

# Report of the European Expert Meeting in Preparation of SBSTTA-18

May 05 – 09, 2014

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

Horst Korn, Kathrin Bockmühl, Axel Paulsch & Katja Heubach (Eds.)

## **Global Biodiversity Outlook**

- Review of the draft of the fourth edition of the Global Biodiversity Outlook
- Review of the implementation of the Global Strategy for Plant Conservation

## **Marine and coastal biodiversity**

- Ecologically or biologically significant marine areas
- Addressing impacts of underwater noise and marine debris on marine and coastal biodiversity
- Systematic review on the impacts of ocean acidification and proposal to update the specific work plan on coral bleaching
- Tools and capacity development, including marine spatial planning and training initiatives

## **Invasive alien species**

- Management of risks associated with invasive alien species introduced as pets, aquarium and terrarium species, and as live bait and live food
- Review of work on invasive alien species and considerations for future work

## **New and emerging issues: synthetic biology**

**Incentive measures:** obstacles encountered in implementing options identified for eliminating, phasing out or reforming incentives that are harmful for biodiversity

## **Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services**

## **Issues in progress**

- Integration of the conservation and sustainable use of biodiversity into climate-change mitigation and adaptation activities
- Application of relevant safeguards for biodiversity with regard to policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation
- Climate-related geoengineering
- Ecosystem conservation and restoration
- Definitions of key terms related to biofuels and biodiversity
- Sustainable use of biodiversity: bushmeat and sustainable wildlife management
- Health and biodiversity



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## Glossary of Acronyms

AHTEG	Ad Hoc Technical Expert Group
CBD	Convention on Biological Diversity
CE	Climate engineering / climate-related geoengineering
CDR	Carbon Dioxide Removal
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of the Parties
EBSA	Ecologically or biologically significant area
EEA	European Environment Agency
ES	Executive Secretary
EU	European Union
FAO	United Nations Food and Agriculture Organization
GBIF	Global Biodiversity Information Facility
GBIO	Global Biodiversity Informatics Outlook
GBO	Global Biodiversity Outlook
GEF	Global Environment Facility
GEO BON	Group on Earth Observations Biodiversity Observation Network
GHG	Greenhouse Gases
GSPC	Global Strategy for Plant Conservation
ICCM	International Conference on Chemicals Management
IPBES	Intergovernmental Panel on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
MDG	Millennium Development Goal
MOP	Meeting of the Parties (Cartagena Protocol)
NBSAP	National Biodiversity Strategies and Action Plan
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
REDD	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN)
SACM	Strategic Approach to International Chemical Management
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice (CBD)
SEBI	Streamlining European Biodiversity Indicators
SRM	Solar Radiation Management
TEEB	The Economics of Ecosystems and Biodiversity
UN	United Nations
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
WCMC	UNEP World Conservation Monitoring Centre
WGRI	Ad Hoc Open-ended Working Group on Review of Implementation (CBD)

## 1 Introduction

The European expert meeting in preparation of the upcoming eighteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-18) 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 eighteenth meeting of SBSTTA. The 56 participants from 16 countries attended in their personal capacities as biodiversity experts.** Simone Schiele from the CBD Secretariat took part in the meeting as observer. Further experts introducing specific topics to the meeting were Andrew Stott (Department for Environment Food and Rural Affairs, United Kingdom), Anastasiya Timoshyna (TRAFFIC International, WWF Hungary), David Johnson (Seasacape Consultants Ltd. GOBI Secretariat), Alexander Liebschner (Federal Agency for Nature Conservation, Germany), Karin Zaunberger (European Commission, Belgium), Hendrik Segers (Belgian Biodiversity Platform, Belgium), Adrian Peres (European Commission, Belgium), Tone Solhaug (Ministry of the Environment, Norway), Axel Paulsch (Institute for Biodiversity Network e.V., Germany), Marina von Weissenberg (Ministry of the Environment, Finland), Kelly Hertenweg (Federal Public Service Health, Food Chain Safety and Environment, Belgium), Roland Melisch (TRAFFIC International, WWF Germany), Hilde Eggermont (Belgian Biodiversity Platform, Belgium), Ulrich Claussen (Federal Environment Agency, Germany), Anna-Maria Hubert (Institute for Advanced Sustainability Studies, Germany), Stefan Schäfer (Institute for Advanced Sustainability Studies, Germany), Ralph Bodle (Ecologic Institute, Germany) and Andreas Obrecht (Federal Office for the Environment, Switzerland).

The participants of the preparatory meeting to SBSTTA-18 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-18.**

### How to read the report

Amendments and additions to the draft SBSTTA-18 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 General chapeau for streamlining COP decisions

During the Vilm meeting the participants discussed ways and means how to efficiently advance with items on issues of work in progress like e.g. the paragraphs on biofuels, geo-engineering, biodiversity and health, and sustainable use.

The participants agreed on proposing a general chapeau, aiming at streamlining COP decisions on these items. The respective proposal to the eighteenth meeting of the Subsidiary Body was introduced to the plenary of the Vilm meeting by Nicola Breier.

The participants agreed on the following **proposal**:

In order to reduce the number of the decisions by the Conference of the Parties the Subsidiary Body *may consider* to recommending further guidance on items on issues of work in progress as a single decision by the Conference of the Parties, instead of individual decisions on each of these items, using e.g. the following chapeau:

The Subsidiary Body on Scientific, Technical and Technological Advice *recommends* that the Conference of the Parties, at its twelfth meeting, includes the following elements in one single decision on ongoing issues or in other related decisions,

like, *inter alia*:

Para on biofuels

Para on geoengineering

Para on biodiversity and health

Para on sustainable use

### 3 Review of the draft of the fourth edition of the Global Biodiversity Outlook

#### Item 3.1 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/2: Draft executive summary with the main messages of the fourth edition of the Global Biodiversity Outlook**

#### Introductory Remark

Item 3.1 was introduced to the plenary of the Vilm meeting by Andrew Stott who also chaired the respective working group.

The participants discussed item 3.1 in anticipation of documents UNEP/CBD/SBSTTA/18/2 and UNEP/CBD/SBSTTA/18/INF/2, which were not available by the time of the Vilm meeting, and agreed on the following **proposal** to be considered by SBSTTA at its eighteenth meeting:

#### 1. Action expected from SBSTTA-18

SBSTTA will be invited to review the draft of the fourth edition of the Global Biodiversity Outlook (GBO4) and provide guidance on the completion of the respective documents with a view to facilitating the official launch of GBO4 on the opening day of the twelfth meeting of the Conference of the Parties.

The conclusions and recommendations of SBSTTA on this item may also inform the consideration of the Conference of the Parties, at its twelfth meeting, on the steps to enhance the implementation of the Strategic Plan for Biodiversity 2011-2020, and the achievement of the Aichi Biodiversity Targets.

#### 2. Elements to be included in recommendations from SBSTTA-18

##### (1) Finalisation of reports

SBSTTA *requests* the Executive Secretary to:

- undertake any tasks necessary to finalise the report;
- implement the strategy to communicate results of GBO4, subject to available resources, with a focus on key audiences

##### (2) Endorsement

SBSTTA *recommends* that COP-12:

- *welcomes* the GBO4 technical report;
- *acknowledges* financial contributions;
- *notes* the procedure for report preparation, including peer review (e.g. robust data, scientific credibility);

##### (3) Review

SBSTTA *recommends* that COP-12:

- *notes* the use of the indicative framework of indicators for the Strategic Plan,

- and *decides* follow-up actions to address any gaps, lessons learnt and issues for the future assessment of the Strategic Plan for Biodiversity 2011-2020, regarding, *inter alia*:
  - further development/simplification of indicator framework (terms of reference for AHTEG recommended by SBSTTA-17)
  - development and use of models, projections, scenarios and integrated assessments (also with reference to recommendations from SBSTTA-17);
  - experience in the preparation and synthesis of fifth National Reports and development of guidance for sixth National Reports;
  - implications for future assessments to be undertaken by IPBES (cross-reference IPBES recommendations);

**(4) Conclusions and implementation**

SBSTTA *recommends* that COP-12:

- *notes with concern* the main findings of the report, and also taking into consideration relevant findings of IPCC, *urges* Parties to undertake actions to enhance implementation of the Strategic Plan for Biodiversity 2011-2020;
- *recalls* decision X/2, Annex paragraphs 15 and 21, and *urges* Parties and *invites* other Governments and international organisations to make full use of the guidance and tools developed through the Convention's programmes of work to enhance implementation of the Strategic Plan for Biodiversity 2011-2020, in particular those programmes that would address specific elements of the Aichi Targets where insufficient progress has been made.

## 4 Review of the implementation of the Global Strategy for Plant Conservation 2011-2020

### Item 3.2 of the provisional agenda

- Document UNEP/CBD/SBSTTA/18/3: Progress in achieving the targets of the Global Strategy for Plant Conservation 2011-2020

### Introductory Remark

Item 3.2 was introduced to the plenary of the Vilm meeting by Anastasiya Timoshyna who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/3 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/18/3:

### Suggestions on the text:

#### PROGRESS IN ACHIEVING THE TARGETS OF THE GLOBAL STRATEGY FOR PLANT CONSERVATION 2011-2020

*Note by the Executive Secretary*

#### I. INTRODUCTION

abridged; continued

#### V. SUGGESTED RECOMMENDATIONS

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

A. *The Subsidiary Body on Scientific, Technical and Technological Advice:*

1. ~~Takes note of~~ Welcomes the assessment undertaken of progress in implementing the Global Strategy for Plant Conservation 2011-2020;
2. Recognizes that the achievement of the targets of the Global Strategy for Plant Conservation requires coordinated action by a wide range of stakeholders;
3. Recognizes and welcomes the efforts of the Global Strategy for Plant Conservation (GSPC) members and other organizations in supporting the delivery on GSPC Targets, acknowledges the support of Parties, other Governments and organizations contributing resources to the GSPC capacity-building initiatives, and commends the initiatives of those Parties that coordinated efforts with relevant national stakeholders;

~~(3)4.~~ *Acknowledges* that different approaches might be effective in helping to accelerate progress towards the targets of the Global Strategy for Plant Conservation depending on which stakeholders, dedicated institutions or champions are involved and national circumstances;

**5. Recalling paragraph 8 of decision XI/26 on preparing the indicator-based information and disaggregated information relevant to plant conservation, requests the Executive Secretary to address the needs for reporting on GSPC in preparation of possible elements for the terms of reference for the Ad Hoc Technical Expert Group (AHTEG) on indicators for the Strategic Plan; [(Rationale: strong link to AHTEG on indicators and the importance of including indicators specific to plants in addition to already existing indicators)]**

**6. Recognizes that some of the deliverables of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) can be useful for the GSPC implementation, in particular with regard to baselines and monitoring the progress on delivery of selected GSPC targets. [(Rationale: IPBES can potentially be helpful to understanding baselines and monitoring the progress on GSPC delivery)]**

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

*The Conference of the Parties*

1. Welcomes the **initial** progress made towards the achievement of most of the targets of the Global Strategy for Plant Conservation 2011-2020, ~~and~~ *recognizes* the contribution this makes to the achievement of the corresponding Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020, **but notes with concern that most of the Targets may not be achieved with the current rate of implementation, as reflected in the technical background document on progress made in implementing the Global Strategy for Plant Conservation UNEP/CBD/SBSTTA/18/INF/10 [(Rationale: reflecting on the SBSTTA document and mid-term review)]**

2. Urges Parties and invites other Governments, members of the Global Partnership for Plant Conservation and other stakeholders to enhance their efforts in implementing the Global Strategy for Plant Conservation, ~~in particular~~ **by promoting and facilitating communication, coordination and partnerships between all relevant actors, as well as: [(Rationale: shifted from former 2c)]**

(a) *For those targets of the Global Strategy for Plant Conservation (**notably targets 6, 10, 13, 14**) where many of the key stakeholders, dedicated institutions or champions are outside the plant conservation community:* by pursuing and supporting activities identified as critical for the achievement of corresponding Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020, including those identified through the mid-term review of the Strategic Plan and the fourth edition of Global Biodiversity Outlook, as a basis for the formulation of the Pyeongchang Roadmap;

(b) *For those targets of the Global Strategy for Plant Conservation (**notably targets 1, 2, 3, 4, 5, 7, 8, 9, 12, 15, 16**) where progress is primarily driven by actors from within the plant conservation community:* through the provision of political, institutional and financial support as appropriate and by giving recognition to the efforts, including by presenting information from these processes in official communications and reports;

~~(c) — For those targets of the Global Strategy for Plant Conservation where progress depends on actors both within and outside the plant conservation community:~~ by promoting and facilitating com-

~~munication, coordination and partnerships between all relevant actors.~~ **[(Rationale: shifted to the chapeau of para 2)]**

3. *Notes* that target 11 of the Global Strategy for Plant Conservation on flora endangered by trade is entirely aligned with the objectives and activities of the Plants Committee of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and therefore encourages Parties to recognize the Plants Committee and national CITES authorities as the lead agencies for the implementation of this target in accordance with CITES Resolution 16.5.

4. ~~*Invites*~~ ***Urges*** Parties and ~~*invites*~~ other Governments to make further efforts to mainstream plant conservation objectives into relevant policies, **including NBSAPs**, in order to enhance the effectiveness of implementation of the Global Strategy for Plant Conservation;

5. *Encourages* Parties **and invites** other Governments to ~~enhance their~~ further engagement with partner organizations, including members of the Global Partnership for Plant Conservation and to facilitate and support the development of ~~national plant conservation~~ partnerships involving a wide range of stakeholders **in order to enhance the implementation of GSPC**;

6. *Encourages* Parties and *invites* other Governments to continue sharing relevant examples and case studies, **including those made available by Parties through their fifth national reports**, through the GSPC toolkit ([www.plants2020.net](http://www.plants2020.net)) and to draw on the tools and guidance shared through the toolkit as appropriate in planning and implementing plant conservation activities.

abridged

## 5 Ecologically or biologically significant marine areas

### Item 4.1 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/4: Progress report on describing areas meeting the criteria for ecologically or biologically significant marine areas**

### Introductory Remark

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

The participants at the Vilim meeting took note of the documents UNEP/CBD/SBSTTA/18/4 and UNEP/CBD/SBSTTA/18/4/Add.1, and discussed the item. The results of the discussion are mirrored in the following changes in the recommendations suggested in document UNEP/CBD/SBSTTA/18/4:

### Document UNEP/CBD/SBSTTA/18/4:

### Suggestions on the text:

#### **PROGRESS REPORT ON DESCRIBING AREAS MEETING THE CRITERIA FOR ECOLOGICALLY AND BIOLOGICALLY SIGNIFICANT MARINE AREAS**

*Note by the Executive Secretary*

#### **I. INTRODUCTION AND OVERVIEW**

abridged; continued

#### **V. SUGGESTED RECOMMENDATIONS**

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

*The Conference of the Parties,*

*Recalling* decisions X/29 and XI/127 on ecologically or biologically significant marine areas (EBSAs),

1. *Welcomes* the summary reports prepared by the Subsidiary Body at its eighteenth meeting,<sup>1</sup> and the reports of the regional workshops for describing ecological and biologically significant marine areas held in seven regions: Southern Indian Ocean (Flic en Flac, Mauritius, 31 July to 3 August 2012; UNEP/CBD/RW/EBSA/SIO/1/4); Eastern Tropical and Temperate Pacific (Galapagos, Ecuador, 28 to 31 August 2012; UNEP/CBD/RW/EBSA/ETTP/1/4); North Pacific (Moscow, Russian Federation, 25 February to 1 March 2013; UNEP/CBD/EBSA/NP/1/4); South-Eastern Atlantic (Swakopmund, Namibia, 8 to 12 April 2013; UNEP/CBD/RW/EBSA/SEA/1/4); Arctic (Helsinki, Finland, 3 to 7 March 2014; UNEP/CBD/EBSA/WS/2014/1/5); North-West Atlantic (Montreal, Canada, 24 to 28 March 2014; UNEP/CBD/EBSA/WS/2014/2/4); and Mediterranean (Málaga, Spain, 3 to 7 April 2014; UNEP/CBD/EBSA/WS/2014/3/4);

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1. To be developed by SBSTTA on the basis of UNEP/CBD/SBSTTA/18/4/Add.1.

2. *Expresses its gratitude* to all donors, hosting countries and collaborating organizations, involved in the organization of the regional workshops referred to above;

3. *Requests* the Executive Secretary to include the summary reports prepared by the Subsidiary Body at its eighteenth meeting, annexed to the present decision, in the EBSA repository, and to submit the summary reports to the United Nations General Assembly and particularly its Ad Hoc Open-ended Informal Working Group, as well as relevant Parties, other Governments and relevant international organizations in line with the purpose and procedures set out in decisions X/29 and XI/17;

4. *Urges* Parties and *invites* other Governments to undertake national exercises to identify areas meeting EBSA criteria, for areas under national jurisdiction not covered by the regional workshops convened under the Convention or related processes, and to make this information, and other relevant information, available through the EBSA repository or information sharing mechanism; **and requests the Executive Secretary to report on progress prior to the next meeting of the Conference of the Parties; [(Rationale: it was considered important to add a timeframe)]**

5. *Encourages* Parties and other Governments to make use of the scientific information regarding the descriptions of areas meeting EBSA criteria, including the information in the EBSA repository and information sharing mechanism, when carrying out marine spatial planning, development of representative networks of marine protected areas, **taking into account Annex II to decision IX/20**, and application of other area-based management measures in marine and coastal areas, with a view to contributing to national efforts to achieve the Aichi Biodiversity Targets; **[(Rationale: an appropriate place to mention Annex II)]**

**5.bis Welcoming the UNGA resolution 68/70, further invites the UNGA as well as other competent intergovernmental organizations to make use of the scientific information regarding the descriptions of the areas meeting EBSA criteria in the implementation of their respective mandates. [(Rationale: in addition to Parties and other Governments)]**

6. *Invites* Parties, other Governments and competent ~~intergovernmental~~ organizations to provide, for inclusion in the EBSA information sharing mechanism, scientific and technical information, including georeferenced information, on threats and stressors on marine biodiversity as well as existing conservation and management measures in areas described as meeting the EBSA criteria contained in the EBSA repository, and *requests* the Executive Secretary to facilitate the compilation and sharing of this information through the EBSA information sharing mechanism;

**6.bis Requests the Executive Secretary to further collaborate with Parties, other Governments, competent organizations, and global and regional initiatives, such as the United Nations General Assembly Ad Hoc Working Group of the Whole on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-Economic Aspects, the International Maritime Organization, the Food and Agriculture Organization of the United Nations, regional seas conventions and action plans, and, where appropriate, regional fisheries management organizations, with regard to fisheries management, and also including the participation of indigenous and local communities, to facilitate the description of areas that meet the criteria for EBSAs through the organization of additional regional or subregional workshops for the remaining regions or subregions, where Parties wish workshops to be held; and takes note that there is an ongoing scientific and technical process with respect to the areas in the North-East Atlantic. [(Rationale: previously agreed text drawn from decision XI/a7– to highlight the ongoing schedule of Regional EBSA Workshops (i.e. those already mentioned in this document – NW Indian Ocean, NE Indian Ocean, East Asia Seas; those not yet mentioned – Southern Ocean, SW Atlantic; and the ongoing NE Atlantic process)]**



7. *Requests* the Executive Secretary, in collaboration with Parties, other Governments and relevant organizations, **to facilitate technical training including the** ~~to organize~~ **organization of** regional and/or subregional training workshops on the compilation and use of scientific and technical information contained in the EBSA repository and information sharing mechanism, towards the enhancement of conservation and **related** management measures ~~within the context of marine spatial planning~~ with a view to contributing to the achievement of the Aichi Biodiversity Targets, and to report on progress to a meeting of the Subsidiary Body prior to the thirteenth meeting of the Conference of the Parties; **[(Rationale: differentiate between technical training and training workshops)]**

8. *Further requests* the Executive Secretary, in collaboration with Parties, other Governments, relevant organizations and scientific groups, to develop practical options for further work on [the description of] areas meeting the EBSA criteria, including **future** systematic assessments of new scientific information, use of traditional knowledge, and other approaches at local, national, subregional or regional scales, building upon the existing scientific guidance and drawing upon the lessons from the series of regional workshops for describing areas that meet the EBSA criteria, and report on progress to a meeting of the Subsidiary Body prior to the thirteenth meeting of the Conference of the Parties. **[(Rationale: more precise language)]**

abridged

## 6 Addressing impacts of underwater noise on marine and coastal biodiversity

### Item 4.2 of the provisional agenda

- Document UNEP/CBD/SBSTTA/18/5: Progress report on addressing impacts of underwater noise and marine debris on marine and coastal biodiversity

### Introductory Remark

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

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/5 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/18/5:

### Suggestions on the text:

#### **PROGRESS REPORT ON ADDRESSING IMPACTS OF UNDERWATER NOISE AND MARINE DEBRIS ON MARINE AND COASTAL BIODIVERSITY**

*Note by the Executive Secretary*

#### **I. INTRODUCTION**

abridged; continued

#### **IV. SUGGESTED RECOMMENDATIONS**

A. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties adopts a decision along the following lines:

*The Conference of the Parties*

#### ***Impacts of anthropogenic underwater noise on marine and coastal biodiversity***

1. Expresses its gratitude to the European Commission for providing financial resources for, the Government of the United Kingdom of Great Britain and Northern Ireland for hosting, and International Maritime Organization for collaborating in the organization of the Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity (IMO Headquarters, London, from 25 to 27 February 2014), and welcomes the workshop report (UNEP/CBD/MCB/EM/2014/1/2); **[(Rationale: moved to para 2)]**

2. **Welcomes the workshop report (UNEP/CBD/MCB/EM/2014/1/2) [(Rationale: taken from para 1 to be more visible)] and Takes note with appreciation [(Rationale: The data are available and need to be worked on)]** that there has already been a significant amount of research into the effects of noise on aquatic life over the last decade, but there still remain significant questions that require further study, with the largest gaps in knowledge relate to fishes, invertebrates, turtles and birds, and additional knowledge gaps on characteristics of major sound sources, trends in the prevalence and magnitude of underwater noise and on the potential population and ecological impacts of underwater noise, including implications of cumulative and synergistic impacts of multiple sources of noise and other stressors;

3. **Urges Encourages Parties and invites [(Rationale: Standard CBD-language, reminding Parties of their obligations under the Convention)]** other Governments and competent organizations, including the International Maritime Organization, the Convention on Migratory Species, the International Whaling Commission, indigenous and local communities and other relevant stakeholders, to **address the task of avoiding, minimizing and mitigating the significant adverse impacts of anthropogenic underwater noise on marine and coastal biodiversity [(Rationale: based on COP/DEC/XI/18 para 18c)] and take measures, such as the enhancement of collaboration [(Rationale: wording rearranged so as to avoid the cul-de-sac of infinite expert discussions)]** on the development of practical guidance and toolkits ~~to minimize and mitigate the significant adverse impacts of anthropogenic underwater noise on marine and coastal biodiversity,~~ including through, *inter alia*:

- (a) — ~~Development of Ship identification systems for a broader range of vessels;~~
- (b) — ~~Further information on sound characteristics for a greater number of types of vessels within the present merchant fleet;~~
- (c) — ~~Standardization of metrics and sound measurements so that there are similar measures and approaches for all sounds and in all places;~~

**[(Rationale: moved further down, because they are not objectives but means to achieve the objectives)]**

**(d)(a) Incentives for the development of quieter technologies for airguns, pile-driving and ship quieting and application of best available practice in all relevant activities. [(Rationale: short quote from key conclusions of the expert workshop Annex I para 15 page 12)] and application of best available practice in all relevant activities [(Rationale: COP/DEC/XI/18 para 18c)]**

(e)(b) With regard to the selection of areas for acoustic mapping, the inclusion of areas that are affected at different levels of sound in order to build a coherent and complete picture of the spatial and temporal distribution of sound;

(f)(c) With regard to spatial risk assessments, the combination of acoustic mapping with habitat mapping of species of concern in order to identify areas where particular species are at risk from noise impacts;

**(d) Mitigation and management of anthropogenic noise through the use of spatio-temporal restrictions (STR) of activities as the most practical and straightforward approach to reduce effects on marine animals. [(Rationale: taken from the background document UNEP/CBD/SBSTTA/16/INF/12 para 10)]**

**(e) Inclusion of noise considerations into management plans of MPAs, as appropriate. [(Rationale: short quote from key conclusions of the expert workshop Annex I para 20 page 12)]**

**(f) Consideration of thresholds as a tool to protect sound-sensitive species taking into account their locations during critical life cycle stages [(Rationale: considering further work on the identified but unfinished task from the expert workshop (page 12 para 19)]**

**(a)(g) Development of Ship identification systems for a broader range of vessels;**

**(b)(h) Further information on sound characteristics for a greater number of types of vessels within the present merchant fleet;**

**(e)(i) Standardization of metrics and sound measurements so that there are similar measures and approaches for all sounds and in all places; [(Rationale: see former a), b) and c) which are some methods to achieve the above named objectives]**

(g)(j) Building of capacity in developing regions where the awareness and scientific capacity to address this issue has yet to be strengthened;

(h)(k) Engagement of industry when developing guidelines in order to increase their ownership and participation in the implementation of the guidelines;

(i)(l) Encouragement of collaboration and communication among relevant international bodies for synergies in addressing this issue.

4. *Requests* the Executive Secretary to further facilitate the collaboration among Parties, other Governments and relevant organizations, as referred to in the paragraph 3 above, through the compilation and synthesis of relevant scientific and technical work **as well as measures taken and best practice examples [(Rationale: additional information that is relevant for moving closer to actual implementation)]**, concerning the elements specified in the paragraph 3, by Parties, other Governments and relevant organizations, and make this compilation available as information for the future meeting of the Subsidiary Body prior to the thirteenth meeting of the Conference of the Parties to the Convention.

abridged

## **7 Background information on marine debris and pollution of oceans with plastic (provided by the editors)**

### **Item 4.3 of the provisional agenda**

- **Document UNEP/CBD/SBSTTA/18/5: Progress report on addressing impacts of underwater noise and marine debris on marine and coastal biodiversity**

### **Introductory Remark**

Item 4.3 was introduced to the plenary of the Vilm meeting by Ulrich Claussen (by video conference).

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/5. However, as the suggested recommendations contained in this document do not refer to the issue of marine debris and pollution, the participants decided against providing recommendations for this item.

Though, the issue of marine debris and pollution was perceived as very important by the participants of the Vilm meeting. Thus, they wished the vital points as regards content of Ulrich Claussen's presentation to be included as background information into the workshop report.

### **ADDITIONAL BACKGROUND INFORMATION INTRODUCED BY THE EDITORS**

The following information on marine debris and pollution was compiled by the German Federal Environment Agency<sup>1</sup>. The content of this section was neither discussed nor agreed by the participants of the Vilm-Workshop.

#### **What is marine litter?**

“Marine litter is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment ... Marine Litter consists of items that have been made or used by people and deliberately discarded or unintentionally lost into the sea and on beaches, including such materials transported into the marine environment from land by rivers, draining or sewage systems or winds. For example, marine litter consists of plastics, wood, metals, glass, rubber, clothing or paper etc. This definition does not include semi-solids remains of for example mineral and vegetable oils, paraffin and chemicals that sometimes litter sea and shores”.

In the context of marine conservation, the terms “marine litter” and “marine debris” are used interchangeably.

#### **How much human-created waste is in the oceans?**

Estimates claim there is now between 100 and 142 million tons of human-created waste in the world's oceans. Up to ten million additional tons are added every year. Some 70 per cent of the waste is thought to sink to the ocean floor, whereas one half of the remaining 30 per cent is washed up on beaches and the other half is suspended at the surface and the water column. The UNEP believes that about 13,000 pieces

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<sup>1</sup> Based on the information sheet „Frequently Asked Questions - Marine litter / pollution of oceans with plastic”, accessible at: [http://www.marine-litter-conference-berlin.info/userfiles/file/FAQ\\_marine%20litter.pdf](http://www.marine-litter-conference-berlin.info/userfiles/file/FAQ_marine%20litter.pdf)

of plastic litter are floating on every square kilometer of ocean surface. Currents and wind spread the litter worldwide throughout the oceans, where it accumulates in certain regions.

### **What is the ecological impact of marine litter on the marine environment?**

Whereas the pollution problem in holiday areas is for human beings mostly no more than an aesthetic annoyance, it poses a serious threat to the health, and sometimes survival, of the affected marine organisms. The ingestion or swallowing of litter has been observed in 43 % of all cetaceans, 36 % of marine bird species and various species of fish. The proven consequences include partial or complete blockage of the gastrointestinal tract accompanied by a drastic reduction in the production of digestive enzymes, significantly increased expenditure of energy by the animals, all of which can affect reproduction or even lead to death by starvation.

There are 136 marine species that regularly become entangled or strangled by marine litter, including six of the seven species of sea turtles, 51 of the 312 known species of marine birds and 32 species of marine mammals. One-tenth of the litter in the world's oceans consists of ownerless fishing equipment which is either lost or actively discarded in the marine environment, for example when cargo capacities have been reached. In particular, this concerns cheap fishing equipment such as set gillnets: these nylon nets can continue to fish at will for up to 600 years. The cumulative impact of the large numbers of drifting nets is a threat to marine biodiversity.

### **Where does marine litter come from?**

This varies greatly depending on region. In general, 80 per cent of discharges originate onshore, that is from rivers or large landfills in coastal areas. An additional source of input is tourism along the coast. In some areas however, most of the litter comes from the shipping and fishing industries. Usually only a fraction of the litter is actually from the local region.

### **How long have plastics been around?**

Plastics have only been manufactured on an industrial scale since 1907. It is precisely their unique properties of durability and low-cost manufacture which also make their disposal problematic. The annual production rate is 245 million tons, of which 60 million tons are produced in Europe.

### **What is the share of plastic in ocean debris?**

About three-quarters of the litter found in oceans are made of plastic.

### **Doesn't plastic biodegrade at all or is it a very slow process?**

It takes up to 450 years for a plastic bottle or disposable nappy to decompose. It is believed that microorganisms cannot completely biodegrade plastics. Plastic is biologically inert and are hardly susceptible to mineralization, which means that microplastic particles gradually become smaller and more numerous but are not completely degraded. An accumulation of plastics has been observed worldwide along beaches, in whirlpools and sediments.

## HOW LONG DOES IT TAKE RUBBISH TO BREAK DOWN IN THE SEA?



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### What are microplastics?

Microplastics are plastic particles smaller than 5mm in size and therefore hard to see with the naked eye. There are two types of microplastics: so-called primary microplastics that include nurdles, which is the base material used to manufacture plastic; granulates in cosmetics and hygiene products such as peelings, toothpaste, hand soaps; microscopic particles that are used in blast cleaning in shipyards, in medicine as a vector for active ingredients and in fibers. Up to 2,000 synthetic fibers from a piece of fleece clothing, made mostly of polyester or polyacrylic, are released per washing cycle to the marine environment through watercourses since they cannot be captured by wastewater treatment plants. If a cargo container with industrial plastic pellets intended for later manufacture is lost at sea, 50 billion pellets are released into the ocean and can then hardly be distinguished from grains of sand on the beach. Moreover, microplastics are also formed as a result of physical, biological and chemical degradation of macroplastic particles, the so-called secondary microplastics.

### **Are microplastics a problem?**

Common plastics such as polyethylene are notable for their low density and thus float at the ocean surface. Microplastics are therefore widely available to plankton but also to commercially fished species in the larval stage. The ratio of microplastics particle to zooplankton in the northwestern Mediterranean is 1:2. As they degrade, plastics may emit toxic and endocrine disruptive additives such as plasticisers, flame retardants and UV filters to the marine environment or organisms which takes them up. In addition, persistent organic pollutants from the surrounding water can bond in high concentrations to microplastic particles and enter the food web (as Trojan horses) through the marine fauna which take up the plastic while feeding. These properties can lead to an accumulation of pollutants in the food chain which might also be relevant for human consumption of fish and shellfish.

### **What are promising approaches to solving the problem of marine litter?**

Remedial collection of litter in the sea and along shorelines is time-consuming, costly and only captures a small proportion of overall debris. Preventative and other measures at the sources should be enacted with more determination. Environmentally friendly design of plastic products (eco-design) should be promoted. Recycling and reuse schemes should be further strengthened. Awareness has to be raised that plastic is of great value in order to prevent careless disposal. Therefore, plastics should be produced as recyclable materials. Producer responsibility should also play a greater role. Product sales by highly developed economies often occur in regions where there is no adequate waste management system in place. There is also a need for the development of a coherent, regionally coordinated monitoring programme to improve the database. Gaps in knowledge should be closed in close collaboration with research.

For more detailed information and further literature on marine litter see

Factsheet 1 “Impact of marine litter” accessible at:

<http://www.marine-litter-conference-berlin.info/userfiles/file/Factsheet%201%20Impact-V2.pdf>

Factsheet 2 “Source of marine litter” accessible at:

[http://www.umweltbundesamt.de/sites/default/files/medien/419/dokumente/source\\_of\\_marine\\_litter.pdf](http://www.umweltbundesamt.de/sites/default/files/medien/419/dokumente/source_of_marine_litter.pdf)

Factsheet 3 “Measures for the prevention of marine litter” accessible at:

[http://www.umweltbundesamt.de/sites/default/files/medien/419/dokumente/measures\\_for\\_the\\_prevention\\_of\\_marine\\_litter.pdf](http://www.umweltbundesamt.de/sites/default/files/medien/419/dokumente/measures_for_the_prevention_of_marine_litter.pdf)



## 8 Systematic review on the impacts of ocean acidification and proposal to update the specific work plan on coral bleaching

### Item 4.4 of the provisional agenda

- Document UNEP/CBD/SBSTTA/18/6: Systematic review on the impacts of ocean acidification and proposal to update the specific workplan on coral bleaching

### Introductory Remark

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

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/6 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/18/6:

### Suggestions on the text:

#### SYSTEMATIC REVIEW ON THE IMPACTS OF OCEAN ACIDIFICATION AND PROPOSAL TO UPDATE THE SPECIFIC WORKPLAN ON CORAL BLEACHING

*Note by the Executive Secretary*

#### I. INTRODUCTION

abridged; continued

#### IV. SUGGESTED RECOMMENDATIONS

##### **A. The Subsidiary Body on Scientific, Technical and Technological Advice,**

**Requests the Executive Secretary to forward the updated synthesis of the impacts of the ocean acidification on marine biodiversity (UNEP/CBD/SBSTTA/18/INF/6) to the next meeting of the Joint Liaison Group between the Rio Conventions [(Rationale: timing issue)].**

(A)B. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties adopts a decision along the following lines:

*The Conference of the Parties*

*Impacts of Ocean Acidification on Marine and Coastal Biodiversity*

*Recalling* paragraphs 63 to 67 of decision X/29 and paragraph 24 of Section A of decision XI/17

1. *Expresses its gratitude* to the Government of the United Kingdom of Great Britain and Northern Ireland for supporting the scientific compilation, coordination and synthesis work, and international experts for contributing to the preparation of a systematic review document on the impacts of ocean acidification on biodiversity and ecosystem functions, which provides a targeted synthesis of the biodiversity implications of ocean acidification for marine and coastal systems, including information on the less-reported paleo-oceanographic research, and *welcomes* the updated synthesis of the impacts of the ocean acidification on marine biodiversity (UNEP/CBD/SBSTTA/18/INF/6);

2. **Takes note and expresses its high concern [(Rationale: expression was found too weak taking into account the serious findings of the review report)]** *Takes note* that in waters where pH is already naturally low (e.g. in high latitudes, coastal upwelling regions and on the shelf slope) widespread undersaturation of both aragonite and calcite is expected to develop during this century, and that benthic and planktonic mollusks are amongst the groups likely to be affected, also coldwater corals and the structural integrity of their habitats;

3. *Urges* Parties, **and invites** other Governments, the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, relevant scientific groups, and other relevant organizations, to further enhance their international collaboration to improve ocean acidification monitoring, closely linked to other global ocean observing systems, noting that a well-integrated global monitoring network for ocean acidification is crucial to improve understanding of current variability and to develop models that provide projections of future conditions;

4. *Requests* the Executive Secretary to forward the updated synthesis of the impacts of the ocean acidification on marine biodiversity (UNEP/CBD/SBSTTA/18/INF/6) to Parties, other Governments and relevant organizations and transmit it to the Secretariat of the United Nations Framework Convention on Climate Change, and to continue to collaborate with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, relevant scientific groups, other relevant organizations, and indigenous and local communities to raise awareness on the key findings from the updated synthesis and facilitate incorporating these findings into relevant national strategies and action plans concerning conservation and sustainable use of marine and coastal biodiversity as well as developing relevant research and monitoring programmes at global, regional and national levels;

5. **Recalling paragraph 2 of decision XI/21 invites Parties, other Governments, relevant organizations, and indigenous and local communities to consider the information contained in the updated synthesis of the impacts of the ocean acidification on marine biodiversity (UNEP/CBD/SBSTTA/18/INF/6) for their work under relevant processes within the frame of the UNFCCC; [(Rationale: the review is highly relevant in particular for the on-going review process of the 2 °C target under UNFCCC)]**

*Priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems*

5. *Recalling* paragraph 9 of decision XI/18 (Section A), *endorses* the *Priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems*, as an addendum to the programme of work on marine and coastal biodiversity, in order to update the specific work plan on coral bleaching of the programme of work (annex II to UNEP/CBD/SBSTTA/18/6), and *urges* Parties, with the support of relevant organizations, to implement the activities contained therein, where applicable and in accordance with national capacity and circumstances, for enhanced implementation toward achieving Target 10;

**5bis. Recalls IPCC V WG 2 which states that many species and systems with limited adaptive capacity are subject to very high risk with additional warming of 2 °C, particularly arctic, sea – ice and coral reef systems, which demonstrates that the Aichi Target 10 is intrinsically linked with the achievement of the objectives of UNFCCC; [(Rationale: remind of the strong natural link and interdependence between CBD (Aichi 10 in particular) and UNFCCC)]**

6. *Recognizing* that increased sea temperature also increases risks to coral reefs from pathogens and that there are additional interactions, often synergistic, among all these stressors, *urges* Parties, *and invites* other Governments and relevant organizations to consolidate and further strengthen current efforts at local, national, regional and global levels to manage coral reefs as socio-ecological systems undergoing change due to the interactive effects of multiple stressors, including both global stressors (e.g. rising sea temperature, the effects of tropical storms and rising sea levels, as well as ocean acidification,) and local stressors (e.g. overfishing, destructive fishing practices, land-based and sea-based pollution, coastal development, tourism and recreational use, etc.), focusing on actions that address, in particular:

(i) reducing the impacts of multiple stressors, in particular by addressing those stressors that are more tractable at the regional, national and local levels;

(ii) enhancing the resilience of coral reefs and closely associated ecosystems through ecosystem-based adaptation to enable the continued provisioning of goods and services;

(iii) maintaining sustainable livelihoods and food security in reef-dependent coastal communities and provide for viable alternative livelihoods, where appropriate;

(iv) increasing the capability of local and national managers to forecast and plan proactively for climate risks and associated secondary effects, applying ecosystem-based adaptation measures; and

(v) enhancing international and regional cooperation in support of national implementation of priority actions, building upon existing international and regional initiatives and creating synergies with various relevant work within the Convention.

7. *Recalling* paragraph 14 of decision XI/18 (Section A) and further *requests* the Executive Secretary, in collaboration with Parties, other Governments and relevant organizations, to facilitate the implementation of the *Priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems* through organizing capacity building workshops and developing information-sharing mechanisms on experiences and lessons learned from various implementation activities;

8. Noting that deep water corals are also vulnerable to the effects of ocean acidification, but are impacted by additional stressors that are different from those affecting warm water coral reefs, *requests* the Executive Secretary to prepare, in collaboration with Parties, other Governments and relevant organizations, a draft specific workplan on cold water corals, building upon the *Elements of a work plan on physical degradation and destruction of coral reefs, including cold water corals* (appendix 2 of annex I to decision VII/5) and in close linkage with the relevant work under the Convention, such as the description of areas meeting the scientific criteria for ecologically or biologically significant marine areas, and rele-

## Systematic review on the impacts of ocean acidification and proposal to update the specific work plan on coral bleaching

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vant competent organizations, such as FAO's work on vulnerable marine ecosystems (VMEs), and submit the draft specific workplan on cold water corals for consideration to the future meeting of the Subsidiary Body prior to the thirteenth meeting of the Conference of the Parties to the Convention.

abridged

## **9 Tools and capacity development, including marine spatial planning and training initiatives**

### **Item 4.5 of the provisional agenda**

- **Document UNEP/CBD/SBSTTA/18/7: Progress report on tools and capacity development, including marine spatial planning and capacity-building initiatives**

### **Introductory Remark**

Item 4.5 was introduced to the plenary of the Vilm meeting by Matthias Leonhard Maier. The participants of the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/16 and discussed the item. In plenary was agreed that the participants of the Vilm meeting supported the draft recommendations in the document without any amendments.

## 10 Management of risks associated with invasive alien species introduced as pets, aquarium and terrarium species, and as live bait and live food

### Item 5.1 of the provisional agenda

- Document UNEP/CBD/SBSTTA/18/8: Management of risks associated with Introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, and related issues

### Introductory Remark

Item 5.1 was introduced to the plenary of the Vilm meeting by Hendrik Segers who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/8 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/18/8:

#### Suggestions on the text:

#### MANAGEMENT OF RISKS ASSOCIATED WITH INTRODUCTION OF ALIEN SPECIES AS PETS, AQUARIUM AND TERRARIUM SPECIES, AND AS LIVE BAIT AND LIVE FOOD, AND RELATED ISSUES

*Note by the Executive Secretary*

#### I. INTRODUCTION

abridged; continued

#### IV. SUGGESTED RECOMMENDATION

1. The Subsidiary Body *may wish* to recommend that the Conference of the Parties, at its twelfth meeting, includes the following elements in its decisions on further guidance to support the implementation of Aichi Biodiversity Target 9:

*The Conference of the Parties,*

*Recognizing* the negative impacts of invasive alien species introduced as pets, aquarium and terrarium species, and as live bait and live food, on biodiversity, and the high risk of escape and release, including ~~irresponsible~~ **intentional** and unintentional release of these live organisms from their captivity, **[(Rationale: the word "irresponsible" has negative connotations; here (and throughout) replaced by more neutral term "intentional")]**

*Reaffirming* that the Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species annexed to decision VI/23\* continue to provide guidance to Parties, other Governments, relevant organizations and all biodiversity stakeholders,

*Recalling* its encouragement to Parties, in decision IX/4, to make use of the risk assessment guidance and other procedures and standards developed by the International Plant Protection Convention, the World Organisation for Animal Health (OIE) and other relevant organizations,

1. *Adopts* the Guidance on devising and implementing ~~national~~ 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, as contained in the annex to this decision;<sup>1</sup>

2. *Urges* Parties to disseminate this guidance widely and to promote its use, ~~as appropriate~~, for the development of ~~national~~ regulations or codes of conduct, and for the development of voluntary codes of conduct and other guidance by business and relevant organizations. **[(Rationale: Use of Guidance should not a priori be restricted to development of “national” regulations or codes of conduct)]**

### **III. DRAFT GUIDANCE ON DEVISING AND IMPLEMENTING NATIONAL 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**

#### *Objectives and nature of this guidance*

51. This guidance is intended to assist ~~countries~~ **States** and relevant organizations (**international organizations, business and civil society organizations**) in devising and implementing ~~national~~ measures to address the risks of the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food. ~~It provides elements that countries may use for the development of national regulations or codes of conduct, or that international organizations, industry and civil society organizations may use in for voluntary codes of conduct and other guidance.~~ **[(Rationale: second part of paragraph 51 is redundant)]**

52. The introduction of invasive alien species as pets, aquarium and terrarium species, and as live bait and live food, is a subcategory of “escape” as a pathway. Escape is the movement of organisms from captivity or confinement into the natural environment. Through this pathway the organisms are initially intentionally imported or transported into the confined conditions, then escape from such confinement. This may include ~~accidental or irresponsible~~ **intentional or unintentional** release of live organisms from confinement, including cases such as the disposal of live food into the environment or the use of live baits in non-confined water systems.

53. For the purpose of this guidance, pets, aquarium and terrarium species, live bait and live food

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\*One representative entered a formal objection during the process leading to the adoption of this decision and underlined that he did not believe that the Conference of the Parties could legitimately adopt a motion or a text with a formal objection in place. A few representatives expressed reservations regarding the procedure leading to the adoption of this decision (see UNEP/CBD/COP/6/20, paras. 294-324).

<sup>1</sup> On the basis of part III of UNEP/CBD/SBSTTA/18/8.

are understood to include lower taxa and hybrids (including hybrids between native organisms and organisms that are alien in the region to which they are intended to be imported or transported).

54. This guidance is intended to apply to import or transport to a distinct biogeographical area, of pets, aquarium and terrarium species, live bait and live food, including trade via the Internet. It is **relevant to** ~~addressed to~~ States, relevant organizations, the industry and consumers including, ~~as appropriate,~~ all actors along the value chain (such as importers, breeders, wholesalers, retailers and customers). For the case of live food, ~~it~~ **this** also includes restaurants and live markets.
55. This guidance is voluntary and is not intended to affect any existing international obligations. It is intended to be used in conjunction with other relevant guidance, for example the Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats and Species; standards, guidelines and recommendations developed under the International Plant Protection Convention or under the World Organisation for Animal Health; and existing voluntary codes.

#### *Prevention and responsible conduct*

56. Industry and all actors should be aware of the risks of alien ~~live~~ organisms becoming invasive and their potential negative impacts on biodiversity, including ecosystems, habitats, and species. States, industry ~~and~~ relevant organizations ~~should~~ **are urged to** undertake public awareness campaigns to this effect.
57. Generally, and as a priority, States, relevant organizations and the industry should promote the use of native species, or species that have been shown to be non-invasive, as pets and aquarium and terrarium species.
58. States, relevant organizations and the industry ~~should~~ strongly encourage the use of ~~only~~ non-invasive species as live bait.
59. States, relevant organizations and the industry should raise awareness of buyers and sellers on the importance of safe handling and disposal of invasive species used as live food.
60. States, relevant organizations, the industry ~~and~~ consumers should handle any potentially invasive pet, aquarium and terrarium species, or species used as live bait and live food, responsibly and with utmost care. They should undertake, where possible and appropriate, the measures listed in paragraph 67 below ~~voluntarily even in cases where they would not formally required.~~ **[(Rationale: the guidance \*is\* voluntary so this line is misleading)]**

#### *Risk assessment and management*

61. When planning to import or transport **pets, aquarium and terrarium species, live bait and live food** to a distinct biogeographical area, where they are non-native, ~~pets, aquarium and terrarium species, live bait and live food,~~ States, relevant organizations and the industry, ~~as appropriate,~~ should undertake a risk assessment. The risk assessment may draw on previously conducted assessments and other available information ~~as appropriate,~~ The risk assessment should consider, *inter alia* **at the least:**
  - (a) The probability of escape of the species from confinement (including through ~~irresponsible~~ **intentional** and unintentional release);



- (b) The probability of establishment and spread of the species; and
- (c) The significance of the impacts of establishment and spread of the species on biodiversity.

62. The assessment of the probability of escape should take into account the specific characteristics of the species as well as existing measures in place to retain it within confinement.

~~63. Where the risk assessment indicates that the risk associated with the pet, aquarium and terrarium species, live bait or live food is acceptable, the species may be imported or transported to a distinct biogeographical area. States, relevant organizations and the industry may need to repeat the risk assessment if new information becomes available that may change the outcome of the assessment.~~ **[Rationale: first part of paragraph deleted as irrelevant to this Guidance; second part in new, separate paragraph]**

63. Where the risk assessment indicates that the risk associated with the pet, aquarium and terrarium species, live bait or live food is not acceptable, measures to manage the risk should be taken. They could include the requirement to undertake one or more of the actions listed in paragraph 67 below.

64. Where the risk assessment indicates that the risk associated with the pet, aquarium and terrarium species, live bait or live food is not acceptable and risk management measures are not sufficient to lower the risk, the import or transport of the species should not take place.

**65. States, relevant organizations and the business may need to repeat the risk assessment if new information becomes available that may change the outcome of the assessment.**

~~(65)66. All consignments of pet, aquarium and terrarium species, live bait or live food should clearly indicate the taxon (at the lowest known taxonomic rank and if possible the genotype, using the scientific name), natural distribution, and potential impact on biodiversity of the species.~~ **[(Rationale: paragraph more appropriate near last paragraph of “Measures”: both on labelling)]**

### *Measures*

65. A number of measures are available to address the risk associated with **alien** species introduced as pets, aquarium and terrarium species, live bait and live food. Examples **of such measures may** include, ***inter alia***:

- (a) To ~~demonstrate~~ **ensure** that appropriate measures to prevent escape (e.g., methods of secure confinement, handling, and transport) are in place;
- (b) To ~~inform~~ **raise awareness amongst** all persons involved in transporting, handling, selling, using or keeping the species of its risk and of appropriate measures to prevent escape (e.g., methods of secure confinement, handling, and transport);
- (c) To ~~request~~ **urge** users, consumers and owners of the species not to release the species into the natural environment and, in the event of an escape, to take immediate measures to recapture the organism and, **if appropriate**, report the escape to the relevant authorities in order to facilitate a rapid response;
- (d) To provide secure and humane services for the return, ~~or~~ resale, rehoming **or disposal** of undesired species;

(e) To ~~demonstrate~~ **ensure** that appropriate response measures, including eradication and control, are in place to address potential introduction, establishment and spread;

(f) To ensure that appropriate and safe methods of disposal are used by buyers and sellers for live food.

**66. All consignments of pet, aquarium and terrarium species, live bait or live food should clearly indicate the taxon (at the lowest known taxonomic rank and if possible the genotype, using the scientific name), and its natural distribution.**

~~(66)~~67 Consignments may be labelled as a potential hazard to biodiversity unless the species has been shown to be safe for import to the particular country or biogeographical region in question.

*Information sharing*

~~(67)~~68 The results of risk assessments should be made publicly available.

~~(68)~~69 States should maintain lists of species shown to be safe for import into particular countries or biogeographical regions, including detailed information on their native range and a clear definition of the biogeographical regions for which they are shown to be safe.

~~(69)~~70 States should maintain lists of species with the assessed potential to become invasive and associated with unacceptable risks for biodiversity.

*Consistency with other international obligations*

~~73 Measures under this guidance should be undertaken consistent with applicable international obligations (for example the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization). **[(Rationale: repeats paragraph above; and is not appropriate as this is voluntary guidance to assist in devising and implementing measures and does not in itself include measures.)]**~~

abridged

## 11 Review of work on invasive alien species and considerations for future work

### Item 5.2 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/9: Review of work on invasive alien species and considerations for future work**

### Introductory Remark

Item 5.2 was introduced to the plenary of the Vilm meeting by Hendrik Segers who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/9 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/18/9:

### Suggestions on the text:

#### REVIEW OF WORK ON INVASIVE ALIEN SPECIES AND CONSIDERATIONS FOR FUTURE WORK

*Note by the Executive Secretary*

#### I. INTRODUCTION

abridged; continued

#### IV. SUGGESTED RECOMMENDATION

98. *The Subsidiary Body on Scientific, Technical and Technological Advice, recommends* that the Conference of the Parties, at its twelfth meeting, include the following elements into its decisions on further guidance to support the implementation of Aichi Biodiversity Target 9:

*The Conference of the Parties*

1. ~~*Urges*~~ ***Reaffirms*** Parties, and ~~*invites*~~ other Governments and relevant organizations to recognize ***that invasive*** alien species ***pose*** a ***serious*** potential hazard to biodiversity, human health and sustainable development;

2. *Welcomes* the establishment of the Global Invasive Alien Species Information Partnership and *recognizes with appreciation* the contributions of its members towards free and open access to standardized invasive alien species and pathway information globally;

3. *Invites* the IUCN-Invasive Species Specialist Group and other technical partners to continue and complete the work on pathway analysis, and **to continue** to develop a **system for classifying unified classification** of alien species based on the magnitude of their impacts;

4. *Calls upon* Parties and **invites** other Governments, when developing or updating **and implementing** their national or regional invasive alien species strategies, to consider:

(a) Making effective use of communication strategies, tools and approaches to raise awareness of the risks associated with the introduction of invasive alien species **and potentially invasive alien species**, including through targeted messaging towards different sectors and audiences;

(b) Making use of existing guidance on risk analysis relevant to invasive alien species, ~~including guidance developed by the International Plant Protection Convention, the World Organisation for Animal Health, and the Food and Agricultural Organization of the United Nations;~~ **[(Rationale: list of examples deleted)]**

(c) Making use of the categorization of pathways of introduction of invasive species, considerations for their prioritization and overview of available tools for their management as contained in document UNEP/CBD/SBSTTA/18/9/Add.1, ~~including with a view to enhancing interoperability of databases;~~

(d) Identifying and prioritizing pathways of introduction of invasive alien species, taking into account, *inter alia*, information on the frequency of introduction, ~~and~~ magnitude of impacts, **and scenarios for future climate change; [(Rationale: pathways may be significantly affected by future climate change)]**

(e) ~~Identifying, prioritizing and~~ Sharing information about invasive alien species for control, management and/or eradication based on cost-benefit analyses, drawing, *inter alia*, upon information available through the GIASI Partnership;

(f) **Taking appropriate actions, m** Making use of the full range of measures for control, **management and/or** and eradication, with appropriate risk analysis, ~~including biocontrol, and of decision-support tools and guidance, including in the context of ecosystem restoration efforts;~~

(g) ~~The creation of national invasive species partnerships i~~ Involving experts from relevant agencies and institutions, including academia, indigenous and local communities and private sector entities, with a view to ~~ensuring~~ **promoting a comprehensive coherent** approach towards invasive alien species; and **[(Rationale for deletion of first part: creation of partnerships is only one way to reach desired objective of involving)]**

(h) The risk associated with the ~~inadvertent~~ **unintentional** introduction of alien species through ~~programmes~~ **activities** related to development aid, **ecosystem** restoration, scientific research and others ~~gaps identified in previous decisions on invasive alien species;~~

5. *Requests* the Executive Secretary

(a) to facilitate capacity building on **invasive** alien **and potentially invasive alien** species identification, including on rapid approaches, in support of the Capacity-building Strategy for the Global Taxonomy Initiative. **[(Rationale for inclusion of “invasive”: capacity building on “all” alien species may be unrealistically ambitious)]**

(b) to ~~develop, in~~ **collaboration** with relevant organizations, **including the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, in the assessment and /or development of** tools for ~~assessing~~ **evaluating** the economic consequences of invasive alien species, and tools for cost-benefit analyses for eradication, **management** and control measures.

abridged

## 12 New and emerging issues: synthetic biology

### Item 6 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/10: New and emerging issues: synthetic biology**

### Introductory Remark

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

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/10 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/18/3:

### Suggestions on the text:

## NEW AND EMERGING ISSUES: SYNTHETIC BIOLOGY

*Note by the Executive Secretary*

### I. INTRODUCTION

abridged; continued

### IV. 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 taken note* of the information compiled by the Executive Secretary on synthetic biology and its potential impacts on biodiversity and on the possible gaps and overlaps with the Convention, its Protocols and other relevant agreements (UNEP/CBD/SBSTTA/18/INF/3 and INF/4) and having considered the application of the criteria for new and emerging issues to the field of synthetic biology, **recalling decision XI/11, para 3**, notes that:

- (a) Synthetic biology may be understood to involve various techniques, organisms and components and result in a range of products, living and non-living, and of differing characteristics;
- (b) Some of these techniques, organisms and components have already resulted in commercial products and industrial processes, others are expected to in the near-term, while yet others

**may do so [(Rationale: addition to enhance clarity)]** have a potential in the longer-term or are speculative;

(c) There are a number of intended benefits of these products and processes;

(d) There are also risks associated with the components, organisms and products resulting from synthetic biology techniques, some expected and manageable, some involving a high degree of uncertainty **as to the frequency of occurrence and the magnitude of harm, [(Rationale: addition to enhance clarity)]** and others unforeseeable;

(e) There is no coherent international regulatory framework for synthetic biology techniques and the components, organisms and products resulting from them;

(f) There is uncertainty regarding the adequacy of existing national and international regulatory regimes and risk assessment methodologies for components, organisms and products resulting from synthetic biology techniques.

### ***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 twelfth meeting, adopt a decision along the following lines:

#### *The Conference of the Parties*

1. **Takes note of the conclusions of SBSTTA at its eighteenth meeting that:**

a) **Synthetic biology may be understood to involve various techniques, organisms and components and result in a range of products, living and non-living, and of differing characteristics;**

b) **Some of these techniques, organisms and components have already resulted in commercial products and industrial processes, others are expected to in the near-term, while yet others may do so in the longer-term or are speculative;**

c) **There are a number of intended benefits of these products and processes;**

d) **There are also risks associated with the components, organisms and products resulting from synthetic biology techniques, some expected and manageable, some involving a high degree of uncertainty as to the frequency of occurrence and the magnitude of harm, and others unforeseeable;**

e) **There is no coherent international regulatory framework for synthetic biology techniques and the components, organisms and products resulting from them;**

f) **There is uncertainty regarding the adequacy of existing national and international regulatory regimes and risk assessment methodologies for components, organisms and products resulting from synthetic biology techniques. [(Rationale: addition to enhance clarity of the COP decision; advice identical with paragraphs a-f above based on the SBSTTA 18/INF 3 and 4 documents)]**

2. *Urges* Parties and *invites* other Governments:

(a) To approve **authorize field testing of** organisms, **components and products** **[(Rationale: addition to enhance consistency with COPXI/11 text)]** resulting from synthetic biology techniques ~~for field testing only with appropriate scientific data~~ **risk assessment** to **justifying** such

testing; **[(Rationale: addition to enhance clarity; emphasise need of appropriate risk assessment not just scientific data)]**

(b) To approve organisms, **components and products [(Rationale: addition to enhance consistency with COPXI/11 text)]** resulting from synthetic biology techniques for commercial use only after appropriate, authorized and robust scientific risk assessments with regard to their potential ecological and socio-economic impacts and adverse effects on biological diversity, food security and human health **[including potential cumulative and synergistic impacts,] [(Rationale: highlight that beyond the mentioned impacts there might be mixed effects)]** have been carried out in a transparent manner and the conditions for the safe and beneficial use of these organisms, components and products have been validated; **[(Rationale: addition to enhance consistency with COPXI/11 text)]**

(c) To have effective procedures and regulatory processes in place that govern the approval processes under (a) and (b) above;

23. *Invites Parties, ~~and~~ other Governments, ~~relevant international organizations, indigenous and local communities, and other stakeholders~~ to report on measures undertaken in accordance with paragraph 24 above, **and identified needs for guidance**, and to submit such information to the Executive Secretary;*

4. **Invites Parties, other Governments, relevant international organizations, indigenous and local communities, and other stakeholders** to provide further information on potential and actual impacts of synthetic biology on the conservation and sustainable use of biological diversity and associated social, economic and cultural considerations as well as on existing regulatory frameworks and gaps in these;

5. *Requests* the Executive Secretary to make available the information reported in accordance with paragraph **3 and 4** above through the clearing-house mechanism of the Convention and other means.

6. **Further requests the Executive Secretary subject to availability of financial resources and at the appropriate time, to prepare, provide for peer-review, and submit for consideration by a future meeting of the Subsidiary Body an update on the potential impacts of components, organisms and products resulting from synthetic biology techniques on the conservation and sustainable use of biological diversity and associated social, economic and cultural considerations. [(Rationale: timely update required due to fast technological developments)]**

7. **Further requests the Executive Secretary to convene, subject to available resources, a workshop of experts with knowledge on the Convention and the Cartagena Protocol to exchange views on how to address Synthetic Biology, and to report its outcomes to a future meeting of SBSTTA. [(Rationale: enhance collaboration with Cartagena Protocol)]**

abridged

**For further reading on synthetic biology please see the very recent publications on this issue:**

Silver, P. A. & Way, J. C.: **Rationalizing nature**. Nature, Vol. 509, 8 May 2014, p. 166

Arnold, F. H. & Meyerowitz, J. T.: **Evolving with purpose**. Nature, Vol. 509, 8 May 2014, p. 166

IAP - the global network of science academies: **IAP Statement on Realising Global Potential in Synthetic Biology: Scientific Opportunities and Good Governance**. 7 May 2014, accessible through [http://interacademies.net/10878/Scientific\\_Opportunities\\_and\\_Good\\_Governance.aspx](http://interacademies.net/10878/Scientific_Opportunities_and_Good_Governance.aspx)

ter Meulen, V.: **Time to settle the synthetic controversy**. Editorial, Nature, Vol. 509, 8 May 2014, p. 135

Nature News: **Tribal gathering**. Nature, Vol. 509, 8 May 2014, p. 133

Nature News: **Beyond divisions**. Nature, Vol. 509, 8 May 2014, p. 151

Nelson, B.: **Cultural divide**. Nature, Vol. 509, 8 May 2014, p. 152

Collins, J. J.: **Bring in the biologists**. Nature, Vol. 509, 8 May 2014, p. 155

Maxon M.: **Agree on a definition**. Nature, Vol. 509, 8 May 2014, p. 156

Ellington, A.: **Build green “bioalchemists”**. Nature, Vol. 509, 8 May 2014, p. 156

Fussenegger, M.: **Make tools for mammalian cells**. Nature, Vol. 509, 8 May 2014, p. 157

Weiss, R.: **Automat efficient design**. Nature, Vol. 509, 8 May 2014, p. 157

Sauro, H.: **Capitalize on evolution**. Nature, Vol. 509, 8 May 2014, p. 157

Gibson, D. G. & Venter, C.: **Construction of a yeast chromosome**. Nature, Vol. 509, 8 May 2014, p. 168



## 13 Incentive measures: obstacles encountered in implementing options identified for eliminating, phasing out or reforming incentives that are harmful for biodiversity

### Item 7 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/11: Modalities and milestones for the full operationalization of Aichi Biodiversity Target 3, and obstacles encountered in implementing options identified for eliminating, phasing out or reforming incentives that are harmful for biodiversity**

### Introductory Remark

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

The participants discussed item 7 in anticipation of document UNEP/CBD/SBSTTA/18/11, which was not available by the time of the Vilm meeting, and agreed on the following **proposal** to be considered by SBSTTA at its eighteenth meeting:

#### The Subsidiary Body:

1. *Welcomes* the analysis of the obstacles encountered in implementing options identified for eliminating, phasing out or reforming incentives that are harmful for biodiversity;
2. *Requests* the Executive Secretary to compile and present advice on options for overcoming the obstacles based on document SBSTTA 18/11 for consideration by COP 12 in conjunction with the outcomes of WGRI 5 Agenda item 6.4;
3. Further *requests* the Executive Secretary to develop input for the revision of the headline indicators related to Aichi Target 3, in line with its evaluation of the fifth national reports, relevant submissions and other sources [(Rationale: In document SBSTTA 18/11 the task for SBSTTA was merely to note the synthesis report on obstacles encountered. As the document contains valuable advice on how to overcome the obstacles, the participants of the Vilm WS were of the opinion that this advice would be highly relevant to be used by COP 12 in conjunction with the milestones and modalities to be discussed at WGRI 5. Furthermore, the draft GBO 4 reports extremely low progress on target 3.)]

## 14 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

### Item 8 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/12/rev.1: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services**

### Introductory Remark

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

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/12/rev.1 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/18/12/rev.1:

### Suggestions on the text:

## THE INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM ON BIODIVERSITY AND ECOSYSTEM SERVICES

*Revised note by the Executive Secretary*

### I. INTRODUCTION

abridged; continued

### VII. SUGGESTED RECOMMENDATION

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

*The Conference of the Parties,*

*Recalling* decisions XI/2 E and XI/13 C,

*Welcoming* the adoption of the work programme of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services for 2014-2018,

1. *Adopts* the following procedure for submitting and prioritizing requests to IPBES:

(a) Parties, other Governments, relevant organizations, including the other biodiversity-related conventions, and indigenous and local communities can, at any time, submit suggestions for re-

quests to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services to the Executive Secretary. Proposals should (i) be accompanied by the information requested in paragraph 7 of decision IPBES-1/3, and (ii) state clearly the rationale for and the added value of submitting the request through the Convention;

(b) In preparation for each meeting of the Subsidiary Body, the Executive Secretary, in consultation with the IPBES Secretariat, will compile the proposals received, prepare further information, as necessary for the consideration by the Subsidiary Body, and consult the secretariats of other biodiversity-related conventions, as appropriate, with a view to sharing perspectives and, where possible, coordinating the submission of requests;

(c) The Subsidiary Body will consider the proposals, taking into account, as appropriate, the views from the other biodiversity-related conventions, and where necessary further information prepared by the Executive Secretary, and will decide which requests, if any, should be transmitted to IPBES. The Subsidiary Body will request the Executive Secretary to transmit these proposals to the IPBES Secretariat in accordance with the procedure established by IPBES. The Chair of the Subsidiary Body, in his function as an observer of the Multidisciplinary Expert Panel, will support the consideration in this regard.

(d) **The Subsidiary Body may formulate a request to IPBES, accompanied by the information requested in paragraph 7 of decision IPBES-1/3, in the case where the Subsidiary Body considers that an issue on the agenda of COP requires an urgent response and the consolidated information available does not permit the formulation of an evidence based recommendation for consideration by COP. The Subsidiary Body will request the Executive Secretary to transmit this request to the IPBES Secretariat in accordance with the procedure established by IPBES. [(Rationale: urgency of an issue)]**

2. *Requests* the Executive Secretary:

(a) To continue to collaborate with the Intergovernmental Science-Policy Platform **where relevant, strengthening synergies and avoiding duplication of work and to report to a meeting of the Subsidiary Body before COP 13** in all relevant areas;

(b) To undertake the activities described in subparagraph 1(b) above;

(c) To bring to the attention of SBSTTA focal points draft versions of IPBES deliverables when they become available for peer-review, and to invite them to participate in the peer-review processes in accordance with the procedures for the preparation of deliverables of IPBES;

To provide final deliverables of IPBES, as they become available, to the Subsidiary Body for its consideration with regard to the relevance of the findings for the work of the Convention, in consultation with the Secretariat of IPBES, as appropriate.

abridged

## 15 Issues in progress: Items 9.1 to 9.7

### A) Integration of the conservation and sustainable use of biodiversity into climate-change mitigation and adaptation activities

#### Item 9.1 of the provisional agenda

- Document UNEP/CBD/SBSTTA/18/13: Report on issues in progress: biodiversity and climate change

### B) Application of relevant safeguards for biodiversity with regard to policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

#### Item 9.2 of the provisional agenda

- Document UNEP/CBD/SBSTTA/18/13: Report on issues in progress: biodiversity and climate change

### Introductory Remark

Item 9.1 was introduced to the plenary of the Vilm meeting by Marina von Weissenberg who also chaired the respective working group.

Item 9.2 was introduced to the plenary by Kelly Hertenweg who also chaired the respective working group.

The participants of the Vilm meeting took note of document UNEP/CBD/SBSTTA/18/13 and discussed the item. Since the document does not provide draft recommendations, the participants developed the following general **proposal** to be considered by SBSTTA at its eighteenth meeting:

[(Comment: The recommendations have been prepared for being used during SBSTTA-18 and the deliberations under different agenda items such as Global Biodiversity Outlook, Marine and coastal biodiversity, and items under progress (9.1-9.5). This recommendation can also be a self-standing recommendation.)]

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

*Recalling* decisions IX/16, Annex II and decision X/33 para. 8, XI/19, XI/21 on the integration of biodiversity into relevant climate change activities;

*Recalling* goal 1.2 objective 3 of the Programme of Work on Forest Biodiversity decision VI/22 para 10 annex to mitigate the negative impacts of climate change on forest biodiversity;

*Concerned* that the CO<sub>2</sub> concentration in the atmosphere continues to increase in an unprecedented manner, and that the presented scenarios defined in terms of Representative Concentration Pathways (RCPs) reveal that for maintaining a situation with viable living conditions for calcifying marine organisms such as coral reefs, strong mitigation and also CO<sub>2</sub> removal from the atmosphere are needed;

*Notes with great concern* the findings of GBO4 with regard to the impacts of climate change on biodiversity and its consequences, in particular for the achievement of Aichi Biodiversity Targets 5, 10, and 15;

*Further notes with great concern* the findings of the working groups I, II, III of the IPCC AR5 regarding the impacts of climate change on biodiversity and ecosystem services on which society depends;

*Mindful* that terrestrial and marine ecosystems have buffered climate change through absorbing roughly half of the anthropogenic CO<sub>2</sub> emissions, and that biodiversity loss and climate change are intrinsically linked and cannot be tackled in isolation, stresses that the achievement of the objectives of the CBD and the UNFCCC are mutually interdependent and reinforcing;

*Invites* Parties, other governments, relevant organizations and indigenous and local communities to ensure that biodiversity issues are integrated into relevant climate change activities and that both the CBD and the UNFCCC are implemented coherently on the national level;

*Aware* that while biodiversity loss cannot be tackled without addressing climate change; successfully mitigating climate change requires the conservation and restoration of biodiversity and ecosystem services;

*Encourages* Parties, other Governments and relevant organizations to promote and implement ecosystem-based approaches to climate change adaptation and mitigation including through mobilization of conservation and nature based restoration measures on all levels to contribute to the overall adaptation and mitigation efforts;

Further *Encourages* Parties, other Governments and relevant organizations to strengthen knowledge and information on the linkages between biodiversity, climate change and human well-being on all levels;

Further *Encourages* Parties, other Governments and relevant organizations to share experiences, *inter alia*, through the CHM and to report on the integration of conservation and sustainable use of biodiversity into climate change mitigation and adaptation activities, considering the role of ecosystems;

*Requests* the Executive Secretary to update the Climate Change Adaptation Database, with a view to enhancing knowledge sharing on ecosystem-based approaches for adaptation and to report on progress to the nineteenth meeting of the Subsidiary Body;

*Also requests* the Executive Secretary to develop advice, including from pilot experiences, on how Parties can be best encouraged to maximize biodiversity-related benefits of REDD+ activities and to prepare draft recommendation on the use thereof for consideration by SBSTTA at one of its future meetings prior to COP 13.

## **C) Background information on climate-related geoengineering (provided by the editors)**

### **Item 9.3 of the provisional agenda**

- **Document UNEP/CBD/SBSTTA/18/13: Report on issues in progress: biodiversity and climate change**

### **Introductory Remark**

Item 9.3 was introduced to the plenary by Stefan Schäfer, Ralph Bodle and Anna-Maria Hubert.

The participants of the Vilm meeting took note of document UNEP/CBD/SBSTTA/18/13. The respective working group was led by Barbara Livoreil and Andreas Obrecht. The participant intensively discussed the item, however, they finally decided against providing recommendations, as the topic is currently highly dynamic in terms of information provision and evaluation.

Though, the issue of climate-related geoengineering was perceived as very important by the participants of the Vilm meeting. Thus, they wished the vital points as regards content of the above mentioned presentations to be included as background information into the workshop report.

### **ADDITIONAL BACKGROUND INFORMATION INTRODUCED BY THE EDITORS**

The following text is based on information from the Institute for Advanced Sustainability Studies provided by IASS fact sheet 1/2013, compiled by Sean Low, Stefan Schäfer, Achim Maas<sup>1</sup>. The content of this section was neither discussed nor agreed by the participants of the Vilm-Workshop.

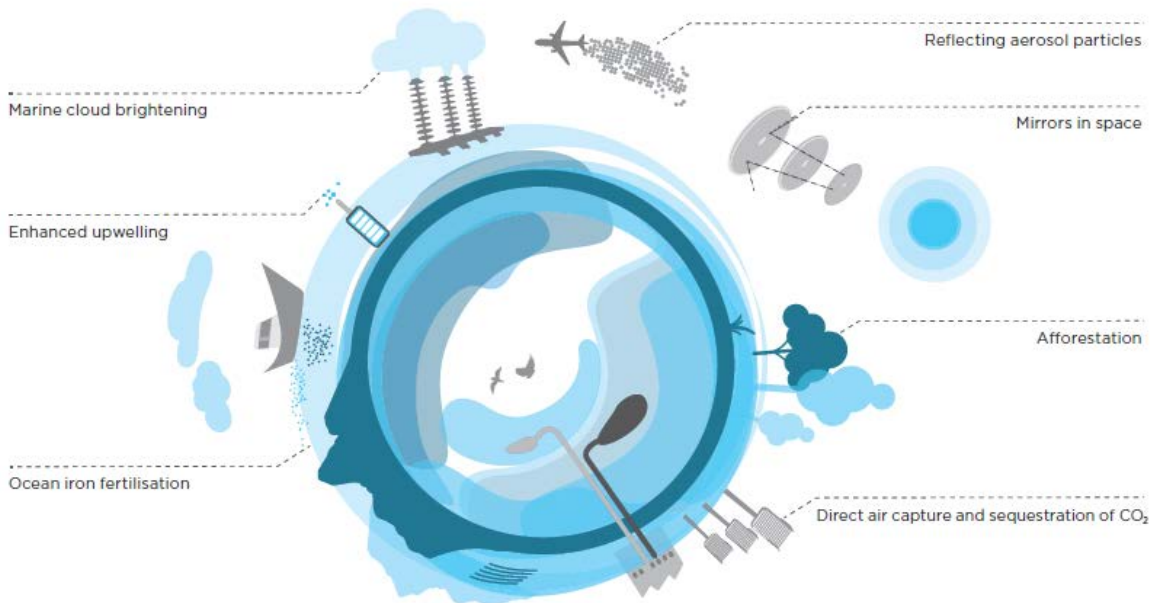
#### **What is climate engineering?**

Climate engineering (CE), also known as geo-engineering, describes a diverse and largely hypothetical array of methods for manipulating the global climate in order to moderate or forestall some of the effects of climate change. CE methods aim either to remove carbon from the atmosphere and store it, or to reflect some of the incoming sunlight back into space. The former techniques are known as Carbon Dioxide Removal (CDR), and focus either on enhancing existing carbon removal processes in natural systems (e.g. soils, forest and oceans), or on filtering carbon out of the atmosphere with technological means. The latter techniques, known as Solar Radiation Management (SRM), focus on increasing the reflectivity of existing surfaces (clouds, forests, deserts, oceans, urban areas), forming a reflective particle layer in the middle atmosphere, or deploying mirrors in space.

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<sup>1</sup>The complete fact sheet is accessible on the website of the Institute for Advanced Sustainability Studies (IASS, <http://www.iass-potsdam.de/>) at: [http://www.iass-potsdam.de/sites/default/files/files/climate\\_engineering\\_1.pdf](http://www.iass-potsdam.de/sites/default/files/files/climate_engineering_1.pdf)

### Various climate engineering measures



### What is the state of climate engineering research?

The last half-decade has seen a proliferation of scientific study, public commentary, and limited governmental and private sector involvement.

An expanding number of research programmes – mostly based in the global North – are exploring CE's physical and social effects through computer simulations and assessments of potential risks and uncertainties. Much of the funded research goes beyond technical questions to focus on economics, ethics, governance, perception and other aspects. Academic work has been accompanied by increased attention from the media, public intellectuals, and environmental and technology watchdog groups. The first government-commissioned reports have been released by the UK, USA, and Germany, and scientific researchers have begun to engage academic and policy-making communities worldwide. The Intergovernmental Panel on Climate Change has expanded its discussion of climate engineering in its 2014 Assessment Report. There has also been some commercial interest, with many patents being registered, and some companies having attempted to sell voluntary carbon credits based on CDR methods.

Field tests of prototype technologies are being discussed or have been done on small scales. Ocean iron fertilisation experiments from 1990 to 2009 and a limited number of tests of small-scale prototypes for removing carbon from the atmosphere have already helped generate interest in (and criticism of) CDR techniques. Field tests of globally impacting SRM technologies remain highly controversial – although none have taken place at a large scale, some small-scale tests are being planned. Due to concerns that efforts to scope CE might inadvertently generate momentum to develop – and perhaps later, to deploy – the technologies, there is a general climate of caution surrounding any actions that go beyond social science research, modelling and laboratory work.

Many in the academic community have called for a global debate with scientists, policy-makers, and civil society on the state, risks, unknowns, and challenges of current research. Effective planning may need to take place decades in advance, and decisions that are taken now – on switching to a low-carbon economy, developing particular CE methods, or some mix thereof – may create pathways of development that could be difficult to reorient later on.

There is a broad scientific consensus that no CE method can be considered a solitary substitute for mitigation or adaptation. Many stress that the transition to a low-carbon economy is key to sustainably addressing climate change. CDR may complement the reduction of carbon emissions, but cannot viably replace it. SRM only masks the warming effect of GHGs, does not address non-warming effects of climate change such as ocean acidification, and abrupt termination may result in quick temperature rises with possibly dramatic impacts.

### **Is climate engineering feasible?**

The feasibility of CE methods is uncertain, and we may not be able to anticipate or address all risks beforehand. These range from technical questions on costs, mechanics, geophysical processes and environmental impacts, to wider societal repercussions. Modelling studies, small-scale field experiments, natural analogues, and political analysis may offer preliminary indications, but only multi-year experiments on regional-to-global scales would be able to shed light on the long-term impacts of various CE methods. However, such experiments would, in principle, be indistinguishable from actual deployment.

There is no comprehensive economic assessment of CE methods. The possible operational costs have been estimated with different methods. The costs of SRM have been estimated to be of the order of a few tens of billion US dollars per year or less, while CDR costs range from tens to hundreds of billions of US dollars per year. These numbers strongly depend on the particular technology or technique involved, as well as the scale of deployment. Moreover, because there is no quantification of the economic impacts of CE, the notion that CE may be cheaper than mitigation and adaptation is based on an incomplete assessment.

Current scientific knowledge infers that deployment will have unevenly distributed global effects. For example, increasing the earth's reflectivity on a global scale (SRM) is expected to lead to varying temperature reductions and precipitation changes in different regions. Similarly, particular CDR measures aiming at radically increasing biological processes taking up carbon, such as ocean fertilisation, may impact regional ecosystems. Altered environments may have complex effects upon human and state security, water availability and food production, biodiversity, and energy. The basic possibility of unilateral deployment of global SRM methods, due to its comparatively low development, implementation and operation costs, exacerbates concerns about conflicts.

There are overarching concerns over how climate governance and human society may develop under a CE scenario. Developing CE technologies may create a 'slippery slope' toward deployment, and siphon momentum away from already slow-moving efforts to reduce emissions. Moreover, should SRM ever be discontinued in the absence of comprehensive GHG reductions, a rapidly rising global mean temperature would create a 'termination shock' to which ecosystems and societies would have severe difficulties adapting. Others criticise what they see as the postponing of transitioning off fossil fuels to later generations, the unequal capacity between states to research and deploy the technologies, or shifting the effects of what would have been GHG-driven climate change to populations that will suffer from an engineered climate. Conceptually, there are questions of how CE alters (or confirms) humanity's relationship to nature, as well as the hubris (or ingenuity) of applying technological solutions to complex issues.

### **Is climate engineering permitted under international law?**

There is no international treaty that addresses CE as a whole, and existing rules may be general, vague, or contain gaps. However, some CE activities could violate specific rules in international agreements. Relevant treaties include:

The **United Nations Framework Convention on Climate Change** (UNFCCC), which aims at the stabilisation of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogen-



ic interference with the climate system. SRM techniques, which do not alter GHG emissions, are neither currently covered nor necessarily prohibited. CDR methods may be implicitly covered by some articles. There have so far been no negotiations on CE within the UNFCCC.

The **Environmental Modification Convention (ENMOD)**, which outlaws the military or other hostile use of environmental modification techniques with widespread, long-lasting or severe effects. The treaty does not apply to activities carried out for peaceful purposes and its provisions have never been invoked in practice.

The **Convention on Biological Diversity (CBD)**, which addresses the conservation and sustainable use of biodiversity. The conference of parties of the CBD first discussed CE in 2008, and in 2010 adopted the only general measure to address all forms of CE taken to date. Although non-binding, CBD Decision X/33 establishes general criteria for CE governance and prohibits all CE activities except for scientific research that meets specified criteria.

The **London Convention and London Protocol (LC/LP)**, which govern the dumping of wastes and other matter at sea. In October 2013, the Contracting Parties adopted an amendment to the London Protocol to create a legally binding mechanism for the regulation of ocean fertilisation, including assessment procedures, which also provides for the possibility of adding in other marine geoengineering activities in the future. Ratification by two-thirds of the Parties to the London Protocol is required for the amendment to enter into force. Some rules of customary international law also have relevance to CE activities, including the duty of states to ensure that activities within their jurisdiction or control respect the environment of other states or of areas beyond national jurisdiction.

### Summary

- CE is not capable of returning the climate to its pre-industrial state, or even of keeping it at its current state.
- No CE technique can be considered a solitary substitute for mitigation or adaptation.
- Individual CE techniques are expected to have different costs, feasibilities, risks and time-lines on which they operate, and will involve different actor constellations.
- Any CE technique will have unequally distributed societal impacts.
- Scientific research, public and policy engagement, and governance frameworks are growing, but field-tests of certain methods remain controversial, and the debate is still based largely in the global North.
- Many researchers are calling for a timely and global debate to explore which CE techniques – if any – might be capable of reducing risks from climate change.
- Many CE techniques are not strictly prohibited by international law, but there are treaties and strong principles urging caution with regard to research, development and deployment.

### For further detailed information on international governance of climate-related geo-engineering:

Bodle, R., Oberthuer, S., Donat, L., Homann, G., Sina, S. and Tedsen, E., (2013): **Options and Proposals for the International Governance of Geoengineering**. German Federal Environment Agency (UBA) research report FKZ 3711 11101, 212 pages; accessible through <http://bodle.net/publications> (<http://bodle.net/wp-content/uploads/2014/04/ecologic-2013-geoengineering-governance-proposals-final-report.pdf>)

## **D) Ecosystem conservation and restoration**

### **Item 9.4 of the provisional agenda**

- **Document UNEP/CBD/SBSTTA/18/14**

#### **Introductory Remark**

Item 9.4 was not introduced and discussed by the participants as the according document UNEP/CBD/SBSTTA/18/14 was not available by the time of the meeting.

## **E) Definitions of key terms related to biofuels and biodiversity**

### **Item 9.5 of the provisional agenda**

- **Document UNEP/CBD/SBSTTA/18/15: Biofuels and biodiversity: information on relevant definitions of relevant key terms to enable parties to implement decisions IX/2 and X/37**

#### **Introductory Remark**

Item 9.5 was introduced to the plenary by Andreas Obrecht. As the according document (UNEP/CBD/SBSTTA/18/15) did not provide suggested recommendations the item was not further discussed among the participants.

## **F) Sustainable use of biodiversity: bushmeat and sustainable wildlife management**

### **Item 9.6 of the provisional agenda**

- **Document UNEP/CBD/SBSTTA/18/16: Sustainable use of biodiversity: bushmeat and sustainable wildlife management**

#### **Introductory Remark**

Item 9.6 was introduced to the plenary of the Vilm meeting by Roland Melisch who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/16 and discussed the item. Since the document does not provide draft recommendations, the participants developed the following general **proposal** to be considered by SBSTTA at its eighteenth meeting:

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

*Recalling* Decision XI/25 on Sustainable use of biodiversity: bushmeat and sustainable wildlife management;

*Acknowledging* the progress made by the Collaborative Partnership on Sustainable Wildlife Management (CPW) under its mission to promote conservation through the sustainable management of terrestrial vertebrate wildlife in all biomes and geographic areas and to increase cooperation and coordination on sustainable wildlife management issues among its members and partners;

*Noting* the Decision from the sixteenth meeting of their Conference of the Parties Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on the need to consult with CBD to review the CITES Resolution Conf. 13.11 on Bushmeat;

*Recalling* SBSTTA 17 Recommendation XVII/1 on Scientific and technical needs related to the implementation of the Strategic Plan for Biodiversity 2011-2020;

1. *Welcomes* the progress report provided under UNEP/CBD/SBSTTA/18/16;
2. *Requests* the Executive Secretary to:
  - (a) *Consider for inclusion* amongst the possible elements for the terms of reference of the proposed meeting of the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for Biodiversity 2011-2020 the following:
    - (i) The suitability of existing wildlife-use related indicators;
    - (ii) The potential need for additional wildlife-use related indicators, taking into account, indicators used in the Technical Report for the Fourth Global Biodiversity Outlook (GBO4) on Ecosystem services Sustainability and indicators that are already in use by, or relevant to, other conventions, regional agreements and processes;
    - (iii) A limited number of simple, easily applicable, measurable and cost-effective indicators that can potentially be used by Parties, as appropriate, taking into account their particular conditions and priorities;
    - (iv) A draft toolkit for Parties, with possible steps, for the development of baselines for indicators where these do not yet exist and to measure progress towards the Aichi Biodiversity Targets, among other relevant global wildlife related commitments, taking into account national conditions and priorities;
  - (b) *Provide* guidance to Parties on the role that Sustainable Wildlife Management plays in achieving the Aichi Biodiversity Targets and in implementing the Strategic Plan for Biodiversity 2011-2020;
  - (c) *Report* on progress to a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice.

Further *requests* the Executive Secretary to:

- (d) *Provide* information on progress with the implementation of CBD Decision XI/25 to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora for its review of CITES Resolution Conf. 13.11 on Bushmeat in time for its seventeenth meeting of the Conference of the Parties, taking into consideration the decisions and guidance developed under the CBD, the outcomes of the joint CITES/CBD meeting on bushmeat and other relevant sources of information;

(e) *Continue to liaise* with partner organizations under the Collaborative Partnership on Sustainable Wildlife Management (CPW), and *provide* periodic updates to the Subsidiary Body on Scientific, Technical and Technological Advice on progress made by the Partnership.

3. Recommends that the Conference of the Parties

*Welcomes with appreciation* the report prepared by the Executive Secretary in accordance with Decision XI/25 and on Art. 10c on customary sustainable use.

## G) Health and Biodiversity

### Item 9.7 of the provisional agenda

- **Document UNEP/CBD/SBSTTA/18/17: Consideration of issues in progress: health and biodiversity**

### Introductory Remark

Item 9.7 was introduced to the plenary of the Vilm meeting by Hilde Eggermont who also chaired the respective working group.

The participants at the Vilm meeting took note of the document UNEP/CBD/SBSTTA/18/17 and discussed the item. Since the document does not provide draft recommendations, the participants developed the following general **proposal** to be considered by SBSTTA at its eighteenth meeting:

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

*may wish to recommend* that the Conference of the Parties at its twelfth meeting adopt a decision along the following lines:

1. *Welcoming* the ongoing work and the activity summary report 2, *urges* Parties and invites other Governments and relevant organizations to make use of the findings in the report “State of knowledge review on the inter-linkages between biodiversity and human health”, and of the outcomes of regional capacity-building workshops in the revisions of their National Biodiversity Strategies and Action Plans as a means for achieving the objectives of the Strategic Plan for Biodiversity 2011-2020 and relevant Aichi Biodiversity Targets, in particular Aichi Target 14.

2. *Requests* the Executive Secretary:

(i) to continue efforts for a joint work programme with the World Health Organization, and with other relevant organizations and initiatives as appropriate, to foster the implementation of the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets, in particular Target 14, and the emerging post-2015 Sustainable Development Goals;

(ii) to widely disseminate the results contained in the “State of knowledge review on the inter-linkages between biodiversity and human health” in view of the implementation of the Strategic Plan for Biodiversity 2011-2020, and Aichi Target 14 and to mainstream these findings in the process of developing Sustainable Development Goals;

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2. 2 UNEP/CBD/SBSTTA/18/17

(iii) to report on further progress on joint activities at a future meeting of the Subsidiary Body prior to COP-13;

## European Expert Meeting in Preparation of the Seventeenth Meeting of SBSTTA (SBSTTA-18)

**May 05 – 09, 2014**

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-18

### Objectives

The goal of the European expert meeting was to exchange information on topics on the agenda of the upcoming seventeenth meeting of SBSTTA (SBSTTA-18) among national experts from European countries. The informal discussions were based on the documents prepared by the Secretariat of the Convention on Biological Diversity (CBD).

### Program

#### SUNDAY, MAY 4

##### Arrival at the Isle of Vilm

Ferry boats from Lauterbach harbour: 16:10, 17:10, 18:10, 20:10

The train leaving "Bergen auf Rügen" at 19.40 will go through to "Lauterbach/Mole". This special train might not be correctly indicated in the schedule of Deutsche Bahn on the internet.

18.30 *Dinner*

21.00 HORST KORN

##### **Welcoming of the participants of the marine and coastal section, short introduction of the participants**

21.30 *Informal get-together*

#### MONDAY, MAY 5

08.00 *Breakfast*

##### **I. MARINE AND COASTAL BIODIVERSITY**

09.00 HENNING VON NORDHEIM

##### **Introduction to the marine and coastal section of the meeting**

09.15 DAVID JOHNSON

##### **Ecologically or biologically significant marine areas**

Discussion

10.00 ALEXANDER LIEBSCHNER

##### **Addressing impacts of underwater noise on marine and coastal biodiversity**

Discussion

- 10.30 KARIN ZAUNBERGER  
**Systematic review on the impacts of ocean acidification and proposal to update the specific work plan on coral bleaching**  
Discussion
- 11.00 *Coffee break*
- 11.15 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part I**
- 12.30 *Lunch break*
- 14.00 ULRICH CLAUSSEN (BY VIDEO-CONFERENCE)  
**Report: Addressing impacts of marine debris on marine and coastal biodiversity**  
Discussion
- 14.30 JEFF ARDRON  
**Report: Tools and capacity development, including marine spatial planning and training initiatives**  
Discussion
- 15.00 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part II**
- 16.30 *Coffee break*
- 17.00 **Plenary: Presentation of the working group results / Marine contribution to the workshop report**  
Discussion
- 18.30 *Dinner*
- 19.30 **Finalisation of the marine contribution to the workshop report (open end, if necessary)**
- 20.00 HORST KORN  
**Welcoming of the participants of the general section of the meeting, introduction & short introduction of the participants (parallel to work on marine issues)**
- 20.30 *Informal get-together*

## TUESDAY, MAY 6

08.00 *Breakfast*

### II. GLOBAL BIODIVERSITY OUTLOOK

09.00 ANDREW STOTT

**Review of the draft of the fourth edition of the Global Biodiversity Outlook**  
Discussion

09.30 ANASTASIYA TIMOSHYNA

**Review of the implementation of the Global Strategy for Plant Conservation 2011-2020**

Discussion

### III. VARIOUS ISSUES

10.00 HENDRIK SEGERS

**Invasive alien species:**

**1) Management of risks associated with invasive alien species introduced as pets, aquarium and terrarium species, and as live bait and live food**

**2) Review of work on invasive alien species and considerations for future work**

Discussion

10.30 *Coffee break*

11.00 ADRIAN PERES

**New and emerging issues: synthetic biology**

Discussion

11.30 TONE SOLHAUG

**Incentive measures: obstacles encountered in implementing options identified for eliminating, phasing out or reforming incentives that are harmful for biodiversity**

Discussion

### V. CONSIDERATION OF ISSUES IN PROGRESS

12.00 JAN PLESNIK

**Ecosystem conservation and restoration**

Discussion

12.30 *Lunch break*

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

16.00 *Coffee break*

16.30 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part III**

18.30 *Dinner*

20.00 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part IV**

## WEDNESDAY, MAY 7

08.00 *Breakfast*

### V. CONSIDERATION OF ISSUES IN PROGRESS (CONTINUED)

09.00 STEFAN SCHÄFER  
**Climate-related geoengineering Part I**  
Discussion

09.30 RALPH BODLE  
**Climate-related geoengineering Part II**  
Discussion

10.00 MARINA VON WEISSENBERG  
**Integration of the conservation and sustainable use of biodiversity into climate-change mitigation and adaptation activities**  
Discussion

10.30 *Coffee break*

11.00 KELLY HERTENWEG  
**Application of relevant safeguards for biodiversity with regard to policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries**  
Discussion

11.30 ROLAND MELISCH  
**Sustainable use of biodiversity: bushmeat and sustainable wildlife management**  
Discussion

12.00 HILDE EGGERMONT  
**Health and biodiversity**  
Discussion

12.30 *Lunch break*

- 14.00 AXEL PAULSCH  
**Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services**  
Discussion
- 14.30 ANDREAS OBRECHT  
**Definitions of key terms related to biofuels and biodiversity**  
Discussion
- 15.00 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part V**
- 16.30 *Coffee break*
- 17.00 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part VI**
- 18.30 *Dinner*
- 20.00 **Plenary: Presentation of working group results**  
Discussion

## THURSDAY, MAY 8

- 08.00 *Breakfast*
- 09.00 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part VII**
- 10.30 *Coffee break*
- 11.00 **Drafting groups / Discussion groups**  
**Contribution to the workshop report Part VIII**
- 12.30 *Lunch break*
- 14.00 **Plenary: Presentation of working group results / Finalisation of the workshop report**  
Discussion
- 16.00 *Coffee break*
- 16.30 **Plenary (continued)**
- 18.00 *Reception at the invitation of the German Federal Agency for Nature Conservation*
- 20.00 **Plenary: Finalisation of the workshop report (if necessary)**

## FRIDAY, MAY 9

Departure of participants



## Proposed organization of work for the eighteenth meeting of the subsidiary body on scientific, technical and technological advice (Montreal, 23-28 June 2014)

- Annex I from document UNEP/CBD/SBSTTA/18/1/Add. 1

	10 a.m. – 1 p.m.	3 p.m. – 6 p.m.
<b>Monday, 23 June 2014</b>	<ol style="list-style-type: none"> <li>1. <b>Opening of the meeting.</b></li> <li>2. <b>Organizational matters.</b> <ol style="list-style-type: none"> <li>2.1 Election of officers.</li> <li>2.2 Adoption of agenda and organization of work.</li> </ol> </li> <li>3. <b>Global Biodiversity Outlook: mid-term review of progress towards the Aichi Biodiversity Targets.**</b> <ol style="list-style-type: none"> <li>3.1 Review of the draft of the fourth edition of the Global Biodiversity Outlook.</li> <li>3.2 Review of the implementation of the Global Strategy for Plant Conservation 2011-2020.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>3. <i>continued</i></li> <li>8. <b>Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services.</b></li> <li>7. <b>Incentive measures: obstacles encountered in implementing options identified for eliminating, phasing out or reforming incentives that are harmful for biodiversity</b></li> <li>9. <b>Consideration of issues in progress</b> (if time is available)</li> </ol>
<b>Tuesday, 24 June 2014</b>	<ol style="list-style-type: none"> <li>4. <b>Marine and coastal biodiversity**:</b> <ol style="list-style-type: none"> <li>4.1 Ecologically or biologically significant marine areas;</li> <li>4.2 Addressing impacts of underwater noise on marine and coastal biodiversity;</li> <li>4.3 Addressing impacts of marine debris on marine and coastal biodiversity;</li> <li>4.4 Systematic review on the impacts of ocean acidification and proposal to update the specific work plan on coral bleaching;</li> <li>4.5 Tools and capacity development, including marine spatial planning and training initiatives.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>4. <i>continued</i></li> <li>6. <b>New and emerging issues: synthetic biology.</b></li> <li>9. <b>Consideration of issues in progress</b> (if time is available)</li> </ol>
<b>Wednesday, 25 June 2014</b>	<ol style="list-style-type: none"> <li>5. <b>Invasive alien species:**</b> <ol style="list-style-type: none"> <li>5.1. Management of risks associated with introduction of alien species introduced as pets, aquarium and terrarium species, and as live bait and live food</li> <li>5.2. Review of work on invasive alien species and considerations for future work</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>9. <b>Consideration of issues in progress:</b> <ol style="list-style-type: none"> <li>9.1 Integration of the conservation and sustainable use of biodiversity into climate-change mitigation and adaptation activities;</li> <li>9.2 Application of relevant safeguards for biodiversity with regard to policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in de-</li> </ol> </li> </ol>

3. \*\* Presentations and/or panel discussions may be organized to introduce these items.

		<p>veloping countries;</p> <p>9.3 Climate-related geoengineering</p> <p>9.4 Ecosystem conservation and restoration;</p> <p>9.5 Definitions of key terms related to biofuels and biodiversity;</p> <p>9.6 Sustainable use of biodiversity: bushmeat and sustainable wildlife management;</p> <p>9.7 Health and biodiversity.</p>
<b>Thursday, 26 June 2014</b>	<i>Pending issues</i>	<i>Pending issues</i>
<b>Friday, 27 June 2014</b>	<i>Pending issues</i>	<i>Pending issues</i>
<b>Saturday, 28 June 2014</b>	<p>10. <b>Other matters.</b></p> <p>11. <b>Adoption of the report.</b></p> <p>12. <b>Closure of the meeting.</b></p>	