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Working Group on the State of the Environment and Nature
Conservation

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Background

In this report, the main points of discussion are summarized and general comments on the CBD Secretariat's documents are given. In addition, amendments to the recommendations given in the CBD Secretariat's documents are suggested. The aim of the expert meeting was not to reach a consensus on the individual points but rather to have an exchange of opinions and ideas. A high degree of similar points of view was apparent. This report is intended to help individuals and delegations in their preparation of the topics on the agenda of SBSTTA-20.

The report is also available from:

- a) The literature database "DNL-online" (www.dnl-online.de)
- b) Vilm-Reports are not available in book trade but can be downloaded from the internet at: http://www.bfn.de/0304_veroe+M52087573ab0.html#c32887

Action requested

The Meeting is invited to take note of the information.

Report of the European Expert Meeting in Preparation of SBSTTA-20

March 7 - 11, 2016

Convened by the
German Federal Agency for Nature Conservation
at the International Academy for Nature Conservation,
Isle of Vilm

Horst Korn, Kathrin Bockmühl, Rainer Schliep (Eds.)

- Scientific review of the implementation of the Strategic Plan for Biodiversity 2011-2020 and related programmes of work and the achievement of the Aichi Biodiversity Targets
- Marine and coastal biodiversity:
 - Ecologically or biologically significant marine areas
 - Biodiversity and acidification in cold-water areas
 - Impacts of marine debris and anthropogenic underwater noise
 - Marine spatial planning and training initiatives
- Invasive alien species
- Synthetic biology
- Review of the IPBES assessment on pollinators, pollination and food production
- Biodiversity and climate change
- Sustainable wildlife management
- Protected areas and ecosystem restoration
- Fifth edition of the Global Biodiversity Outlook, guidelines for the sixth national reports, and indicators for assessing progress towards the Aichi Biodiversity Targets
- Mainstreaming of biodiversity across sectors, including agriculture, forests and fisheries

Report of the European Expert Meeting in Preparation of SBSTTA-20

March 7 - 11, 2016

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Glossary of Acronyms

AHTEG	Ad Hoc Technical Expert Group
CBD	Convention on Biological Diversity
CHM	Clearing House Mechanism
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on Migratory Species
COP	Conference of the Parties
CPW	Collaborative Partnership on Sustainable Wildlife Management
EBSA	Ecologically or Biologically Significant marine Area
ES	Executive Secretariat
EU	European Union
FAO	United Nations Food and Agriculture Organization
GBO	Global Biodiversity Outlook
GEF	Global Environment Facility
GMO	Genetically Modified Organism
GOA-ON	Global Ocean Acidification Observation Network
GSPC	Global Strategy for Plant Conservation (CBD)
IPBES	Intergovernmental Panel on Biodiversity and Ecosystem Services
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
MSP	Marine Spatial Planning
NBSAP	National Biodiversity Strategies and Action Plan
NGO	Non-Governmental Organization
NR	National Report
PoWPA	Programme of Work on Protected Areas (CBD)
PSSA	Particularly Sensitive Sea Area
RAP	Regional Action Plan (Regional Sea Conventions)
SBI	Subsidiary Body on Implementation (CBD)
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice (CBD)
SDG	Sustainable Development Goal
TEEB	The Economics of Ecosystems and Biodiversity
TS	Technical Series (CBD)
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention on Climate Change
VME	Vulnerable Marine Ecosystem
WCMC	World Conservation Monitoring Centre (UNEP)

1 Introduction

The European expert meeting in preparation of the upcoming twentieth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-20) of the Convention on Biological Diversity (CBD) was held as an informal scientific workshop, **aiming to exchange information and opinions on the topics to be discussed at the upcoming twentieth meeting of SBSTTA. The 52 participants from 15 countries attended in their personal capacities as biodiversity experts.** Robert Höft and Joseph Appiott from the CBD Secretariat took part in the meeting as observers. Further experts introducing specific topics to the meeting were Susanne Altvater (s.pro - sustainable projects , Germany), Jan Ekebom (Metsähallitus Parks and Wildlife Finland), Margret Engelhard (Federal Agency for Nature Conservation, Germany), Vincent Fleming (Department for Environment Food and Rural Affairs, United Kingdom), Ema Gojdičová (State Nature Conservancy of the Slovak Republic), Janos Henricke (Nature and Biodiversity Conservation Union, NABU, Germany), David Johnson (Seascope Consultants Ltd, United Kingdom), Marcel Kok (PBL Netherlands Environment Assessment Agency, The Netherlands), Alexander Liebschner (Federal Agency for Nature Conservation, Germany), Andreas Obrecht (Federal Office for the Environment, Switzerland), Axel Paulsch (Institute for Biodiversity Network e.V., Germany), Jan Plesnik (Agency for Nature Conservation, Czech Republic), Tone Solhaug (Ministry of the Environment, Norway), Anki Weibull (Swedish Environmental Protection Agency), Karin Zaunberger (European Commission, Belgium). Paola Mosig Reidl and Hesiquio Benitez Diaz (National Commission for Knowledge and Use of Biodiversity, Mexico) provided updated information on proposed objectives and main activities at the forthcoming thirteenth Conference of the Parties (COP) of the CBD in Cancún, Mexico.

The participants of the preparatory meeting to SBSTTA-20 were welcomed by Horst Korn from the German Federal Agency for Nature Conservation who chaired the meeting. The topics were introduced briefly by the above named specialists in their field and discussed extensively in small working groups and in plenary. **In this report, the main points of discussion are summarized and general comments on the Secretariat's documents are given. In addition, amendments to the recommendations given in the Secretariat's documents are suggested. The aim of the expert meeting was not to reach a consensus on the individual points but rather to have an exchange of opinions and ideas.** A high degree of similar points of view was apparent. **This report is intended to help individuals and delegations in their preparation of the topics on the agenda of SBSTTA-20.**

How to read the report

Amendments and additions to the draft SBSTTA-20 documents are marked as follows throughout the report:

~~Text~~ = text is suggested to be deleted

Text = suggestion for new text

[(Text)] = comment on suggested change

2 Scientific review of the implementation of the Strategic Plan for Biodiversity 2011-2020 and related programmes of work and the achievement of the Aichi Biodiversity Targets

Item 3 of the provisional agenda

Item 3 was introduced to the plenary of the Vilm meeting by Tone Solhaug who also chaired the respective working group.

The participants discussed item 3 and the results of the discussion are mirrored in the following comments, proposals for changes and additions in the document's suggested recommendations.

General Comments

The discussion at the Vilm meeting was based on an advanced document entitled "UPDATED ASSESSMENT OF PROGRESS TOWARDS SELECTED AICHI BIODIVERSITY TARGETS". Target 11 was the only target being assessed at the time of the Vilm meeting. Other targets to be included are 12, 5 and 15.

The first observation is that the document "UPDATED ASSESSMENT OF PROGRESS TOWARDS SELECTED AICHI BIODIVERSITY TARGETS" is not focusing on a scientific review of the implementation, and it is relevant to draw the attention to the CBD Technical Report 78 for a scientific review. This report on progress in implementation is a useful exercise in order to address obstacles for the implementation of targets.

The participants of the Vilm meeting questioned the process of selecting targets for this assessment as previous COP decisions have asked for additional efforts on targets with the least progress. The participants did however also recognize the importance of being able to reach some of the Aichi Targets before 2020, and that this would contribute positively to the negotiations on the follow-up of the Strategic Plan in 2020.

The participants are aware that the updated status for all Aichi Targets will be discussed at a forthcoming SBI meeting, and that some elements of this SBSTTA document and recommendations are to be addressed at this SBI meeting (in particular funding issues).

The work-sharing between SBSTTA and the Subsidiary Body on Implementation is expected to be further matured based on the experiences from SBSTTA-20 and SBI-1.

It would seem useful to give clear instructions to the Executive Secretariat on how the scientific review of implementation should be prepared to the Parties. With the development of indicators and preparation of reporting instructions (at COP-13) this could form a basis for this review. One other main source of information before COP-14 would also be the IPBES regional reports.

Document UNEP/CBD/SBSTTA/20/2:

Suggestions on the text:

**UPDATED ASSESSMENT OF PROGRESS TOWARDS SELECTED
AICHI BIODIVERSITY TARGETS**

Note by the Executive Secretary

INTRODUCTION

abridged; continued

VII. SUGGESTED RECOMMENDATIONS

1. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines, taking into account also any updated information on progress that is available at that time:

The Conference of the Parties,

Recognizing that the information in CBD Technical Report 78 provides the best available scientific knowledge on the implementation of the Aichi Biodiversity Targets,

Welcoming the continued progress towards the achievement of Aichi Biodiversity Target 11,

Acknowledging with appreciation the support of partner organizations, donors, host Governments and the Executive Secretary, for organizing the workshops and related activities on achieving Aichi Biodiversity Target 11 and 12,

Noting that, implementation of one element of Aichi Biodiversity Target 11 will influence the others and ~~well as~~ **will** aid in the implementation of **Target 12 and** other relevant Aichi Biodiversity Targets ~~and as well as~~ the Sustainable Development Goals;

Recalling decision X/31 and XI/24

1. *Invites* Parties:

(a) ~~Provide regularly updated information to the World Database on Protected Areas, managed by the International Union for Conservation of Nature and the United Nations Environment Programme's World Conservation Monitoring Centre on their protected area systems, including as appropriate, areas that are effectively conserved through indigenous peoples, local communities and the private sector, with a view to improving the accuracy and completeness of global information for reporting and planning, and to avoid or reduce discrepancies;~~

(b) ~~Undertake concerted efforts to develop and implement their roadmaps for the achievement of Target 11 at national level, taking full account of any relevant projects funded by the GEF and other donors;~~

(c) In establishing new protected areas give priority to those that would expand the coverage of areas important for biodiversity and ecosystem services and improve ecological representativity;

(d) Undertake more systematic assessment of management effectiveness gaps, with the aim to complete a national assessment within the next five years, and report the results to the Global Database on Protected Areas Management Effectiveness;

(e) Undertake the measures to improve the effectiveness of protected areas from the inadequate management category to the sound management category;

~~(f) Report on the implementation their roadmaps for the achievement of Target 11 at national level, and on progress achieved, prior to the fourteenth and fifteenth meetings of the Conference of Parties;~~ **[(Rationale: The participants of the Vilm meeting recommend that reporting on Target 11 is done together with the National Reports.)]**

1bis. Invites the IUCN and WCMC to work with Parties to verify and update the data contained in the World Database on Protected Areas, as a source of information to assess the implementation of Target 11;

2. *Invites* relevant partners, regional agencies, bilateral and multilateral funding agencies in collaboration with the Executive Secretary to:

(a) ~~To d~~ **D**evelop further guidance on:

(i) ~~Criteria for e~~ **E**ffective area-based conservation measures;

(ii) Measures to enhance connectivity and integration of protected areas into the wider land- and seascapes;

~~(iii) Understanding equity, including the link between governance and equity and how to measure governance quality, with simple, user friendly formats for collecting information, and organizing training programmes on equitable management;~~ **[(Rationale: This topic needs further clarification and framing as well as possible collaboration with the Working Group on Art. 8j.)]**

(b) Explore the possibility of developing global and/or regional projects to identify, designate and map connectivity corridors, including through the integration of Indigenous Community Conservation Areas and other effective area-based conservation measures as stepping stones, as well as through ecosystem restoration;

(c) Explore the possibility of developing global or regional projects to complete national assessments of management effectiveness gaps in a coherent manner, and to promote improvements in management effectiveness;

~~[(d) Enable implementation support networks at the subregional level, with the involvement of project coordinators, regional organizations, GEF implementing agencies, bilateral funding agencies, and Friends of PoWPA and other partners to facilitate implementation of roadmaps~~ **Target 11** in a coherent manner, and to provide structured technical support, through regular communications, exchanging best practices, tools, and lessons learned, including organization of webinars and training programmes, as well as facilitating monitoring and reporting;] **[(Rationale: This paragraph might fit better for the SBI, and then as one example of structured work to facilitate implementation.)]**

2bis. Request the Executive Secretariat to:

~~(ae)~~ **P**romote dissemination of tools, best practices, challenges, experiences and lessons learned through the subregional implementation support networks;

~~[(f) Report on progress to the Subsidiary Body on Scientific, Technical and Technological Advice and/or the Subsidiary Body on Implementation at a meeting held prior to the fourteenth meeting of the Conference of the Parties;]~~ **[(Rationale: Has to be seen in connection with the instructions of the next scientific review.)]**

[3. *Invites* the Global Environment Facility and its implementing agencies to facilitate the alignment of the development and implementation of protected area projects in its sixth and seventh replenishment cycles with the actions identified in the road maps, with a view to facilitating the systematic monitoring and reporting of the results of those projects as they contribute to implementation of the road maps and achievement of Aichi Biodiversity Target 11 and other related targets;

4. *Encourages* bilateral and multilateral donors, Parties and countries in a position to do so, subject to availability of funding, to support mobilization of funding to implement road maps, taking into account that implementation actions for achieving Aichi Biodiversity Target 11 will aid in the implementation of other relevant Aichi Biodiversity Targets, relevant targets of Sustainable Development Goals and contribute to Article 5.1 of Paris Climate agreement.] **[(Rationale: Paragraphs 3 and 4 are addressing funding and must be discussed by the Subsidiary Body on Implementation.)]**

3 Ecologically or biologically significant marine areas

Item 4.1 of the provisional agenda

Item 4.1 was introduced to the plenary of the Vilm meeting by David Johnson who also chaired the respective working group.

The participants took note of the document UNEP/CBD/SBSTTA/20/3 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendations.

Document UNEP/CBD/SBSTTA/20/3:

Suggestions on the text:

PROGRESS REPORT ON DESCRIBING AREAS MEETING THE CRITERIA FOR ECOLOGICALLY OR BIOLOGICALLY SIGNIFICANT MARINE AREAS

Note by the Executive Secretary

INTRODUCTION

abridged; continued

VII. SUGGESTED RECOMMENDATIONS

26. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

The Conference of the Parties,

Recalling decisions X/29, XI/17 and XII/22 on ecologically or biologically significant marine areas (EBSAs),

1. *Welcomes* the summary reports prepared by the Subsidiary Body at its twentieth meeting,¹ and the reports of the regional workshops for describing ecological or biologically significant marine areas held in three regions: North-East Indian Ocean (Colombo, 22-27 March 2015); North-West Indian Ocean (Dubai, United Arab Emirates, 19-25 April 2015); and Seas of East Asia (Xiamen, China, 13-18 December 2015) and *expresses its gratitude* to the Government of Japan (through the Japan Biodiversity Fund) and the European Commission for their financial support and to hosting countries and collaborating organizations involved in the organization of the regional workshops referred to above;

¹ To be developed by SBSTTA on the basis of UNEP/CBD/SBSTTA/20/3/Add.1.

2. *Requests* the Executive Secretary to include the summary reports prepared by the Subsidiary Body at its twentieth meeting, annexed to the present draft decision, in the EBSA repository, and to submit the summary reports to the United Nations General Assembly, in particular its ~~Ad Hoc Open-ended Informal Working Group~~ **[(Rationale: Add proper title here.)]** to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, as well as relevant Parties, other Governments and relevant international organizations in line with the purpose and procedures set out in decisions X/29, XI/17 and XII/22;

3. *Notes with satisfaction* that the summary reports on the description of areas meeting the criteria for EBSAs have been considered and made use of by the United Nations General Assembly, the Food and Agriculture Organization of the United Nations, the International Maritime Organization, the Convention on the Conservation of Migratory Species of Wild Animals and the Intergovernmental Oceanographic Commission/Ocean Biogeographic Information System, as well as by a number of regional and subregional processes, **and invites competent international organizations to take every opportunity to make use of and apply EBSA information in their relevant activities;**

4. *Expresses* appreciation to those Parties that have initiated or completed national exercises to describe areas meeting the EBSA criteria or other relevant compatible and complementary nationally or intergovernmentally agreed scientific criteria, and those that have participated in the regional workshops under the Convention to describe areas within their national jurisdiction meeting the EBSA criteria **and invites Parties to provide information on any additional national exercises;**

5. *Takes note* of practical options to further enhance scientific methodologies and approaches on the description of areas meeting the EBSA criteria, as contained in the annex to present draft decision (annex IV to the present note), **in particular the possibilities to:**

- **Improve the scientific guidance for the application of the EBSA criteria based on workshop experiences;**
- **Undertake prior systematic assessments of areas meeting EBSA criteria, in preparation for workshops;**
- **Characterize and categorize EBSAs, during or post workshops;**
- **Consider means of improving data availability and accessibility;**

invites Parties to designate national EBSA information curators, as referred to in annex to present draft decision, and **[(Rationale: This part of original paragraph 5 should be deleted on the basis that the group found no support for the additional burden any such national curator role would create and wished to further study SBSTTA/20/INF/19 and SBSTTA/20/INF/20.)]**

5 bis ~~*Requests*~~ the Executive Secretary to convene ~~the work of an~~ Ad Hoc Technical Expert Group on EBSAs, with the terms of reference provided in the annex to the present decision,² ~~through e-mail, online forums or meetings once every two years, subject to available financial resources, in order to implement practical options in collaboration with Parties, other Governments, relevant organizations, and indigenous peoples and local communities, as outlined in annex to present draft decision (annex IV to the present note);~~ **[(Rationale: This issue should be reconsidered subject to further information.)]**

6. *Requests* the Executive Secretary, in line with paragraph 36 of decision X/29, paragraph 12 of decision XI/17 and paragraph 6 of decision XII/22, to continue to facilitate the description of areas meeting the criteria for EBSAs through the organization of additional regional or subregional workshops where Parties wish workshops to be held, taking into account the results **and experiences of previous EBSA workshops, practical options identified in paragraph 5, and** the work done by the **any relevant** Ad Hoc Technical Expert Group, as referred to in paragraph 5 above;

[7. *Recalling* paragraph 24 of decision XI/17 and paragraph 15 of decision XII/22, *welcomes* the training manual on the use of traditional knowledge in the application of the EBSA criteria,³ and

² Appendix to annex IV to the present note.

³ UNEP/CBD/SBSTTA/20/INF/21

requests the Executive Secretary, in collaboration with Parties, other Governments, donors, relevant organizations, and indigenous peoples and local communities to apply this training manual **as well as other training materials, e.g. SBSTTA/16/INF/9,** by organizing training activities, subject to the availability of financial resources.] **[(Rationale: This paragraph needs further information and clarification on the status and content of the draft training manual.)]**

4 Specific work plan on biodiversity and acidification in cold-water areas

Item 4.2 of the provisional agenda

Item 4.2 was introduced to the plenary of the Vilm meeting by Janos Hennicke who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/4 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendation.

Document UNEP/CBD/SBSTTA/20/4:

Suggestions on the text:

SPECIFIC WORKPLAN ON BIODIVERSITY AND ACIDIFICATION IN COLD WATER AREAS

[(Rationale: "Acidification" was removed as a main issue throughout the document as it was considered only one of the various threats to biodiversity in cold-water areas. The issue of "acidification" is dealt with together with other threats, such as destructive fishing practices, marine mining, etc., all of which are addressed in the document. Mentioning "acidification" specifically in title, subheadings, etc. of the document was considered giving an unbalanced and misleading impression of scope, content and objectives of the document.)]

Note by the Executive Secretary

INTRODUCTION

abridged; continued

SUGGESTED RECOMMENDATIONS

8. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to:

1. *Welcome* the scientific compilation and synthesis on biodiversity and acidification in cold-water areas,¹ and *take note* of the key findings of this synthesis, as summarized in annex I to the note by the Executive Secretary on specific workplan on biodiversity and acidification in cold-water areas;²

¹ UNEP/CBD/SBSTTA/INF/25.

² UNEP/CBD/SBSTTA/20/4.

2. *Encourage* Parties, other Governments, and research and funding organizations to promote ~~the activities to address~~ research and monitoring needs as identified in the annex to the present recommendation.³

9. The Subsidiary Body on Scientific, Technical and Technological Advice may also wish to recommend that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

The Conference of the Parties,

Recalling paragraph 4 of decision XI/20, in which it urged Parties to advocate and contribute to effective carbon dioxide emission reductions, by reducing anthropogenic emissions by sources and by increasing removals by sinks of greenhouse gases under the United Nations Framework Convention on Climate Change,⁴ noting also the relevance of the Convention on Biological Diversity and other instruments,

1. *Notes* that cold-water areas sustain ecologically important habitats, such as cold-water corals and sponge fields, which play important functional biological and ecological roles, including supporting rich communities of fish as well as suspension-feeding organisms such as sponges, bryozoans and hydroids, undergoing change due to the interactive effects of multiple stressors, including both global stressors (such as ocean warming, ocean acidification, and ocean deoxygenation) and local stressors (such as destructive fishing practices, marine mining, hydrocarbon exploitation, shipping, pollution, and bioprospecting);

2. *Adopts* the specific workplan for biodiversity ~~and acidification~~ in cold-water areas contained in the annex to the present decision,⁵ as an addendum to the programme of work on marine and coastal biodiversity;

3. *Urges* Parties, other Governments and relevant organizations to implement the activities contained in the specific workplan, where applicable and in accordance with national capacity and circumstances, and further strengthen current efforts at the local, national, regional and global levels in order to:

(a) ~~Reduce~~ **Avoid, minimize and mitigate** the impacts of ~~multiple global and cal~~ stressors, **and especially the combined and cumulative effects of multiple stressors**, noting that this would have multiple benefits ~~and that benefits can be expected regardless of the impacts of ocean acidification~~;

~~(b) Enhance the resilience of biodiversity and ecosystems in cold water areas through ecosystem based adaptation to enable the continued provisioning of goods and vices; [(Rationale: Item (b) was removed as the objective was considered unreasonable for and unachievable in the target areas, i.e. cold-water areas, as those are predominantly located in the deep sea. The item was also removed in the workplan (Annex II).)]~~

~~(be)~~ Identify and protect areas known to be resilient to climate-related impacts and capable of acting as refugia sites in order to enhance the adaptive capacity of cold-water ecosystems;

~~(cd)~~ Enhance understanding of ecosystems in cold-water areas, including by improving the ability to predict the occurrence of ~~biodiversity~~ **species** and habitats and to understand the vulnerability of these ~~biodiversity and habitats~~ to different types of stressors as well as ~~the interactive~~ **combined and cumulative** effects of various stressors;

³ Annex III to the present document

⁴ United Nations, *Treaty Series*, vol. 1771, No. 30822.

⁵ Annex II to the present document

(de) Enhance international and regional cooperation in support of national implementation, building upon existing international and regional initiatives and creating synergies with various relevant areas of work within the Convention;

4. *Requests* the Executive Secretary, in collaboration with Parties, other Governments and relevant organizations, to facilitate, promote and support the implementation of the specific workplan contained in annex to the present decision by, among other things, facilitating capacity-building activities, subject to available financial resources, and the sharing of information on experiences and lessons learned from various implementation activities, including through collaboration with the Food and Agriculture Organization of the United Nations, the International Maritime Organization, the International Seabed Authority, regional seas organizations and relevant regional initiatives, and regional fisheries management bodies.

Annex I

KEY MESSAGES FROM THE SCIENTIFIC COMPILATION AND SYNTHESIS ON BIODIVERSITY AND OCEAN ACIDIFICATION IN COLD-WATER AREAS⁶

Cold-water biodiversity and ecosystems

abridged; continued

Pressures and threats to biodiversity in cold-water areas

4. Ocean acidification has increased by ~26% **in H⁺ ion concentration** since pre-industrial times. Increased releases of CO₂ due to the burning of fossil fuels and other human activities are leading to increases in sea surface-temperatures and ocean acidification. **[(Rationale: Not only will sea surface temperatures increase, but also sea temperatures in general, i.e. temperatures of waters deeper than the sea surface. Thus, “surface” was considered being imprecise and should therefore be removed. However, if the background document specifically states “sea surface temperatures” the term could be kept to match this statement with the background document.)]**

abridged; continued

8. Destructive fishing practices can significantly impact vulnerable marine ecosystems. Many cold-water ecosystems have slow growth rates, and recovery from impacts may take decades to hundreds or even thousands of years. Decreases in biodiversity, biomass and habitats (through destruction **or alteration**) could entail consequences for broader biogeochemical cycles.

9. There are potential impacts on marine biodiversity and ecosystems in the deep-sea from marine mining **(exploration and exploitation)** ~~to marine biodiversity~~. Impacts may include habitat destruction, ecotoxicology, **noise**, changes to habitat conditions, discharge of nutrient enriched deep-water to surface communities and potential displacement or extinction of local populations. ~~;~~ **In** addition to point source mining impacts, understanding the consequences of mine tailings disposal over wide areas is particularly important.

abridged; continued

⁶ Based on UNEP/CBD/SBSTTA/INF/25

Annex II

**SPECIFIC WORKPLAN ON BIODIVERSITY AND ACIDIFICATION IN
COLD-WATER AREAS**

Context and scope

abridged; continued

Objectives

4. The objectives of the specific workplan are the following:

(a) ~~To reduce the impacts of multiple stressors~~ **To avoid, minimize and mitigate the impacts of global and local stressors, and especially the combined and cumulative effects of multiple stressors**, noting that this would have multiple benefits and that benefits can be expected regardless of the impacts of ocean acidification;

(b) ~~To enhance the resilience of biodiversity and ecosystems in cold-water areas through ecosystem-based adaptation to enable the continued provisioning of goods and services;~~

(be) To identify and protect areas known to be resilient to climate-related impacts and capable of acting as refugia sites in order to enhance the adaptive capacity of cold-water ecosystems;

(ce) To enhance understanding of ecosystems in cold-water areas, including by improving the ability to predict the occurrence of **biodiversity species** and habitats and to understand the vulnerability of these ~~biodiversity and habitats~~ to different types of stressors as well as the interactive **combined and cumulative** effects of various stressors;

(de) To enhance international and regional cooperation in support of national implementation, building upon existing international and regional initiatives and creating synergies with various relevant areas of work within the Convention.

Activities

5. *Parties are encouraged to take the following actions:*

5.1 Assess needs and develop integrated policies, strategies and programmes related to biodiversity ~~and acidification~~ in cold-water areas:

(a) Integrate issues related to biodiversity ~~and acidification~~ in cold-water areas into national biodiversity strategies and action plans (NBSAPs);

abridged; continued

(e) ~~Develop and implement adaptation plans to improve the resilience of cold-water biodiversity, giving priority to key habitats, such as cold-water coral reefs and related ecosystems, and support and monitor the implementation of the adaptation plans using robust indicators for resilience and stressor assessment;~~

(ce) Assess the degree to which local stressors **(such as destructive fishing practices, marine mining, hydrocarbon exploitation, anthropogenic noise, shipping, pollution, and bioprospecting)** are addressed by existing sectoral regulations and adjust regulatory frameworks to address these stressors, where appropriate;

(de) Integrate long-term climate-related impacts on cold-water biodiversity into the assessment of local stressors;

(ef) Ensure close coordination among national and subnational governments, and facilitate the involvement of indigenous peoples and local communities;

(fg) Develop regional strategies to address ~~common~~ stressors, complementing national strategies.

5.2 Strengthen existing sectoral and cross-sectoral management to address stressors to cold-water biodiversity, including from overfishing and destructive fishing practices, pollution, shipping, seabed mining, by taking the following actions, as appropriate:

abridged; continued

(d) ~~Reduce~~ **Avoid, minimize or mitigate** land-based and sea-based pollution, deoxygenation, and introduction of invasive species through ballast water and biofouling to prevent adverse impacts on cold-water ecosystems and species, including through the implementation of instruments, tools and guidelines by the International Maritime Organizations (IMO) and other relevant global and regional organizations;

(e) ~~Reduce~~ **Avoid, minimize or mitigate** adverse impacts related to hydrocarbon extraction, including exclusion of oil and gas exploration and extraction in the vicinity of cold-water coral and sponge reefs and other areas of sensitive cold-water biodiversity;

(f) ~~Reduce~~ **Avoid, minimize or mitigate** adverse impacts of deep-sea mining on cold-water biodiversity, including impacts related to mining in areas adjacent to habitats containing sensitive cold-water biodiversity and important fisheries habitats, in line with instruments, tools and guidelines of the International Seabed Authority for mining in the deep seabed beyond national jurisdiction;

(g) Avoid placement of undersea cables in areas that are known or highly likely to contain vulnerable cold-water coral and sponge reefs.

5.3 Develop and apply marine protected areas and marine spatial planning in order to reduce the impacts of multiple stressors on cold-water biodiversity in the context of the ecosystem approach and national development planning:

(a) Increase spatial coverage and **management effectiveness of marine protected areas** in cold-water managed areas;

(b) Identify and prioritize in conservation, protection and management approaches cold-water areas ~~that are likely to enhance the resilience of ecosystems to the impacts of ocean warming and acidification~~, including:

- Ecologically or biologically significant marine areas (EBSAs), vulnerable marine ecosystems (VMEs) and particularly sensitive sea areas (PSSAs) in cold-water areas;
- Cold-water areas identified in vulnerability assessments using ecological and socio-economic criteria.
- Habitats that ~~may be resilient to~~ **have not been affected by** the impacts of ocean acidification and warming, and thus serve as refugia sites;
- Healthy cold-water coral reefs, sponge reefs and other cold-water marine ecosystems to prevent their degradation through human induced stressors;
- Areas with healthy cold-water coral communities that are at depths above the aragonite saturation horizon;
- Habitats that are important for maintaining connectivity, **gene pool size and diversity**, and gene flow ~~nationally and regionally~~;

- Representative benthic habitats across the range of ecosystems, including those adjacent to degraded areas.

5.4 Expand and improve monitoring and research on biodiversity in cold-water areas to ~~fill in gaps in~~ **improve** fundamental knowledge ~~of~~ **related to** species identification, **taxonomic standardization**, species distribution, and community composition, ~~including taxonomic standardization~~, including through activities outlined in the appendix to this workplan, with a focus on activities that:

(a) Improve understanding of biodiversity in cold-water areas to provide baseline information used for assessing the effects of climate and human-induced stressors;

(b) Conduct research to assess how climate and human-induced stressors will impact the physiology, health and long-term viability of cold-water organisms, habitats and ecosystems;

~~(c)~~ Improve monitoring of environmental conditions in cold-water habitats to understand variability in carbonate chemistry;

~~(d)~~ Develop or expand upon predictive model research to determine how projected climate change will impact cold-water biodiversity over different time scales;

~~(e)~~ Assess the economic implications of the ongoing and predicted future pressures on cold-water biodiversity;

~~(f)~~ ~~Conduct research to assess how climate and human-induced stressors will impact the physiology, health and long-term viability of cold-water organisms, habitats and ecosystems;~~

~~(g)~~ ~~Improve coordination and collaboration in research, information sharing and capacity building to address policy and management needs, and to increase public awareness.~~

5.5 Improve coordination and collaboration in research, information sharing and capacity-building to address policy and management needs, and to increase public awareness:

abridged; continued

Annex III

MONITORING AND RESEARCH NEEDS FOR SUPPORTING THE IMPLEMENTATION OF THE SPECIFIC WORKPLAN ON BIODIVERSITY AND ACIDIFICATION IN COLD-WATER AREAS

1. Improve understanding of biodiversity in cold-water areas to provide baseline information used for assessing the effects of climate **change** and **other** human-induced stressors:

abridged; continued

~~2. Improve monitoring of environmental conditions in cold-water habitats to understand variability in carbonate chemistry:~~

~~2.1 Develop or expand upon existing water chemistry monitoring programmes in cold-water areas to better understand the natural spatial and temporal variability of ocean carbon chemistry;~~

- ~~2.2~~ — Integrate water chemistry monitoring within national jurisdictions into international programmes, such as the Global Ocean Acidification Observation Network (GOA-ON);
 - ~~2.3~~ — Support the development of technology for the rapid and economical assessment of seawater carbonate chemistry;
 - ~~2.4~~ — Integrate carbonate chemistry sampling into marine monitoring programmes, where possible.
- ~~3.~~ — Develop or expand upon predictive model research to determine how projected climate change will impact cold water biodiversity over different time scales:
- ~~3.1~~ — Improve ocean carbonate models to understand the temporal and three-dimensional spatial changes in carbonate saturation state and its main drivers, including changing atmospheric CO₂ conditions and ocean currents;
 - ~~3.2~~ — Document existing gaps in data knowledge on national, regional global scales that limit the predictive power of models;
 - ~~3.3~~ — Couple ocean carbonate chemistry mapping and oceanographic models to biophysical and ecological information to predict the temporal and spatial variability of acidification impacts in order to help identify areas under the greatest threat and possible refugia;
 - ~~3.4~~ — Optimize habitat modelling to predict key habitats and biodiversity occurrence from seawater carbonate chemistry, oceanographic and water mass modelling and larval dispersal.
24. Assess the economic implications of current and predicted future pressures on cold-water biodiversity:
- 24.1 Enhance understanding of the ecosystem goods and services of cold-water areas;
 - 24.2 Investigate connectivity (genetic and transfer of mobile species) between cold-water areas at multiple scales;
 - 24.3 Investigate flow-on effects to ecosystems and ecosystem services that have significant environmental, social, cultural and economic impacts.
35. Conduct research to assess how climate and human-induced stressors will impact the physiology, health and long-term viability of cold-water organisms, habitats and ecosystems:
- 35.1 Carry out controlled laboratory experimentation, where feasible, on key individual species (ecosystem engineers, keystone species) to understand their metabolic, physiological and behavioural responses, their tolerance limits/thresholds to ocean acidification, potential interactive effects of warming and deoxygenation and to human-induced stressors;
 - 35.2 Implement experiments using mesocosms in the field to understand fundamental ecological responses to ocean acidification, including how acidification may alter plankton productivity, larval ecology, food webs and the competitive interactive strength of taxa;
 - 35.3 Assess experimental designs for ocean acidification biodiversity research at the individual, population and ecosystem level to identify best practices;
 - 35.4 Identify the adaptive (or evolutionary) capacity of species with regard to single and multiple stressors, to assess the long-term resilience of key ecosystems and their continued provisioning of goods and services;
 - 35.5 Conduct long-term experiments to assess whether organism survival comes with hidden energetic, structural or reproductive costs over a longer period;
 - 35.6 Conduct experiments to assess whether larval stages are more susceptible to potential impacts at different life stages of organisms, and whether this impacts the long-term fitness of key species;

- 35.7** Incorporate broader assessments of ecological, physiological and microbiological impacts of acidification into research to consider wider impacts on individuals, species and ecological interactions.

4. Improve understanding of the trends in ocean acidification in cold-water areas and potential impacts on biodiversity:

4.1 Improve monitoring of environmental conditions in cold-water habitats to understand variability in carbonate chemistry:

4.1(a) Develop or expand upon existing water chemistry monitoring programmes in cold-water areas to better understand the natural spatial and temporal variability of ocean carbon chemistry;

4.1(b) Integrate water chemistry monitoring within national jurisdictions into international programmes, such as the Global Ocean Acidification Observation Network (GOA-ON);

4.1(c) Support the development of technology for the rapid and economical assessment of seawater carbonate chemistry;

4.1(d) Integrate carbonate chemistry sampling into marine monitoring programmes, where possible.

4.2. Develop or expand upon predictive model research to determine how projected climate change will impact cold-water biodiversity over different time scales:

4.2(a) Improve ocean carbonate models to understand the temporal and three-dimensional spatial changes in carbonate saturation state and its main drivers, including changing atmospheric CO₂ conditions and ocean currents;

4.2(b) Document existing gaps in data knowledge on national, regional global scales that limit the predictive power of models;

4.2(c) Couple ocean carbonate chemistry mapping and oceanographic models to biophysical and ecological information to predict the temporal and spatial variability of acidification impacts in order to help identify areas under the greatest threat and possible refugia;

4.2(d) Optimize habitat modeling to predict key habitats and biodiversity occurrence from seawater carbonate chemistry, oceanographic and water mass modeling and larval dispersal.

5 Addressing impacts of marine debris and anthropogenic underwater noise on marine and coastal biodiversity

Item 4.3 of the provisional agenda

Item 4.3 was introduced to the plenary of the Vilm meeting by Susanne Altvater (marine debris) and Alexander Liebschner (underwater noise).

The participants at the Vilm meeting discussed the suggested recommendations in the unedited copy of document UNEP/CBD/SBSTTA/20/5 and concluded to await the draft of document UNEP/CBD/SBSTTA/19/5 by the Executive Secretary.

Document UNEP/CBD/SBSTTA/20/5 (as of 10 February 2016):

Suggestions on the text:

ADDRESSING IMPACTS OF MARINE DEBRIS AND ANTHROPOGENIC UNDERWATER NOISE ON MARINE AND COASTAL BIODIVERSITY

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

IV. SUGGESTED RECOMMENDATION

14. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

Impacts of anthropogenic underwater noise on marine and coastal biodiversity

The Conference of the Parties

1. *Welcomes* the updated report entitled “Scientific synthesis of the impacts of underwater noise on marine and coastal biodiversity and habitats” as contained in document UNEP/CBD/SBSTTA/20/INF/8, and *encourages* Parties, other Governments and relevant organizations to make use of the information therein;

2. *Recalling* ~~paragraph 3 of~~ decision XII/23, **in particular paragraph 3, and** *invites* Parties, other Governments and competent organizations, including the International Maritime Organization, the Convention on the Conservation of Migratory Species of Wild Animals,¹ the International Whaling

¹ United Nations, *Treaty Series*, vol. 1651, No. 28395.

Commission, other relevant stakeholders, and indigenous peoples and local communities, to share their experiences on the application of measures to **avoid**, minimize and mitigate the significant adverse impacts of anthropogenic underwater noise on marine and coastal biodiversity, including the measures specified in paragraph 3 of the same decision, and **share their experiences on the application of these measures**;

2bis. *Requests* the Executive Secretary to continue his work on the compilation, synthesis and dissemination of these experiences, and to develop, in collaboration with Parties, other Governments and relevant organizations, practical guidance and toolkits on measures to **avoid**, minimize and mitigate the significant adverse impacts of anthropogenic underwater noise on marine and coastal biodiversity **for consideration by a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice held prior to the fourteenth meeting of the Conference of the Parties**;

Addressing impacts of marine debris on marine and coastal biodiversity

3. *Welcomes* the report of the Expert Workshop to Prepare Practical Guidance on Preventing and Mitigating the Significant Adverse Impacts of Marine Debris on Marine and Coastal Biodiversity and Habitats;²

4. *Endorses* the practical guidance on preventing and mitigating the impacts of marine debris on marine and coastal biodiversity and habitats, as contained in the annex to this decision;

5. *Urges* Parties, **and invites** other Governments, relevant organizations, industries, other relevant stakeholders, and indigenous peoples and local communities, to take appropriate measures, in accordance with national and international law and with their competencies, to prevent and mitigate the potential adverse impacts of marine debris on marine and coastal biodiversity and habitats, taking into account the practical guidance contained in the annex to the present draft decision;

5bis. Urges Parties, and invites other Governments, taking into account Principle 13 of the Rio Declaration on Environment and Development, to address the issue of liability and compensation and consider extended producer responsibility for providing appropriate response measures where there is damage or sufficient likelihood of damage to marine and coastal biodiversity and habitats, and cooperate on this matter; [(Rationale: Polluter Pays Principle and report of the workshop as included in the annex.)]

5ter. Urges Parties, and invites other Governments and relevant international organizations, to develop and implement measures, policies and instruments to prevent the discard, disposal, loss or abandonment of any persistent, manufactured or processed solid material in the marine and coastal environment, in view of the urgency and extent of the issue; [(Rationale: A matter of urgency and potential serious, irreversible damage to biodiversity.)]

6. *Invites* competent intergovernmental organizations, including the International Maritime Organization and the Food and Agriculture Organization of the United Nations, within their mandates, to take appropriate measures, and to assist Parties and other Governments in taking appropriate measures to prevent and mitigate the potential adverse impacts of marine debris on marine and coastal biodiversity and habitats, taking into account the practical guidance contained in the annex to the present draft decision;

7. *Requests* the Executive Secretary:

(a) To facilitate collaboration among Parties, other Governments and relevant organizations, on the application of the practical guidance contained in the annex to the present draft decision, by facilitating the sharing of experiences, information, toolkits and best practices;

(b) To facilitate the provision of capacity-building opportunities to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, for the implementation of various measures identified in the practical guidance contained in the annex to the present draft decision;-

² UNEP/CBD/SBSTTA/20/INF/7

(c) To cooperate on the issue of marine debris with the secretariat of relevant international and regional organisations such as DOALOS , IMO, FAO and UNEP.

Annex

PRACTICAL GUIDANCE ON PREVENTING AND MITIGATING THE IMPACTS OF MARINE DEBRIS ON MARINE AND COASTAL BIODIVERSITY AND HABITATS

Marine debris and its impacts on marine and coastal biodiversity and habitats

abridged; continued

4. Microplastics³ are likely to increase in abundance, and are a persistent pollutant that is present in all marine habitats. The trophic transfer of microplastics through benthic and pelagic food webs may facilitate the transfer and accumulation of both plastics and toxic chemicals. There is ~~some~~ evidence of transfer of chemical additives from ingested plastics into tissue. There is also concern that the ingestion of microplastics, as well as macro- and mesoplastics, can cause physical effects, such as internal abrasion, blockage and injury, and may also provide a pathway for the uptake of harmful chemicals (for example, additives contained in plastic products) by marine organisms.

abridged; continued

Priority actions for mitigating and preventing the impacts of marine debris on marine and coastal biodiversity and habitats

8. For land-based sources of marine debris, the following actions are suggested:

(a) Identify baseline data on the main land-based sources, quantities and impacts of marine debris;

(b) Promote structural economic changes that would reduce the production and consumption of plastics, increase production of environmentally friendlier materials, and support the development of alternative materials, increase recycling and reuse, and support an enabling environment for these changes through capacity-building, regulations and standards, and cooperation between industry, governments and consumers;

(c) Support research aimed at developing technology to better understand the environmental impacts of plastics on the marine environment, to design new or improved ~~green chemistry alternatives~~ **products which are really biodegradable** and to assess cost-effective production on a commercial scale;

(d) **Promote and disseminate best practices in resource-efficient and closed product-to-waste cycles, taking into account the following issues:**

• **To support the design of products to be long-lasting and reused, repairable, re-manufacturable and recyclable with the most effective use of resources;**

• **To limit superfluous consumption with discouraging inappropriate disposal behaviour and enabling citizens to make responsible, well-informed decisions about the products they buy; sustainable product systems are available to citizens;**

³ abridged

- **To promote adequate collection and separation of different types of waste to maximize return rates of high-quality materials. Waste is regarded as a valuable resource;**

- **To promote recycling over incineration and landfilling.**

(ed) Promote best practices along the whole plastics manufacturing and value chain from production to transport, such as aiming for zero loss;

(fe) Assess whether different sources of microplastics and different products and processes that include both primary and secondary micro plastics⁴ are covered by legislation, and strengthen, as necessary, the existing legal framework so that the necessary measures are applied;

(gf) Improve the waste management systems of countries through the sharing of best practices as well as identifying and addressing loopholes that contribute to the generation of marine debris.

9. For sea-based sources of pollution, the following actions are suggested:

(a) Develop approaches to ~~maximize the amount of waste delivered~~ **optimize waste delivery** to port reception facilities and to ensure that they are disposed of properly, in collaboration with the International Maritime Organization, **and to consider no-special-fee systems;**

(b) Identify the options to address key waste items from the fishing industry and aquaculture that could contribute to marine debris, and implement activities, including pilot projects, as appropriate, **and good practice examples such as** (including deposit schemes, voluntary agreements and end-of-life recovery), in collaboration with the Food and Agriculture Organization of the United Nations (FAO) **and the United Nations Environmental Programme (UNEP);**

abridged; continued

10.(e) Foster partnerships with international and regional organizations, port authorities and non-governmental organizations, to encourage **in all regions** the implementation of **initiatives containing, utilizing and/or processing marine litter, such as** passive “Fishing for litter” schemes, to collect litter caught in fishing nets during normal fishing activities, and *Fishing Net Recovery* schemes;~~10~~. With regard to information exchange, knowledge-sharing, awareness-building, capacity-building, and socio-economic incentives, the following actions are suggested:

abridged; continued

(e) Develop and implement socioeconomic incentives ~~to encourage coastal communities, including indigenous people and local communities,~~ **for coastal communities, including tourist resorts,** to prevent the introduction of waste into the environment, such as levies for the sale of plastic bags;

(f) Collaborate, based on existing eco-labels, with international environmental certification schemes on information exchange and inclusion of the management and prevention of marine debris in their criteria.

11. For integrated management and coordination, the following actions are suggested:

(a) Support the development and implementation of national or regional action plans to prevent or mitigate the impacts of marine debris on coastal and marine biodiversity and habitats, also by drawing upon existing guidance in certain regions (~~for example,~~ **such as** the Caribbean, North-East Atlan-

⁴ Ibid.

tic and Baltic Sea regions), **taking into account existing Regional Action Plans (RAPs) of the Regional Sea Conventions;**

(b) Mainstream marine debris consideration into existing and newly developed regulatory frameworks and develop necessary legislative and institutional framework that will put sustainable waste management into practices, including through the promotion of extended producer responsibility and waste management infrastructure;

(c) **Mainstream existing legislation to integrate marine debris issues and targets in line with existing packaging and waste regulations;**

(d) Set in place quantifiable and operational targets for **avoiding or minimizing marine debris and for** preventing and mitigating ~~their~~ impacts of marine debris on marine and coastal biodiversity and habitats;

(e) Define the role of marine debris prevention strategies within the context of cross-sectoral and area-based management tools based on the ecosystem approach.

12. For addressing knowledge gaps and research needs, the following actions are suggested:

(a) Support and promote harmonized approaches to monitoring, analysis and reporting based on standardized methodologies, **taking into account existing monitoring guidance for marine litter such as of Australia and the EU Monitoring Guidance for Marine Litter in European Seas;**

abridged

6 Marine spatial planning and training initiatives

Item 4.4 of the provisional agenda

Item 4.4 was introduced to the plenary of the Vilm meeting by Jan Ekebom who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/6 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendation.

Document UNEP/CBD/SBSTTA/20/6:

Suggestions on the text:

MARINE SPATIAL PLANNING AND TRAINING INITIATIVES

Note by the Executive Secretary

I. INTRODUCTION

1. Marine spatial planning (MSP)¹ is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve agreed ecological, economic and social objectives. **It is based on the CBD's ecosystem approach.**

abridged; continued

IV. SUGGESTED RECOMMENDATIONS

2. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

Marine spatial planning

The Conference of the Parties

1. Welcomes the report of the Expert Workshop to Provide Consolidated Practical Guidance and a Toolkit for Marine Spatial Planning, held in Montreal, Canada, from 9 to 11 September 2014,² and expresses its gratitude to the European Commission for its financial support;

2. ~~Takes note of the set of key considerations for the development and implementation of marine spatial planning, as contained in the annex to the present draft decision, and~~ **[(Rationale: The set of key considerations is not appropriate in the context of the decision on MSP which is based on the CBD's ecosystem approach, key findings of the workshop are included in the report of the Expert**

¹ Step-by-Step Approach for Marine Spatial Planning toward Ecosystem-based Management (Intergovernmental Oceanographic Commission Manual and Guides No. 53, ICAM Dossier No. 6).

² See UNEP/CBD/SBSTTA/20/INF/6.

Workshop mentioned in paragraph 1 already, there is no need for duplication.] *Invites* Parties and other Governments to apply marine spatial planning to their marine and coastal areas or enhance existing marine and spatial planning initiatives, taking into account the above-mentioned ~~set of considerations~~ **report of the Expert Workshop and other technical guidance from relevant international and regional organisations and agreements, [(Rationale: To make best use of existing documents on MSP) considering the ecosystem approach [(Rationale: Decision XII/23: ecosystem approach and MSP should be closely interlinked.)]** and linking closely to existing efforts for integrated marine and coastal management, marine protected areas, or other area-based management initiatives **and conservation measures [(Rationale: According to Target 11.)]**, by engaging relevant stakeholders and sectors as well as indigenous peoples and local communities, as an effective tool for expediting their progress towards achieving Aichi Biodiversity Targets in marine and coastal areas **in particular Targets 6, 8, 10, 11 and 12 [(Rationale: In accordance to paragraph 8 of the document.)]**, also linking closely with other management tools, such as strategic environmental assessments, environmental impact assessments, pollution management measures or fisheries management measures, as appropriate, and for sharing their experiences through the clearing-house mechanism of the Convention or relevant online information-sharing mechanism;

3. *Recalling* **decision XI/18 section C and** paragraph 18 of decision XII/23, *requests* the Executive Secretary and *invites* relevant organizations, in particular the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, the United Nations Environment Programme, the Food and Agriculture Organization of the United Nations, the International Maritime Organization, regional seas conventions and action plans, and regional fisheries management bodies, to support the national implementation of marine spatial planning through collaboration on, among other things, the following activities: **[(Rationale: Decision XI/18 supports the implementation of MSP and both decisions complement each other.)]**

(a) Further consolidate and complement existing guidance on marine and spatial planning, building upon the results of the workshop referred to in paragraph 1 above, ~~including the set of considerations listed in the annex to the present draft decision~~, through online communication, expert workshops, compilation of case studies, informal interaction among experts and/or expert peer review; **[(Rationale: See paragraph 1 above.)]**

(b) ~~Communicate with Parties and relevant organizations on the results of the workshop referred to in paragraph 1 above;~~ **[(Rationale: Obsolete.)]**

(c) — Develop linkages with other work on marine and coastal biodiversity under the Convention or other relevant international/regional agreements and programmes;

(~~c~~d) Explore opportunities to test guidance and facilitate capacity development opportunities, including through capacity development workshops being convened through Sustainable Ocean Initiative or other relevant initiatives, as well as on-the-ground implementation;

(~~d~~e) Compile national, subregional or regional experiences in the implementation of marine spatial planning, in collaboration with Parties and other Governments, and disseminate them through the clearing-house mechanism of the Convention or relevant online information-sharing mechanism;

(f) **Develop the ecosystem approach further in the context of MSP in form of a common framework and in particular focusing on the use of ecological, economic and social spatial data and knowledge as well as on transboundary cooperation; [(Rationale: Supports the national implementation of MSP; comprehensive data is needed to implement ecosystem approach, ecosystem approach and MSP are closely interlinked.)]**

4. *Requests* the Executive Secretary to report on progress in the cooperation referred to in paragraph 3 above to the Subsidiary Body on Scientific, Technical and Technological Advice at a future meeting held prior to the fourteenth meeting of the Conference of the Parties;

5. *Recalling* paragraph 19 of decision XII/23, *requests* the Executive Secretary, subject to available financial resources:

(a) To invite Parties, other Governments and relevant organizations and initiatives, including the Food and Agriculture Organization of the United Nations, the Intergovernmental Oceanographic Commission, the International Maritime Organization, the International Seabed Authority, the United Nations Environment Programme, regional seas ~~organizations~~ conventions and action plans, regional fisheries bodies, indigenous peoples and local communities, ~~and other relevant organizations and initiatives~~, to submit information on national, subregional and regional experiences and lessons learned in the application of marine spatial planning or other measures for enhanced conservation and management, in support of achieving Aichi Biodiversity Targets, in particular Targets 6, 10, 11, and 12, in marine and coastal areas, and where appropriate, meeting the criteria for ecologically or biologically significant areas; **[(Rationale: This should also apply for areas where there are no EBSAs.)]**

(b) To compile and synthesize submissions by Parties, other Governments and relevant organizations, along with additional scientific and technical information, as input to an expert workshop;

(c) To organize an expert workshop to consolidate scientific and technical information on the types of human activities ~~or~~ and environmental stressors that may have adverse impacts on a range of different ecosystem features, functions and processes in specific areas such as areas meeting each of the criteria for ecologically or biologically significant areas; different types of conservation and management measures that have been shown to prevent or mitigate these potential adverse impacts; environmental factors that have been found to amplify or reduce the potential adverse impacts; and the effectiveness of different types of the prevention and mitigation measures, drawing on compilation and synthesis of submissions as described in subparagraphs (a) and (b) above; **[(Rationale: This should also apply for areas where there are no EBSAs.)]**

(d) To submit the compilation/synthesis referred to in subparagraph 5(b) above, and the report of the expert workshop referred to in subparagraph 5(c) above, for consideration at a future meeting ~~by the Subsidiary Body~~ of SBSTTA to be held prior to the fourteenth meeting of the Conference of the Parties;

6. *Recalling* paragraph **75 and 76** of decision X/29 and subparagraph 1(b) of decision XI/24 and *recognizing* the importance of building linkages among existing efforts on various area-based conservation measures within the framework of cross-sectoral and integrated marine spatial planning and implementation in support of achieving Aichi Biodiversity Targets, in particular Targets 6, 10, 11, and 12, *requests* the Executive Secretary, subject to available financial resources, drawing on the existing work by the Executive Secretary, in partnership with relevant organizations, pursuant to paragraph 10 of decision XI/24: **[(Rationale: Paragraph 75 and 76 support each other.)]**

(a) To compile, in collaboration with Parties, other Governments, the World Commission on Protected Areas, relevant organizations, and indigenous peoples and local communities, national experiences and lessons learned on the development, and effective and equitable management, of ecologically representative and well connected systems of marine protected areas and other effective area-based conservation measures, and their integration into the wider landscapes and seascapes, as an input to an expert workshop;

(b) To organize an expert workshop to consolidate scientific and technical information on various approaches for, and their effectiveness in, assessing the contribution to the achievement of Target 11 of marine protected areas and other effective area-based conservation measures as well as their integration into the wider landscapes and seascapes;

(c) To submit the compilation of information referred to in subparagraph 6(a) above and the report of the expert workshop referred to in subparagraph 6(b) above ~~to the Subsidiary Body~~ of SBSTTA to be held for its consideration at a future meeting of the Conference of the Parties;

7 Invasive alien species: addressing the risks associated with trade; biological control; and decision support tools

Item 5 of the provisional agenda

Item 5 was introduced to the plenary of the Vilm meeting by Ema Gojdičová who also chaired the respective working group. Axel Paulsch presented the results of the working group to the plenary.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/7 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendations.

Document UNEP/CBD/SBSTTA/20/7:

Suggestions on the text:

INVASIVE ALIEN SPECIES

Note by the Executive Secretary

INTRODUCTION

abridged; continued

V. SUGGESTED RECOMMENDATIONS

64. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to adopt a recommendation along the following lines:

The Subsidiary Body on Scientific, Technical and Technological Advice

Takes note of the report of the Expert Meeting on Alien species in wildlife trade, experiences in the use of biological control agents and development of decision support tools for management of invasive alien species.¹

65. The Subsidiary Body may also wish to recommend that the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties,

Welcomes the entry into force of the International Convention for the Control and Management of Ships' Ballast Water and Sediments; [(Rationale: Expected to enter into force before COP-13.)]

¹ UNEP/CBD/SBSTTA/20/INF/31.

Recalling its provisions related to Article 8(h) of the Convention and existing standards, guidelines and recommendations under the international regulatory framework relevant to invasive alien species, **further recalling decisions VI/23 and X/2 (Aichi Target 9),**

Additional ways and means to address the risks associated with trade in wildlife

Recalling decisions XII/16 and XII/17,

1. *Encourages* Parties, other Governments and relevant organizations, consumers and traders to make use of the Guidance on Devising and Implementing Measures to Address the Risks Associated with the Introduction of Alien Species as Pets, Aquarium and Terrarium Species, and as Live Bait and Live Food, **including its expansion,** in addressing risks associated with the introduction of all live alien species, beyond pets, aquarium and terrarium species, and live bait and live food, applying the guidance mutatis mutandis;

1bis. Invites the Inter-agency Liaison Group on Invasive Alien Species to consider options for expanding the Guidance on Devising and Implementing Measures to Address the Risks Associated with the Introduction of Alien Species as Pets, Aquarium and Terrarium Species, and as Live Bait and Live Food to cover all live species; [(Rationale: See paragraph 22 of the main document.)]

2. *Invites* the International Plant Protection Convention, in collaboration with the inter-agency liaison group on invasive alien species, to consider developing commodity-specific international standards for live species including risks posed by the associated materials (such as packaging, media, food) and live organisms unintentionally attached to or contaminating the imported live species or its container, taking into account the existing domestic regulations and approaches;

3. *Encourages* Parties and other Governments to review their regulatory framework with a view to ensuring the control of the import and **the prevention of** spread of wildlife species and associated materials (such as packaging material and food) that can be pathways of introduction for invasive species, making use of appropriate risk analysis processes;

4. *Urges* actors in trade and industry to apply the voluntary measures indicated in the Guidance on Devising and Implementing Measures to Address the Risks Associated with the Introduction of Alien Species as Pets, Aquarium and Terrarium Species, and as Live Bait and Live Food when trade in wildlife takes place, for example the use of labeling on the consignment of live organisms as a potential hazard for biodiversity and the proper identification of species with the scientific names/taxonomic numbers;

5. *Encourages* Parties, other Governments and relevant organizations, including research organizations, to explore ways and means to promote changes in behaviour of individuals so as to reduce the risks to biodiversity associated with both legal and illegal trade in wildlife, including through the engagement with social sciences and social media in targeted awareness campaigns, and through cooperation with wildlife trade organizations;

5bis. Invites Parties, CITES, and other relevant organizations, including UNEP-WCMC, that manage databases pertaining to trade in wild animals and plants, to develop mechanisms to exchange information on the identification and vectors of potential invasive alien species in trade and facilitate this information and use of mechanisms between Parties, other governments and relevant organizations; [(Rationale: Referring to key message 13 and other comments from the AHTEG.)]

5ter. Encourages Parties, other Governments and relevant organizations, to establish a working cooperation with bodies involved in trade to engage them in the risk assessment and decision-making process, promote compliance with regulations, as well as to gather information and experience of ways, other than restrictions in trade, to avoid the impacts of invasive alien species introduced through trade; [(Rationale: Referring to key message 13 and other comments from the AHTEG.)]

5. *Squar. Urges Parties, and invites other governments and relevant organizations to undertake horizon scanning to reduce future risks and developing preventative measures. Horizon scanning should consider the parameters of: drivers of trade, future trade patterns and potentially invasive alien species that may come into trade; [(Rationale: Referring to key message 13 and other comments from the AHTEG.)]*

Reducing the risk associated with trade in invasive alien species sold via e-commerce

6. With a view to reducing the risk associated with trade in invasive alien species sold via e-commerce, *urges Parties, and invites* other Governments, relevant international organizations, consumers and e-commerce traders:

(a) To promote greater awareness among consumers, e-commerce traders and other stakeholders about the risks of biological invasions ~~on the one hand~~, and the relevant international standards and national regulations ~~on the other~~ through, inter alia, e-commerce market places and related social media;

(b) To review the risk of biological invasions, and associated sanitary and phytosanitary risks, posed by all forms of distance selling and, as necessary, develop appropriate measures to minimize the risks;

(c) To consider using, or promoting the use of, the Single Window approach of the United Nations Centre for Trade Facilitation and Electronic Business to facilitate reporting on the trade in regulated live species via e-commerce;

(d) To establish a working collaboration between Parties and e-commerce market places in the development of new measures to reduce the risks of invasive alien species in trade, as well as to improve compliance with existing regulations on introduction and movement of invasive species.

Reducing the risk of invasive alien species moving with sea containers

7. *Welcomes* the revised IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units and recommendations of the Commission on Phytosanitary Measures at its tenth session that are related to prevention and minimizing the risk of invasive alien species spreading with sea containers;

8. *Invites* Parties and other Governments:

(a) To communicate about the risk of invasive alien species ~~of the country's concern~~ that move and spread via sea containers with those stakeholders involved in the packing of sea containers or the movement of sea containers in and out of their country

(b) To support the implementation of the relevant parts of the Code of Practice for Packing of Cargo Transport Units;

(c) To gather information on the movement of invasive alien species ~~via~~ **attached to** sea containers ~~themselves~~, rather than with the cargo moved within sea containers and to share such information should serious ~~trends~~ **concerns** arise;

(d) To analyse the possible biological invasion risk and, where justified and practical, take proportionate actions to mitigate the risk.

Biological control of invasive alien species

Recognizing that classical biological control can be an effective measure to manage already established and widespread invasive alien species, that use of biological control agents can also present direct and indirect risks to non-target organisms and ecosystems and that these risks ~~can~~ **should** be addressed through **applying the precautionary approach and using** appropriate procedures including comprehensive risk assessment;

9. *Encourages* Parties, other Governments and relevant organizations, ~~to make use of~~ **when using** classical biological control, ~~through~~ **to manage already established and**

widespread invasive alien species, to apply the precautionary approach and appropriate procedures, including comprehensive risk assessment, ~~to manage already established and widespread invasive alien species,~~ making use, as appropriate, of the summary of technical considerations annexed to the present draft decision;

10. *Requests* the Executive Secretary to further collaborate with the International Plant Protection Convention, the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations and other members of the inter-agency liaison group on invasive alien species to identify options to address gaps in risk assessment and risk management standards for the use of biological control agents against invasive ~~animal~~-**alien** species;

10bis. Invites Parties, other Governments, standard-setting bodies, and others to adapt, improve or further develop decision support tools to better support the development of biological control programmes against invasive alien species, including prioritization based on impact, the feasibility and likelihood of success of biocontrol, and the selection of the biological control agent. [(Rationale: Referring to key message 6 of the AHTEG.)]

Decision support tools

11. Further to decisions IX/4 A, X/38, XI/28 and XII/17, *requests* the Executive Secretary, in collaboration with partner organizations:

(a) To compile or develop and maintain decision support tools and make them available through the clearing-house mechanism of the Convention;

(b) To develop technical guidance for conducting cost-benefit and cost-effectiveness analysis for management of invasive alien species.

11bis. Urges Parties and invites other Governments to consider in decision making on introduction, eradication, containment, mitigation or control, the balance between the environmental, social and economic benefits and costs related to biological invasion and remedial actions; [(Rationale: Key message 27 of the AHTEG.)]

11ter. Urges Parties and invites other Governments to adopt a participatory process in decision making by identifying and engaging stakeholders, including risk bearers and risk makers, at an early stage in the decision making process, and to develop and use participatory decision-support tools to increase transparency in decision making, reduce bias and support objective decisions, to enhance the effectiveness of measures taken to manage invasive alien species. [(Rationale: Key message 25 of the AHTEG.)]

Aichi Target 9 on Invasive Alien Species

12. Requests the Executive Secretary to compile experiences, best practices and lessons learned from Parties, other governments and relevant organizations to fulfil Aichi Target 9, especially on the application of methods for pathway analysis and prioritization of invasive alien species, and to make this information available, inter alia, through the CHM.

Annex

SUMMARY OF TECHNICAL CONSIDERATIONS FOR THE USE OF BIOLOGICAL CONTROL AGENTS TO MANAGE INVASIVE ALIEN SPECIES

Classical biological control

1. Classical biological control is the control of invasive species by host-specific natural enemies – biocontrol agents. Such natural enemies from the country of origin of the invasive alien species targeted for control are identified, and subjected to risk assessment against direct and indirect non-target impacts, in line with national law and international standards. If the results of the risk assessment permit, the biological control agents are imported, further tested and released to control the invasive alien species. The biological control agents are expected to establish permanently from the founder population released,

and to reproduce and spread, causing suppression of the target organism. Classical biological control assists mitigation of the negative impacts of invasive alien species and expedites the restoration of biodiversity but rarely leads to the complete eradication of a target species. Biological control is usually carried out as part of an integrated management approach in the context of clear goals for conservation and restoration.

Precautionary approach and risk assessment and management

2. Comprehensive risk assessment of candidate biological control agents against direct and indirect non-target impacts **including the application of the precautionary principle**, prior to any release decision, is key for the success of classical biological control programmes.

3. Comprehensive risk assessment affords a clear understanding of the risks before and after programmes are implemented and allows improvements to be understood and adopted. Internationally harmonized guidance, such as that provided in the International Standards for Phytosanitary Measures (ISPMs) pertaining to the pest risk analysis process (including ISPM 2, 3, 11), provides readily available guidance for this purpose.

4. Risk assessments should include the following elements:

(a) ~~The potential for direct non-target impacts, including the degree to which the action of the biocontrol agent is specific only to the invasive alien species to be controlled, and does not impact native species, habitats or ecosystems, including those that are important for the economy and the distinct culture in the area where the biological control agents are planned to be released;~~ (b) **[(Rationale: Covered by new (a) and new (c).)]** The potential for **direct and** indirect non-target impacts on the ecosystems, habitats, native species, or human health and safety, in the area where the biological control agents are planned to be release **and in areas in which they might establish**;

(b) The potential influence of climate and its current and future variability and other sources of environmental variation ~~in the proposed region of release~~ on the establishment, spread and impact of the biological control agent;

(c) **The risks to ecosystem functions and services, social, economic and cultural issues, including the values and priorities of indigenous peoples and local communities. [(Rationale: Paragraph 24 in UNEP/CBD/IAS/EM/2015/1/6.)]**

4bis. When considering the risks, as well as costs and benefits of a proposed release of a biological control agent, the risks and costs of inaction or comparative risks from other approaches, such as the use of chemicals or toxins to reduce invasive alien species population, should also be considered and assessed. [(Rationale: Paragraph 26 in UNEP/CBD/IAS/EM/2015/1/6.)]

5. The following procedures should be **followed to minimize risks to biological diversity and human health and ensure maximum potential for success** ~~respected~~:

(a) Quarantine infrastructure of sufficient standard and appropriate standard operating procedures should be available to ensure that the agents can be safely imported, tested and cleaned of any diseases and parasites before any releases are made;

(b) Host selection and host specificity testing and efficacy studies of biological control agents should take place either in the country of origin or in an appropriately registered quarantine facility within the country of introduction;

(c) Qualified taxonomists, including experts in phylogenetic analysis, should be involved in the selection and testing to correctly identify all potential biocontrol agents and the species undergoing the testing;

(d) Shipments of live biological control agents conform to applicable national (origin, destination and transit countries) and international regulations, and permits for the import of live organisms include appropriate labeling. This is generally a requirement of all shipping and courier companies;

(e) International regulations, procedures and agreements, including the Nagoya Protocol, should be followed in research and development of biological control agents.

6. Social factors should be addressed, including any conflicts of interest surrounding the control of the target **organism** as well as the potential for cognitive bias in the community regarding management of invasive alien species.

Planning and implementation of biological control programmes

7. The following planning and implementation measures are recommended:

(a) Carrying out biological control programmes in the context of clear environmental conservation and restoration goals and as part of an integrated management approach, consistent with the **Precautionary Approach and the Ecosystem Approach** and its 12 principles;

(b) Availability of substantial initial investments for exploration, risk analysis and quarantine facilities, as well as sustainable long-term funding to support mass rearing and redistribution of biological control agents and post-release monitoring and surveillance;

(c) Full engagement by the State authority for the management of pests and pathogens and of appropriate State regulators responsible for release decisions, **including consultation and collaboration across sectors, such as the agricultural, environmental, health sectors and border protection services and between the private and public sector**;

(d) Engagement of all relevant stakeholders, at the cross-jurisdictional, cross-sector, and cross-stakeholder levels, to take account of varying and complementary goals, knowledge, experience, and capacity development, and to allow a fair distribution of benefits and costs.

7bis. Countries planning to release biological control agents are urged to inform neighbouring countries and, if they might be affected by a release, consult with them at an early stage in the planning process and prior to any release. Notification and consultation with such neighbouring countries is necessary in order to inform them of potential benefits and risks, and to promote consultation and participation of potentially affected countries, in the decision processes, as well as to ensure the development of effective and beneficial biological control methods.

Post-release monitoring, emergency plan and rapid response

8. Post-release monitoring allows for rapid detection and measurement of any predicted, unpredicted direct or indirect negative impacts of the agents on biodiversity or agriculture and can assist emergency planning and rapid response. ~~In this context,~~ **All biological control programmes should incorporate** long-term monitoring and evaluation of impacts (positive or negative) using standardized and cost-effective methodologies is important. **[(Rationale: Text from Key Message 11.)]**

Decisions on release of biological control agents

9. For decisions regarding biological control programmes, participatory decision-making is encouraged **an essential factor for engaging support and success**. This includes the communication of information on risks and options for their management. This process is most usefully initiated at the early stage of the development of a biological control programme to ensure that the interests of all relevant stakeholders are considered in view of the conservation goals set for the specific programme.

10. The provision of relevant scientific information for neighbouring countries prior to the approval of the release of biological control agents **is necessary to** supports regional consultation and the sharing of relevant knowledge, and allows neighbouring countries to **contribute to the decision making process** ~~offer feedback~~ and prepare for any potential negative impacts.

11. Sharing post-release monitoring information widely, including with neighbouring countries and other experts, can support the improvement of biological control programmes elsewhere, and the approaches adopted in the face of climate variability, fluctuations and changes.

Capacity development

12. Technical and scientific cooperation to develop capacities in classical biological control, from scientific understanding through the regulatory process to the training of skilled staff, is crucial for the success of biological control programmes.

8 Synthetic biology

Item 6 of the provisional agenda

Item 6 was introduced to the plenary of the Vilm meeting by Margret Engelhard who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/8 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendations.

Document UNEP/CBD/SBSTTA/20/8:

Suggestions on the text:

SYNTHETIC BIOLOGY

Note by the Executive Secretary

INTRODUCTION

abridged; continued

VI. SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to adopt a recommendation along the following lines:

The Subsidiary Body on Scientific, Technical and Technological Advice,

Having considered the information submitted by Parties, other Governments, relevant organizations and stakeholders, the outcomes of the Open-ended Online Forum on Synthetic Biology and the AHTEG on Synthetic Biology, as well as the comments from the peer-review process, *notes* that:

(a) The operational definition “synthetic biology is a further development and new dimension of modern biotechnology that combines science, technology and engineering to facilitate and accelerate the understanding, design, redesign, manufacture and/or modification of genetic materials, living organisms and biological systems” is useful as a basis for facilitating further deliberations under the Convention;

(b) Living organisms, components and products of synthetic biology fall within the scope of the Convention and its three objectives, and that the conservation and sustainable use of biodiversity, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources may be affected, both positively and negatively, by living organisms resulting from synthetic biology, as well as by non-living components and products of synthetic biology;

(c) Living organisms developed through current and near future applications of synthetic biology are similar to LMOs as defined in the Cartagena Protocol on Biosafety, whereas non-living compo-

nents (e.g. a DNA-molecule) and products/outputs of synthetic biology (e.g. a chemical substance) do not fall under the scope of the Cartagena Protocol;

(d) The general principles and methodology for risk assessment under the Cartagena Protocol and existing biosafety frameworks provide a good basis for the risk assessment of living organisms developed through current and near future applications of synthetic biology, but such methodologies may need to be updated and adapted for **current and** future developments and applications of synthetic biology; **[(Rationale: Text added to give justice to the current new developments like gene-drives.)]**

(e) The sharing of experience and information among Parties is crucial and needs to be encouraged, including information on actual risk assessments and gaps in existing national, regional and/or international instruments to regulate the organisms, components or products derived from synthetic biology techniques;

(f) Scientific and technological developments in the field of synthetic biology need to be reviewed regularly to ensure adequacy of regulatory oversight and risk assessment methodologies;

(g) Coordination is needed among current and future processes under the Convention and its **Cartagena and Nagoya** Protocols, and in particular with the AHTEG on Risk Assessment and Risk Management, ~~and~~ the AHTEG on Socio-economic Considerations under the Cartagena Protocol, as appropriate; **[(Rationale: Text added to emphasize the connectivity of synthetic biology to the protocols of the Convention.)]**

(h) Coordination ~~is needed to~~ **should be established** with other United Nations and international organisations considering, whose mandates are relevant to synthetic biology. **[(Rationale: Word-ing changed to emphasize the process/action that is needed.)]**

Recommendation to the Conference of the Parties

The Subsidiary Body on Scientific, Technical and Technological Advice *recommends* that the Conference of the Parties, at its thirteenth meeting, adopt a decision along the following lines:

The Conference of the Parties

(a) *Reaffirms* decision XII/24, in which the Conference of the Parties urged Parties and invited other Governments to take a precautionary approach in accordance with paragraph 4 of decision XI/11;

(b) *Decides to use* the following operational definition of synthetic biology to facilitate further deliberations in the context of the Convention: “synthetic biology is a further development and new dimension of modern biotechnology that combines science, technology and engineering to facilitate and accelerate the understanding, design, redesign, manufacture and/or modification of genetic materials, living organisms and biological systems”;

(c) *Takes note* of the conclusion of the Ad Hoc Technical Expert Group (AHTEG) on Synthetic Biology that living organisms developed through current and near future applications of synthetic biology are similar to LMOs as defined in the Cartagena Protocol;

(d) *Encourages* Parties, other Governments and relevant organizations to:

(i) Conduct research on the positive and negative impacts of synthetic biology ~~on bi-~~ ~~odiversity~~ **including organisms, compounds and products** **[(Rationale: Since it is important to stress compounds and products in addition to organisms, because they are in contrast to the Cartagena Protocol on Biosafety only covered under the CBD.)]** **vis-a-vis the three objectives of the Convention** **[(Rationale: Text added to give justice to all the three goals of the Convention.)]** with a view to filling knowledge gaps and identifying how those impacts relate to the objectives of the Convention and its Protocols **including socio-economic, cultural and ethical considerations**;

(ii) Promote and enable public **consultation** and multi-stakeholder dialogues and awareness-raising activities on the potential positive and negative impacts of synthetic biology on biodiversity, taking **also** into account **socio-economic, cultural and** **[(Rationale: See prior terms of refer-**

ence for the AHTEG on Synthetic Biology.]) ethical considerations in the context of the three objectives of the Convention, with the full engagement of indigenous peoples and local communities;

(iii) Cooperate in the development of guidelines and capacity-building activities with a view to assessing the potential benefits and potential adverse effects of synthetic biology and adapting current methodologies for risk assessment of living modified organisms to organisms resulting from synthetic biology **including socio-economic, cultural and ethical impacts**;

(iv) Share and exchange, through the appropriate online platform under the Convention, information and experience arising from research, cooperation, capacity-building activities and regulatory processes;

(e) *Invites* Parties, other Governments, relevant organizations and indigenous people and local communities to submit information and supporting documentation to the Executive Secretary on:

(i) Evidence of positive and negative impacts of synthetic biology vis-à-vis the three objectives of the Convention **including socio-economic, cultural impacts and ethical considerations**;

(ii) Experiences in conducting risk assessments of organisms, **compounds and products** resulting from synthetic biology, including any challenges encountered and lessons learned;

(iii) Examples of risk management and other measures that have been put in place to **avoid or** minimize the potential adverse effects of the components, organisms and products of synthetic biology;

(iv) Views on how the use of digital sequence information on genetic resources relates to access and benefit sharing the fair and equitable sharing of benefits arising from their utilization in the context of the Nagoya Protocol;

(v) Regulations, policies, ~~and~~ guidelines **and infrastructures** in place or under development which are directly relevant to synthetic biology, **including the means to implement them with a view to also address unintentional transboundary movements**;

(vi) Examples of public consultations and multi-stakeholder dialogues and awareness-raising activities on the potential positive and negative impacts of synthetic biology on biodiversity. [(Rationale: Report here what has been done in d (i).)]

(f) *Extends* the mandate of the current AHTEG on synthetic biology in accordance with the terms of reference attached hereto;

(g) *Extends* the open-ended online forum to support the work of the AHTEG, and *invites* Parties, other Governments, indigenous and local communities and relevant organizations to continue nominating experts to take part in the open-ended online forum;

(h) *Requests* the Executive Secretary to:

(i) Facilitate and promote the sharing of knowledge and information, through an online platform, on synthetic biology, **including organisms, compounds and products**, in the context of the Convention and its Protocols;

(ii) Commission a comprehensive and in-depth study to assess the extent to which existing national, regional and/or international instruments are adequate to regulate the non-living components and products of synthetic biology techniques, and identify any possible gaps that are relevant to the objectives of the Convention;

(iii) Compile and synthesize the results of the work referred to in the paragraphs above available for further discussion through the online forum and the AHTEG;

(iv) Convene moderated online discussions under the open-ended online forum and, subject to the availability of funds, a face-to-face meeting of an AHTEG with the terms of reference annexed to this decision, and submit the report of the AHTEG to peer-review by Parties, **other governments, relevant organisations and indigenous peoples and local communities** for consideration by a meeting of SBSTTA prior to the fourteenth meeting of the Conference of the Parties;

(v) Cooperate with other United Nations and international organizations, whose mandates are relevant to synthetic biology, such as the World Health Organization, the Food and Agriculture Organization of the United Nations, including its Committee on World Food Security and Codex Alimentarius, the World Intellectual Property Organization, the World Organization for Animal Health, the Permanent Forum on Indigenous Issues, **the International Labour Organization [(Rationale: Since they are already addressing the impact of synthetic biology of income opportunities of small farmers whose products are being replaced.)]** and the Technology Facilitation Mechanism of the United Nations;

(vi) Promote the full engagement of indigenous peoples and local communities in future activities relating to synthetic biology under the Convention;

(i) *Invites* the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety to address synthetic biology in a coordinated manner, particularly by tapping into existing processes, such as the AHTEG on Risk Assessment and Risk Management for the development of guidance dedicated to risk assessment of living modified organisms developed through synthetic biology and the AHTEG on Socio-economic Considerations under the Cartagena Protocol, as appropriate.

TERMS OF REFERENCE FOR THE AD HOC TECHNICAL EXPERT GROUP ON SYNTHETIC BIOLOGY

1. The AHTEG on Synthetic Biology shall:

(a) Monitor and assess the current state of knowledge within the field of synthetic biology by reviewing recent technological developments;

(b) **On that basis, develop criteria and identify appropriate structures for a regular review process of scientific and technological developments in this rapidly evolving field to ensure adequacy of regulatory oversight and risk assessment methodologies; [(Rationale: Paragraph added to give justice to the fact that this field has developed already significantly since COP-12, and it is expected that this will continue.)]**

(c) Identify, if any, the living organisms already developed or currently under research and development through techniques of synthetic biology which do not fall under the definition of LMOs under the Cartagena Protocol;

(d) ~~Analyze evidence of positive and negative~~ **Identify potential** impacts of synthetic biology **including organisms, compounds and products, on ecosystem functions and services and any related socioeconomic consequences and identify knowledge gaps in this field; [(Rationale: Possible impacts and replacements of natural ecosystem services have not been assessed yet but synthetic biology application might fundamentally alter ecosystem functions, pressures and benefits.)]**

(e) **Collate documented cases of positive and negative impacts of synthetic biology including organisms, compounds and products** vis-à-vis the three objectives of the Convention, including documented cases of incidents that may lead to potential adverse effects, such as cases of organisms that were intended for contained use being introduced into the environment and of unintentional transboundary movements;

(f) **Identify tasks for research programmes and policies addressing the protection of biodiversity also taking into account human health in the context of synthetic biology; [(Rationale: Since this has not been addressed yet.)]**

(g) Assess potential gaps in oversight under the Convention and its Protocols with regard to components, organisms and products of synthetic biology;

(h) **Provide recommendations regarding the detection, screening/identification, traceability and monitoring of organisms and compounds of synthetic biology, also addressing the do-it-yourself (DIY) biology; [(Rationale: Since this has not been addressed yet.)]**

(ie) Provide clarity on how the use digital sequence information on genetic resources could have impacts, both positive and negative, on the fair and equitable sharing of benefits arising from their utilization within the context of the Nagoya Protocol;

(j) Provide recommendations to encourage the study of the values and valuation by different groups of society of the positive and negative impacts of synthetic biology, including organisms, compounds and products; [(Rationale: Socio-economic contexts and values define whether impacts of synthetic biology are considered positive or negative.)]

~~(f) Provide recommendations on the basis of its deliberations to facilitate future discussions and actions on synthetic biology under the Convention for consideration by a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the fourteenth meeting of the Conference of the Parties. [(Rationale: Shifted to paragraph 2.)]~~

2. Provide recommendations on the basis of its deliberations to facilitate future discussions and actions on synthetic biology under the Convention for consideration by a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the fourteenth meeting of the Conference of the Parties. The AHTEG will draw upon relevant information submitted by Parties, other Governments, relevant organizations and indigenous people and local communities, as well as information made available through the online forum and by the Secretariat, as referred to in this decision.

3. The AHTEG will be convened in accordance with the modus operandi of SBSTTA (decision VIII/10). Subject to the availability of funds, the AHTEG shall meet at least once face-to-face prior to the fourteenth meeting of the Conference of the Parties and make use of online tools to facilitate its work, as appropriate.

9 Review of the IPBES assessment on pollinators, pollination and food production

Item 7 of the provisional agenda

Item 7 was introduced to the plenary of the Vilm meeting by Jan Plesnik who also chaired the respective working group.

The participants at the Vilm meeting took note of a near final draft of document UNEP/CBD/SBSTTA/20/9 and discussed the item. The results of the discussion are mirrored in the following changes in the near final draft's suggested recommendations.

Document UNEP/CBD/SBSTTA/20/9:

Suggestions on the text:

IMPLICATIONS OF THE IPBES ASSESSMENT ON POLLINATORS, POLLINATION AND FOOD PRODUCTION FOR THE WORK OF THE CONVENTION

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

SUGGESTED RECOMMENDATIONS

16. The Subsidiary Body may wish to consider recommending that the Conference of the Parties at its thirteenth meeting:

The Conference of the Parties

Recalling decisions III/11, V/5, VI/-

Highlighting the essential role of the abundance and diversity of pollinators for food production, nutrition and human well-being, and the need to address threats to pollinators and pollination services,

Recognizing the potential to increase crop production by increasing the abundance and diversity of pollinators and by protecting the plants on which they depend for foraging and nesting,

Noting the relevance of the conservation and sustainable use of pollinators for the mainstreaming of biodiversity in the food and agriculture sectors,

Noting also the importance of pollinators and pollination for all terrestrial ecosystems, including those beyond agricultural ecosystems and food production,

1. *Welcomes* the summary for policy makers of the assessment on pollinators, pollination and food production approved by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, at its fourth session, in Kuala Lumpur, Malaysia on the 26th February 2016, as well as the full assessment report that was accepted by the Plenary.

2. *Endorses* the key messages of the assessment;
3. *Encourages* Parties, other Governments ~~and~~, **relevant organisations and stakeholders** to use the findings of the assessment to help guide their efforts to improve the **conservation and** management of pollinators, address drivers of pollinator declines and achieve sustainable food systems and agriculture;
4. *Further encourages* Parties and other Governments **and relevant organisations and stakeholders**:

Policies and strategies

- a. To integrate consideration of issues related to the conservation and sustainable use of pollinators in agricultural policy, national biodiversity strategies and action plans, **climate change adaptation strategies** and research policy, inter alia to promote the implementation of the points below;

Promoting pollinator-friendly habitats

- b. Promote diversity of habitats and production systems in the landscape, particularly in areas dominated by agriculture, including through support to diversified agricultural systems such as forest gardens, home gardens, agroforestry and mixed cropping and livestock systems, and through the **conservation, management and** restoration of natural habitats, to enhance the extent and connectivity of pollinator-friendly habitats;
- c. Conserve, restore, and promote the use of patches of natural and semi-natural habitats on farms, and in urban and other developed areas, to maintain floral resources and nesting sites for pollinators;
- d. Promote cropping systems and the **conservation, management and restoration** of grasslands and rangelands to enhance floral diversity over time and space;

Improving the management of pollinators, and reducing risk from of pests, pathogens and invasive species

- e. Enhance the floral diversity available to pollinators, and reduce dependence of managed pollinators on nectar-replacements, thereby improving pollinator nutrition and immunity to pests and diseases;
- f. Promote ~~increased~~ genetic diversity within populations of managed pollinators;
- g. Improve hygiene and control of pests (including the *Varroa* mite) and pathogens in managed pollinator populations;
- h. Regulate the movement of all managed pollinator species, within and among countries, to limit the spread of parasites and pathogens to managed and wild pollinators, and with a view to preventing the introduction of pollinator species outside their native ranges;
- i. Prevent the introduction of invasive **alien** species harmful to pollinators and the plant resources on which they depend

*Reducing risk from pesticides; **including** herbicides*

- j. Promote Integrated Pest Management practices to reduce the unnecessary and inappropriate use of pesticides, taking into account the International Code of Conduct on the Distribution and Use of Pesticides of the Food and Agriculture Organization of the United Nations;
- k. Where pesticides are used, improve application practices to reduce exposure of pollinators;
- l. Promote weed management strategies that take into account the need for pollinator forage and nesting sites;

- m. Improve risk assessment procedures for pesticides and ~~L~~**Genetically Modified Organisms** to better take into account impacts on both wild and managed pollinators including sub-lethal and indirect effects, including by using a wider range of pollinator taxa, beyond honeybees **and managed bumblebees**, in risk assessment protocols, applying the precautionary approach;

Enabling policies and activities

- n. Promote education and public awareness of the value of pollinators and of the habitats that support them and of the need to reduce threats to these species and **their preferred** habitats;
- o. **Avoid or minimise the use of pesticides and their synergistic effects with other drivers that pose serious or irreversible harm to pollinators;**
- p. Integrate consideration of issues related to the conservation and sustainable use of pollinators into agricultural extension services, using, as appropriate, approaches such as farmer field schools;
- q. Develop **and implement** incentives for farmers to protect pollinators and pollinator habitats, for example through payment for pollinator services schemes, and remove or reduce ~~negative incentives such as those promoting~~ **that directly or indirectly trigger the** destruction of pollinator habitats, over-use of pesticides ~~and~~ **including** herbicides and over-simplification of agricultural landscapes;
- r. Promote and support land use planning and zoning, to enhance the extent and connectivity of pollinator habitats in the landscape, with the participation of farmers and local communities;
- s. Protect and promote traditional knowledge and practices for the conservation and sustainable use of pollinators, and protect traditional land rights and tenure to promote bio-cultural diversity

Research, monitoring and assessment

- t. Enhance the monitoring of the status and trends of pollinators and pollinator-friendly habitats, and the identification of potential pollinator deficits;
 - u. Promote further research to address gaps in knowledge identified in the **IPBES** assessment, including the impact of pesticides, in particular neonicotinoids, on pollinators, especially wild pollinators **under field conditions** ~~Further work addressing gaps in the assessment;~~
 - v. **Promote further research and capacity building in developing countries;**
 - w. Promote further research to identify practical ways that pollinator friendly practices can be integrated into farming systems as **a** part of efforts to increase production through ecological intensification;
5. *Invites* FAO, to bring the summary of pollinators and this decision to the attention of its governing bodies and relevant technical committees and commissions, such as the Commission on Genetic Resources for Food and Agriculture and the Committee on Agriculture, as well as the Committee on World Food Security;
 6. ~~{Invites IPBES} [Encourages the lead authors of the assessment] to prepare an update or supplement to the assessment, focusing on recent advances as reflected in the scientific literature; Encourages~~ academic and research bodies to promote further research to address gaps in knowledge identified in the assessment, including the impact of pesticides in particular **neonicotinoids** ~~neon-
eitinoids~~, on pollinators, especially wild pollinators;
 7. *Requests* the Executive Secretary together with FAO, and in collaboration with other partners, to review the International Initiative on the Conservation and Sustainable Use of Pollinators and

prepare a draft updated plan of action, based on the IPBES assessment report and including the most recent knowledge, for consideration by SBSTTA at a meeting prior to COP-14;

8. *Further requests* the Executive Secretary to undertake a brief scoping of issues related to pollinators and pollination relevant to the conservation and sustainable use of biodiversity in all ecosystems, beyond their role in agriculture and food production for consideration by SBSTTA at a meeting prior to COP-14.

10 Biodiversity and climate change

Item 8 of the provisional agenda

Item 8 was introduced to the plenary of the Vilm meeting by Anki Weibull who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/10 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendation.

Document UNEP/CBD/SBSTTA/20/10:

Suggestions on the text:

BIODIVERSITY AND CLIMATE CHANGE

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

VIII. CONCLUSION AND SUGGESTED RECOMMENDATION

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to adopt conclusions along the following lines:

The Subsidiary Body on Scientific, Technical, and Technological Advice

1. *Welcomes* the following reports; and ~~takes note of~~ the summary information provided in the note prepared by the Executive Secretary on biodiversity and climate change (UNEP/CBD/SBSTTA/20/10):

(a) The synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction (UNEP/CBD/SBSTTA/20/INF/2).

(b) The study titled "Managing ecosystems in the context of climate change mitigation: A review of current knowledge and recommendations for action," (UNEP/CBD/SBSTTA/20/INF/3)

(c) The report on the contribution of the Aichi Targets to climate mitigation, (UNEP/CBD/SBSTTA/20/INF/29).

(d) The guidance on enhancing the positive and minimizing the negative impacts on biodiversity of climate change adaptation activities (UNEP/CBD/SBSTTA/20/INF/4).

2. ~~Takes note of~~ **Welcomes** the synthesis report on further advice on possible indicators and potential mechanisms to assess contributions to, and impacts of REDD+ on biodiversity (UNEP/CBD/SBSTTA/20/10/Add.1) and the further information provided in UNEP/CBD/SBSTTA/20/INF/30;

3. *Encourages* Parties, other Governments and relevant organizations to increase and share knowledge on ecosystem-based approaches to climate change adaptation and disaster risk reduction and to make use of this knowledge to better inform decision-making;

3bis. Invites the Intergovernmental Panel on Climate Change when elaborating its special report on the impacts of global warming of 1.5°C above pre-industrial levels, to also focus on the impacts on biodiversity and ecosystem functions and services, and on the contribution of the conservation and sustainable use of biodiversity, and of ecosystem restoration, to efforts to keep global warming within a limit of 1.5°C.

The Subsidiary Body on Scientific, Technical, and Technological Advice recommends that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

The Conference of the Parties,

Reaffirming paragraph 8 of decision X/33 inviting Parties to implement ecosystem-based approaches for mitigation and adaptation [**(Recommendation: Make sure that the spelling out of decision X/33 is maintained.)**],

Noting-Recognizing that cooperation amongst the biodiversity, climate change adaptation and disaster reduction communities ~~can~~ results in a greater ability to design interventions that deliver multiple benefits,

Noting-Recognizing the potential for synergies ~~at the national level~~ [**(Rationale: Occurs at all levels.)**] provided by the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015 - 2030, the Strategic Plan for Biodiversity 2011 - 2020 and the Paris Climate Agreement,

Noting-Recognizing the need for the full and effective participation of indigenous peoples and local communities including through prior informed consent, and the need to pay particular attention to their differentiated needs in order to avoid detrimental impacts on their livelihoods and cultures,

Noting-Recognizing that gender-responsive approaches are critical to ensure the success and sustainability of adaptation and disaster risk reduction policies, programmes and projects,

Welcoming the following reports and the summary information provided in the note prepared by the Executive Secretary on biodiversity and climate change (UNEP/CBD/SBSTTA/20/10):

(a) The synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction (UNEP/CBD/SBSTTA/20/INF/2).

(b) The study titled “Managing ecosystems in the context of climate change mitigation: A review of current knowledge and recommendations for action,” (UNEP/CBD/SBSTTA/20/INF/3)

(c) The report on the contribution of the Aichi Targets to climate mitigation, (UNEP/CBD/SBSTTA/20/INF/29).

(d) The guidance on enhancing the positive and minimizing the negative impacts on biodiversity of climate change adaptation activities (UNEP/CBD/SBSTTA/20/INF/4).

1. *Welcomes* the Paris Agreement on Climate Change **with its biodiversity-linked articles**¹;

2. *Encourages* national focal points to the Convention, using the information contained in UNEP/CBD/SBSTTA/20/INF/3 and UNEP/CBD/SBSTTA/20/INF/29 and other tools and guidance under the Convention, to cooperate with their counterparts **national focal points** in

¹ The reference to the importance of ensuring the integrity of all ecosystems as contained in the preamble of the Paris Agreement; Article 5 that calls upon parties to take action to conserve and enhance sinks and reservoirs of greenhouse gases; Article 7 which recognizes the role of adaptation in protecting livelihoods and ecosystems.

the United Nations Framework Convention on Climate Change in the development of nationally determined contributions and in the implementation of the domestic measures aimed at achieving such contributions, **ensuring policy coherence**;

3. *Recognizes* that ecosystem based approaches ~~to climate change adaptation and disaster risk reduction can be~~ **are** technically feasible, politically desirable, socially acceptable, economically viable and beneficial and that implementation and investment into these approaches is increasing ~~at the national level~~;

4. *Encourages* Parties, other Governments and relevant organizations:

(a) To ~~consider~~ **address** impacts on biodiversity and related social, environmental, and economic impacts associated with climate change and disasters, including the costs of inaction and the value of investing in actions timeously in order to reduce impacts;

(b) To take into consideration the status of biodiversity and ecosystems **functions and services** and their ~~future~~ vulnerability to climate change impacts when planning and implementing ~~ecosystem-based approaches to~~ adaptation and disaster risk reduction activities, **including ecosystem based approaches**, and to avoid activities that would increase the vulnerability and reduce the resilience of ecosystems;

(c) To consider **multiple benefits, including mitigation, and to address** potential trade-offs throughout the development and implementation of ecosystem-based approaches to adaptation and disaster risk reduction. Spatial tools to identify areas of high priority for ecosystem-based adaptation and disaster risk reduction, as well as risks, can also assist in decision-making;

(d) To raise awareness among decision-makers in relevant sectors, and at different levels of government, about ecosystem-based approaches to adaptation and disaster risk reduction;

(e) To develop and implement ecosystem-based approaches to adaptation and disaster risk reduction that are based on the best available science as well as traditional knowledge to ensure the most appropriate use of ecosystems and to avoid maladaptation and potential trade-offs;

(f) To promote **and give priority to** the wide use of ecosystem-based approaches ~~where appropriate~~, including in urban areas and agricultural landscapes;

(g) To develop improved monitoring and evaluation methods, noting that such methods are best developed **and applied** early in the planning phase, and to systematically assemble and analyse evidence to assess the effectiveness of ecosystem-based adaptation;

(h) To make use of existing tools and guidance on ecosystem-based approaches to adaptation and disaster risk reduction and to further develop and refine these tools and guidance, ~~and share experiences around these processes through the clearing house mechanism~~;

(i) To increase the availability of, and access to, local climate data and projections of future climate change for assessing vulnerabilities and risks in the preparation of adaptation strategies;

(j) To share and disseminate knowledge **and experiences** on matters referred to in the present paragraph through **inter alia** the clearing-house mechanism.

5. *Requests* the Executive Secretary to prepare, in collaboration with the appropriate United Nations agencies and international organizations, guidelines for the design and effective implementation of ecosystem-based approaches to adaptation and disaster risk reduction, for consideration by the Conference of the Parties at its fourteenth meeting. The guidelines should consider existing guidance, including that developed under the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change, and include information on:

(a) Tools for assessing the effectiveness of ecosystem-based approaches to adaptation and disaster risk reduction at various scales;

- (b) The design and implementation of ecosystem-based approaches to adaptation and disaster risk reduction at difference scales, including at the subnational and local levels;
- (c) Trade-offs, thresholds of change and limits to adaptation;
- (d) Options for monitoring and evaluation of ecosystem-based approaches to climate change adaptation and disaster risk reduction activities, and their effectiveness.

~~6. — Invites the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services to identify relevant experts, and requests the Executive Secretary, to promote and facilitate their contributions from relevant experts to the special report of the Intergovernmental Panel on Climate Change on the impacts of global warming of 1.5°C above pre-industrial levels, focusing, inter alia, on the impacts on biodiversity and ecosystem services, and on the contribution of the conservation and sustainable use of biodiversity, and of ecosystem restoration, to efforts to keep global warming within a limit of 1.5°C.~~

11 Sustainable wildlife management

Item 9 of the provisional agenda

Item 9 was introduced to the plenary of the Vilm meeting by Vincent Fleming who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/11 and discussed the item. The results of the discussion are mirrored in the following changes in the document's recommendations.

Document UNEP/CBD/SBSTTA/20/11:

Suggestions on the text:

SUSTAINABLE USE OF BIODIVERSITY: BUSHMEAT AND SUSTAINABLE WILDLIFE MANAGEMENT: INFORMATION IN RESPONSE TO DECISION XII/18 PARAGRAPH 13

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

VII. RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical, and Technological Advice,

Welcomes the progress report on the CPW (UNEP/CBD/SBSTTA/20/11) and takes note of the information provided in the analyses on the impacts of subsistence use of wildlife on the survival and regeneration of wild species (UNEP/CBD/SBSTTA/20/INF/aa), Parties' experiences and approaches on sustainable wildlife management (UNEP/CBD/SBSTTA/20/INF/bb) and further activities of the CPW (UNEP/CBD/SBSTTA/20/INF/cc).

Welcomes the outcomes of the Symposium on "Beyond Enforcement: communities, governance, incentives, and sustainable use in combating illegal wildlife trade", held in South Africa, in February 2015 and the workshop on "Sustainable use and bushmeat trade in Colombia: operationalizing the legal framework in Colombia", held in Leticia, Colombia, in October 2015, which have leveraged attention on wildlife governance processes and sustainable management approaches.

1. ~~Encourages Parties, other governments and relevant organizations to take note of the roadmap on wildlife and food security, and strategies therein on better governance for a sustainable and formal bushmeat sector that ensures food security of people using non-threatened wild eies. [(Rationale: duplicated below in recommendation to COP.)]~~
2. The Subsidiary Body on Scientific, Technical, and Technological Advice recommends that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

The Conference of the Parties,

Noting the potential for enhanced policy harmonization on wildlife conservation, sustainable use and trade encouraged by the 2030 Agenda for Sustainable Development, in particular on Targets 15.7 and 15.c under Goals 15, the United Nations General Assembly resolution 69/314, and the Strategic Plan for Biodiversity 2011 - 2020;

Concerned with the continued decline of wildlife species (**including flora, fauna and fungi**) due to extensive destruction and degradation of natural habitats, fragmentation and the loss of landscape connectivity, as well as other threats including illegal logging ~~exploitation~~ and illegal wildlife trade, unsustainable use of forest ~~wildlife~~ products and resources, climate change, illegal land conversion, unwanted forest-fires, pollution, and invasive alien species, that impact negatively on the survival and regeneration of wild species, as well as on sustainable development and human well-being; **[(Rationale: Changes in the paragraph are made to emphasise that ‘wildlife’ refers to animals, plants and fungi; and to remove references to forests and so widen the scope of this paragraph.)]**

Mindful that wildlife loss has consequences for vital ecological processes that support biodiversity, and ~~may have~~ **has** serious socioeconomic and health related impacts, affecting customary sustainable use and the culture, spirituality and identity of indigenous peoples; **[(Rationale: to recognise that wildlife loss does have impacts.)]**

Noting the need for sound wildlife management programs that build upon an understanding of biological and ecological factors, as well as on effective and equitable programs, recognizing the importance of the human dimension, not only in terms of people’s needs and benefit-sharing, but also with respect to generating incentives for wildlife conservation and sustainable use;

Recognising that considerable work has been done under the Convention on ways to improve the sustainability of bushmeat harvest, but noting that the issues of the sustainable use of wildlife are wider and that the Convention needs a more strategic approach to the issue; [(Rationale: to emphasise that despite the previous initial focus on bushmeat, there is a need to look at sustainable use more widely and strategically.)]

1. **Encourages Parties, other Governments and relevant organizations to consider integrate into their National Biodiversity Strategies and Action Plans and implement,** as appropriate and where possible, the roadmap on wildlife and food security and the strategies therein to strengthen governance processes for a sustainable and formal bushmeat sector; **[(Rationale: to refer to NBSAPs and widen scope of those being encouraged to act.)]**

2. ~~Urges Parties when developing their sixth National Reports to CBD to report on the use of rights-based management systems and the transfer of these rights and associated management to local people with regards to sustainable wildlife management; [(Rationale: deleted as considered redundant with addition of paragraph below.)] Requests the Executive Secretary, when developing guidance to Parties with respect to the sixth National Reports, to request Parties to include information on the use of rights-based management systems, and the transfer of these rights and associated management to indigenous peoples and local communities, with regards to sustainable wildlife management; [(Rationale: new text added to request the Executive Secretariat to include this request in guidance on the sixth National Reports.)]~~

3. **Requests the Executive Secretary to continue working with the Collaborative Partnership on Sustainable Wildlife Management, to support Parties’ implementation of the Strategic Plan for Biodiversity 2011-2020, by elaborating the elements within the roadmap for better governance towards a sustainable bushmeat sector, taking into account the perspective and knowledge of indigenous peoples and local communities in customary sustainable use of biodiversity, and to report on progress at a meeting of the Subsidiary Body on Scientific, Technical, and Technological Advice**

prior to the 14th meeting of the Conference of the Parties to the Convention on Biological Diversity; [(Rationale: order of paragraph changed to group bushmeat items together.)]

4. ~~Invites~~ Requests the Executive Secretary, in collaboration with the CPW and the Global Partnership for Plant Conservation, to ~~organize scope and~~ organize a Wildlife Forum event, taking into account the Addis Ababa Principles and Guidelines for Sustainable Use and the views of, and involving, Parties and relevant stakeholders including indigenous peoples and local communities, to consider and define the priorities for work under the Convention with respect to sustainable wildlife management and to report to a SBSTTA meeting prior to CoP14, ~~on the margins of the fourteenth meeting of the Conference of the Parties to the CBD;~~ [(Rationale: Wording changed to adopt the suggestion of a wildlife forum event but to use it to enable some strategic forward thinking on where CBD could add most value in the area of sustainable use of wildlife.)]

5. Requests the Executive Secretary to continue to liaise and collaborate with CITES, CMS and other biodiversity-related Conventions with respect to sustainable wildlife management and with IPBES with respect to the scoping for, and subsequent thematic assessment on, the sustainable use of biodiversity. [(Rationale: Wording changed to encourage ongoing liaison with other Conventions and to make links to the IPBES future thematic assessment on sustainable use.)]

abridged

12 Protected areas and ecosystem restoration

Item 10 of the provisional agenda

Item 10 was introduced to the plenary of the Vilm meeting by Karin Zaunberger who also chaired the brainstorming meeting and the respective working group. On 7 March a voluntary group including experts from seven countries and the European Union met to brainstorm on ecosystem restoration and to discuss in detail the draft action plan on restoration, which forms an Annex to the draft recommendation included in UNEP/CBD/SBSTTA/20/12. The suggestions were presented and discussed in plenary. The results of the discussion are mirrored in the following changes in the document's suggested recommendation and proposed amendments.

Document UNEP/CBD/SBSTTA/20/12:

Suggestions on the text:

PROTECTED AREAS AND ECOSYSTEM RESTORATION

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

V. SUGGESTED RECOMMENDATION

The Subsidiary Body on Scientific, Technical and Technological Advice

Recommends that the Conference of the Parties at its thirteenth meeting adopt a decision along the following lines:

The Conference of the Parties,

Recalling Article 8(f) and decisions XI/16 and XII/19,

Welcoming the progress made in the implementation of the Forest Ecosystem Restoration Initiative, supported by the Korea Forest Service of the Republic of Korea,

Noting that the effective implementation of ecosystem restoration not only helps to achieve many of the Aichi Biodiversity Targets, but also the Sustainable Development Goals,¹ ecosystem-based adaptation and climate change mitigation under the United Nations Framework Convention on Climate Change,² land degradation neutrality under the United Nations Convention to Combat Desertification,³ the wise use of wetlands under the Ramsar Convention on Wetlands,⁴ the four Global Objectives on For-

¹ See General Assembly resolution 70/1, annex.

² United Nations, *Treaty Series*, vol. 1771, No. 30822.

³ *Ibid.*, vol. 1954, No. 33480.

⁴ *Ibid.*, vol. 996, No. 14583.

ests of the United Nations Forum on Forests, commitments under the Convention on the Conservation of Migratory Species of Wild Animals,⁵ the Bonn Challenge of the Global Partnership on Forest and Landscape Restoration and **the objectives of many** other initiatives; **[(Rationale: Worldwide there are many successful initiatives; see examples demonstrated in the short film ‘Hope in a changing climate’ <https://www.youtube.com/watch?v=bLdNhZ6kAzo.>)]**

Noting that restoration needs to be carried out in ways that balance social, economic and environmental objectives, especially in regard to the participation of women, recognising that women are powerful agents of change and their leadership is critical in community revitalization and renewable natural resource management; [(Rationale: Stress the role of women in restoration see also Message of the Executive Secretary of the Convention on Biological Diversity, Braulio Ferreira De Souza Dias, on the occasion of Africa Environment Day/Wangari Maathai Day on 2 March 2016.)]

1. *Adopts* the key elements for a short-term action plan on ecosystem restoration, as contained in the annex to the present draft decision, as a flexible framework for urgent action towards achieving Aichi Biodiversity Targets 5, 14 and 15, and Targets 4 and 8 of the Global Strategy for Plant Conservation, and other internationally agreed goals;

2. *Urges* Parties **and other governments** to promote **and step up [(Rationale: Restoration action is urgent and can bring multiple benefits; this justifies the use of the stronger word.)]** action on ecosystem restoration by making use of the key elements of a short-term action plan on ecosystem restoration;

3. *Encourages* Parties, when developing ecosystem restoration plans and when updating national biodiversity strategies and action plans, to take into account existing commitments on ecosystem restoration, including those promoted under other relevant processes;

4. *Urges* overseas development agencies, international finance agencies and other funders, such as regional development banks, to provide support for ecosystem restoration, integrated as appropriate into programmes and initiatives for development, food security, job creation and poverty eradication;

5. *Encourages* relevant organizations, ~~including, as appropriate, members of the Global Partnership on Forest and Landscape Restoration,~~ to promote and support Parties in their efforts to implement short-term action plans on ecosystem restoration; **[(Rationale: Not singling out one partnership.)]**

6. *Requests* the Executive Secretary, subject to the availability of funds, to support the efforts of Parties in making use of the key elements for a short-term action plan on ecosystem restoration by:

(a) Providing capacity-building and tools in collaboration with partners and initiatives, including by implementing the Forest Ecosystem Restoration Initiative in collaboration with the Forest and Landscape Restoration Mechanism of the Food and Agriculture Organization of the United Nations;

(b) Updating the information on guidance, tools and initiatives relating to ecosystem restoration⁶ and making it available through the clearing-house mechanism.

⁵ Ibid., vol. 1651, No. 28395.

⁶ UNEP/CBD/SBSTTA/20/INF/35.

Annex

KEY ELEMENTS FOR A SHORT-TERM ACTION PLAN ON ECOSYSTEM RESTORATION**I. OBJECTIVES AND PURPOSE**

1. The *overall objective* of the action plan is to promote restoration of **degraded** natural and semi-natural ecosystems **including in urban environments (RATIONALE: restoration of ecosystem services in urban areas brings multiple benefits and can improve the livelihood of citizens and help alleviate poverty)** as a contribution to ~~halting~~ **reversing [(Rationale: stronger wording.)]** the loss of biodiversity, improving ecosystem resilience, enhancing the provision of ecosystem services, mitigating and adapting to the effects of climate change, combating desertification and land degradation, and improving human well-being while reducing environmental risks and scarcities.

2. The *purpose* of the action plan is to help Parties **as well as any relevant organisations and initiatives** accelerate and upscale activities on ecosystem restoration. **It aims** to support achievement of the Strategic Plan for Biodiversity 2011-2020, in particular Aichi Biodiversity Targets 14 and 15. Aichi Biodiversity Target 15 calls for the restoration of at least 15 per cent of degraded ecosystems by 2020. The action plan can also contribute to the achievement of objectives under other conventions, including the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, the Ramsar Convention on Wetlands, the Convention on the Conservation of Migratory Species of Wild Animals, and the United Nations Forum on Forests, as well as the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015-2030.

3. The *specific objectives* of this action plan are the following:

(a) ~~To identify and communicate the benefits of ecosystem restoration to generate public awareness, support and involvement;~~(b) To support and ~~accelerate~~ **step up [(Rationale: stronger wording.)]** action in the planning, implementation and monitoring of ecosystem restoration activities at all levels;

(b) To identify and formalize regional, national and local targets, policies and actions for ecosystem restoration;

(c) To identify and provide elements for communication of the benefits of ecosystem restoration to generate awareness, support and involvement. [(Rationale: Reordered.)]

Scope and scale

4. Ecological restoration refers to the process of ~~actively~~ managing or assisting the recovery of an ecosystem that has been degraded, damaged or destroyed as a means of sustaining ecosystem resilience and conserving biodiversity. Degradation is characterized by a loss or reduction in **ecosystem health / ecological integrity [(Rationale: Clearer.)]** and/or productivity. Degradation and restoration are context-specific and refer to both the state of ecosystems and to ecosystem processes.

5. The action plan promotes ecosystem restoration across all types of habitat, biomes and ecosystems, including forests, grasslands, savannas and other terrestrial and inland water ecosystems, marine and coastal ecosystems, and, as appropriate, urban environments. The activities can be applied at the national, regional, subnational and site levels within a land- and seascape perspective. Actions intended to reduce, mitigate or reverse direct drivers of degradation, restore ecosystem conditions and processes may be undertaken on a range of scales within a mosaic of land uses, for a range of purposes and with different actors. Actions on the national or regional scale are necessary to provide an enabling institutional framework.

6. The action plan promotes **the initiation of short-term** actions ~~that can be undertaken~~ between now and 2020 **[(Rationale: Clearer.)]**. However, restoration necessarily involves sustained activities over the **medium and [(Rationale: More complete.)]** long term. The ~~short-term~~ actions identified in this plan need be undertaken in the context of the 2050 Vision of the Strategic Plan for Biodiversity and the 2030 Agenda for Sustainable Development.

7. The action plan can be applied, ~~as appropriate,~~ to: (a) cases where ecosystems already under ongoing restoration, (b) degraded ecosystems already identified and considered for restoration, ~~and~~ (c) degraded ecosystems not yet considered for restoration, **and (d) the enhancement of ecosystem functions. [(Rationale: The enhancement of ecosystem function is a key element of restoration in urban areas.)]** ~~by adjusting objectives and actions accordingly.~~

Principles

8. ~~Ecosystem restoration is not a substitute for conservation, nor is it a conduit for allowing intentional destruction or unsustainable use.~~ Ecosystem restoration is a complement to **other** conservation activities, **which brings multiple benefits. [(Rationale: important additional aspect)]** ~~and can greatly enhance the value of protected areas. Where possible, p~~ Priority should be given to conserving biodiversity and preventing the degradation of natural habitats and ecosystems by reducing pressures and maintaining ecological integrity (see guidance for integrating biodiversity considerations into ecosystem restoration in appendix 1). **Ecosystem restoration is not a substitute for the conservation of existing non-degraded ecosystems, nor is it an excuse for allowing their intentional destruction or unsustainable use. [(Rationale: reordered)]**

9. Ecosystem restoration activities should be undertaken consistent with the provisions of the Convention. In particular, the 12 principles of the Ecosystem Approach are highly relevant for guiding ecosystem restoration activities,⁷ as is the United Nations Declaration on the Rights of Indigenous Peoples.⁸ Other relevant guidance includes the Addis Ababa Principles and Guidelines for the Sustainable use of Biodiversity,⁹ the Akwé: Kon guidelines,¹⁰ the Tkarihwaí:ri Code of Ethical Conduct,¹¹ and the Plan of Action on Customary Sustainable Use of Biological Diversity.¹²

10. Ecosystem restoration activities should be planned and implemented using the best available **evidence science** ~~science~~ and local knowledge. The free, prior and informed consent and full and effective participation of indigenous peoples and local communities and women, as well as the engagement of other relevant stakeholders are crucial at all stages of the processes. Communication, education and public awareness are also crucial at all stages so that the benefits and costs of ecosystem restoration activities are widely understood.

Key elements of the action plan

11. The plan comprises four main groups of activities:

- (a) Assessment of opportunities for ecosystem restoration in the light of ecological, **economic, social [(Rationale: more complete)]** and institutional realities;
- (b) Improving the institutional enabling environment for ecosystem restoration (at the national level or the level of other relevant jurisdictions);
- (c) Planning and implementation of ecosystem restoration activities;
- (d) Monitoring, evaluation, feedback and disseminating results.

12. An iterative process is likely to be required and there should be feedback among and within these four main groups of activities.

A. Assessment of opportunities for ecosystem restoration

13. To ensure that restoration activities are implemented in areas requiring restoration and are high priority in the light of ~~both~~ ecological, **economic, social** and institutional realities, it is imperative to im-

⁷ <https://www.cbd.int/ecosystem/>

⁸ General Assembly resolution 61/295.

⁹ Decision VII/12, annex II.

¹⁰ Decision VII/16 F.

¹¹ Decision X/42, annex.

¹² Decision XII/12 B, annex

plement **or to use existing** broad-scale ecosystem assessments, including mapping. These assessments would be initiated at the national level (or, where appropriate, at the level of subnational or supranational jurisdictions) and adjusted in the light of more detailed assessments that result from the site-level activities under step C below. **The following actions should be considered:**

1. **Identify and obtain the free, prior and informed consent and full and effective participation of indigenous peoples and local communities and relevant stakeholders** in the process, including consideration for gender balance, in the identification of priority areas for restoration.
2. **Determine the extent, type, degree and location of degraded ecosystems ~~on the~~ at regional, national and local scales** (~~including biome by biome~~) and resulting losses of biodiversity and ecosystem services and determine the drivers of ecosystem degradation. Take into account ongoing ecosystem restoration actions, and determine baseline information.
3. **Assess the potential costs and multiple benefits of ecosystem restoration ~~on the national scale~~ at regional, national and local scales.** [(Rationale: more complete)] Benefits may include those linked to biodiversity and ecosystem services, and socioeconomic benefits, such as water and food security, carbon capture and sequestration, jobs and livelihoods, **health benefits**, [(Rationale: important additional aspect)] and disaster risk reduction (e.g. fire and erosion control, and coastal protection). Costs of inaction may also be significant. Capitalize on the potential for ecosystem restoration to provide ecosystem services ~~or~~ **through developing** “green infrastructure” **and using nature-based solutions.** [(Rationale: more complete)]
4. **Assess the institutional, policy, and legal frameworks** and identify financial and technical resources, as well as gaps, for implementing ecosystem restoration. **Analyse opportunities for innovative approaches to restoration including financial ones.** [(Rationale: important additional aspect)] This assessment should be conducted at the national level (or at the level of subnational or supranational jurisdictions, where appropriate).
5. **Reduce and eliminate the drivers of the loss of biodiversity and the degradation of ecosystems at various scales.** Consult with experts and stakeholders to determine what is required, such as: resources; behavioural changes; incentive mechanisms; adopting sustainable land, water, forest, fisheries and agriculture management practices; diversifying land tenure; and recognizing resource rights.
6. **Identify and prioritize geographical** [(Rationale: clearer)] **areas** where restoration would contribute most significantly to achieving national level targets contributing to the Aichi Biodiversity Targets (such as key biodiversity areas, areas that provide key ecosystem services, and areas that would enhance the integrity of protected areas and their integration into wider land- and seascapes) **and also to achieving the Sustainable Development Goals and to climate change adaptation and mitigation.** [(Rationale: important additional aspect)]
7. **Consider the need for safeguard measures** to reduce risks of displacing habitat loss and degradation as well as other risks to biodiversity and indigenous peoples and local communities. (see also “Principles” (paras. 8-10 above) and “guidance for integrating biodiversity considerations into ecosystem restoration” in the appendix).

B. Improving the institutional enabling environment

14. In order to achieve restoration goals, it may be necessary to further develop the enabling institutional framework for ecosystem restoration. This includes providing legal, economic and social incentives, and appropriate planning mechanisms, and fostering cross-sectoral collaboration, to promote restoration and for reducing ecosystem degradation. This work would be informed by the assessments undertaken in step A, and especially A4, and would be undertaken in parallel with the planning and implementation activities undertaken in step C. **The following actions should be considered:**

1. **Review, improve or establish a legal, and policy and financial** [(Rationale: important additional aspect)] **frameworks for the protection and restoration of ecosystems.** This may include, as appropriate, laws, regulations, policies and other requirements for protecting, and restoring ~~vulnerable habitats~~ **as well as improving ecosystem functions.** [(Rationale: important ad-

ditional aspect)] It may require a certain proportion of land, coast or sea to be maintained in its natural state.

2. **Review, improve or establish a legal, and policy and financial frameworks [(Rationale: clearer)] for land tenure**, and for recognizing the rights of indigenous peoples and local communities.
3. **Review, improve or establish terrestrial and marine spatial planning processes** and zoning activities in the framework of integrated management.
4. **Review, improve or establish regional, national and local targets [(Rationale: restoration action shall be promoted and implemented at all levels)], policies and strategies for ecosystem restoration**. These activities should normally be reflected in national biodiversity strategies and action plans, and/or national plans for sustainable development, climate change mitigation and adaptation and land management. Setting national targets can help to increase political will and public awareness. Existing national targets established under other relevant processes should also be taken into account.
5. **Develop accounting processes** that take into account the values of natural, semi-natural, and urban ecosystems, and of the functions and services they deliver habitats. **[(Rationale: clearer)]**
6. **Promote economic and financial incentives and avoid-remove or reform perverse incentives** in order to reduce the drivers of ecosystem loss and degradation and promote **tion. [(Rationale: more complete)]**
7. **Develop a resource mobilization strategy**. Create a framework for mobilizing resources to support ecosystem restoration, from national, bilateral and multilateral sources, such as the Global Environment Facility, leveraging national budgets, donors and partners, including the private sector, local communities and non-governmental organizations **and Official Development Assistance agencies**, to support implementation of plans and to fill gaps identified through assessments. Public funds and instruments can be used to leverage private funding through such methods as risk guarantees, payment for ecosystem services, and green bonds.
8. **Foster the development of business plans and innovative approaches to tion. [(Rationale: important additional aspect)]**
9. **Promote capacity-building and training** for planning and implementing ecosystem restoration so as to improve the effectiveness of ~~future~~ restoration programmes.

C. Planning and implementation of restoration activities

15. Restoration activities should be planned on the basis of priorities identified under step A and implementation facilitated by actions under step B. Actions will require consultation with stakeholders and experts from various disciplines to assist with all phases of project work (assessment, planning, implementation and monitoring). Capacity-building for stakeholders, including legal and legislative support for the rights of women and indigenous peoples and local communities, may be required. **The following actions should be considered:**

1. **Identify the most appropriate measures for conducting ecosystem restoration**, based on **the best science available and on** a range of options and considering ecological appropriateness, cost effectiveness, and support to indigenous peoples' and community conserved territories and areas, and respect for their traditional customary knowledge and practices. **Emphasis should be given to restoration approaches and activities that allow people to maintain and/or establish sustainable livelihoods. [(Rationale: important additional aspect)]**
2. **Consider how ecosystem restoration activities can support ecological and economic sustainability** of agriculture and other production activities, as well as climate change mitigation and adaptation, disaster risk reduction, and the needs of urban areas. Restoration needs to be mainstreamed into landscape planning. The expected effects of restoration activities on the ecological function of adjacent lands and waters should be considered, for example through environmental

impact assessments and strategic environmental assessments. Possible future environmental changes, such as those resulting from climate change, should be kept in mind.

3. **Develop ecosystem restoration plans that include clear and measurable objectives** for expected environmental, **economic** and social outcomes as well as indicators for assessing them. In addition to goals and objectives, plans should include the extent and lifetime of the project, the feasibility of mitigating degrading forces, budget and staff requirements, and a coherent plan for monitoring project implementation and efficacy. Project goals should include the desired future condition of the areas being restored, and the ecological and socioeconomic attributes of the reference ecosystem(s) to be achieved. In addition, goals should explicitly specify ecological and ~~social~~ **socioeconomic** targets (e.g., biomass of vegetation, jobs), and for each target an action (e.g., reduce, increase, maintain), quantity (e.g., 50%), and timeframe (e.g., 5 years). Objectives should then be developed to detail the specific steps required to fulfil the goals.
4. **Develop explicit implementation tasks, schedules, and budgets.** Anticipated details of implementation, including site preparation, installation, or follow-up activities, should be considered. In addition, performance standards should be explicitly stated, along with questions to be addressed through monitoring and the protocols that will be used to examine project success at specified intervals during restoration. Integral to monitoring and evaluation is the establishment of standards for data collection, management and retention, analyses, and sharing of lessons learned.
5. **Implement the measures outlined in the ecosystem restoration plan** to conserve, manage sustainably, and, where necessary, restore degraded ecosystems and landscape units in the most effective and coordinated manner possible, making use of existing science and technology and local knowledge. **Activities may include those referred to in recommendations 8-11 of the UNEP rapid response assessment 'Dead Planet Living Planet Biodiversity and Ecosystem Restoration for Sustainable Development'¹³ listed in Endnote 1.**

D. Monitoring, evaluation, feedback, and disseminating results

16. Monitoring activities should begin during the earliest phases of project development to enable ecosystem conditions and socio-economic effects to be measured against a reference model. Effective monitoring requires extensive planning prior to initiation of restoration activities, including establishing baselines. Monitoring results and the lessons learned on the outcomes of activities under B and C should be documented, analysed and used to support adaptive management. **The following actions should be considered:**

1. **Assess the efficacy and effects of implementing the ecosystem restoration plan**, including the success of ecosystem restoration activities, ~~and~~ **the environmental and socioeconomic costs and benefits and financial costs.** This should be done in close collaboration with relevant stakeholders and be based on the questions and analysis set out in the monitoring section of the restoration plans (step C above).
2. **Adjust plans, expectations, procedures, and monitoring through adaptive management** based on monitoring results and lessons learned and ensure continuity beyond the project end, ~~including through collegial management.~~
3. **Share successes, failures and lessons learned** from planning, **financing, [(Rationale: important additional aspect)]** implementing and monitoring ecosystem restoration plans in collaboration with researchers, including across ministries and with the public to demonstrate the practices and areas that provide multiple benefits of ecosystem restoration, identify unintended consequences, and improve outcomes of future restoration efforts ~~both locally and in other sites within a given biome or further afield.~~

¹³ UNEP(2010) Dead Planet Living Planet, Biodiversity and Ecosystem Restoration for Sustainable Development, Nairobi

Supporting guidance, tools, organizations and initiatives relating to ecosystem restoration

17. Relevant guidance and tools developed under the Convention, and those developed by partner organizations and initiatives, as well as relevant organizations and initiatives are provided in information document UNEP/CBD/SBSTTA/20/INF/35 and will be made available on the clearing-house mechanism.

Actors

This action plan is addressed to all relevant stakeholders, including national, subnational and municipal governments, Parties to the Rio conventions and other multi-lateral environmental agreements, donor agencies, including the World Bank and regional development banks, private and corporate donors, pension funds and business consortia, as well as other relevant international bodies and organisations, land owners and land managers, indigenous peoples and local communities, and civil society and citizens. [(Rationale: important additional aspect, derived from the ‘Hyderabad Call for a Concerted Effort on Ecosystem Restoration’.)]

Appendix

GUIDANCE FOR INTEGRATING BIODIVERSITY CONSIDERATIONS INTO ECOSYSTEM RESTORATION

- Address the drivers of biodiversity loss, including land-use change or habitat ~~change, degradation and fragmentation~~, **degradation and loss** over-exploitation, pollution, **climate change** and invasive alien species: conservation should be prioritized, as ecosystem restoration generally costs more than avoiding degradation, and the loss of some species and ecosystem services might not be recoverable. Further, natural habitats act as refugia for species that can offer restoration opportunities to other areas. **[(Rationale: important additional aspect)]**
- ~~Aim to restore ecosystems to the condition they would have been in if degradation had not occurred, recognizing that, particularly under climate change, this may not always be ble.~~ **[(Rationale: deleted because redundant)]**
- **Promote the role of biodiversity in restoring multiple ecosystem functions and services including through nature-based solutions.** **[(Rationale: important additional aspect)]**
- Avoid the afforestation of **high nature value** **[(Rationale: clearer)]** grasslands and ecosystems with naturally low tree cover, noting that ecosystems may not always be homogenous, and non-climax ecosystems could naturally have areas without forests.
- ~~¶~~ **Natural and** traditional disturbance regimes (e.g., under fire or grazing) may be important for ecosystem structure and functioning, and may need to be maintained or restored.
- Make use of research ~~into~~ **on** the functions of species in the ecosystem: **and the links between ecosystem functions and services.** Due consideration should be given to the **recovery** ~~restoration~~ of species ~~directly~~ providing ecosystem services and functions, such as seed dispersal, pollination, and maintaining the food web (such as ~~key~~ predators) and nutrient flows **and other services and functions as referred to in recommendations 8-10 of the UNEP rapid response assessment ‘Dead Planet Living Planet Biodiversity and Ecosystem Restoration for Sustainable Development’¹⁴.**
- Take into consideration the fact that natural regeneration may allow a degraded area to recover on its own after ~~stressors~~ **drivers of fragmentation, degradation and loss** have been removed or reduced. If active restoration is required, such as removing invasive alien species, reintroducing native plants and animals, and revitalizing soils and hydrological processes, this will generally require greater resources over a greater period of time.

¹⁴ see footnote 13 and endnote 1

- If ecosystem restoration is being aided by planting **and re-introduction**, make use of native **site-adapted [(Rationale: important additional aspect)]** species, giving attention to genetic variation within and among native species, their life histories and the consequences of their interactions with each other and with their environment.
- Site-based actions should be taken in the context of integrated land- and seascape management practices. For example: priority can be given to restoring ecosystem services within a mosaic of land uses; or promoting ~~ecological~~ **landscape [(Rationale: correct term)]** connectivity and biodiversity conservation through ecosystem restoration in proximity to species refugia (e.g., protected areas, key biodiversity areas, important bird and biodiversity areas, and Alliance for Zero Extinction sites) creating buffer zones, or connectivity corridors between them.
- Prevent the introduction of those alien species which threaten ecosystems, habitats or species: if the use of alien species is being considered, for example to initially stabilize severely degraded soils, this should, in particular, be guided by sound science and the precautionary approach in order to avoid loss of habitat and species due to invasive alien species.

¹ **Recommendations 8-11** of the UNEP rapid response assessment “Dead Planet Living Planet, Biodiversity and Ecosystem Restoration for Sustainable Development”:

8) *Apply ecosystem restoration as an active policy option for addressing challenges of health, water supply and quality and wastewater management by improving watersheds and wetlands, enhancing natural filtration.*

9) *Apply ecosystem restoration as an active policy option for disaster prevention and mitigation from floods, tsunamis, storms or drought. Coral reefs, mangroves, wetlands, catchment forests and vegetation, marshes and natural riparian vegetation provide some of the most efficient flood and storm mitigation systems available and restoration of these ecosystems should be a primary incentive in flood risk and disaster mitigation planning.*

10) *Enhance further use of ecosystem restoration as a mean for carbon sequestration, adaptation to and mitigation of climate change. The restoration targets for sequestration includes among other forests, wetlands, marine ecosystems such as mangroves, seagrasses and salt marshes, and other land use practices.*

11) *Improve food security through ecosystem restoration.*

Given the significance of food production and its relations to biodiversity and ecosystems loss, expanded recommendations are presented:

- Strengthen natural pest control: Restoration of field edges, crop diversity and wild crop relatives, forests and wetlands is a tool for improving natural weed, pest and disease control in agricultural production. This should be combined with biological control including establishment and facilitation of natural predator host plants and insects, enzymes, mites or natural pathogens.*
- Improve and restore soil fertility: Research and Development funds into agriculture should become a primary investment source for financing restoration of lost and degraded soils, improve soil fertility and water catchment capacity, by investing in small-scale eco-agricultural, agroforestry- and intercropping systems*
- Support more diversified and resilient agricultural systems that provide critical ecosystem services (water supply and regulation, habitat for wild plants and animals, genetic diversity, pollination, pest control, climate regulation), as well as adequate food to meet local and consumer needs. This includes managing extreme rainfall and using inter-cropping to minimize dependency on external inputs like artificial fertilizers, pesticides and blue irrigation water. Support*

should also be provided for the development and implementation of green technology for small-scale farmers.

- d. Improve irrigation systems and reduce evapotranspiration in intercropping and green technology irrigation or rainfall capture systems.*
- e. Improve water supply and quality and wastewater management in rural, peri-urban, and urban areas through restoration of field edges, riparian zones, forest cover in catchments, extent of green areas and wetland restoration*

13 Fifth edition of the Global Biodiversity Outlook, guidelines for the sixth national reports, and indicators for assessing progress towards the Aichi Biodiversity Targets

Item 11 of the provisional agenda

Item 11 was introduced to the plenary of the Vilm meeting by Andreas Obrecht who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/13 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendation.

Document UNEP/CBD/SBSTTA/20/13:

Suggestions on the text:

FIFTH EDITION OF THE GLOBAL BIODIVERSITY OUTLOOK, NATIONAL REPORTING AND INDICATORS FOR ASSESSING PROGRESS TOWARDS THE AICHI BIODIVERSITY TARGETS

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

VI. SUGGESTED RECOMMENDATIONS ON ITEM 11

55. Complementing recommendations XIX/4 and XIX/5, the Subsidiary Body on Scientific, Technical and Technological Advice may wish to adopt a recommendation along the following lines:

The Subsidiary Body on Scientific, Technical and Technological Advice,

Complementing recommendations XIX/4 and XIX/5, the Subsidiary Body on Scientific, Technical and Technological Advice,

Recommends that the Conference of the Parties

[(Section with recommendations on IPBES and elements for the preparation of GBO-5)]

1. Welcomes the decision of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services at its fourth plenary meeting, in February 2016, ~~to undertake~~ **to approve the scoping document for** a global assessment on biodiversity and ecosystem services **foreseen to be concluded by May 2019 and reemphasizes the importance of this global assessment for analysing progress towards the implementation of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets,** ~~noting that this assessment is designed to provide inputs and be complementary to~~

~~the fifth edition of the *Global Biodiversity Outlook*, by providing information relevant to the assessment of progress towards the Aichi Biodiversity Targets and contribute to the follow up of the Strategic Plan for Biodiversity 2011–2020 to be considered by the Conference of the Parties at its fifteenth meeting;~~

2. *Welcomes* the completion of the methodological assessment of scenarios and models of biodiversity and ecosystem services by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, and the approval of the Summary for Policy Makers by the Plenary of the Platform, **and recognises the high relevance of this assessment for work under the CBD;**

3. *Encourages* Parties, other Governments, relevant organizations, **the scientific community**, stakeholders and indigenous **peoples** and local communities to make use of **scenarios and models in support of decision making**, and contribute to **and engage with**, the further development of scenarios and models **as described by the Summary for Policy Makers on models and scenarios of IPBES;** ~~and their application in supporting decision-making;~~

3bis. Recognizes ;the importance of matching scenarios to the needs of particular policy or decision contexts, including for exploring post 2020 policy scenarios [(See Summary for Policy Makers Guidance point 1)] and to consider improving, and more widely applying, participatory **and cross-scale** scenario methods in order to enhance the relevancy and acceptance of **(regional, sectoral and thematic)** scenarios for biodiversity and ecosystem services; **[(See Summary for Policy Makers Guidance point 2)]**

4. *Encourages* Parties, other Governments and relevant organizations including funding organizations to support efforts to develop human and technical capacity for scenario development and modelling needs and to promote open and transparent access to scenario and modelling tools, as well as the data required for their development and testing; **[(See Summary for Policy Makers Guidance point 6)]**

5. *Encourages* the scientific community:

(a) To address key gaps in methods for modelling impacts of scenarios of drivers and policy interventions on biodiversity and ecosystem services that have been identified in the ment; **[(Guidance point 3)]**

(b) To develop practical and effective approaches to evaluating and communicating levels of uncertainty associated with scenarios and models, as well as tools for applying those approaches to assessments and decision-making; **[(See Summary for Policy Makers Guidance point 4)]**

6. *Encourages* data holders and institutions to improve the accessibility of well documented data sources and work in close collaboration with research, observation (including citizen science) and indicator communities to fill gaps in data collection and provision; **[(See Summary for Policy Makers Guidance point 5)]**

7. *Encourages* the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and the Intergovernmental Panel on Climate Change to foster further enhanced collaboration between the scientific communities working on scenarios and models and requests the Executive Secretary to also promote such collaboration;

[(Indicators)]

8. ~~*Recommends* that the Conference of the Parties: (a) Welcomes~~ the report of the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for Biodiversity 2011-2020;

9. Takes note of the updated list of indicators for the Strategic Plan for Biodiversity 2011-2020 **contained in the Annex to this document;**

10. Emphasizes that the **list of** indicators provide a flexible framework for Parties to adapt, as appropriate, to their national priorities and circumstances **and decides that the list of indicators should be kept under review;**

10bis. [(Reference to the final version of the document “National Indicators and Approaches to Monitor Progress Towards the Aichi Biodiversity Targets” (20/INF/#))]

11. *Welcomes* the alignment of indicators for the Strategic Plan for Biodiversity 2011-2020 with indicators for the Sustainable Development Goals and other relevant processes.

~~*Decides* that the indicators should be kept under review with a view to enabling the future incorporation of other relevant indicators.~~

SBSTTA conclusions on the draft reporting guidelines

The participants of the Vilm meeting noted that no draft recommendations related to the 6th national report had been prepared. The meeting decided to only provide general points, given that the related document for SBI-1 was not yet available. The 6th national reporting guidelines will be discussed by SBI-1 as well. However, SBSTTA can list some elements, which will then be taken into account by the CBD Secretariat when further refining the draft reporting guidelines for consideration by COP-13. Hence, the Vilm meeting recommends the following points to be brought up at SBSTTA-20:

- We emphasize that the resource manual, which will provide further guidance and specifications to help parties prepare their national report, should be made available timely before COP-13 so parties are able to well prepare their position on the national reporting guidelines for the COP.
- The national reporting of the CBD should be a used to realize synergies among biodiversity-related Conventions, as was discussed and encouraged at various occasion so as during the workshop of biodiversity-related Conventions on synergies in Geneva in February 2016. Reporting requested by the CBD should complement what is already reported through other channels (other national reporting mechanisms, international databases such as the World Database on Protected Areas,...) and therefore go in the direction of modular national reporting.
- We emphasize that the draft reporting guidelines should be provided to the secretariats of other biodiversity-related conventions timely for comments and be discussed by the Liaison Group of biodiversity-related Conventions (BLG).
- There should be a distinction between mandatory reporting (e.g. National Targets and their contribution on the Aichi Targets) and voluntary reporting elements (GSPC)
- The online reporting tool should facilitate the retrieval and use of data and information entered into related databases and tools.

14 Mainstreaming of biodiversity across sectors, including agriculture, forests and fisheries

Item 13 of the provisional agenda

Item 13 was introduced to the plenary of the Vilm meeting by Marcel Kok who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/20/15 and discussed the item. The results of the discussion are mirrored in the following changes in the document's suggested recommendation.

The participants of the Vilm meeting felt that:

- There should be a linkage to and use of the results and conclusions from the Mexico mainstreaming workshops in Mexico, which also should be fed into the documents on mainstreaming for consideration by SBI.
- The scope of this document (that will also be discussed at SBI) and the scope of the SBI document that takes a broader perspective on mainstreaming - and how they relate - should be clarified.
- In the recommendations there should be more attention to/emphasis on (but no text suggestions in recommendations):
 - More emphasis on SDGs, throughout and otherwise we expect this to be covered in SBI document
 - Other relevant organizations
 - Introduce 'the need for monitoring and reporting what sectors contribute to conservation of biodiversity, also as a contribution to awareness raising' (in general recommendations)
 - Introduce 'the need for strengthening the evidence base and theory of change of how mainstreaming works, together with for example FAO' (in request to Executive Secretariat of the CBD?)
 - Need to link to IPBES pollinator report in agricultural section? Synthetic Biology? Restoration? Climate Change?

Questions were raised:

- How can we as CBD make clear that biodiversity conservation is essential for achieving the goals in other sectors?
- It should be made more clear in the current draft of the document how biodiversity aspects could be integrated into other sectors without putting too much emphasis on negative effects instead. Are we putting enough emphasis on opportunities for collaboration and synergies (e.g. via "Green Deals")?
- Do we need to direct the text more towards recipients in the sectors, while also emphasizing what CBD/biodiversity policies need to do (or is this the task of the SBI documents?)
- Are the indicators for mainstreaming part of the guidelines to the 6th National Reports?

Document UNEP/CBD/SBSTTA/20/15:

Suggestions on the text:

**STRATEGIC SCIENTIFIC AND TECHNICAL ISSUES RELATED TO THE
IMPLEMENTATION OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020**

**MAINSTREAMING BIODIVERSITY INTO
FOOD SYSTEMS, AGRICULTURE, FISHERIES, AQUACULTURE AND FORESTRY**

Note by the Executive Secretary

I. INTRODUCTION

abridged; continued

V. THE WAY FORWARD – SUGGESTED RECOMMENDATION

The Conference of the Parties at its thirteenth meeting may wish to adopt a decision along the following lines:

The Conference of the Parties:

Recognizes the opportunity arising from an integrated and holistic implementation of the 2030 Agenda for Sustainable Development, the Strategic Plan for Biodiversity 2011-2020 and the Reviewed Strategic Framework 2010-2019 of the Food and Agriculture Organization of the United Nations to simultaneously achieve food security and improved nutrition, water security, poverty reduction, climate change, disaster risk reduction, health and biodiversity objectives and that these are inter-dependent and mutually supportive;

Stresses the need for coherence between policies related to agriculture, forestry, fisheries and aquaculture across relevant scales; and that transformational change, including through mutually supportive policy, legal, technical and financial measures in these sectors is required to meet agreed sustainable development objectives;

Welcomes the voluntary guidance on Building a Common Vision for Sustainable Food and Agriculture and *encourages* Parties and invites other Governments apply this guidance, as appropriate, in support of an integrated approach to sustainability across agriculture, forestry and fisheries, recognizing the interdependencies between these sectors;

Notes the relevance of the Plan of Action on Customary Sustainable Use of Biological Diversity in enabling indigenous peoples and local communities to contribute to addressing biodiversity considerations in agriculture, forestry fisheries and aquaculture;

Urges Parties, and *invites* other Governments to strengthen their efforts to mainstream biodiversity into ~~the~~ **various sectors including** agriculture, forestry, fisheries and aquaculture sectors at all levels and scales, involving all relevant stakeholders including producers and consumers throughout supply chains, including by including biodiversity in sectoral standards; **[(Rationale: Indicating that other sectors are relevant as well.)]**

Urges Parties and *invites* other Governments to implement cross-sectoral strategies and integrated landscape and seascape management to curb biodiversity loss, including *inter alia* by reducing negative impacts from agriculture, forestry, fisheries, aquaculture, while identifying potential measures to contribute to the health and resilience of ecosystems;

Notes the **FAO** Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security and *encourages* Parties and invites other governments to make use of this guidance, as appropriate, to review land and other resource tenure or stewardship issues;

Urges Parties and *invites* other Governments **to make use of appropriate legal instruments to enforce a sufficient level of concern for biodiversity in all productive sectors; [(Rationale: Important instrument missing, need to emphasize importance to create legal minimum/level playing field.)]**

Urges Parties and invites other Governments to align financial incentives and performance based payments **(including phasing out and reforming perverse incentives)**, with national biodiversity objectives to reduce habitat loss, degradation and fragmentation, and to channel public and private sources of finance into practices that reduce biodiversity loss and the restoration of critical ecosystems, in a way that provides for local community needs, does not cause harm to other ecosystems, and complies with legal environmental regulations; **[(Rationale: Reference to specific Aichi target on negative incentives.)]**

Invites international organizations, including **UNDP, FAO, IFAD, ILO**, the GEF, the World Bank, and relevant regional development banks, to support mechanisms, ~~including certification schemes, payment for environmental services, national capital accounting, environmental and social safeguards and access and benefit sharing agreements~~ for the integration of biodiversity into productive sectors, and to promote tools, standards and guidelines **(including certification schemes, payment for environmental services, national capital accounting, environmental and social safeguards, monitoring and reporting systems and access and benefit sharing agreements)** in a manner that provides incentives for actors to modify practices that may be degrading biodiversity; **[(Rationale: Important to introduce ‘the need for monitoring and reporting what sectors contribute to conservation of biodiversity, also as a contribution to awareness raising’.)]**

Invites the Food and Agriculture Organization of the United Nations, in cooperation with other relevant partners, ~~and avoiding duplication of effort~~, to support implementation of this decision and other relevant policies and measures, consistent with the Strategic Plan for Biodiversity 2011-2020, the Reviewed Strategic Framework 2010 – 2019 of the Food and Agriculture Organization of the United Nations and the 2030 Agenda for Sustainable Development; **[(Rationale: unnecessary addition)]**

Agriculture

Recognizes the importance of biodiversity to food and nutrition and its role in the human health;

Recognizes that there are currently many agricultural areas that are not sustainably managed with significant negative impacts on biodiversity and habitats; [(Rationale: Balanced treatment of good and bad as in fisheries – to make treatment of sectors balanced.)]

Recalls that in decision IX/1 the Conference of the Parties agreed that the programme of work on agricultural biodiversity, including its three international initiatives **(i.e., on pollination, on nutrition and on soils)**, continues to provide a relevant framework to achieve the objectives of the Convention; **[(Rationale: making text more explicit)]**

Recalls that one of the conclusions of the Fourth Edition of the Global Biodiversity Outlook, and its supporting assessments, is that addressing the pressures on biodiversity resulting from food systems will be crucial in the success of the Strategic Plan for Biodiversity 2011 – 2020, and that urgent action to achieve sustainable food systems is needed;

Notes that the growing demand for food and agricultural commodities, associated with population growth, increasing wealth and shifts in consumption patterns, will have an impact on biodiversity unless it is appropriately addressed;

Notes that a high proportion of food is currently wasted ~~post-production~~ and that reducing this loss will have a major benefits, including by reducing pressures on resources, including biodiversity; **[(Rationale: Now the paragraph refers to waste reduction in all stages of production.)]**

Welcomes the FAO Assessment on Biodiversity for Food and Agriculture;

Welcomes the TEEB for Agriculture and Food; [(Rationale: Two future assessments that will contribute to mainstreaming biodiversity in agriculture.)]

Notes that restoring currently degraded agricultural systems can increase food production and restore biodiversity and ecosystem services important for agriculture;

Invites the Food and Agriculture Organization of the United Nations, its Commission on Genetic Resources for Food and Agriculture and its Committee on Agriculture to consider and further support the development and implementation of measures, guidance and tools to promote the mainstreaming of biodiversity in the crop, livestock and food sectors and to ~~place~~ **address biodiversity as part of** the transition to sustainable food and agriculture (SDG) as a standing item on the agendas of these ~~ies~~; **[(Rationale: Make link to SDGs and highlight biodiversity dimension.)]**

Urges Parties, and *invites* other Governments to restore, maintain or build the ecological basis of farming, including through the conservation and restoration of biodiversity and ecosystem services in agricultural landscapes, including genetic resources for food and agriculture and their landraces and wild relatives as a key pathway to achieve sustainable productivity and nutritional gains;

Urges Parties, and *invites* other Governments; ~~and~~ to support agricultural development models that are consistent with the Reviewed Strategic Framework 2010-2019 of the Food and Agriculture Organization of the United Nations and to implement the principles for responsible investments in agriculture and food systems approved by the Committee on World Food Security in October 2014, noting in particular the importance of small-scale family farming and pastoralism in view of its dominance in terms of food security and nutrition, poverty reduction, social equity in farming and biodiversity conservation efforts **as well as the need to address the food-waste during the processing, marketing and consumption processes;** **[(Rationale: Before we were noting importance, this adds an action to that.)]**

Encourages Parties and invites Governments to implement the International Treaty for Plant Genetic Resources for Food and Agriculture and the Nagoya protocol in a mutually supportive manner; [(Rationale: Important for coherent implementation of relevant treaties for agriculture.)]

Forestry

Recognizes the role of forest biodiversity in contributing to human well-being through production of food, wood, fibre, fuel, medicine, clean water, and oxygen and their contribution to ecosystem processes;

Recognizes that there are currently many forests that are not sustainably managed with significant negative impacts on biodiversity and habitats; ; [(Rationale: Balanced treatment of good and bad as in fisheries – to make treatment of sectors balanced.)]

Notes UN General Assembly Resolution A/RES/62/98 which describes sustainable forest management, and refers to its seven thematic elements, adopted by the United Nations ~~Forum on Forests~~ **Forum on Forests** ~~non-legally binding instrument on all types of forests;~~

Further notes ECOSOC resolution 2015/33 **on international arrangement on forests beyond 2015 which emphasizes the economic, social and environmental contributions of all types of forests to the achievement of the 2030 Agenda for Sustainable Development** ~~which acknowledges different visions, approaches, models and tools of sustainable forest management;~~

Also notes the elements of the Durban Declaration, from the XIV World Forestry Congress, promoting the need for a deeper understanding of the integral role of biodiversity in forest ecosystem functioning,

Recognizes the contributions of other members of the Collaborative Partnership on Forests to fully operationalize sustainable forest management while ensuring biodiversity conservation;

Invites the Food and Agriculture Organization of the United Nations and its Committee on Forestry to consider and further support the development and implementation of measures, guidance and tools to promote the mainstreaming of biodiversity in the forest sector and to and to address biodiversity as part of the transition to sustainable forest management (SDG) as a standing item on the agenda of this body; [(Rationale: Make link to SDGs and highlight biodiversity dimension; recommendation made for agriculture and now also for forest.)]

Urges Parties and *invites* other Governments and other relevant stakeholders to support the implementation of the Global Plan of Action on Forest Genetic Resources, and to contribute to the preparation of the 2017-2020 Strategic Plan of the international arrangement on forests, in a manner consistent with the implementation of FAO's Reviewed Strategic Framework 2010-2019, the Strategic Plan for Biodiversity 2011-2020, the 2030 Agenda for Sustainable Development, and the Sendai Framework for Disaster Risk Reduction 2015-2030;

Urges Parties and *invites* other Governments to create enabling conditions for the adoption of responsible forest management practices, and *encourages* forest enterprises and forest owners to appropriately integrate biodiversity into the development and use of certification schemes, or other voluntary and appropriate mechanisms;

Urges Parties and invite other Governments to strengthen participation of indigenous peoples and local communities on forest lands as part of a strategy for forest protection, sustainable use of territories and welfare of these communities; [(new suggestion)]

Urges Parties and *invites* other Governments to strengthen their efforts to establish, maintain and develop well-managed national or regional forest protected area networks with managed buffer zones, where appropriate, applying spatial and land use-planning tools to identify areas of particular importance to forest biodiversity;

Fisheries and Aquaculture

Recognizes that healthy marine, coastal and inland waters ecosystems and biodiversity are essential to achieving sustainable increases and improved resilience in the provision of food and livelihoods;

Recognizes that there are currently many fisheries that are not sustainably managed and aquaculture operations and practices with significant negative impacts on biodiversity and habitats; **[(Comment: Include similar line in other agriculture/forestry)]**

Recalls decision XI/18 in which the Conference of the Parties to the Convention recognized that fisheries management organizations are the competent bodies to manage fisheries, and noted the need for further improvement and implementation of the ecosystem approach in fisheries management by enhancing the capacity of these fisheries management organizations, constructive inter-agency collaboration, and full and meaningful participation by a wide range of experts on biodiversity, indigenous and local communities, taking into consideration Article 8(j) and 10(c) of the Convention, and relevant stakeholders, as appropriate, in the fisheries management process;

Recalls decisions X/29 and XI/17, in which the Conference of the Parties to the Convention emphasized the importance of collaborating with the Food and Agriculture Organization of the United Nations (FAO), the regional fisheries management organizations/regional fisheries bodies and the regional seas conventions and action plans with regard to addressing biodiversity considerations in sustainable fisheries and aquaculture;

Recognizes the central role of the ecosystem approach and the precautionary approach in guiding all activities relevant to fisheries and aquaculture undertaken in the context of the Convention, including activities under the programme of work on marine and coastal biodiversity, the programme of work on inland waters biodiversity, the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization;

Recognizes the overarching principles of sustainable fisheries and aquaculture stipulated in a number of international instruments, including the United Nations Convention on the Law of the Sea, the 1993 FAO Compliance Agreement, the 1995 United Nations Fish Stock Agreement, the 1995 FAO Code of Conduct for Responsible Fisheries, and that, together with accompanying guidelines and plan of actions, these represent a comprehensive global framework for fisheries policy and management and support mainstreaming of biodiversity in fisheries and aquaculture;

Encourages Parties and *invites* other Governments to ratify the FAO Agreement on Port States Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing, adopted in 2009, which provides a means of addressing IUU fishing activities;

Recalling decisions X/29, XI/17, and XII/22, *calls for* further collaboration and information-sharing among of the Secretariat of the CBD, FAO and Regional Fishery Bodies/Regional Fisheries Management Organizations on the application of the scientific criteria for ecologically or biologically significant marine area (EBSAs) and on vulnerable marine ecosystems (VMEs);

Invites FAO and the Committee on Fisheries of FAO to consider and further support the development and implementation of measures, guidance and tools to promote the mainstreaming of biodiversity in the fisheries and aquaculture sectors, including the risks of introduction of invasive alien species, **and to address biodiversity as part of the transition to sustainable fisheries management (SDG) as a standing item on the agenda of this body; [(Rationale: Make link to SDGs and highlight biodiversity dimension; recommendation made for agriculture and now also for fisheries.)]**

~~*Invites-Urges*~~ Parties and *invites* other Governments to use, as appropriate, existing guidance related to the ecosystem approach to fisheries and aquaculture, the FAO Sustainability Assessment of Food and Agriculture Systems Guidelines and the FAO Policy Support Guidelines for the Promotion of Sustainable Production Intensification and Ecosystem Services;

~~*Invites Parties and other governments*~~ ***Urges Parties and invites other Governments*** to improve synergies in managing pressures in seascapes and inland waters landscapes, including through the implementation of the Priority Actions to Achieve Aichi Biodiversity Target 10 for Coral Reefs and Closely Associated Ecosystems (decision XII/23);

Requests the Executive Secretariat:

- (a) to strengthen collaboration with the Food and Agriculture Organization of the United Nations and other relevant partners in all areas relevant to the implementation of this decision;
- (b) to transmit this decision for the attention of the Conference and Committees on Agriculture, Fisheries and Forestry of the Food and Agriculture Organization of the United Nations, the Committee on World Food Security, the United Nations Forum on Forests and other relevant bodies;
- (c) to apply for membership of the Advisory Group of the Committee on World Food Security;
- (d) in collaboration with the Food and Agriculture Organization of the United Nations and other relevant partners, to prepare and disseminate to Parties further guidance on the concept of “sustainability” in food and agriculture, with regards to biodiversity and to strengthen support for relevant information sharing and technology transfer among Parties, building on existing initiatives where feasible;
- (e) ~~To~~ **to** continue compiling guidance and tools relevant to addressing biodiversity considerations in agriculture, forestry, fisheries and aquaculture, and make this available through the Clearing-House Mechanism of the Convention and other relevant means before the fourteenth meeting of the Conference of the Parties.

European Expert Meeting in Preparation of the Nineteenth Meeting of SBSTTA (SBSTTA-20)

March 7 - 11, 2016

at the Federal Agency for Nature Conservation
International Academy for Nature Conservation,
Isle of Vilm, Germany

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European Expert Meeting in Preparation of SBSTTA-20

Objectives

The goal of the European expert meeting was to exchange information on topics on the agenda of the upcoming twentieth meeting of SBSTTA (SBSTTA-20) among experts from European countries. The informal discussions were mainly based on the documents prepared for the meeting by the Secretariat of the Convention on Biological Diversity (CBD).

Programme

SUNDAY, MARCH 6

Arrival of participants

18.00 *Dinner*

20.00 *Informal get-together*

MONDAY, MARCH 7

Brainstorming Meeting on Ecosystem Restoration

Chair: KARIN ZAUNBERGER

08.00 *Breakfast*

09.00 KARIN ZAUNBERGER

Introduction

10.30 *Coffee break*

11.00 **Discussion groups / Drafting groups – Part I**

12.30 *Lunch break*

14.00 **Discussion groups / Drafting groups – Part II**

16.00 *Coffee break*

16.30 **Finalisation of the report**

18.00 *Dinner*

Arrival of participants

18.00 *Dinner*

21.00 HORST KORN

Welcome and short introduction of the participants

21.30 *Informal get-together*

TUESDAY, MARCH 8

SBSTTA-Preparation Meeting

Chair: HORST KORN

08.00 *Breakfast*

09.00 TONE SOLHAUG

Scientific review of the implementation of the Strategic Plan for Biodiversity 2011-2020 and related programmes of work and the achievement of the Aichi Biodiversity Targets

Discussion

09.45 ANDREAS OBRECHT

The fifth edition of the *Global Biodiversity Outlook*, guidelines for the sixth national reports, and indicators for assessing progress towards the Aichi Biodiversity Targets

Discussion

10.30 *Coffee break*

11.00 JAN PLESNIK

Review of the IPBES assessment on pollinators, pollination and food production

Discussion

11.45 ANKI WEIBULL

Biodiversity and climate change

Discussion

12.30 *Lunch break*

14.00 *Guided tour through the nature reserve of the Isle of Vilm*

15.30 *Coffee break*

16.00 **Drafting groups / Discussion groups**

Contribution to the workshop report - Part I

18.00 *Dinner*

20.00 **Drafting groups / Discussion groups**

Contribution to the workshop report - Part II

WEDNESDAY, MARCH 9

SBSTTA-Preparation Meeting

Chair: HORST KORN

08.00 *Breakfast*

09.00 KARIN ZAUNBERGER

Protected areas and ecosystem restoration

Discussion

10.00 EMA GOJDIČOVÁ

Invasive alien species: addressing the risks associated with trade; biological control; and decision support tools

Discussion

10.30 *Coffee break*

11.00 VINCENT FLEMING

Sustainable wildlife management

Discussion

11.30 MARGRET ENGELHARD

Synthetic biology

Discussion

12.30 *Lunch break*

14.00 MARCEL KOK

Mainstreaming of biodiversity across sectors, including agriculture, forests and fisheries

Discussion

14.45 **Drafting groups / Discussion groups**

Contribution to the workshop report - Part III

15.30 *Coffee break*

16.00 **Drafting groups / Discussion groups - Part IV**

18.00 *Dinner*

20.00 **Drafting groups / Discussion groups - Part V**

THURSDAY, MARCH 10

SBSTTA-Preparation Meeting

Chair: HORST KORN

08.00 *Breakfast*

09.00 **Drafting groups / Discussion groups**
Contribution to the workshop report - Part VI

10.30 *Coffee break*

11.00 **Drafting groups / Discussion groups**
Contribution to the workshop report - Part VII

12.30 *Lunch break*

14.00 **Plenary: Presentation of working group results**

15.30 *Coffee break*

16.00 **Plenary: Presentation of working group results (cont.)**

18.00 *Reception at the invitation of the German Federal Agency for Nature Conservation*

20.00 **Finalisation of the workshop report**
Discussion

Arrival of participants

20.00 *Informal get-together*

FRIDAY, MARCH 11

Marine and Coastal section of the SBSTTA-Preparation Meeting

Chair: HORST KORN

09.00 HENNING VON NORDHEIM
Introduction

09.20 DAVID JOHNSON
Ecologically or biologically significant marine areas
Discussion

10.00 JAN EKEBOM
Marine spatial planning and training initiatives
Discussion

10.40 *Coffee break*

- 11.10 SUSANNE ALTVATER, ALEXANDER LIEBSCHNER
Addressing impacts of marine debris and anthropogenic underwater noise on marine and coastal biodiversity
Discussion
- 11.50 JEAN-PATRICK LEDUC
Specific work plan on biodiversity and acidification in cold-water areas
Discussion
- 12.30 *Lunch break*
- 14.00 **Drafting groups / Discussion groups**
Contribution to the workshop report - Part I
- 15.30 *Coffee break*
- 16.00 **Drafting groups / Discussion groups**
Contribution to the workshop report - Part II
- 17.00 **Plenary: Presentation of working group results**
Discussion
- 18.00 *Dinner*
- 20.00 **Finalisation of the marine contribution to the workshop report**
(open end, if necessary)

SATURDAY, MARCH 12

Departure of participants

**PROPOSED ORGANIZATION OF WORK FOR THE TWENTIETH MEETING OF
THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL
ADVICE**

	10 a.m. – 1 p.m.	3 p.m. – 6 p.m.
Monday 25 April 2016	1. Opening of the meeting 2. Organizational matters 3. Scientific review of the implementation of the Strategic Plan for Biodiversity 2011-2020 and related programmes of work and the achievement of the Aichi Biodiversity Targets 13. Mainstreaming of biodiversity across sectors, including agriculture, forests and fisheries	4. Marine and coastal biodiversity: 4.1. Ecologically or biologically significant marine areas 4.2. Specific work plan on biodiversity and acidification in cold-water areas 4.3. Addressing impacts of marine debris and anthropogenic underwater noise on marine and coastal biodiversity 4.4. Marine spatial planning and training initiatives
Tuesday 26 April 2016	5. Invasive alien species: addressing the risks associated with trade; biological control; and decision support tools 6. Synthetic biology	7. Review of the IPBES assessment on pollinators, pollination and food production 8. Biodiversity and climate change
Wednesday 27 April 2016	9. Sustainable wildlife management 10. Protected areas and ecosystem restoration	11. Fifth edition of the <i>Global Biodiversity Outlook</i> , guidelines for the sixth national reports, and indicators for assessing progress towards the Aichi Biodiversity Targets 12. New and emerging issues
Thursday 28 April 2016	<i>Pending issues</i>	<i>Pending issues</i>
Friday 29 April 2016	<i>Pending issues</i>	14. Other matters
Saturday 30 April 2016	15. Adoption of the report 16. Closure of the meeting	