue of power relationships and asymmetries and how to overcome them among actors, this is an issue under all political systems, but especially in non-democratic systems		This has been addressed in the new version.
UK: Andrew Stott	SPM		40	873				Not just monitored and evaluated, but also improved?		This has been addressed in the new version.
Finnish Government	SPM		40	873	40	873		add: and processes then adapted based on evaluation		This has been addressed in the new version.
UK: Andrew Stott	SPM		40	874				is it clear to all readers what traditional hierarchical governance is?		Wording has been changed in the new version to avoid misunderstanding.
UK: Andrew Stott	SPM		40	874		896		How far are these statements supported by the evidence?		Confidence language has been included
Germany	SPM		40	881	40	885		transparency is an important factor in governance		This has been added
Adriano Mazzotta	SPM		40	885	40	885		I would remove "the worst-case scenario" as this is related to a real contingency.		This has been deleted.
EU: Karin Zaunberger	SPM		40	887				since (typo)		This has been corrected.
Jeroen Arends	SPM		40	896	40	896		The right mix of policy instruments and incentives for private actor and their incorporation need to be developed.		The text has been changed to take the meaning of this into consideration
André Mader	SPM		40	897	41	914		Very theoretical, without reference to what has worked in the past, and where. The ECA regions and subregions are not mentioned.		The text has been changed to take the meaning of this into consideration
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	40		897	40	897		More precise suggestions should be given with regard to "better coordination and multi-level approaches"		This message has been developed to take these aspects into consideration.
Switzerland: José Romero	SPM		40	897	41	914		Section D5: Cohesiveness could be dealt with in this section by providing some examples of approaches between the various governance levels (national, subnational and private sector). It is not clear if the lack of cohesiveness is primarily due to the lack of coordination, innovative or multi-level and transboundary governance. Which one of these factors is most determinant?		This message has been developed to take these aspects into consideration.
Finnish Government	SPM		40	899	40	899		delete innovative (not necessarily)		This message has been developed to take these aspects into consideration.
Robert Watson	SPM		40	900				This text below needs to make the point more explicitly that the different ministries within a country must work together to develop multi-sectoral policies and that at the international level, MEAs and other international agreements need to work together with joint work programs		This message has been developed to take these aspects into consideration.
Switzerland: José Romero	SPM		40	901	40	901		Coordination does not implies forcefully that there is a common objective, in this context, the same high level of protection of biodiversity and NCPs. Therefore, it would probably be usefull to mention that coordination should be used as a mechanism to help raising the level of protection of biodiversity and NCP.		This message has been developed to take these aspects into consideration.
UK: Andrew Stott	SPM		40	901	41	914		How far are these statements supported by the evidence?		This message has been developed to take these aspects into consideration.
Switzerland: José Romero	SPM		40	908	40	908		Use the word "replicate" instead of "transfer".		The message has been changed and do no longer include the concept.
ECA values liaison group	SPM		40	911				and related value systems, please remove systems as it is more about the different values rather than different value systems		The section has been revised.
Jeroen Arends	SPM		40	913	40	913		Capacity building on NCP, policy processes, etc. needs to take place at all levels.		This has now been clarified
Yorick Revjol	SPM	41		915				Wouldn't be useful to add a part on how scientists, nature managers and PM for E could provide some help to the same people and government in CA, based on their experience, successes and failures? This would be a real added value based on the geographical extent, historical and socio-economic differences at the ECA scale...		We were unsure to include your suggestion without being policy prescriptive. We have now pointed out that there seems to be a respective knowledge gap within the chapter text. Further, we have hinted on this topic also in the overall gaps section of the SPM
EU: Karin Zaunberger	SPM		41	915		952		include a paragraph in EU as an example how countries can work together and adopt legally binding instruments (Habitats and Birds Directive, IAS regulation and achieve, provided implementation is successful, results which provide transboundary benefits. Include reference to MAES; EU could be an example for a innovative, multi-level and transboundary approach; the 'transition movement' should not be seen in combination with eco-topia. Transition movements are bottom up, close to citizen and local people. Green Economy/low carbon narrative can only be succesful in achieving sustainability, if the economic growth dilemma is addressed. If the economic growth paradigm is maintained then green economy and the low carbon narrative can only buying time.		We have tried to make more clear that Green economy and low carbon provide more short term options and might be combined with more transformative pathways in the longer run. The examples, where EU policy making had a positive impact are included in section D now and many further examples can be found in chapter 5. As you point out transition movements are bottom up, close to citizen and local people and so are Ecotopian pathways. Therefore they are discussed together.
UK: Andrew Stott	SPM		41	916	41	921		See comment above. The term governance is being applied to widely. This sections refers to policy options.		We have now rewritten the section and only refer to governance when pointing to the next section.
Robert Watson	SPM		41	922				I like this discussion, but Section C argues for four plausible worlds – economic optimism, global sustainable development, regional competition and regional sustainability – these should be the basis for this section. The authors should place their narratives e.g., green economy, low carbon, transition and ecotopina within these four worlds, therefore, the table should be totally revised		We hopefully made more clear now that this section is not about the plausible futures dealt with above, but about the desired futures for Europe and Central Asia.
André Mader	SPM		41	922	41	923		It might be instructive to the reader if the actions towards sustainable development are related back to the four broader "plausible futures" in message/finding C7. The terminology between the two key messages/findings might also need some harmonizing.		We hopefully made more clear now that this section is not about the plausible futures dealt with above, but about the desired futures for Europe and Central Asia.
Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	41		923	41	928		word 'eco-topian' might need some explanation for some readers (incl policymakers)		Ecotopian is just a name for a category of pathways, which was adopted from literature
ECA values liaison group	SPM		41	927				instead of altering fundamental values we suggest changing values, changing values is already the most fundamental level of change and altering sounds as if it is induced rather than intended		Thank you, we revised the text accordingly

Belgian government - Hilde Eggermont (IPBES National Focal Point)	SPM	41	929	41	930	"developing local, bottom-up transformational capabilities" - would be interesting to get a sense of feasibility	Unfortunately, the vast majority of studies did not assess feasibility. We included now an example in a box in the chapter text, but there is not have enough confidence to include it in the summary.
André Mader	SPM	41	937	41	948	This paragraph might be more at home under finding D3. Also, examples of the different instruments might make it easier to understand the points being made.	We decided to maintain the pathways text, but made the link with the new SPM text on policy instruments from chapter 6 now more clear.
EU: Jan-Erik Petersen (EEA)	SPM	41	937			Policy instruments to implement the different options are rather similar" a meaningless statement that ignores the importance of emphasis and choice of instruments between the really quite different policy visions set out in the paras above.	We have now tried to make the differences between the pathways more clear.
Anna-Rosa Asikainen	SPM	41	942	41	942	New business models are mentioned in the text. Could the assessment address how private investments in nature conservation and in biodiversity could be encouraged? Are there any relevant studies providing information about this issue?	While investments were mentioned in a number of studies across the chapter, none of them provided systematic research to appropriately respond to the role of investments in nature conservation. As a result, the question remains largely unanswered from a chapter 5 perspective.
Adriano Mazziotta	SPM	41	946	41	946	Spell out NBSAPs as this acronym is difficult to remember.	Thank you, we revised the text accordingly
André Mader	SPM	42	953	42	956	Could the "actions" column be made more simple and clear for policymaker? Also, combining "nature" actions and "NCP" actions might help to simplify. Lastly, it is not clear whether "quality of life" refers to quality of life as a product of NCP, or quality of life in general.	We have now omitted the table
Anna-Rosa Asikainen	SPM	42	953	45	972	As mentioned in the draft document, the tables need further development. Hopefully the writers are able to mention some simple and concrete example actions in Table SPM 4 (page 44-45).	We have now omitted the table
Marie Stenseke	SPM	42	953	45		It is unclear how table 3 and table 4 resonates with each other. Table 4 seems to be redundant since the information given in it is very basic political science, and not a specific result from the assessment	We have now omitted the table
Switzerland: José Romero	SPM	42	953	45	972	Various comments on the Tables SPM 3 and 4: 1) on line 971, substitute the word "Managing" by "Avoiding"; 2) would it be possible to provide some differentiation of the actions in order to cope with the various situations and capabilities in the countries of the ECA region (some are rich, other have less means, other would reach some targets with less means but with more time, etc.); 3) we wonder if it would be possible to introduce a notion of time (e.g. short, medium and long-term) in the recommendations: which actions should be taken immediately, and how much they should last; which ones should be prioritised in case of lack of means to undertake them immediately; etc. ; 4) another question refers to "packaging" or synergies: which actions should be taken together to produce most effects? ; 5) another element that could be indicated is the (range of) financial and/or societal costs and benefits of the various actions; 6) could it be possible to provide some (range) of quantitative objectives/thresholds for some of the actions/species/ecosystems/CNPs indicated in these tables (referring to the most virtuous scenarios used in this report?); 7) rferences to ILK should be strengthened in these tables; 8) the actions should be referred to the various scenarios considered in this report (cf. what was done to structure the pathways and the actions in the IPBES Pollination report); 9) more references to technologies and technological approaches and solutions for the various drivers of biodiversity loss should be done in these tables (e.g. fragmentation of the soil vs. densification of cities and human settlements and infrastructure); 10) we propose to merge tables spm 2, 3 and 4 taking into account our proposals above.	We have now omitted the table
France	SPM	42	953	45	Tables SPM	Once finalized, these tables should be very useful.	Due to a number of criticism we have now omitted these tables
France	SPM	42	953	42	Table SPM	This would be useful to have examples of instruments working in the ECA region under each icon of policy instrument.	This is now included in the new section D
France	SPM	42	953	42	Table SPM	Nature actions are needed in a low carbon pathway, are they not? Through protected areas for example, that may be existing or new carbon sink and storage. If no nature action is required with this pathway, what would be the point in conserving biodiversity if we choose that one to guide our actions?	We tried to make more clear now that relying on one pathways alone, is not ideal.
Robert Watson	SPM	42	955			Low carbon: Bioenergy crops: But not at the expense of biodiversity or arable land	Due to a number of criticism we have now omitted these tables
Robert Watson	SPM	42	955			Low carbon: Bioenergy and other renewable energy production: But not at the expense of biodiversity or arable land	Due to a number of criticism we have now omitted these tables
Robert Watson	SPM	42	955			Replace 'NCPs' by 'NCP'	Due to a number of criticism we have now omitted these tables
Jeroen Arends	SPM	42	955	42	955	Table SPM3: What about Nature Based Solutions and how NCP/ecosystem services can contribute to this?	Due to a number of criticism we have now omitted these tables
EU: Karin Zaunberger, Anne Teller	SPM	42	955	43	956	Table SPM 3 There are overlaps between the different pathways eg implementation of N2K and GI are also an integral part of a Transition scenario; Low carbon should also include nature action - the low carbon narrative as described is detrimental to biodiversity and ecosystems which risk to turn from sinks into sources and thus undermine the Low carbon narrative; restoration could be included; 'sustainable intensification' should be replaced by 'ecological intensification' as defined by FAO or better 'agro-ecology'	Due to a number of criticism we have now omitted these tables
Robert Watson	SPM	43	956			Transition: alternative forms of agriculture (organic). Contentious – if yields are low will this result in extensification	Due to a number of criticism we have now omitted these tables
Robert Watson	SPM	43	956			Replace 'NCPs' by 'NCP'	Due to a number of criticism we have now omitted these tables
EU: Ole Ostermann, JRC	SPM	43	956	43	956	(in the table) Please explain the term "Ecotopia": The Notebooks and Reports of William Weston is a seminal utopian novel by Ernest Callenbach, published in 1975. Maybe a paraphrase around an ecologic utopia is easier to communicate?	Due to a number of criticism we have now omitted these tables
EU: Jan-Erik Petersen (EEA)	SPM	43	957			Some very general statements again but of course an in-depth analytical discussion is a difficult exercise to carry out in a setting like the Regional Assessment. However, what is really lacking here is a connection back to the exceedance of our footprint in ECA in relation to Europe's biocapacity - why is that key message of the limits to our use of nature under whatever 'green growth' scenario or otherwise not part of this discussion of the options? In that context: does the Regional Assessment discuss the powerful concept of, and research on, planetary boundaries anywhere?	We are discussing issues of consumption and footprint now elsewhere in the SPM (Section A). More information can also be found in chapter 2 on the status and trends.
Robert Watson	SPM	43	959			Replace 'or' by 'and'	Thank you!
Robert Watson	SPM	43	961			Replace 'NCPs' by 'NCP'	Thank you!
ECA values liaison group	SPM	43	962			remove fundamental see line 927	Removed
EU: Karin Zaunberger	SPM	43	968			EU could be a driving force for the innovative thinking to bridge scientifically and institutionally from local, bottom up and sectoral options to systemic, regional and global levels !	We have now included many examples of the positive role the EU is playing in the SPM but also in the chapter text, particularly in chapter 6.
André Mader	SPM	44	970	45	972	Is it worth considering a less wordy table with selected ("best so far") strategic resonates that have worked in the past, with brief descriptions of which situations they might best be applied to?	The tables synthesising the findings in chapter 6 has been changed substantially. The main table now include options and opportunities for the mainstreaming of biodiversity and NCP. While revising the table we have tried to take all the comment to the table into account.
ECA values liaison group	SPM	44	970			Policy action: threshold value is the ecological concept the policy action would need to define an allowable value based on the threshold.	This text has been deleted
France	SPM	44	970	44	Table SPM	The first ambition should be rather formulated as "reducing, and if possible halting, biodiversity loss". This wording would reflect better agreed targets such as Aichi Targets and SDGs.	This table has been deleted
EU: Anne Teller	SPM	44	971			Add 'integration of ecosystem services into decision-making' in Economic & Financial Instruments.	This table has been deleted
Germany	SPM	46	975	46	983	Figure SPM 11: What do the different colours stand for? What is the intention of this figure? This is not clear.	Removed from SPM. A simpler version is included in Chapter 5.
France	SPM	46	975	46	Figure SPM	These graphs are difficult to understand: why are some bars starting in the middle of the boxes? Is there a point zero to see whether the bar indicates an increasing or a decreasing trend?	Removed from SPM. A simpler version is included in Chapter 5.

Switzerland: José Romero	SPM	45	982	45	982 Figure SPM.11 is difficult to read.	Removed from SPM. A simpler version is included in Chapter 5.
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