

Report of the Expert Meeting in Preparation of SBSTTA-12

April 10 - 14, 2007

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

Horst Korn, Rainer Schliep & Jutta Stadler (Eds.)

- **Application of the Ecosystem Approach**
- **Implementation of the Global Strategy for Plant Conservation**
- **Millennium Ecosystem Assessment**
- **Global Biodiversity Outlook**
- **Biodiversity and Climate Change**
- **Biodiversity of Dry and Sub-Humid Lands**
- **Biodiversity and Liquid Biofuel Production**

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Glossary of Acronyms

AHTEG	Ad Hoc Technical Expert Group
CBD	Convention on Biological Diversity
CEM	Commission on Ecosystem Management (IUCN)
CHM	Clearing House Mechanism
COP	Conference of the Parties
EIA	Environmental Impact Assessment
EPCS	European Plant Conservation Strategy
ES	Executive Secretary
EU	European Union
FAO	United Nations Food and Agriculture Organization
GBO	Global Biodiversity Outlook
GEF	Global Environment Facility
GEO	Global Environment Outlook
GHG	Green House Gas
GIS	Geographical Information System
GMO	Genetically Modified Organism
GSPC	Global Strategy for Plant Conservation
IMoSEB	International Mechanism of Scientific Expertise on Biodiversity
IPA	Important Plant Area
IPCC	Intergovernmental Panel on Climate Change
IUCN	The World Conservation Union
MA	Millennium Ecosystem Assessment
MDG	Millennium Development Goal
NGO	Non-Governmental Organisation
PoI	Plan of Implementation (WSSD)
PoW	Programme of Work
SBSTA	Subsidiary Body on Scientific and Technological Advice (UNFCCC)
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice (CBD)
SGA	Sub-global assessment

Glossary of Acronyms

UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention on Climate Change
WCMC	UNEP World Conservation Monitoring Centre
WGRI	Ad Hoc Open-ended Working Group on Review of Implementation (CBD)
WSSD	World Summit on Sustainable Development

1 Introduction

The expert meeting in preparation of the twelfth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-12) 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 meeting of SBSTTA. The 43 participants from 18 European countries** (EU member states, Norway and Switzerland) **attended in their personal capacity as biodiversity experts.** Mr. Jo Mulongoy, Principal Officer of the CBD Secretariat, took part in the meeting. Mr. Christian Prip, Chair of SBSTTA-12, presented the report of the SBSTTA-Bureau on ways and means to improve the effectiveness of the Subsidiary Body. The experts introducing their respective topics to the meeting were Ms. Jana Kus Veenvliet (Slovenian Ministry of the Environment and Spatial Planning), Mr. Jan Plesnik (Agency for Nature Conservation and Landscape Protection of the Czech Republic), Mr. Martin Sharman (European Commission, DG Research), Mr. Peter Herkenrath (UNEP World Conservation Monitoring Centre), Mr. Heikki Toivonen (Finnish Environment Institute SYKE), Ms. Mariam Akhtar-Schuster (Biozentrum Klein Flottbek and Botanical Garden, Germany), Mr. Stefan Leiner (European Commission, DG Environment), Mr. Uwe Fritsche (Öko-Institut e.V., Institute for Applied Ecology, Germany), Ms. Caterina Wolfangel (IUCN-CEM, Switzerland), and Mr. Ben ten Brink (Netherlands Environmental Assessment Agency MNP).

The participants of the preparatory meeting to SBSTTA-12 were welcomed by Mr. 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 plenary. **In this report, the main points of discussion are summarised and general comments on the Secretariat's documents are given. In addition, amendments to the recommendations given in the Secretariat's documents are suggested.** Topics of the Secretariat's documents not mentioned specifically in this report were widely agreed on by the workshop. The major points raised during the discussion are represented in this report. **The aim of the workshop 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-12.**

How to read the report

Amendments and additions to the original SBSTTA-12 documents are marked as follows throughout the report:

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

Text = suggestion for new text

[(Text)] = comment

Only those passages of the Secretariat's documents to which amendments are proposed are reproduced in the report.

2 Application of the Ecosystem Approach

Item 3.1. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/2: In-depth Review of the Application of the Ecosystem Approach**

Introductory Remark

Ms. Jana Kus Veenvliet introduced the document UNEP/CBD/SBSTTA/12/2 on the in-depth review of the application of the ecosystem approach, which includes suggested recommendations for further work. Additionally Ms. Caterina Wolfangel presented the concrete operational guidance for action on the ground developed and used by IUCN.

General Comment

The participants of the workshop were pleased to be informed on the outcomes of the review process. It has been noted that some progress has been achieved on the application of the ecosystem approach. Participants especially recognised the work done on the development of the Ecosystem Approach Sourcebook. However, there is still a great need to further promote the use and understanding of the ecosystem approach. Therefore, the participants have aimed to strengthen the recommendations in this regard.

The principles of the ecosystem approach as such serve as a comprehensive basis for its application. However, there is a need to provide a short and easy to understand communication, to make it more attractive and to facilitate its application. The definition of the ecosystem approach should stay unchanged; it should only be explained in a more understandable way.

The participants of the workshop felt that at this stage more practical guidance on the application of the ecosystem approach is needed, rather than developing standards and indicators. These could be developed at the later stage, when more experience is gained.

The Ecosystem Approach Sourcebook has proven to be a good means for providing information, but its practicability for different user groups should be further strengthened.

The Millennium Ecosystem Assessment does have a relevance to the ecosystem approach, but the participants of the workshop felt a need to specify this relevance further.

Recommendations have been revised especially in order to address the two needs (simplification, “marketing”), which have been identified during the in-depth review. “Marketing” was found to be an inappropriate word; promotion and communication are preferred in this context. The main changes have been made in the executive summary and the recommendations. The main text has to be adapted accordingly.

Document UNEP/CBD/SBSTTA/12/2:

Suggestions on the text:

IN-DEPTH REVIEW OF THE APPLICATION OF THE ECOSYSTEM APPROACH

Note by the Executive Secretary

EXECUTIVE SUMMARY

At its seventh meeting in 2004, in decision VII/11 on the ecosystem approach, paragraph 12, the Conference of the Parties requested the Executive Secretary to assess the application of the ecosystem approach, in the light of experiences gained from the activities under paragraphs 8, 9 and 10 of the same decision), for the consideration of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the ~~ninth~~ **eight** meeting of the Conference of the Parties. This note summarises progress regarding implementation of various paragraphs of decisions of the Conference of the Parties relating to the ecosystem approach by Parties, major partners, initiatives and organizations and in international fora; barriers to the application of the ecosystem approach; relevant findings and lessons learned from the Millennium Ecosystem Assessment (MA); the contribution of the ecosystem approach to implementing the Convention and reducing the rate of biodiversity loss; and, key issues and opportunities for promoting the further application of the ecosystem approach.

The case study database in the CBD ecosystem approach Source Book is now operational. It includes case studies and a range of tools which could be enhanced by incorporating links to additional resources. The value of the Source Book will increase as more case studies are entered providing a greater resource for those seeking to implement the ecosystem approach.

Information available from the third national reports shows that the ecosystem approach is being applied by many Parties, at different scales. The approach has been adopted by major fora beyond the Convention. It is referenced in programmes and activities, as appropriate, by all the major inter- and non-governmental organisations and initiatives reviewed. There is a significant opportunity to build upon the existing experiences and progress.

Barriers have been well reviewed previously. No new barriers have emerged in this in-depth review. However, two important needs were identified: (i) to simplify the description of ecosystem approach and make it more attractive to, and comprehensible for, key target audiences (and these vary widely); and (ii) to improve the “marketing” of the approach, chiefly by promoting it as a tool to achieve ~~improved economic benefits~~ **social, economic and environmental objectives in a balanced way.**

The usefulness of the ecosystem approach is strongly supported by the MA findings, since this approach is well suited to the need to take into account the trade-offs that exist in the management of ecosystems and incorporates the need for both coordination across sectors and management across scales. The ecosystem approach also provides a framework for designing and implementing the entire range of necessary responses, ranging from this directly addressing the needs for conservation and sustainable use of biodiversity to those necessary to address indirect and direct drivers that influence ecosystems.¹ ~~The MA has significant relevance to this review. The ecosystem approach as a method for addressing the issues raised by the MA is embodied in its conceptual framework. But the MA discusses the issues in the economic context that key actors may respond to. It presents an opportunity for enhanced application of the ecosystem approach because of its potential to drive fundamental policy reform, including at the highest political level, and therefore governance, administrative and management reform, which affect the application of the ecosystem approach at the institutional level.~~

¹ Millenium Ecosytem Assessment, 2005. Ecosystems and human well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC.

Global assessments suggest that the ecosystem approach is not being applied systematically to reduce the rate of biodiversity loss but there are many examples of successful application at regional, national and local scales. Most of these examples can be considered as positive outcomes for both biodiversity and human well-being. Without indicators the impacts of the ecosystem approach are difficult to quantify.

Opportunities to strengthen ongoing efforts include *inter alia* developing standards for application of the ecosystem approach; simplified and improved marketing approaches to appeal to a wider audience; and capacity building at all levels by developing a strategic approach through enhanced partnerships.

SUGGESTED RECOMMENDATIONS

1. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to request the Executive Secretary to:

(a) **Provide in collaboration with relevant partners including in particular the Communication, Education and Public Awareness Informal Advisory Committee, easy to understand communication materials on the Ecosystem Approach in order to further promote awareness and understanding.** ~~Develop and implement, in collaboration with relevant partners including in particular the Communication, Education and Public Awareness Informal Advisory Committee, a strategy and action plan for capacity building at all levels on the application of ecosystem approach,~~

(b) Further develop the Source Book **by:** *inter alia*

- i. **integrating interfaces for the different user groups providing practical guidance and methods based on synthesised information from the case studies, for e.g. the project level, general policy and planning level. The interfaces should also include comparison with other similar approaches and how they could be simultaneously used;**
- ii. **improving the assessment tools by developing a checklist related to the application of the ecosystem approach, which will enable the users to assess their process;**
- iii. identifying additional cases studies relating to all the programmes of work of the Convention and all economic sectors **impacting biodiversity;**
- iv. **providing up-to-date links to relevant resource organisations and other sources of expertise;**
- v. **demonstrating the benefits and trade-offs of the use of the ecosystem approach in achieving the 2010-target and the Millennium Development Goals.**

~~, and/or linking to the Millennium Development Goals; and by identifying tools that integrate ecosystem approach into planning and monitoring of biodiversity; and~~

(c) Report on **the progress of** these activities to the Conference of the Parties at its ninth meeting

2. Recalling decisions VI/12 and VII/11, the Subsidiary Body on Scientific, Technical and Technological Advice may wish to urge the Parties, other Governments and relevant organisations to continue submitting case-studies and lessons learned and provide further technical input to the Source Book.

3. The Subsidiary Body on Scientific, Technical and Technological Advice may also wish to recommend that the Conference of the Parties; ~~requests the Executive Secretary to~~

(a) **urges the Parties, other Governments and relevant organisations to:**

- i. **further promote the use of the ecosystem approach in all sectors and enhance inter-sectoral cooperation, among others using the tools provided by the Source Book;**

ii. develop and carry out capacity building initiatives to apply the ecosystem approach, using the tools provided by the Source Book.

(b) requests the Executive Secretary to submit a report on these activities for the consideration by SBSTTA at a meeting prior to the tenth meeting of the Conference of the Parties.

~~Provide scientific basis for the development of a ‘marketing’ strategy to facilitate the understanding and application of ecosystem approach on a wider scale and in all the sectors affecting biodiversity, taking into account the elements identified in section III of the Note by the Executive Secretary on ‘key issues for the further application of the ecosystem approach’ and the findings of the Millennium Ecosystem Assessment that promoted ecosystem assessment as a tool for ensuring and enhancing economic benefits in biodiversity conservation activities;~~

- ~~(b) — Develop standards for application of the ecosystem approach, bearing in mind that the twelve ecosystem approach principles already form a framework for this work but need to be accompanied by methods to assess their degree of application, individually and collectively, on a case by case basis;~~
- ~~(c) — Integrate ecosystem approach issues in ongoing work on incentives;~~
- ~~(d) — Identify outcome indicators of performance in applying the ecosystem approach, preferably among those already available (such as the indicators of ecosystem integrity in the framework adopted in decision VII/30) to be used in future assessments of the application of ecosystem approach; and~~
- ~~(e) — Submit a report on these activities for the consideration by SBSTTA at a meeting prior to the tenth meeting of the Conference of the Parties.~~

I. INTRODUCTION

1. The ecosystem approach was endorsed by the Conference of the Parties in 2000 through decision V/6. In decision VII/11 on the ecosystem approach, paragraph 12, the Conference of the Parties requested the Executive Secretary to assess the application of the ecosystem approach, in the light of experiences gained from activities under paragraphs 8, 9 and 10 of the same decision, for the consideration of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the ~~ninth~~ **eight** meeting of the Conference of the Parties. In annex II of decision VIII/10, the Conference of the Parties decided to undertake the in-depth review of the application of the ecosystem approach at its ninth meeting. Decision VIII/15 (annex III) of the Conference of the Parties provided guidelines for the review of the thematic programmes of work of the Convention. These guidelines are used here as a basis for undertaking this in-depth review of the application of ecosystem approach (a cross-cutting issue). The review considers: the extent of implementation of requests of the Conference of the Parties in decisions V/6, VII/11 and relevant paragraphs in other decisions; how the principles, operational guidance and implementation guidelines have been applied; the barriers to application; and opportunities to further enhance application.

abridged

3 Implementation of the Global Strategy for Plant Conservation

Item 3.2. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/3: In-Depth Review of the Implementation of the Global Strategy for Plant Conservation**

Introductory Remark

The document presenting the outcomes of the In-depth-review of the Implementation of the Global Strategy for Plant Conservation (UNEP/CBD/SBSTTA12/3) was introduced by Mr. Jan Plesník, who also provided comprehensive background on the history of the process, the scope and the general principles of the Strategy. In addition to introducing the implementation process of the Global Strategy for Plant Conservation, Mr. Plesník highlighted the relevance of the European Plant Conservation Strategy as an example for the regional implementation of the GSPC.

General Comment

The participants of the workshop agreed that the Global Strategy for Plant Conservation has been an important milestone in the CBD's development. Nevertheless, the current pace of the GSPC implementation is not adequate to meet its targets and objectives.

The participants of the workshop discussed the possibilities to amend the GSPC by two new issues, namely climate change and nutrient loading. There are two options:

1. If they will be new particular targets, then the format of the existing targets should be kept (with appropriate technical rationale, quantitative, measurable, accepted by stakeholders, simple as possible with indicators and data available to assess their implementation).
2. Another possibility is to include them in a reasonable way into the existing targets.

The participants of the workshop stressed the need to improve the access to and dissemination of information covering protocols for plant conservation and sustainable use. The information should include case studies on practical experiences in using such protocols and on assessment of the conservation status of plant species.

Some participants suggested that much remains to be done to reach the target 1, which really is fundamental for the Strategy and therefore, target 1 should be included among those with only limited progress.

The targets with limited progress are, however, addressed within CBD by other thematic programmes of work or cross-cutting issues and some of them are often in charge of other sectors than the environmental sector at the national level. Therefore, an inter-sectoral approach to the GSPC's implementation is needed at all levels.

Document UNEP/CBD/SBSTTA/12/3:

Suggestions on the text:

**IN-DEPTH REVIEW OF THE IMPLEMENTATION OF THE GLOBAL STRATEGY FOR
PLANT CONSERVATION**

Note by the Executive Secretary

EXECUTIVE SUMMARY

abridged; continued

5. Although the time since the adoption of Global Strategy **for** Plant Conservation in 2002 is not sufficiently long to allow significant achievement of the targets, there has been notable progress in achieving targets 1 (A widely accessible working list of known plant species, as a step towards a complete world flora), 5 (Protection of 50 per cent of the most important areas for plant diversity assured;), 8 (60 per cent of threatened plant species in accessible *ex situ* collections, preferably in the country of origin, and 10 per cent of them included in recovery and restoration programmes), 9 (70 per cent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained), 11 (No species of wild flora endangered by international trade), 14 (The importance of plant diversity and the need for its conservation incorporated into communication, educational and public-awareness programmes), 15 (The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy), and 16 (Networks for plant conservation activities established or strengthened at national, regional and international levels).

6. However, limited progress was made with respect to the targets 2 (A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels), 4 (At least 10 per cent of each of the world's ecological regions effectively conserved), 6 (At least 30 per cent of production lands managed consistent with the conservation of plant diversity), 10 (Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems), and 12 (30 per cent of plant-based products derived from sources that are sustainably managed). **[(To help to reach the targets, it would be useful to identify the actors who must be engaged and to develop a communication strategy to engage these institutions or organisations. Within the European Plant Conservation Strategy, for each of its 42 targets a lead organisation was nominated which deals more with the topic of the particular target and will monitor its implementation.)]**

7. There are some gaps in achieving target 3 (Development of models with protocols for plant conservation and sustainable use, based on research and practical experience) especially in relation to development of tools and protocols for the targets of the Strategy whose progress is limited. Efforts to achieve target 7 (60 per cent of the world's threatened species conserved *in situ*) have been constrained by limited progress in achieving target 2, as target 7 is dependant on the base line data generated under target 2.

8. Constraints to the national implementation of the Global Strategy include limited institutional integration, lack of mainstreaming, and inadequate policies and legal frameworks at the planning stage; and at the operational level, lack of data, tools and technologies, limited sectoral collaboration and coordination, limited financial and human resources. –The review indicates also that further development of the Global Strategy should include targets relating to: (i) climate change, a driver of biodiversity loss increasing in intensity in recent years; and (ii) the impacts of nutrient loading on plant diversity.

9. With the preliminary challenges identified, it may now be possible to focus on enhanced implementation of the Strategy including by reaching beyond the botanical and conservation communities to address the wider impacts on plant diversity from agriculture and climate change, integrate the Strategy with poverty reduction and development strategies, and consider the Strategy beyond 2010.

SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties:

- (a) *Urges* Parties that have not yet done so to:
 - (i) Nominate focal points for the Strategy;
 - (ii) Develop national and/or regional strategies for plant conservation with targets, and consider their integration in national biodiversity strategies and action plans and other relevant national and regional policies and action plans, as part of broader plans to achieve the 2010 biodiversity target and the relevant Millennium Development Goals;
- (b) *Requests* Parties, other governments and relevant organisations to:
 - (i) Undertake activities for achieving enhanced implementation of the Strategy, in particular its targets 1, 2, 3, 4, 6, 7, 10 and 12;
 - (ii) Provide additional information on the progress made towards achieving the targets of the Strategy, including quantitative data and additional information from other sectors and processes such as in forestry and agriculture. **The additional information should include as much as possible quantitative data, in order to strengthen any future reviews of the implementation of the Strategy.**
- (c) *Considers* the further development of the Strategy beyond 2010, ~~including by integrating targets relating to climate change and nutrient loading;~~ **such consideration should be carried out in the broader context, within the further development of the Convention beyond 2010 as it is scheduled to be discussed at the ninth Meeting of the Conference of Parties;**
- (d) **Considers the integration of the issues climate change and nutrient loading into the GSPC.**

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to request *Requests* the Executive Secretary to develop, in collaboration with the Global Partnership for Plant Conservation and relevant organizations, using the outline annexed to this note, and taking into account contributions from Parties, other governments and relevant stakeholders, **so that they will be available at COP-9.**

~~(d) — Requests the Executive Secretary to develop, in collaboration with the Global Partnership for Plant Conservation and relevant organizations, using the outline annexed to this note, and taking into account contributions from Parties, other governments and relevant stakeholders,~~

 - (i) A toolkit that describes *inter alia* tools and experiences that can help enhance national implementation. **The toolkit should be on-line and interactive, allowing practitioners, nature resource managers and other stakeholders to enter information and comments. It would make it a living and evolving set of discoveries and guidance, not a static, bureaucratic tool,** and
 - (ii) **A comprehensive report/study entitled e.g. “Where are we in conserving plants?” or “Plant Conservation Status Report” A Plant Biodiversity Outlook that would serve as a communication and awareness-raising tool on the status of plant conservation and the implementation of the Strategy, prepared in collaboration with the UNEP - World Conservation Monitoring Centre and the**

Global Partnership for Plant Conservation and other relevant organisations. [(Note: The title “Plant Biodiversity Outlook” seems very similarly to the Global Biodiversity Outlook and can be considered as a competition to the later, fragmenting both the resources and awareness.)] The report/study will be a contribution to the GBO-3 and to the trial indicators for assessing progress towards the target to significantly reduce the current rate of biodiversity loss by 2010, e.g. on “Threatened species” and “Change in species abundance”. Before starting the work, the target audience should be specified.

I. INTRODUCTION

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II. PROGRESS IN NATIONAL AND REGIONAL IMPLEMENTATION OF THE GLOBAL STRATEGY FOR PLANT CONSERVATION

4. Information on the implementation of the Strategy at the national level is based on information from the national focal points for the Convention and for the Global Strategy for Plant Conservation, reports on the establishment and implementation of national and regional strategies, and responses to the third national report.

A. *National reports*

5. In response to paragraph 10 of decision VII/10, the targets of the Strategy were integrated into the format of the third national report under Article 26 of the Convention on Biological Diversity. As of February 2007, 92 Parties had responded to the questionnaire in the national-report form and seven Parties provided additional information. To date, one out of three Parties has set one or more national targets corresponding to the global targets and integrated these into relevant plans, programmes and strategies.

6. Less than 10 per cent of Parties reported having set national targets, baselines, milestones and indicators related to the whole Strategy. -This makes it difficult to analyse and consolidate the information provided into a global status report on the progress in implementation of the Strategy. -Most Parties mentioned activities being undertaken at national level that were of relevance to the targets of the Strategy but did not provide a precise indication of the status of implementation of those activities in terms of specific indicators and milestones. Also, a large number of responses were ~~of~~ qualitative in nature rather than providing quantitative indications.

abridged; continued

III. PROGRESS, CHALLENGES, OPPORTUNITIES AND CONSTRAINTS IN ACHIEVING THE TARGETS IN THE GLOBAL STRATEGY FOR PLANT CONSERVATION

abridged; continued

Target 3: Development of models with protocols for plant conservation and sustainable use, based on research and practical experience

22. Various protocols, tools and technologies linked to the achievement of the Strategy targets were highlighted in the national reports. Examples include tools and technologies for *in vitro* propagation (Algeria), recovery planning and threat abatement (Austria and Australia), translocation of threatened species (Australia), greening using native seed (Australia), propagation and harvesting protocols (Chile), implementation of the ecosystem approach (Germany), and species action plans taking into consideration various national and international legislation and conventions (Hungary), designation of Important Plant Area (IPA) (Belgium, Romania and Slovenia), *ex situ* and *in situ* conservation (Colombia, Chile, China, India, Indonesia and Iran), forest tree breeding (Japan), GIS-based conservation models and permanent ecological plots (Malawi), sustainable forest management models (Malaysia), and sustainable use models in community forest and pro-poor leasehold forests (Nepal). Other tools and protocols include primordial botanic gardens and grand forest parks (Indonesia), wild relatives projects and integrated management of cedar forests (Lebanon), medicinal and useful plants (Nepal), conservation of threatened species (Philippines), propagation and cultivation of South African threatened species (South Africa), special use forests (Viet Nam), and economic valuation of forests (Malaysia).

23. Many international agencies also have developed various tools and protocols related to various targets such as Bioversity International for targets 1, 2, 8, 9, 13, 14 and 15; Botanic Gardens Conservation International for targets 1,2,7 8, 9, 10, 13 and 14; the Food and Agriculture Organization of the United Nations for targets 6, 8, 9, 12, 13, 14 and 15; the Global Invasive Species Programme for target 10; IUCN-The World Conservation Union for targets 2, 4, 5, 7, 10, 11, 16 ,and PlantLife International for targets 5, and 15.

24. However, the main gap is access to, and dissemination of, information, on the existing tools and protocols in appropriate formats. **[(Note: Access to and dissemination of information covering protocols for plant conservation and sustainable use need to be improved. The information should include case studies on practical experiences in using such protocols and on assessment of the conservation status of plant species.)]**

Target 4: At least 10 per cent of each of the world's ecological regions effectively conserved

25. While most countries have not set specific national targets, there are efforts for mainstreaming this target into the protected areas network and national biodiversity strategies and action plans as requested in decision VII/10 paragraph 8. However, regional processes such as **the European Community Natura 2000 and, the European Union Habitats Directive and the Council of Europe's Emerald Network** provide good frameworks for implementing this target at national level in Europe. Some countries have set national targets, e.g. Canada and Thailand, while Ireland and Netherlands indicated having already achieved this target at national level.

26. Many constraints were cited hampering the achievement of this target, including conflict between conservation and land use needs; conflict between economic development and conservation; lack of a nationally agreed ecosystem/ecological region classification; lack of indicators for monitoring; the cost/ or required effort for effective conservation; lack of adequate compensation mechanisms; and conflicts between local communities and protected area managers over land and land use rights. Many areas set aside for plant conservation are small in size (1,000-10,000 hectares), often representing remaining fragments which, although valuable, may be inadequate for maintaining large-scale processes. There are also evident gaps in coverage of existing protected area networks.

Target 5: Protection of 50 per cent of the most important areas for plant diversity assured

27. Various designations for most important areas for plant diversity have been used at national level including using **the European Community Natura 2000 sites and Habitats Directives** (e.g. Belgium, **and Denmark**), bio-regions (Australia), endemic and refuge areas (Bosnia and Herzegovina), ~~the European Union Habitats Directive (e.g. Denmark and Germany)~~, as well as Globally Significant Biodiversity Areas (Ghana).

28. Sixty-seven countries around the world have participated in Important Plant Area (IPA) initiatives focusing on target 5 since the adoption of the Strategy in 2002. Over 50 per cent of these countries have

taken steps to identify IPAs and 24 per cent (16 countries) reported having ongoing programmes that are addressing conservation issues as well as documenting sites. Many of these national projects have been initiated as a result of regional workshops, including those held in Central and East Europe, the Mediterranean, the Himalayas, the Caribbean, Arabia, South East Asia and southern Africa.

29. PlantLife International has developed Guidelines to identifying Important Plant Areas which are available in French, English and Spanish. Criteria for most important areas for plant conservation have been developed and a database is now available to provide a baseline for monitoring the identification and protection of IPAs at national and global levels. 1/

Target 6 :At least 30 per cent of production lands managed consistent with the conservation of plant diversity

abridged; continued

IV SUMMARY FINDINGS FROM THE IN-DEPTH REVIEW AND PROPOSALS FOR A WAY FORWARD

A. Analysis of outcomes of the in-depth review

abridged; continued

C. The contribution of the Strategy to the achievement of the 2010 biodiversity target and the Millennium Development Goals and responding to the challenges identified by the Millennium Ecosystem Assessment

61. Given the need, particularly in many developing countries, to link biodiversity conservation to improved livelihoods, it is important to continue to relate and integrate the Strategy targets into the implementation of the Millennium Development Goals, sustainable-use initiatives, poverty-reduction strategies and other programmes. Such integration is a critical mechanism to promote synergies and to demonstrate the relevance of the Strategy and its targets to national goals for poverty alleviation and sustainable development. Targets 12 and 13 provide a strategic link between national implementation of the Strategy and the national processes for implementing the Millennium Development Goals, especially with regard to poverty reduction (goal 1), the health crisis (goal 6) and environmental sustainability (goal 7).

62. The Strategy provides a useful tool for assessing progress towards the achievement of the 2010 biodiversity target at the national level. Some of the Strategy targets are of relevance to various sub-targets of the 2010 target, however, there are no targets in the Strategy that correspond to the sub-targets under goal 7 of the 2010 framework. (address challenges to biodiversity from climate change). There are also gaps in the Strategy framework with respect to the impacts of nutrient loading on plant diversity. These gaps could be addressed and targets ~~incorporated in the revised Strategy beyond 2010~~ **at COP-9.**

abridged

1/ www.plantlife.org.uk

4 Millennium Ecosystem Assessment

Item 4.1. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/4: Implications of the Findings of the Millennium Ecosystem Assessment on the Work of the Convention**

Introductory Remark

Mr. Martin Sharman introduced the document UNEP/CBD/SBSTTA/12/4. A thorough review of the draft document was discussed in the working group as well as in the plenary.

General Comment

COP decision VIII/9 dealt with the MA and made a variety of requests to the Parties, the SBSTTA and the Executive Secretary concerning the findings and evaluation of the assessment. Document UNEP/CBD/SBSTTA/12/4 is a response to those requests, summarised in a table in annex to the following comments.

COP decision VIII/9 §28 asks SBSTTA to contribute to the evaluation of the MA. §29 states that COP-9, when considering the need for another global assessment, take into account, i.a., scientific assessments that may be undertaken by SBSTTA. SBSTTA should therefore critically review the extent to which the MA provides it with the information it needs and whether SBSTTA itself might be able to generate equivalent information independently. The participants of the workshop believe that the chair should be asked to provide an opportunity for this discussion.

The participants at the meeting on the Island of Vilm felt that although this paper contains useful information, it does not fully examine the implications of the findings of the MA on the work of the Convention. Instead, a short section on progress in implementing decision VIII/9 – that focuses mainly on the activities of the Executive Secretary and contains insufficient information on progress made by Parties and other Governments – is followed by a description of evaluation of the MA by other organisations. This in turn is followed by some thoughts on the need for future integrated ecosystem assessments, which does not rigorously examine the benefit of such repeated assessments, or on what data they should be based. Finally, section V is entitled "options for improving the availability to SBSTTA of scientific information and advice on biodiversity", but does not provide sufficient options, or discussion, on which to base decisions.

The participants at the meeting believe that Parties have information on implementation and the impact of the findings of the MA that could have been made available to SBSTTA, but the information was not gathered before the document was drafted. The summary of the assessments of the MA might have made more use of the internal critiques of the MA and developed these as lessons learned.

The participants at the meeting also felt that the document is not sufficiently informative on the outcome of discussions with other multilateral environmental agreements on the findings of the MA.

Up to date, the impact of the MA among decision makers has been less significant than hoped for. As a consequence, it would be necessary to benefit from lessons learned and to examine the purpose and timing of any future MA.

COP-8/23/23 encourages national and sub-global assessments, and such assessments may be needed to establish whether the 2010 target is reached. Where such assessments take place, those responsible might wish to take advantage of the momentum achieved in the MA.

The participants at the meeting focused on proposed changes in the recommendations, and have included in these comments only a limited number of key remarks on the remainder of the text.

Document UNEP/CBD/SBSTTA/12/4:

Suggestions on the text:

IMPLICATIONS OF THE FINDINGS OF THE MILLENNIUM ECOSYSTEM ASSESSMENT ON THE WORK OF THE CONVENTION

Note by the Executive Secretary

EXECUTIVE SUMMARY

abridged; continued

SUGGESTED RECOMMENDATIONS

Acknowledging that the MA is a major achievement that has had impact among and a positive initial response by, for example, donors, UN agencies, research funding bodies and conservation oriented NGOs;

noting the lack of sufficient information to enable a full evaluation of the impact of the MA on the work of the Convention;

concerned about what seems to be an uneven response among Parties and other actors in the sense of policy formulation and decision making, or action in the field;

The Subsidiary Body on Scientific, Technical and Technological Advice

1. Requests the Executive Secretary to seek from Parties, other Governments and relevant organizations the necessary information to enable the Executive Secretary to undertake a full as-

assessment of the use and impact of the MA from the point of view of stakeholders¹, for consideration by COP-9;

2. Requests the Executive Secretary to investigate whether any work is being done to develop a manual of best practice for integrated local, national or sub-regional assessments, and if not, to identify a volunteer organisation to do this work.

Recalling COP Decision VIII/9 para. 23

3. Recommends ~~The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties:~~

(a) Takes note of the need for new and additional global and sub-global data on ecosystems and their services, including those provided by genes and species; Urges Parties and invites other Governments and relevant organizations to promote and support, through various mechanisms, integrated national, regional and sub-regional ecosystem assessments including, where appropriate, response scenarios that build on the framework and experiences of the Millennium Ecosystem Assessment; [(deleted because it reiterates COP VIII/9 para. 23)]

(b) Takes note of the opportunity to benefit from the knowledge and networks established during the MA and to build on this both regionally and nationally; Invites Parties and other Governments to make full use of the framework, experiences and findings of the Millennium Ecosystem Assessment when they review, revise and implement their national biodiversity strategy and action plans, relevant development plans, and development cooperation strategies, as appropriate; [(deleted because this largely repeats COP VIII/9 para. 26)]

(c) ~~Invites Parties, other Governments, relevant organizations, stakeholders and indigenous and local communities to consider, when designing integrated local, national or sub-regional assessments, to take into account:~~

- (i) ~~The need to engage stakeholders, including local and national decision makers in the assessment; [(part of manual of best practice)]~~
- (ii) ~~The need to integrate the assessment of biodiversity and ecosystem services, including non-market benefits gained from sustainable ecosystem management; [(confusing)]~~
- (iii) ~~The particular value of MA-type assessments for capacity development among participants and stakeholders; [(unsupported by the original report on the impact of the MA)]~~
- (iv) ~~The need for dedicated efforts to communicating the process and findings of the assessment; [(part of manual of best practice)]~~
- (v) ~~The need to provide, whenever possible, free and open access to all past, present and future publicly funded research results, assessments, maps and databases on biodiversity;~~
- (vi) ~~The value of supporting the establishment of coherent standards for the collection and integration of biodiversity data and information with a view to their accessibility for future assessments and analyses.~~

Noting the value of coherent world-wide standards for the collection and integration of biodiversity data and information,

noting also the need for further elaboration, testing and implementation of methods to account for non-monetary values of ecosystems and biodiversity, especially where values are incommensurable;

and noting also the need to develop MA-type scenarios with more positive outcomes for biodiversity including a scenario based on the supposition that all decisions of COP were fully implemented;

The Subsidiary Body on Scientific, Technical and Technological Advice

¹ To be taken to include conventions, regional, national and sub-national Governments, business, donors, NGOs, international agencies, capacity building, education, scientific researchers, and other practitioners.

4. Requests the Executive Secretary to seek and assemble, from Parties and other sources including the consultative process towards an International Mechanism of Scientific Expertise on Biodiversity (IMoSEB),

(a) options for improving the availability of scientific information and advice on biodiversity to the Subsidiary Body on Scientific, Technical and Technological Advice, and

(b) the information from which COP-9 can make a reasoned case for or against another integrated assessment of biodiversity and ecosystems;

~~The Subsidiary Body on Scientific, Technical and Technological Advice may wish to request the Executive Secretary to:~~

~~(d) — *Make full use of* the framework, experiences and findings of the Millennium Ecosystem Assessment in carrying out in-depth reviews of programmes of work under the Convention in accordance with the guidelines for review of programmes of work under the Convention contained in Annex III to decision VIII/15; **[(COP VIII/9 para. 12)]**~~

~~(b) — *Contribute* to the preparation and, as appropriate, implementation of a coherent multi-agency strategy for follow-up to the Millennium Ecosystem Assessment, including:~~

~~(vii) — support for national and sub-global applications of the MA conceptual framework; and **[(COP VIII/9 para. 23)]**~~

~~(viii) — consideration of the need for, and timing of, another global assessment, taking into account the experiences from evaluations of the Millennium Ecosystem Assessment **[(COP VIII/9 para. 29)]**, as well as experiences emerging from the consultative process towards an International Mechanism of Scientific Expertise on Biological Diversity and other relevant processes; **[(dealt with above)]**~~

~~(e) — *Carry out*, through the clearing house mechanism of the Convention and in collaboration with relevant partners, an inventory of existing interoperability mechanisms and their respective prospects for facilitating and promoting the exchange of data and information in support of the 2010 target as well as options for wider collaborative implementation of modern information exchange mechanisms through common methods, protocols, formats and standards; **[(Participants at the meeting did not feel that carrying out such an inventory would make the best use of the Secretariat's limited resources, or that it is best-placed to discuss methods, protocols, formats and standards.)]**~~

5. Requests the Executive Secretary to participate in and promote relevant processes, such as GEOSS, to make observation systems more coherent and biodiversity-inclusive. Participate in and promote relevant processes towards coherent and inclusive biodiversity observation systems with regard to data architecture, scales and standards, observatory network planning and strategic planning for implementation. [(Participants at the meeting did not feel that this level of technical detail lies within the remit of the Secretariat.)]

6. Recommends that the Conference of the Parties notes that the relative lack of data should not impede implementation and action on the ground.

I. INTRODUCTION

7.3. The Millennium Ecosystem Assessment (MA) was carried out between 2002 and 2005 to assess the consequences of ecosystem change for human well-being and the scientific basis for action needed to enhance the conservation and sustainable use of those systems and their contributions to human well-being. The Conference of the Parties (COP), at its eighth meeting, acknowledged the reports of the MA, in particular the Synthesis Report on Biodiversity and its summary for decision makers, and recognized that these reports include key findings relevant to the implementation of the Convention's programmes of work (Decision VIII/9, paragraph 1).

[(The next 7 paragraphs could profitably be replaced with a single sentence recalling the obligations that flow from VIII/9, with a reference to a table in the annex.)]

8.4. In paragraph 17 of decision VIII/9, the COP requested the Executive Secretary to bring the findings of the MA to the attention of the liaison group of the biodiversity-related conventions, and to other multilateral environmental agreements and relevant international and regional processes, with a view to explore options, within their respective mandates and, as appropriate, for joint activities to successfully address and respond to the direct and indirect drivers of biodiversity loss.

9.5. In paragraph 20 of decision VIII/9, the COP requested the Executive Secretary, in collaboration with relevant organizations, taking into account the MA scenarios, to assist Parties in the development of appropriate regionally-based response scenarios within the framework of the Convention's programmes of work, and to coordinate these efforts with other international and regional organizations involved with work on scenarios.

10.6. In paragraph 21 of the same decision, the COP requested the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to take note in its deliberations of the linkages between biodiversity and relevant socio-economic issues and analysis, including economic drivers of biodiversity change, valuation of biodiversity and its components, and of the ecosystem services provided, as well as biodiversity's role in poverty alleviation and achieving the Millennium Development Goals.

11.7. In paragraph 22 of decision VIII/9, the COP requested SBSTTA and invited Parties to draw upon the lessons learned from the MA process, including the sub-global assessments, and to make use as appropriate of its conceptual framework and methodologies in further developing work on environmental impact assessment, strategic environmental assessment and the ecosystem approach.

12.8. In paragraph 23 of decision VIII/9, the COP encouraged Parties and other Governments to conduct national and other sub-global assessments making use of the conceptual framework and methodologies of the MA, as appropriate.

13.9. In paragraph 29 of decision VIII/9, the COP decided to consider, at its ninth meeting, the evaluation of the MA to be undertaken during 2007, and the need for another integrated assessment of biodiversity and ecosystems, taking into account the future plans of the Global Biodiversity Outlook, as well as the outcomes of the current and future processes of the Global Environment Outlook of the United Nations Environment Programme, and scientific assessments that may be undertaken by SBSTTA.

14.10. In paragraph 30 of ~~the same~~ decision VIII/9, the COP decided to consider, at its ninth meeting, taking into account the results of other relevant processes, options for improving the availability to SBSTTA of scientific information and advice on biodiversity, keeping in mind the need to avoid duplication of efforts.

15.11. **[(Purpose of the document)]** The Executive Secretary prepared the current note to report on progress in implementing decision VIII/9 (Section II of this document), and, drawing in particular on the conclusions from three evaluations of the MA of particular relevance for the Convention (Section III of this document), to facilitate the consideration of the need for another integrated assessment of biodiversity and ecosystems (Section IV). Section V discusses options for improving the availability to SBSTTA of scientific information and advice on biodiversity.

16.12. An earlier draft of this note was posted for review from 26 February 2007 to 13 March 2007 in accordance with notification 2007-026 and review comments were incorporated as appropriate.

II. PROGRESS IN IMPLEMENTING DECISION VIII/9

13. ~~A number of the provisions of decision VIII/9 are long term in nature. It is still too early to report comprehensively on progress made in implementing this decision. The following paragraphs present examples of activities undertaken in response to decision VIII/9. [(This phrasing suggests that one cannot report on progress in its early stages. The paragraph should be replaced with something along the lines of the text below.)]~~

17. Many Parties have responded to the MA, especially with respect to the use of the concept of “ecosystem services” to explain the importance of the living world to stakeholders. It is, however, too soon to analyse the impacts of this response on a global scale.

18.14. In accordance with paragraph 17 of decision VIII/9, the Executive Secretary included the follow-up to the MA on the agenda [**(The Participants were not able to find this item on the agenda and so can not comment in any detail on this)**] of the fifth meeting of the liaison group of the biodiversity-related conventions (Gland, 14 September 2006). The Group discussed [**(did it make any decisions or come to any conclusions?)**] joint activities to address drivers of change in the context of the theme for International Biodiversity Day 2007 (“Climate Change and Biodiversity”) and with a view to making collaborative efforts [**(COP asked to “explore options”. Was this done?)**] towards the achievement of the 2010 Biodiversity Target. 2

19.15. Following the request in paragraph 20 of decision VIII/9, to assist Parties in the development of appropriate regionally-based response scenarios, the Executive Secretary initiated, through Notification 2006-070, a review of the response scenarios prepared by the GLOBIO Consortium (Global Methodology for Mapping Human Impacts on the Biosphere) for the 2nd edition of the Global Biodiversity Outlook, seeking *inter alia* views on relevant sub-regional and regional response options that should be ~~evaluated~~ **elaborated** and relevant data sources and institutions that should be involved in ~~calculating~~ **setting out** such scenarios. Views received from Parties confirm the need and make suggestions for regionally-based scenarios.

20.16. The Executive Secretary also brought the request **of the COP** to the attention of the GLOBIO3 Directors meeting (Cambridge, UK, 26-27 June 2006). The partners in the GLOBIO consortium are currently working with a ~~number of~~ developing country partners on the regional ~~implementation~~ **development** of biodiversity models and scenarios. The focus is initially on capacity building workshops. The Secretariat is in the process of identifying activities that would strengthen ongoing work on regionally-based scenarios.

21.17. With regard to paragraph 22 of decision VIII/9, the voluntary guidelines on biodiversity-inclusive environmental impact assessment and strategic environmental assessment endorsed through decision VIII/28 make extensive use of the conceptual framework of the Millennium Ecosystem Assessment (MA), with screening criteria focusing on drivers of change, ecosystem services and key processes. The guidelines are being disseminated and used in capacity-building activities, including the series of regional training workshops on national biodiversity strategy and action plans facilitated by the Secretariat. The Secretariat, in collaboration with other partners, also continues to facilitate the integration of relevant elements of the voluntary guidelines on biodiversity-inclusive impact assessment into policies and procedures where these are due for revision. The MA thereby presents an opportunity for enhanced application of the ecosystem approach [**(unclear)**] in planning processes and development cooperation policies, as concluded in the note by the Executive Secretary on the review of the application of the ecosystem approach (UNEP/CBD/SBSTTA/12/2).

22.18. In accordance with paragraph 23 of decision VIII/9, a number of national and sub-global MA-type assessments are being carried out or planned, including several MA sub-global assessment which are still continuing. Mexico, for example [**(is this the only example?)**], is now carrying out its second biodiversity country study (“*Capital natural y bienestar social*”) using the MA framework and this will provide the baseline for its revised National Biodiversity Strategy and Action Plan³. Information available to the Secretariat from other countries is probably not up to date since for most Parties preparation of third national reports likely predates follow-up to decision VIII/9.

III. EVALUATIONS OF THE MILLENNIUM ECOSYSTEM ASSESSMENT

23. The MA is a major achievement that has had considerable impact among those already sensitised to the status and trends of biodiversity and ecosystems. There is some concern, however,

2 See report of the fifth meeting of the Biodiversity Liaison Group at <http://www.biodiv.org/cooperation/BLG-5-rep-final-en.doc>

3 Submission by Mexico in response to notification 2007-004.

at what seems at this stage to be a uneven response in the sense of policy formulation and decision making, or action in the field to provide the unprecedented effort needed to halt biodiversity loss and the loss of ecosystem services. In part this may be the result of budgetary restrictions that impeded the strategy for the communication of the main messages of the MA.

~~24.19.~~ The organizations represented on the board of the Millennium Ecosystem Assessment have not yet made a decision regarding an evaluation of the MA as referred to in paragraph 29 of decision VIII/9. However, at least three different evaluations of the MA and its impacts have been carried out: an internal survey of initial impacts prepared by the MA Secretariat on the basis of survey of individuals involved in the MA process released in March 2006; an independent evaluation of the five-year US\$ 25 Million Millennium Ecosystem Assessment project commissioned by UNEP as the GEF implementation agency dated September 2006; and the report of the Environmental Audit Committee of the House of Commons of the Government of the United Kingdom of Great Britain and Northern Ireland published in January 2007. Key findings of these evaluations are summarized in the following paragraphs to facilitate consideration of the need for future integrated assessments of biodiversity and ecosystems.

Survey of initial impacts of the MA carried out by the MA Secretariat

~~25.20.~~ The survey assessed the initial impact of the MA approach and findings on conventions, regional, national and sub-national Governments, business, donors, NGOs, international agencies, capacity building, education, scientific research, and other indications of interest such as sales of documents and website visits. 4

~~26.21.~~ The following findings are particularly noteworthy for the design of future assessments within or related to the Convention:

(a) Among Governments, the impact of the MA appears to be greatest in regions and countries where MA sub-global assessments were conducted. At the national level, there is little evidence of impact among several other economically and politically influential countries;

(b) The MA findings were well-received by business journalists but the impact to date in the business sector has been relatively limited;

(c) The MA has had a notable impact on multi-lateral and bilateral donors;

(d) The MA has had a notable impact on international conservation-oriented non-governmental organizations (NGOs) but much less impact on national NGOs and no evident impact on NGOs focused on development, poverty reduction, or health issues;

(e) All of the United Nations agencies involved in the MA process have incorporated the MA findings and process into their activities;

(f) The inclusion of a capacity-building component in the MA has been useful [**(The author of the report states: "While we have no 'before' and 'after' assessment to establish how much capacity was built through these assessments, the individuals involved in these assessments clearly gained knowledge, contacts, and experience and it is likely that many of the institutions involved in these assessments were also strengthened. Very few of the respondents to the survey, however, commented on these dimensions of capacity building..."**)];

(g) MA materials are being used extensively at tertiary education level but rarely below;

(h) The MA has a notable impact on research directions and priorities.

~~27.22.~~ The survey suggests that a thorough analysis of the impacts of the MA could only be done after sufficient time has elapsed from the release of all the products.

4 Walter Reid, "Millennium Ecosystem Assessment: Survey of Initial Impacts", Millennium Ecosystem Assessment, March 2006, www.millenniumassessment.org

Independent evaluation of the UNEP/GEF project commissioned by UNEP

28.23. An independent evaluation of the ~~five-year \$25-million~~ Millennium Ecosystem Assessment (MA) Project was commissioned by UNEP and published by UNEP's Evaluation and Oversight Unit in September 2006. ⁵ Like the report by the MA Secretariat on initial impacts prepared six months earlier, the evaluation judged that it was too early to assess the impact of the report.

29.24. The evaluation considered it a major success that the MA was able to engage the global scientific community, as well as private sector and civil society organizations, and attributes this to the decision not to carry out the assessment through an official inter-governmental process. It specifically noted the high quality preliminary work and the design of the MA framework as factors for the successful engagement of the global scientific community and consequently the authoritative and credible nature of the findings.

30.25. The evaluation noted the high level of interest in carrying out sub-global assessments (SGAs), which far exceeded expectations and were not matched by the limited budget allocated for SGAs. It concluded that SGAs were particularly successful where they managed to engage with local or national decision makers. Although the SGAs had little influence on the global assessment, varied in technical quality and degree of adherence to the criteria set out for their **implementation preparation**, some SGAs have produced – or are producing – useful and important outputs and have contributed significantly to capacity development. The evaluation recognizes the potential contribution of the approaches adopted in selected SGAs for the development of a methodology or tool kit for conducting integrated ecosystem assessments at the local, national and global scales.

31.26. The evaluation on the other hand identified a notable lack of awareness or engagement by political actors in both developed and developing countries. This has been linked to the limited participation of government stakeholders in the implementation and oversight of the MA. It noted an uncertainty over what should happen following the completion of the Millennium Ecosystem Assessment and recommended the development and assessment of options for repeating the MA in some form in several years time, ranging from a full-scale repeat to a briefer, less expensive exercise focussing on particular topics related to the MA.

32.27. The evaluation further observed that the lack of adequate financial resources limited the communication and outreach efforts that might have been necessary to engage more effectively with decision and policy makers.

Report of the Environmental Audit Committee of the House of Commons of the United Kingdom on the Millennium Ecosystem Assessment

abridged; continued

[(Please note: The UK Government have now responded to this report (which was conducted by an independent group of UK Members of Parliament) and this report will be published shortly.)]

IV. CONSIDERATION OF THE NEED FOR FUTURE INTEGRATED ECOSYSTEM ASSESSMENTS

35.30. The MA is the most comprehensive assessment of ecosystems carried out to date. Data and information reviewed through the MA and their analysis applying the MA framework have already influenced other processes and will contribute to the provision of baseline information for future assessments, including assessments of status and trends in biodiversity and threats to biodiversity carried out as part of the in-depth reviews of thematic programmes of work, in accordance with the guidelines contained in

⁵ Terminal Evaluation of the UNEP/GEF Project "Millennium Ecosystem Assessment" - Project Number MT/FP/CP/1010-01-04, September 2006. Accessible at <http://www.unep.org/eou/Pdfs/Millennium%20Eco%20Assessment%20Report%20unedited.pdf> or from [http://www.unep.org/EOU/Reports/Environmental Assesment/MEA.asp](http://www.unep.org/EOU/Reports/Environmental_Assesment/MEA.asp)

annex III of decision VIII/15. **[(There was some question among some participants over the degree to which the MA establishes baselines on ecosystem services or on the status and trends in biodiversity.)]**

~~36.31.~~ The evaluations reviewed above recognize the ~~particular~~ value of national and sub-global MA-type assessments, particularly where they fully engage with local or national decision makers. The Millennium Ecosystem Assessment Toolkit provides selected examples of application of the MA framework for understanding and valuing ecosystem services at a range of scales. ⁶ At the same time, the evaluations also identified the difficulties in making links across scales. Future efforts may therefore need to be directed to facilitating the integration of data and information at different scales so as to assist future assessments in drawing on data and information from local sources and incorporating these into global assessments (upscaling).

~~37.32.~~ In addition to integrated national and sub-regional assessments and partial, thematic updates of data and information in specific areas through processes such as the Global Biodiversity Outlook and the Global Environment Outlook, there maybe a need for global MA-type assessments at regular intervals, perhaps every decade. These ~~future~~ integrated global assessments would provide a comprehensive picture of the processes driving changes ~~to~~ **in** biodiversity, describe the current status and trends of biodiversity and analyse the ecosystem services sustaining human livelihoods. The design of any future global assessment could usefully be informed by the experience gained, and the findings of, national and other sub-global assessments undertaken in the meantime, ~~and~~ **if** barriers to upscaling mechanisms could be overcome such global assessments would increasingly draw on data and information generated through national and sub-regional assessments.

abridged; continued

V. OPTIONS FOR IMPROVING THE AVAILABILITY OF BIODIVERSITY INFORMATION

~~40.35.~~ The Millennium Ecosystem Assessment has constituted a major effort to analyse and interpret data across scientific fields in a holistic way. It has made use of, and added value to, an abundance of available, but hitherto disconnected, scientific information, often through storylines. It has also pointed out uncertainties over, or gaps in, existing information. Through its multi-scale design it has attempted, on a pilot basis, to address the need for ecosystem information at all levels from local to global, thereby hoping to facilitate decision-making at each scale.

41. It would be useful if proposals requesting funding for biodiversity research include a plan for the maintenance and sharing of biodiversity data generated in the proposed project.

[(There was some discussion among participants about whether to include a sentence relating specifically to species and specimen data, along the following lines: “Promote that species and specimen level data and associated metadata that are generated in funded projects are made publicly available through mechanisms providing global access to these kinds of data, within a specified period after completion of the supported research”).]

~~42.36.~~ A major challenge for the MA was the fact that much data and information on biodiversity is fragmented, not easily accessible, exists in different formats or standards, or derived from different methods, and therefore cannot be easily integrated and compared. This makes it difficult to develop comprehensive analysis models to accurately determine the status and trends of biodiversity to guide policy analysis and decision-making.

[(Participants had questions about the context and purpose of the following paragraph and table in this document.)]

⁶ Millennium Ecosystem Assessment. A Toolkit for Understanding and Action. Protecting Nature's Services. Protecting Ourselves. Island Press, 2007. Accessible at: <http://www.islandpress.org/MAToolkit>

43.37. Table 1 below lists the components required for an effective biodiversity observation system and compares the existing elements with a scheme that would allow real-time access to a wide range of interconnected data sources. Such a decentralized approach **[(What is meant by “such a decentralised approach” – what approach?)]** may effectively leverage existing efforts in a variety of sectors and eventually allow integration of data and information across diverse disciplines and scales, while concomitantly offering services that respond to specific user needs.

Table 1: Components of a scaleable **[(In what sense is this scaleable?)]** biodiversity observation system

<i>Components of biodiversity observation system</i>	Primary biodiversity observation (ground-based and space-based; local to global)	Information exchange mechanisms (methods, protocols, formats, standards)	Meta-databases	Analysis, interpretation, value addition	Products defined by user needs
Existing system	Abundance of unlinked data from systematic surveys, sampling or various observation methodologies based on different methods and usually not easily accessible (e.g. data from individual pieces of research)	Lack of existing protocols for data/information exchange	Limited number of meta-databases on biodiversity data sets specifically designed along common standards	Assessments based on interpretation of a fraction of existing information (e.g. Millennium Ecosystem Assessment 2002-2005)	Maps, models, reports, assessments and scenarios derived from shallow [(what does this mean?)] information base (e.g. scenarios on policy options for the 2010 Biodiversity Target contained in GBO-2)
Development needs	<p>Mechanism to make biodiversity data available to the public while recognizing ownership of information, and assuring the scientific quality</p> <p>[(This does not relate to the header of the column. What do we really need as "primary biodiversity observation"?)]</p> <p><u>A systematic and planetary approach to surveys, sampling observations to describe the world's species, their genetics, their relationships and their ecological and economic importance. This will involve co-ordinated and long-term col-</u></p>	<p>Wider collaborative implementation of modern information exchange mechanisms through common methods, protocols, formats and standards (e.g. the Conservation Commons)</p> <p><u>Organize, link, and deliver biological information in an effective, efficient and economical way, in part through the adoption and use of shared procedures and criteria for setting priorities for data collection, archiving, and deletion; shared protocols and standards for data collection, description, archiving and access.</u></p>	<p>Coherent system for biodiversity information management</p> <p><u>[(What characteristics would such a "coherent system" possess?)]</u></p>	<p>Assessments based on interpretation of a broad range of data sets from various fields that are easily accessible [(what is an example of such an easily-accessible field?)], supporting evidence-based decision making (e.g. the Digital Earth model)</p>	<p>Maps, models, scenarios showing responses to specific questions derived from a broad information base</p> <p><u>[(There are many other ways of conveying information (e.g. film, cartoons, photographs, publicity campaigns and so on. What is needed is information provision to convey accurate and timely information on biodiversity and issues surrounding its conservation, wise use and loss.)]</u></p>

<i>Components of biodiversity observation system</i>	Primary biodiversity observation (ground-based and space-based; local to global)	Information exchange mechanisms (methods, protocols, formats, standards)	Meta-databases	Analysis, interpretation, value addition	Products defined by user needs
	<p><u>laborative work by natural and social scientists at a network of aquatic and terrestrial field sites across the globe. It will also require synchronised campaigns to assess distribution, status and trends of species and habitats, especially those of international interest, and the genetic diversity of species of conservation or economic importance.</u></p>				

44.38. Data integration efforts are currently hampered by:

- (a) Technology or data standards barriers;
- (b) Budgetary constraints;
- (c) Behavioural/cultural constraints;
- (d) Individual institutional policy barriers;
- (e) Legal barriers and the implications of Intellectual Property Rights.

[(There are also issues of scale, geographic projection, purpose, theme, inadequate metadata, boundary or location details, spatial coverage, sampling effort, sample size, resolution, accuracy, precision, existence of base maps, what form the data are in, copyright (not the same as intellectual property rights), ethical issues (for example, data collected for one purpose may be suitable for some other use for which it is not acceptable to collect data) and probably quite a few others.)]

45.39. Action is required to address all of these constraints. This requires a collaborative effort across many sectors. An example of growing collaboration is in access to and use of the valuable data which stems from space-based observation platforms. Consultations on the user needs for an Earth Observation System for the GEO societal benefit area on biodiversity, i.e. a Global Biodiversity Observation System, are currently under way; however a number of challenges remain.

46.40. Initial experience indicates that:

- (a) With 66 countries and the European Commission as well as 46 participating organizations the membership in the GEO process is less inclusive than that in the CBD or other biodiversity-related conventions and processes;
- (b) In participating countries, the Group on Earth Observations process is typically driven by ministries of research, science and technology and does not necessarily respond to the needs of ministries of the environment;

- (c) Needs, priorities, targets and approaches agreed within the Convention on Biological Diversity—or other biodiversity-related conventions—are not necessarily taken into account as guidance for the Group on Earth Observations consultation on biodiversity user needs;
- (d) To achieve the long-term goal of a Global Biodiversity Observation System, a broad consensus between the environment and research agendas, both at national and global level, is required.

[(This section V is entitled "options for improving the availability to SBSTTA of scientific information and advice on biodiversity". Both options and discussion could be better elaborated.)]

VI. CONCLUSIONS

47.41. The findings of the Millennium Ecosystem Assessment demonstrate that there is a need for a significant efforts and concerted action among ~~different~~ international institutions to ~~consider~~ **take into account** the full range of ecosystem services, including those for which no formal markets are established. They also underline the need for a much more coherent and sustained approach to enhancing institutional, scientific and technological infrastructures and capacities for cooperation on keeping the state of the environment under review and providing timely, accurate, credible, relevant and consistent environmental data and scientific advice on environmental governance. **[(In discussion on this, participants felt that the MA highlighted the need for swift and effective action, as well as further data and research.)]**

48.42. The wide interest in sub-global assessments under the Millennium Ecosystem Assessment and their relative success in engaging decision makers **[(The evaluations found evidence that SGAs were successful where they managed to engage with decision-makers, but were not able to present much proof of wider engagement.)]** suggest that there is value in supporting Millennium Ecosystem Assessment-type assessments at national and/or sub-regional level. These assessments should in their design take into account:

- (a) The need to engage stakeholders, including local and national decision makers, in the assessment and ensure the results are easily understood by non-specialists;
- (b) The particular value of MA-type assessments for capacity development among participants and stakeholders;
- (c) The need to ensure transparency in the results of biodiversity assessments and, wherever possible, access to the underlying data which support these assessments;
- (d) The need to ensure common data (or metadata) standards across assessments, along with the ability to scale the results from local to global analysis;
- (e) The need for dedicated efforts to communicating the process and findings of the assessment;
- (f) The strong potential of MA-type assessments and the MA conceptual framework to ~~effectively~~ function as a bridge to development and contribute to inclusion of biodiversity and ecosystem services in country development strategies and measures of human well-being;
- (g) The need to realize the substantial non-market benefits gained from sustainable ecosystem management;
- (h) The need to assess progress made towards ~~established~~ national and/or sub-regional environmental targets.

49.43. To ensure that data and information generated through such assessments, and those generated through other efforts, are systematically ~~being~~ made available for other analyses it is important to consider how to design and get support for a coherent biodiversity information management system. Such a system would greatly facilitate future regional and global assessments, which should be carried out at regular intervals. Its design should be linked to ongoing efforts in designing a coherent biodiversity monitoring information system.

[(The following table was added by the participants of the workshop.)]

verb	ES	Parties	SBSTTA	GEF	COP	§	action	§ cited	report
Invites	x	x				25	Use and disseminate the MA reports		
Requests	x					17	Bring MA findings to the attention of [relevant] conventions etc., explore options for joint activities	4	14
Requests	x					20	Help Parties to develop regional response scenarios	5	15
Requests	x					24	Use MA in preparing Global Biodiversity Outlook		15
Requests	x			x		8	Identify funds needed		
Requests	x		x			28	Help to evaluate MA, focusing on impact on implementation of the Convention		
Requests			x			21	Think about links between biodiversity and socio-economic issues	6	
Requests		x	x			22	Use lessons learned in the MA in EIA and the ecosystem approach	7	17
Encourages						16	Address these issues in other international conventions and regional processes		
Encourages						23	Conduct assessments along the lines of the MA, and invites agencies to fund	8	18
Encourages						26	Use MA methods and conceptual framework		
Urges		X				7	Take measures necessary to meet the 2010 target and the goals in VIII/30		
Urges		X				15	Promote dialogue to mainstream biodiversity and address link between economic activities and conservation and sustainable use		
Urges		X				18	Change unsustainable patterns of production and consumption		
Urges		X				19	Increase support for research		
decides					X	29	to consider the MA evaluation, and the need for another assessment	9	19-29
decides					X	30	to consider options for improving availability of scientific advice to SBSTTA	10	35-43

5 Global Biodiversity Outlook

Item 4.2. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/5: Global Biodiversity Outlook: Lessons Learned from the Preparation of the Second Edition of Global Biodiversity Outlook and Proposals on the Scope and Focus of the Third Edition**

Introductory Remark

Mr. Peter Herkenrath introduced the document UNEP/CBD/SBSTTA/12/5. In particular, he reported on the history of the elaboration of the first and second edition of the Global Biodiversity Outlook (GBO), highlighting their main contents, the guidance by COP, ways and means to communicate GBO 2, and on the analysis of the impact of GBO 2. He concluded with an overview of the intended basic structure and main contents for the forthcoming GBO 3 to be published in 2010. In addition to the suggestions in document UNEP/CBD/SBSTTA/12/5, Mr. Herkenrath also presented some initial ideas concerning the elaboration process of GBO 3.

Mr. Ben ten Brink presented results of a study for GBO 2, which elaborates on six solution-oriented options superimposed on one baseline scenario and offers conclusions and opportunities for the European policy arena. The results suggest that structural socioeconomic adjustments (on energy production and savings, wood production, consumption, and poverty alleviation) are unavoidable to reduce the current rate of biodiversity loss. However, solutions such as wood plantations, bioenergy and poverty alleviation will initially lead to substantial additional biodiversity losses, instead of decreasing it. The WTO scenario (liberalisation of agricultural markets) will result in large additional losses also, especially outside the OECD countries, for food production will shift from presently highly efficient areas towards cheap production areas in Sub-Saharan Africa and Southern America. As a result, huge natural areas will be converted. Solutions on a regional level and a smart combination of measures have to be found to halt biodiversity loss by 2010. Improving food production efficiency is crucial.

General Comment

The participants of the meeting discussed the suggestions for the third edition of the Global Biodiversity Outlook contained in document UNEP/CBD/SBSTTA/12/5, keeping in mind that the third edition will be particularly significant for the Convention and the 2010 Biodiversity Target, given that GBO 3 will be published in 2010. Some additional suggestions for the draft recommendations for SBSTTA and also the Ad Hoc Open-ended Working Group on Review of Implementation were developed, focusing in particular on the contents of GBO 3 and its usefulness for regional follow-up work. These are presented below in track changes to the suggested recommendations from document UNEP/CBD/SBSTTA/12/5. A number of additional suggestions were discussed for the preparation and communication of GBO 3; those are listed separately from the suggested recommendations for SBSTTA and WGRI and are aimed at supporting the Secretariat's work on a communication strategy and a work plan for GBO 3.

Document UNEP/CBD/SBSTTA/12/5:

Suggestions on the text:

GLOBAL BIODIVERSITY OUTLOOK

Lessons learned from the preparation of the second edition of Global Biodiversity Outlook and proposals on the scope and focus of the third edition

Note by the Executive Secretary

EXECUTIVE SUMMARY

abridged; continued

SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) may wish to:

(a) *Note* the progress made in preparing products that complement and strengthen the messages contained in the second edition of the Global Biodiversity Outlook, and

(b) *Request* the Executive Secretary

(i) to continue disseminating the second edition of the Global Biodiversity Outlook and future supplementary products to different audiences in all the regions;

(ii) to ensure that the third edition of the Global Biodiversity Outlook is based on the full set of the 2010 biodiversity indicators;

(iii) to ensure that the third edition of the Global Biodiversity Outlook, using appropriate scenarios,

• demonstrates the effects of halting biodiversity loss vs. business as usual on achieving the Millennium Development Goals;

• demonstrates the range of policy options in a timeframe up to 2050 that could halt biodiversity loss;

(iv) to ensure that the chapter on responses and solutions of the third edition of the Global Biodiversity Outlook becomes the most prominent part of the publication; and

(v) to ensure that the third edition of the Global Biodiversity Outlook is prepared as a model enabling the regions to initiate their own analyses, options and solutions.

The SBSTTA may also wish to recommend that the Conference of the Parties:

(a) *Urge* Parties and *invite* other Governments and organizations to make available relevant data on status and trends of biological diversity, progress in the implementation of the Convention including its Strategic Plan and lessons learned in carrying out actions designed to contribute to a significant reduction in the rate of biodiversity loss, including by timely submission of the fourth national reports.

(b) *Encourage* the regions to initiate their own analyses, options and solutions, based on the results of the third edition of the Global Biodiversity Outlook.

The Ad Hoc Open-ended Working Group on Review of Implementation may wish to:

(a) *Request* the Executive Secretary to prepare a work plan, communication strategy and financial plan for the development of the third edition of the Global Biodiversity Outlook and to make this available for comments by national focal points, the Informal Advisory Committee for Communication, Education and Public Awareness and other specialists before finalizing it;

(b) *Request* the Executive Secretary to continue collaborating with other biodiversity-related conventions and other relevant processes and organizations and to engage them in the preparations of the third edition of the Global Biodiversity Outlook as appropriate and in accordance with their respective agendas.

The Ad Hoc Open-ended Working Group on Review of Implementation may also wish to invite the Conference of the Parties to:

(a) *Urge* Parties and *invite* other Governments and donors to make timely financial contributions for the preparation and production of the third edition of the Global Biodiversity Outlook and ancillary products in accordance with the work plan and financial plan for the preparation of the third edition of the Global Biodiversity Outlook as well as the communication strategy, the scope and format for the third edition of the Global Biodiversity Outlook contained in Section V of this note. **These financial contributions should also provide for the development of the full set of the 2010 biodiversity indicators through the 2010 Biodiversity Indicators Partnership.**

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Additional Suggestions for the Third Edition of the Global Biodiversity Outlook

The meeting felt that the following aspects should be considered part of the **communication strategy and/or work plan** for the third edition of the Global Biodiversity Outlook.

- Ensure a substantially increased budget for preparation, publication and communication of GBO 3, in order to deliver reliable data that informs effective responses.
- Gain sufficient support for specific satellite products of GBO 3 from related organizations and sectors, *e.g.* from the private sector for private sector-specific products.
- Ensure sufficient support is available for Parties, in particular from developing countries, countries with transition economies and Small Island Developing States, to communicate GBO 3 at the national level.
- Learn lessons from the Intergovernmental Panel on Climate Change (IPCC) regarding its use of models, scenarios and examples/case studies for communication and outreach.
- Use graphs and figures for the best possible communication of the contents of GBO 3.
- Organise a photo competition and a poster competition. Both competitions should provide material for GBO 3 and offer prizes.

- Use the Clearing-House Mechanism to disseminate the results of the competitions.
- Invite scientists from all over the world to take part in the peer review of the draft GBO, including the summary for policy-makers, improving accuracy and acceptance by the scientific community.
- Publish GBO 3 in all official languages of the United Nations sufficiently early before COP 10, providing plenty of time for communicating the key messages of GBO 3.
- Publish the three main sections of GBO 3 on status and trends, impact on people, and on responses and solutions, separately, learning from the publication schedule of the Intergovernmental Panel on Climate Change (IPCC).
- Ensure that GBO 3 is made available to and relevant for the High Level Segment of COP 10.
- Launch GBO 3 by a prominent person (*e.g.* Bill Clinton, Michael Gorbachev, David Attenborough, or Rowan Atkinson).
- Produce a movie that is a biodiversity equivalent of *The Inconvenient Truth*. Parties and organizations should be encouraged to ensure a wide dissemination of the movie, through, for example, free distribution of an educational DVD to schools or via magazines and newspapers, supported by flyers encouraging action for biodiversity.

6 Biodiversity and Climate Change

Item 5.1. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/7: Biodiversity and Climate Change: Proposals for the Integration of Climate Change Activities within the Programmes of Work of the Convention, Options for Mutually Supportive Actions Addressing Climate Change within the Rio Conventions and a Summary of the Findings of the Global Assessment on Peatlands, Biodiversity and Climate Change**

Introductory Remark

Mr. Heikki Toivonen introduced the document UNEP/CBD/SBSTTA/12/7. Introductorily, he presented the latest IPCC global climate scenarios, projected temperature and precipitation changes in Europe until 2080, and some of the probable impacts of climate change on biodiversity, e.g. differences in ecosystem vulnerability in Europe. Mr. Toivonen recalled the latest decisions of the COP (VII/15 and VIII/30) as well as some implications of climate change for the management and design of protected areas, one of the emerging issues when talking about impacts of climate change.

General Comment

The document UNEP/CBD/SBSTTA/12/7 contains useful information for the integration of climate change considerations in the implementation of the programmes of work as well as for the integration of climate change impacts and response activities into programmes of work themselves. However, with regard to proposals for guidance on how to integrate concerns related to climate change impacts and response activities into the Programmes of Work, participants felt that more guidance was needed from the Secretariat in order to be able to respond adequately to the request in Decision VIII/30 (para. 8) and look forward to receive such guidance during SBSTTA-12. In case this is not possible, it might be necessary to postpone the discussions until SBSTTA-13. For that reason a recommendation to the Executive Secretary on this issue was included between brackets.

The participants at the meeting also felt that the information contained in document UNEP/CBD/SBSTTA/12/7 (§43-§46) does not provide enough guidance to SBSTTA-12 to respond by COP-9 to the requests in Decision VIII/2 (10) to develop proposals and a progress report on the incorporation of climate change considerations in the programme of work on dry and sub-humid lands. It would be necessary to receive further information from the Executive Secretary by SBSTTA-13 in order to be able to respond adequately at COP-9.

The participants at the meeting felt that it is important to clearly separate on the one hand the integration of climate change considerations into the national implementation of the programmes of work and on the other hand the integration of climate change considerations in programmes of work themselves. Similarly, it should be distinguished between the impacts of climate change on biodiversity on the one hand, and the

impacts of response activities on biodiversity on the other. This is reflected in the structure of the revised recommendations.

Chapter III on mutually supportive activities for the Secretariats of the Rio Conventions etc. does not contain options for actions in its current state. The participants look forward to receiving the report of the forthcoming meeting of the Joint Liaison Group containing options for mutually supportive activities.

Co-operation with the Rio Conventions and other biodiversity related Conventions at all levels is important in order to take biodiversity considerations into account in climate change response activities. Therefore some recommendations on this item are added here:

- **Avoided deforestation:** As this issue is dealt with by the SBSTA of the UNFCCC, we feel that it is important that the CBD SBSTTA collaborates with UNFCCC SBSTA within the “UNFCCC process to consider ways and means to reduce emissions from deforestation in developing countries.”
- **The Issue-Based Modules for Coherent Implementation of Biodiversity Conventions developed by UNEP:** these have been acknowledged in Decision VIII/30. In particular the Issue-Based Module on Biodiversity and Climate Change provides a structured overview of national obligations and commitments with regards to biodiversity and climate change as adopted by the Rio Conventions as well as several other biodiversity related conventions. This aims at facilitating implementation of mutually supportive actions at international and national levels.

The knowledge base for the integration of biodiversity considerations in climate change response activities should be enhanced, in order to better support decisions on this matter. The participants made some suggestions in the recommendations regarding this.

Some new and emerging issues on the issue of climate change and biodiversity may be important in the future work of SBSTTA:

- Acidification of oceans and its impacts on many marine ecosystems
- Role of protected areas and ecological networks in the climate change response activities and the implications of climate change impacts to the design and management of protected areas
- Changes in the genetic diversity caused by the climate change and other main stressors to biodiversity.
- The susceptibility of monocultures and genetically depauperate populations to climate change.
- Changed ecology of pathogens as a result of climate change leading to increased susceptibility to new and emerging diseases.

Document UNEP/CBD/SBSTTA/12/7:

Suggestions on the text:

BIODIVERSITY AND CLIMATE CHANGE

Proposals for the integration of climate change activities within the programmes of work of the Convention, options for mutually supportive actions addressing climate change within the Rio Conventions and a summary of the findings of the Global Assessment on Peatlands, Biodiversity and Climate Change

Note by the Executive Secretary

EXECUTIVE SUMMARY

abridged; continued

SUGGESTED RECOMMENDATIONS

10. The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) may wish to recommend that the Conference of the Parties:

(a) *Encourage* Parties to enhance the integration of **concerns regarding** climate change impacts **on biodiversity within national implementation of the Convention as well as the integration of biodiversity considerations into climate change** and response activities ~~within national implementation of the Convention;~~

(b) *More specifically, encourage* Parties to

(i.) identify vulnerable regions, sub-regions and ecosystem types including vulnerable components of biodiversity within these areas and assess the threats and likely impacts of climate change on biodiversity, **taking into account *inter alia* information provided under 2.2, 2.3 and annex 1 of UNEP/CBD/SBSTTA/12/7, and take appropriate actions to address these threats and likely impacts of climate change in the conservation and sustainable use of biodiversity,**

(ii.) ~~identify climate change adaptation and mitigation options, evaluate their impacts~~ **of climate change response activities** on biodiversity, and **integrate biodiversity considerations in the implementation and monitoring of the response activities** ~~the selected adaptation and mitigation plans following the guidance proposed in section II of this note~~ **taking into account *inter alia* information provided under 2.4 and 2.5 of UNEP/CBD/SBSTTA/12/7,** especially in those regions, sub-regions and ecosystem types which are particularly vulnerable to the impacts of climate change and / or play an important role in climate change mitigation and adaptation;

(c) **Integrate concerns regarding climate change impacts and response activities on biodiversity into future in-depth reviews of the thematic and cross-cutting programmes of work under the Convention,**

(d) **Reiterate that avoided deforestation provides opportunities for multiple benefits for biodiversity and reducing greenhouse gas emissions and request the Executive Secretary to convey**

this message to the COP of the United Nations Framework Convention on Climate Change to participate in the process in the UNFCCC on reducing emissions from deforestation in developing countries in order to ensure that issues of conservation and sustainable use of biodiversity are adequately taken into account.

(e) **Request SBSTTA, recalling UNFCCC decision 13/CP.8 on enhanced cooperation between the Rio Conventions and taking into account the high importance of this issue for biodiversity, to collaborate with SBSTA of the UNFCCC within the UNFCCC process towards reducing emissions from deforestation in developing countries, in order to ensure that issues of conservation and sustainable use of biodiversity are adequately taken into account.**

(f) **Encourage Parties and organizations to make use of the UNEP Issue-Based Module on Climate Change and Biodiversity when developing and implementing mutually supportive activities with regard to biodiversity and climate change at national and international level.**

(g) **Invite Parties, other governments, relevant organizations and research institutions to enhance the methodology and the knowledge needed to integrate biodiversity considerations in climate change response activities, such as baseline information, scenarios, potential impacts on and risks to biodiversity, and resilience of ecosystems and species populations.**

(h) **Recognize the importance of peatlands in the global carbon cycle and the potential of peatland conservation and sustainable use as a cost-effective tool for the mitigation of and adaptation to climate change, request the Executive Secretary to convey this message to the COP of the UNFCCC and welcome Request Parties, other Governments and relevant organisations to take note of the findings of the global Assessment on Peatlands, Biodiversity and Climate Change undertaken by Wetlands International and the Global Environment Centre.**

(i) **Furthermore, urge Parties, other Governments and relevant organisations to take and consider, as appropriate, taking actions, as appropriate, such as the ones listed in paragraph 74 75 of UNEP/CBD/SBSTTA/12/7 [(rather refer to the relevant actions in the Peatlands Assessment, when available)] that could contribute to the conservation and sustainable use of peatlands and their positive contributions to climate change mitigation and adaptation.**

[11. SBSTTA requests the Executive Secretary, recalling decisions VIII/30 (paragraph 8) and VIII/2 (paragraph 10), to develop draft guidance for consideration at SBSTTA-13 on how to address concerns regarding climate change impacts and response activities on biodiversity in the programmes of work of the Convention when conducting their in-depth review.]

12. SBSTTA may wish to recommend to SBSTTA-13, when reviewing the Programmes of Work on agricultural and forest biodiversity, to develop proposals to address concerns regarding climate change impacts and response activities on biodiversity in the Programmes of Work, taking into account *inter alia* the information provided in paragraph 36 of UNEP/CBD/SBSTTA/12/7.

I. INTRODUCTION

abridged; continued

II. PROPOSED GUIDANCE ON THE INTEGRATION OF RELEVANT CLIMATE CHANGE IMPACTS AND RESPONSE ACTIVITIES INTO THE PROGRAMMES OF WORK OF THE CONVENTION

19.47- Relevant climate change impacts and response activities include, in general, activities that respond to the threats from climate change to the achievement of the goals of the Convention, and in particular, the activities of the programmes of work. Examples of threats are presented in Annex 1.

2.1 General Guidance

abridged; continued

2.2 Guidance on the programmes of work

abridged; continued

Agricultural biodiversity

38.36. In order to fill the identified gaps, the Conference of the Parties may wish to revise the programme of work during the in-depth review of implementation considering options for requests to:

- i. the Executive Secretary, in collaboration with the Food and Agricultural Organization and other relevant organizations, to identify agricultural biodiversity which can contribute to climate change adaptation in agricultural areas, especially within vulnerable regions, so as to assist Parties to integrate such biodiversity into climate change planning.
- ii. Parties to document observed impacts, consider the projected impacts of climate change on agricultural biodiversity, and use the information in cross-sector planning in agricultural areas.
- iii. the Executive Secretary, in collaboration with partners and relevant organizations, to compile information on the impacts of climate change on livestock, food and nutrition, pollinators and soil biodiversity and to develop proposals on options for adaptation taking into account ongoing initiatives, **as well as potential negative impacts of such adaptation measures on biodiversity.**

abridged

7 Biodiversity of Dry and Sub-Humid Lands

Item 5.2. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/8: Biodiversity of Dry and Sub-Humid Lands: Guidance on Strengthening the Assessment of the 2010 Biodiversity Target and Proposals for Land Use Options that Promote Biodiversity and Generate Income for Indigenous and Local Communities**

Introductory Remark

Ms. Mariam Akhtar-Schuster introduced document UNEP/CBD/SBSTTA/12/8 and some proposals for changes in the document, which were discussed by the participants in plenary. Ms. Caterina Wolfangel presented some examples of IUCN's work on drylands in Africa emphasising the linkage between poverty, land degradation and biodiversity as well as promoting a new paradigm – the 'hidden wealth of drylands'.

Document UNEP/CBD/SBSTTA/12/8:

Suggestions on the text:

BIODIVERSITY OF DRY AND SUB-HUMID LANDS

Guidance on strengthening the assessment of the 2010 biodiversity target and proposals for land use options that promote biodiversity and generate income for indigenous and local communities

Note by the Executive Secretary

EXECUTIVE SUMMARY

1. In paragraph 11(a) of decision VIII/2 on the biological diversity of dry and sub-humid lands, the Conference of the Parties to the Convention on Biological Diversity requested the Executive Secretary to provide, **in collaboration in particular with the United Nations Convention to Combat Desertification and taking into account the findings and lessons learned from the Millennium Ecosystem Assessment,** guidance on strengthening the assessment of the 2010 targets and to provide proposals for land use options that promote biodiversity and generate income for indigenous and local communities.

2. In response, the Executive Secretary prepared the present note containing proposals on: (i) existing sources of information and projects, programmes and processes generating such information for a comprehensive global-level assessment of the status and trends of dry and sub-humid lands biodiversity, including baseline information needed for assessing trends of biodiversity within the framework of the 2010 targets and proposing cost-effective ways to fill remaining gaps; (ii) how to review ongoing and planned assessments in dry and sub-humid lands and facilitate the application, within these assessments, of indicators adopted in decision VII/30; and (iii) land-use options that promote biodiversity and generate income for indigenous and local communities, particularly options for transboundary and community-based natural resource management.

3. A review of existing assessments indicated that a comprehensive global-level assessment could be conducted for three of the ~~eighteen-seventeen~~ indicators adopted by the Conference of the Parties in Annex II of decision VIII/15: (i) trends in extent of selected dry and sub-humid lands, (ii) change in the status of threatened dry and sub-humid lands species, and (iii) trends in invasive alien species in dry and sub-humid lands. A partial global-level assessment could be conducted for an additional four indicators^{1,2}. Baseline data exists for these indicators but there is a need to identify the baseline year and establish a process for **long-term** monitoring and reporting on trends based on the selected baseline.

4. Information is insufficient to conduct a global-level assessment of ten indicators. It is proposed that the lack of relevant information on these ten indicators **can be solved** ~~be addressed~~ in a cost-effective manner as follows:

- i. For four indicators³ a geographic overlay could be applied. ~~This approach consists of the development of geo-referenced dataset on dry and sub-humid lands to be overlain on relevant geo-referenced indicators datasets.~~
- ii. For an additional four indicators⁴, bridge files could be used to link datasets on dry and sub-humid lands to data in common with the selected indicator.
- iii. For the two remaining indicators⁵, significant additional work is required to collect the necessary data.

5. With regards to land-use options that promote both income generation and biodiversity conservation and, where relevant, integrate transboundary and/or community based natural resource management, a review was conducted of forty-eight case studies and good practice examples provided by Parties in response to Notification 2006-037 and identified through a literature review conducted by the Secretariat. Main lessons from the review of transboundary natural resource management and community based natural resource management include the need for: stakeholder participation and appropriate partnerships, secure user rights, clear conflict-resolution mechanisms, improved environmental governance and institutional capacity, and transparent decision-making. From this review ~~three~~ **a number of** categories of land use options **were identified** ~~were proposed for scaled-up implementation of the programme of work on the biological diversity of dry and sub-humid lands: (i) tourism, (ii) sustainable harvesting of high value wild species and (iii) sustainable agriculture and pastoralism.~~

SUGGESTED RECOMMENDATIONS

6.7. In the light of the limited availability of data and information on dry and sub-humid lands as identified in decision VIII/2, the ~~The~~ Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) may wish to

request the Executive Secretary, recalling in particular decision VIII/2 paragraph 5, to liaise with relevant partners on activities necessary to fill gaps in information and data related to establishing baselines prior to the assessment of the achievement of the 2010 target, bearing in mind the additional resources required to fill such gaps.

1 Incidence of human-induced ecosystem failure in dry and sub-humid lands, dry and sub-humid lands biodiversity used in food and medicine, trends in abundance and distribution of selected dry and sub-humid lands species, and coverage of protected areas in dry and sub-humid lands.

2 The indicator 'marine trophic index' is not considered in this document since it is not relevant for dry and sub-humid lands.

3 Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance, area of forest, agricultural and aquaculture ecosystems under sustainable management, water quality in wetlands located in drylands, and health and well-being of communities who depend directly on local ecosystem goods and services

4 Nitrogen deposition, ecological footprint and related concepts, status and trends of linguistic diversity and number of speakers of indigenous languages, and official development assistance provided in support of the Convention.

5 Connectivity/fragmentation of ecosystems, and the proportion of products derived from sustainable sources

7. The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) may wish to recommend that the Conference of the Parties:

(a) **Requests the Executive Secretary to strengthen collaboration on assessments of status and trends in dry and sub-humid lands** ~~Endorse the two proposals on (i) information and projects, programmes and processes generating such information, for a comprehensive global level assessment of the status and trends of dry and sub-humid lands biodiversity (contained in Section II of this note) and (ii) land use options that promote biodiversity and generate income for indigenous and local communities (in Section III of this note).~~

- i. **with the Secretariat of the United Nations Convention to Combat Desertification, recalling that assessments is one of the three elements of the joint programme of work agreed on by the Secretariats of the two Conventions (see UNEP/CBD/COP/7/INF/28).**
- ii. **with the Secretariat of the United Nations Framework Convention on Climate Change giving due consideration to climate change related issues, recalling decision VIII/2 paragraph 11 d.**

(b) **Invites relevant organizations and donor agencies to support activities related to sustainable land use options, including those suggested in section III, and where appropriate involving private sector and public private partnerships, that promote biodiversity and generate income for indigenous and local communities.** ~~Request the Executive Secretary, in collaboration with relevant partners, to undertake, prior to the assessment of the achievement of the 2010 target, the proposed activities to fill assessment gaps and information on baselines bearing in mind the additional resources required to fill such gaps.~~

(c) ~~Takes note of the lack of a common definition of dry and sub-humid lands and requests the Executive Secretary to work with relevant collaborators, **in particular with the Secretariat of the United Nations Convention to Combat Desertification,** to clarify the areas under question with a view to harmonizing the delineation of dry and subhumid lands.~~

I. INTRODUCTION

abridged; continued

II. PROPOSALS ON BIODIVERSITY-RELATED ASSESSMENTS IN DRY AND SUB-HUMID LANDS

abridged; continued

~~14.12.~~ This methodology is intended to identify how planned and existing assessments contribute to the comprehensive global-level assessment of the indicators identified in Annex ~~4II~~ to decision VIII/~~30~~**15**. The methodology is also intended to contribute to the effectiveness of planned and existing assessments in terms of identifying key considerations from assessment design and implementation.

abridged; continued

16.14. Baseline data already exists for these indicators although there remains a need to identify the baseline year **or preferable period** and establish a process for monitoring and reporting on trends based on the selected baseline. It should also be noted that the exact delineation of dry and sub-humid lands has not yet been resolved. While this may have a minimal impact on the accuracy of the global level assessment, for regional, sub-regional and national planning, the lack of clear delineation may be a serious impediment to the establishment of a clear baseline.

abridged; continued

Gaps in scale

31.29. Information is available in various assessments identified in National Reports and the in-depth review of implementation at the national / sub-regional level but not at a global level for indicators on (i) the proportion of products derived from sustainable sources and (ii) for the regional databases within the indicator on biodiversity used in food and medicine.

32.30. A data management system to facilitate online contributions by Parties could enable the collection and analysis of national and sub-regional information including information provided through National Reports. Such a data management system **should be part of** ~~could be similar in format to the Biodiversity Clearinghouse Mechanism⁶~~ **and seek to include and continuously update relevant information from other sources.** ~~which addresses differences in criteria, definition and data formats. The main characteristics of the Clearinghouse Mechanism include:~~

- ~~• Compatible with different levels of national capacity~~
- ~~• Needs driven~~
- ~~• Structurally decentralized~~
- ~~• Provides access to information~~
- ~~• Supports decision making~~
- ~~• Has no vested interest in controlling the expertise or information~~
- ~~• Created for the mutual benefit of all Parties and other stakeholders~~

33.31. Key factors to the success of the implementation of the above approach include:

- ~~• The identification of an organization to house the aggregate data.~~
- Party participation in the development of the data management system.
- Strong commitments from Parties, other governments ~~and~~, relevant organizations **and the private sector** to contribute relevant data to the data management system.

III. PROPOSALS ON LAND-USE OPTIONS COMBINING INCOME GENERATION AND BIODIVERSITY CONSERVATION IN DRY AND SUB-HUMID LANDS

abridged; continued

37.35. Of the above land use options:

- the establishment of national parks and other protected areas **can in some cases be used by indigenous people and local communities as a basis for income generating,** ~~and wildlife watching and other tours can both be aspects of~~ *tourism activities,*
- gathering **of** medicinal plants, the use of biodiversity resources for crafts, and the exploitation of non-timber forest products **can in some cases be used by indigenous people and local communities for generating income through** ~~are all aspects of~~ *sustainable harvesting of high-value wild species,* and

⁶ <http://www.biodiv.org/chm/>

- agriculture, agroforestry, herding, marketing of indigenous crop varieties, and the domestication of dry and sub-humid plants **can in some cases be used by indigenous people and local communities for generating income from** are all aspects of *sustainable agriculture / pastoralism*.

abridged; continued

Tourism

[(The participants of the workshop recommend to delete the rest of the text concerning preferred land use options as it contains only a limited number of case studies but no evidence of balanced representativeness.)]

abridged

8 Biodiversity and Liquid Biofuel Production

Item 5.3. of the provisional agenda

- **Document UNEP/CBD/SBSTTA/12/9: New and Emerging Issues Relating to the Conservation and Sustainable Use of Biodiversity: Biodiversity and Liquid Biofuel Production**

Introductory Remark

Mr. Stefan Leiner introduced the document UNEP/CBD/SBSTTA/12/9 on the new and emerging issue of biodiversity and liquid biofuel production focussing on the suggested recommendations. In addition, Mr. Uwe Fritsche provided background information on the development of sustainability standards and criteria for biomass production.

General Comment

The participants of the workshop recognised the high quality of the Document prepared by the Executive Secretary. The participants agreed to:

- broaden the scope of the document which is currently focussing on liquid biofuel production in order to capture for little additional effort the whole issue of biomass production (the share of biofuel production in biomass production is only 5% and the impacts on biodiversity are alike).
- significantly strengthen the recommendations.
- Strengthening the importance of parties developing coherent policy frameworks for biomass production within which biodiversity can be conserved and sustainably used.
- Emphasize the special responsibility of the CBD in the development of sustainability standards for bioenergy production, acting as an international reference point for biodiversity-related aspects related of the production and consumption of biomass.
- SBSTTA should decide whether it advises COP to agree on biodiversity sustainability standards or to agree on biodiversity principles for sustainability standards to be used in the development of sustainability standards by others. The recommendation sets out the intersessional work necessary to achieve the latter but not yet for the former.
- Given the current dynamics of developments in this field, the participants suggest to request the Executive Secretary to broaden the knowledge base in order to inform the further discussion at COP-9.

Document UNEP/CBD/SBSTTA/12/9:

Suggestions on the text:

**NEW AND EMERGING ISSUES RELATING TO THE CONSERVATION AND SUSTAINABLE
USE OF BIODIVERSITY**

Biodiversity and ~~bioenergy liquid biofuel production~~

Note by the Executive Secretary

EXECUTIVE SUMMARY

[(Note: Text is inconsistent, referring to liquid biofuels or biofuels alternatively.)]

Pursuant to its mandate in paragraph (d) of appendix A to annex III of decision VIII/10, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) will be considering new and emerging issues relating to the conservation and sustainable use of biodiversity. In a meeting held by teleconference on 22 September 2006, the SBSTTA Bureau identified, among other issues, the interlinkages between biodiversity and liquid biofuel production as a new and emerging issue for consideration by SBSTTA at its twelfth meeting. The present note, prepared to facilitate the work of SBSTTA, summarises information from literature and from a 6-week electronic forum organised from 29 January 2007.

In recent years, the production of liquid biofuels has been increasing worldwide mainly in an efforts to ~~mitigate greenhouse gas (GHG) emissions and for~~ **improve economic trade balance, enhance** greater energy security **and mitigate greenhouse gas (GHG) emissions**. The main biomasses used to produce liquid biofuels are sugar cane, grain corn **and rapeseed, palm and soya oil for biodiesel**, and, still in an experimental phase, second-generation feedstocks such as cellulosic materials for bioethanol **and synthetic diesel**, ~~and rapeseed and palm oil for biodiesel~~. The fuel yields, net energy balance, GHG emissions reduction and production costs vary according to the biomass used, the production means, the production sites and the markets. The fuel yields, net energy balance and GHG emissions reduction are generally highest for sugar cane and palm oil whereas production costs are lowest for sugar cane. **Second-generation c**ellulosic feedstocks ~~seem to~~ have even greater yield, net energy balance and GHG emission reduction potentials.

Bioenergy can be used for electricity, heat and transport fuels. Amongst these types of bioenergy, biofuels for transport derived from first generation feedstocks have a less favourable net GHG balance and a higher overall environmental impact than solid or second generation biomass used for electricity and heat generation.

Many reports indicate that large-scale production of liquid biofuel can contribute to the reduction of GHG emissions but, **in particular 1st generation biofuels** can also have significant adverse impacts on biodiversity, including *inter alia* habitat fragmentation and degradation, increased GHG emissions from degraded carbon sinks and deforestation, water pollution and eutrophication, and overexploitation caused by land conflicts and increase in food prices. For example,

(a) The use of natural lands, such as wetlands and natural forests, for biofuel production is reported as an important threat to biodiversity through the loss of habitats, their biodiversity components and the loss of essential ecosystem services. The use of natural lands can also contribute to GHG emissions caused, for example, by deforestation and the degradation of peatlands and soil carbon sinks. **Marginal lands for agriculture and forestry may be of particular importance for biodiversity.**

(b) The need for fertile agricultural land to produce biofuels may result in land conflicts and increase in food prices which affect indigenous and local communities and small-holder farmers, forcing them to rely more heavily on food from the wild and/or clear additional lands for agriculture.

(c) The increased use of water due to agricultural expansion and water pollution caused by biomass conversion processes can also result in biodiversity loss.

Nevertheless, depending on the land use change and the biomass considered, **biomass-biofuel** production can also have beneficial impacts on biodiversity. For instance, displacing **intensively managed** annual crops with **more extensively managed** perennial grassy crops or restoring **selected types of** degraded lands [(Note: This term needs to be defined according to FAO definitions)] with **appropriate vegetation** ~~tree plantations~~ could lead to greater ~~animal~~ biodiversity and reduce pesticide, **water** and net fertilizer use, **reduce erosion. Similarly, agroforestry and multi-or mixed-culture cropping schemes could increase agro-biodiversity and provide a reservoir for pollinators. Biomass including second generation biofuels could be produced from organic residues and waste – both from agriculture (e.g. straw, manure) and forestry (e.g. trimmings and harvesting residues) as well as from downstream processing (e.g. food and wood industry), having benefits for, for example, water quality.**

Options for promoting sustainable biofuel production **and consumption of biomass** exist. They include: (i) the application of **mandatory and/or voluntary** guidelines and standards ~~in the framework of the ecosystem approach~~; (ii) the application of biodiversity inclusive guidelines on environmental impact assessment and strategic environment assessment; (iii) the development of sound policy frameworks **applying the ecosystem approach** that contribute to both GHG emission mitigation and the conservation and sustainable use of biodiversity; **(iv) commitments of the private sector to demonstrate and ensure effective GHG reductions and biodiversity conservation and sustainable use**, and (iv) the promotion of research to improve the economy and yields of energy biomass, **better understand and reduce the impact of its production and use on biodiversity**, and develop the technologies for the second-generation feedstocks and other materials such as wastes.

To date, there are not yet comprehensive analyses, including the socioeconomic and the environmental impacts, of the **full life cycle** ~~complete line~~ of production from planting to the use of **biomass biofuels**. Therefore, the precautionary approach is recommended especially where and when data is not sufficient for decision making.

The Convention on Biological Diversity, as the key instrument in supporting the conservation and sustainable use of biodiversity (WSSD PoI), should act as an international reference point as regards biodiversity-related aspects related to the production and consumption of biomass by *inter alia*:

(a) **developing relevant guidance to parties, other governments, international organisations, the private sector and other stakeholders on how to minimise negative and enhance positive impacts on biodiversity.**

(b) **contributing to the enhancement of the knowledge base on this important, emerging and rapidly developing topic through the promotion of research and the provision, compilation and sharing of relevant information and experiences.**

SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties:

1. Recognises that, depending on the feedstock used, the management practices, the land use change, and energy processes

a) production and consumption of biomass and in particular second-generation biofuels can have positive effects for biodiversity such as:

- contributing to the reduction of GHG emissions
- supporting biodiversity locally through a conversion to a less intensive production, greater diversity of feedstocks, and reduction of pesticide and net water and fertilizer use
- contributing to the sustainable use of biodiversity in low-input and biodiversity-rich agricultural land and forests
- increasing the income-base for farmers and forest owners
- cost-effective control of invasive alien species

b) production and consumption of biomass and in particular first generation biofuels can have significant adverse effects for biodiversity such as:

- the loss, fragmentation and degradation of valuable habitats such as natural and semi-natural forests, grasslands, wetlands and peatlands, their biodiversity components and the loss of essential ecosystem services
- land conflicts and increase in food prices which could affect food security, and affect indigenous and local communities and small-holder farmers, forcing them to rely more heavily on food from the wild and/or clear additional lands for agriculture
- increased shortage of water, water pollution and eutrophication, soil degradation and erosion due to agricultural expansion and intensification
- contributing to an increase of GHG emissions, for example, by deforestation and the degradation of peatlands and other soil carbon sinks, or the increased use of energy in the production of fertilisers, transportation and processing
- introduction and spread of potentially invasive alien species and GMOs.

2. Requests Invites-Parties and invites other Governments to develop a sound policy framework for the biofuel production and consumption of biomass based on the following principles:

- maximisation of options that contribute to both GHG emission mitigation and the conservation and sustainable use of biodiversity
- effective measures to reduce energy consumption and combat climate change (the use of biomass should aim at replacing non-renewable energy, not add to energy consumption)
- land use planning aimed at conserving valuable habitats and delimitating those areas from which bioenergy production must be excluded and/or those which are suitable for the production of biomass including biofuel feedstocks
- identification and promotion of best agriculture and forestry practices and the appropriate plant species to be used

- application of the ecosystem approach
- application of Strategic and Environmental Impact Assessments using the CBD guidelines (see UNEP/CBD/COP/8/27/Add.2, Annex II)
- application of the precautionary approach
- safeguarding food security, good socio-economic conditions and land tenure, in particular of indigenous and local communities.

[(Alternative 1)]

3. Requests Invites Parties and **invites** other Governments, **relevant international organisations, and the private sector** to encourage the development and **apply** application of guidelines and standards within the framework of the ecosystem approach and take into account the precautionary approach to reduce **aimed at effectively promoting the positive and effectively avoiding** the negative impacts **mentioned in para 1 of the production and consumption of biomass** liquid biofuel production on biodiversity.

These standards and guidelines should contain the following elements:

- **minimum GHG saving thresholds ensuring substantial net positive GHG balance in the whole production, transport and consumption chain**
- **ensuring the integrity of high biodiversity value habitats such as natural forests, peatlands, wetlands, natural floodplains, permanent grasslands and other important habitats for threatened species**
- **effectively address the issue of leakage**
- **guaranteeing the maintenance or enhancement of biodiversity, integrity of water quality and supply and the maintenance or enhancement of soil quality**
- **preventing the spread of invasive alien species**
- **ensuring the safe transfer, handling and use of living modified organisms according to the provisions of the Cartagena Protocol**
- **ensuring food security and livelihoods of indigenous and local communities**

[(Alternative 2)]

3. Adopts the following international standards for biodiversity conservation and sustainable use in biomass production and consumption:

[(... to be developed, elaborating on or in line with the principles listed above)]

4.3. *Requests* the Executive Secretary to

- compile **relevant information on the actual and potential impacts of the production and consumption of biomass on biodiversity and related socio-economic issues from Parties, other governments and other sources along the full life cycle of biomass,** in collaboration with relevant organisations, socioeconomic and ecological information from Parties, other governments and other sources along the full line of production of liquid biofuels,
- **carry out a** and use the information for comprehensive assessments of the possible impacts of the production **and consumption of biomass** of liquid biofuels on biodiversity,

- effectively disseminate relevant information on the CBD CHM.
- and the contribution to the greenhouse gas emission reduction.

5.4. Invites Parties and other governments to engage in a dialogue with the private sector in view of promoting the development and application of standards and guidelines to avoid the negative impacts of the production and consumption of biomass on biodiversity.

6.5. Urges Parties, invites other governments, relevant international organisations, major groups... and requests SBSTTA to improve the knowledge base and promote ~~Promotes~~ research on:

- further understanding the impacts on biodiversity of different ways and means to produce, consume and regulate the production and consumption of biomass (e.g. types of feedstocks, types of agricultural and forestry practices, land use options, standards setting and certification, government incentives and regulations, private sector commitments)
- identify best practice to promote positive and mitigate negative impacts of the production and consumption of biomass on biodiversity
- , especially regarding the promote the development and use of those second-generation feedstocks, that will improve the socioeconomics and yields of biomass while preventing biofuels and decrease the negative impacts on biodiversity, if any.

7. Invites UNFCCC to develop an internationally agreed methodology to measure life-cycle carbon benefits of biomass

The Subsidiary Body on Scientific, Technical and Technological Advice may also wish to

1. Request the Executive Secretary to

a. compile relevant information on the actual and potential impacts of the production and consumption of biomass including liquid biofuels on biodiversity and related socio-economic issues from Parties, other governments and other sources along the full life cycle of biomass including liquid biofuels,

b. organise, subject to the availability of financial resources, in collaboration with relevant organisations and the private sector, an international scientific conference on the impacts of the production and consumption of biomass including biofuels on biodiversity

c. submit this information for consideration at COP9 and effectively disseminate this information at the CBD CHM

d. inform the members of the Joint Liaison Group of the Rio-Conventions of this work and encourage collaborative working with the UNFCCC and UNCCD Secretariats

2. Invite the working group on Art 8j at its 5th meeting to address the issue of biomass production and consumption.

3. Recalling UNFCCC decision 13/CP8 on enhanced cooperation between the Rio Conventions and taking into account the high importance of this issue for biodiversity, invite the SBSTA of the UNFCCC to collaborate on the issue of biomass production and consumption, in or-

der to ensure that issues of conservation and sustainable use of biodiversity are adequately taken into account.

I. INTRODUCTION

abridged

„Expert meeting in preparation of the twelfth meeting of SBSTTA“**April 10 - 14, 2007**

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

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Expert meeting in preparation of SBSTTA-12

Objectives

The goal of the expert meeting is to exchange information on topics on the agenda of the upcoming twelfth meeting of SBSTTA (July 2007) among national experts from European countries. The informal discussion will be based on the documents prepared for the SBSTTA meeting by the Secretariat of the Convention on Biological Diversity.

Programme

Tuesday, 10.04.2007

Arrival of the participants at the Isle of Vilm

18.30 *Dinner*

20.30 HORST KORN
Welcome of the participants
Opening of the meeting, Introduction

Wednesday, 11.04.2007

08.00 *Breakfast*

09.00 STEFAN LEINER
Liquid biofuels
Discussion

10.00 UWE FRITSCHÉ
Presentation of a study on sustainability standards for Bioenergy
Discussion

10.30 *Coffee / Tea break*

11.00 HEIKKI TOIVONEN
Biodiversity and Climate Change
Discussion

12.30 *Lunch*

- 14.00 JANA KUS VEENVLIET
Application of the Ecosystem approach
Discussion
- 15.30 CATERINA WOLFANGEL
Presentation of IUCN-CEM work on the Ecosystem approach
Discussion
- 16.00 *Coffee / Tea break*
- 16.30 PETER HERKENRATH
Global Biodiversity Outlook 2 – lessons learned
Discussion
- 17.30 MARTIN SHARMAN
Millennium Ecosystem Assessment – review and follow-up
Discussion
- 18.30 *Reception at the invitation of the German Federal Agency for Nature Conservation*
- 20.00 BEN TEN BRINK
Global Biodiversity Outlook 2 – substance and insights
Discussion

Thursday, 12.04.2007

- 08.00 *Breakfast*
- 09.00 MARIAM AKHTAR-SCHUSTER
Biodiversity of dry and sub-humid lands
Discussion
- 10.00 CATERINA WOLFANGEL
Presentation of IUCN work on drylands
Discussion
- 10.30 *Coffee / Tea break*
- 11.00 JAN PLESNÍK
Implementation of the Global Strategy for Plant Conservation
Discussion

- 12.00 PETER HERKENRATH
Presentation of the new issue-based module on protected areas
- 12.30 *Lunch*
- 14.00 *Guided tour in the nature reserve of the Isle of Vilm*
- 15.30 *Coffee / Tea break*
- 16.00 CHRISTIAN PRIP
Report of the SBSTTA-Bureau on ways and means to improve the effectiveness of the Subsidiary body
Discussion
- 17.00 **Drafting groups: Contributions to the workshop report (part 1)**
- 18.00 *Dinner*
- 20.30 **Drafting groups: Contributions to the workshop report (part 2)**

Friday, 13.04.2007

- 08.00 *Breakfast*
- 09.00 **Drafting groups: Contributions to the workshop report (part 3)**
- 10.30 *Coffee / Tea break*
- 11.00 **Plenary: Finalization of the workshop report**
- 12.30 *Lunch*
- 14.00 **Plenary: Finalization of the workshop report**
- 16.00 *Coffee / Tea break*
- 18.30 **Plenary: Finalization of the workshop report**
- 18.30 *Dinner*
- 20.30 **Plenary: Finalization of the workshop report (if necessary)**

Saturday, 14.04.2007

08.00 *Breakfast*

09.20 Departure of the participants

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

	<i>Plenary or Committee of the Whole</i>	<i>Working Group I</i>	<i>Working Group II</i>
<i>Monday, 2 July 2007</i> 10 a.m. – 1 p.m.	<p><i>Agenda items:</i></p> <ol style="list-style-type: none"> 1. Opening of the meeting 2. Election of officers, adoption of the agenda and organization of work 4.3. Report of the SBSTTA Bureau on the effectiveness of SBSTTA 5.3. New and emerging issues relating to the conservation and sustainable use of biodiversity 		
<i>Monday, 2 July 2007</i> 3 p.m. – 6 p.m.	3.1. Application of the ecosystem approach		
<i>Monday 2 July 2007</i> 6 p.m.	Launching of the poster session		
<i>Tuesday, 3 July 2007</i> 10 a.m. – 1 p.m.	3.2. Implementation of the Global Strategy for Plant Conservation		
<i>Tuesday, 3 July 2007</i> 3 p.m. – 6 p.m.	3.1. Application of the ecosystem approach <i>(continued)</i>		
<i>Wednesday, 4 July 2007</i> 10 a.m. – 1 p.m.	3.2. Implementation of the Global Strategy for Plant Conservation <i>(continued)</i>		

	<i>Plenary or Committee of the Whole</i>	<i>Working Group I</i>	<i>Working Group II</i>
<i>Wednesday, 4 July 2007</i> 3 p.m. – 6 p.m.		4.1. Review of the Millennium Ecosystem Assessment and follow-up to decision VIII/9	5.1. Biodiversity and climate change: proposals for the integration of climate-change activities within the programmes of work of the Convention and options for mutually supportive actions addressing climate change within the three Rio conventions
<i>Thursday, 5 July 2007</i> 10 a.m. – 1 p.m.		4.2. Lessons learned from the preparation of the second edition of the Global Biodiversity Outlook	5.2. Biodiversity of dry and sub-humid lands: guidance on strengthening the assessment of the 2010 targets; and proposals for land use options combining income generation with biodiversity conservation
<i>Thursday, 5 July 2007</i> 3 p.m. – 6 p.m.		Pending issues	Pending issues
<i>Friday, 6 July 2007</i> 10 a.m. – 1 p.m.	6. Draft provisional agenda, and date and venue for the thirteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice		
<i>Friday, 6 July 2007</i> 3 p.m. – 6 p.m.	7. Adoption of the report and closure of the meeting		