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GUIDANCE FOR PROMOTING SYNERGY AMONG ACTIVITIES ADDRESSING BIOLOGICAL DIVERSITY, DESERTIFICATION, LAND DEGRADATION AND CLIMATE CHANGE

Note by the Executive Secretary

SUGGESTED RECOMMENDATIONS

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

1. *Welcome* the report of the Ad Hoc Technical Expert Group (AHTEG) on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5) containing advice and guidance on the integration of biodiversity considerations into adaptation activities and on promoting synergy among biodiversity, climate change and land degradation, as a basis for further work;
2. *Express its gratitude* to the Government of Finland for its financial and logistical support to the meeting of the Ad Hoc Technical Expert Group, the Co-Chairs and all members of the Group for their contributions, those experts and Governments who provided inputs prior to the meeting of the Expert Group, and those Governments and organizations that sponsored the participation of their experts;
3. *Take note of:*
 - (a) The advice or guidance contained in the present note and its annex, including key elements from the report on options for enhanced cooperation among the three Rio conventions (UNEP/CBD/SBSTTA/10/INF/9) and the Viterbo Workshop on Forests and Forest Ecosystems;
 - (b) The number of opportunities that exist for promoting synergy among activities addressing biological diversity, desertification, land degradation and climate change, at national and international levels, and at the level of the secretariats of the Rio Conventions and other multilateral environmental agreements;
 - (c) The need of devoting further attention to the question of adaptation to climate change for the conservation and sustainable use of biodiversity as a rapidly developing area where many projects are being formulated, including the preparation of new national adaptation plans of action by Parties to the United Nations Framework Convention on Climate Change;

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(d) The knowledge gaps for including biodiversity considerations into adaptation planning and implementation, as contained in the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change;

4. *Request* the Executive Secretary to further develop the integration of biodiversity considerations and land degradation in the implementation of adaptation activities to climate change (contained in document UNEP/CBD/SBSTTA/11/INF/5) in collaboration with the members of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change, drawing on more case-studies relevant to the thematic areas of the Convention and including additional information derived from the work of the United Nations Convention to Combat Desertification, and the United Nations Framework Convention on Climate Change, with the view of producing an in-depth assessment;

5. *Recommend* that the Conference of the Parties

(a) *Welcome* the advice or guidance, including tools and approaches, contained in the present note as an initial step in the design, implementation and monitoring of climate-change activities that interlink across biodiversity, land degradation and desertification, while addressing the objectives of the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification;

(b) *Invite* the Conference of the Parties to the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification through the Joint Liaison Group to further collaborate with the Convention on Biological Diversity on promoting synergy at national and international levels and at the level of their respective secretariats and to *encourage* Parties to advance the integration of the objectives of the three Rio conventions into their national plans and other relevant planning schemes at the local level;

(c) *Call upon* Parties, other Governments, relevant organizations, and research institutions to address the research gaps outlined in the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change in order to further facilitate the integration of biodiversity into the design, implementation and monitoring of activities aimed at adapting to climate change.

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I. INTRODUCTION

1. The impacts of climate change on biological diversity have been of major concern to the Parties to the Convention on Biological Diversity since 2000, when, pursuant to a request from the Conference of the Parties in its decision V/4, an expert group was established to carry out an assessment of the interlinkages between biodiversity and climate change and provide advice on the integration of biodiversity considerations into the implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. The report of the Group, contained in CBD Technical Series no. 10, ^{1/} was completed in 2003 and welcomed by the Conference of the Parties in its decision VII/15. In 2003, the UNFCCC Subsidiary Body on Scientific and Technological Advice also welcomed the report and encouraged Parties to the UNFCCC to make use of it for their national purposes. ^{2/}
2. In paragraph 14 of decision VII/15, the Conference of the Parties requested SBSTTA, as the next stage of its work on the interlinkages between biodiversity and climate change to develop, for the consideration of the Conference of the Parties, advice or guidance for promoting synergy among activities to address climate change at the national, regional and international level where appropriate, including activities to combat desertification and land degradation, and activities for the conservation and sustainable use of biodiversity.
3. Pursuant to this request, SBSTTA, in its recommendation X/13, established an Ad Hoc Technical Expert Group (AHTEG) on Biodiversity and Adaptation to Climate Change to prepare advice or guidance under the thematic areas of the Convention for planning and/or implementing activities to address adaptation to climate change and that interlink across biodiversity conservation and sustainable use, and land degradation and desertification. SBSTTA further recognized in the same recommendation that the integration of, and impacts on, biodiversity into adaptation activities needed further development; it therefore also requested the AHTEG to undertake a supplementary assessment of the integration of biodiversity considerations in the design and implementation of adaptation activities to climate change.
4. The AHTEG on Biodiversity and Adaptation to Climate Change met in Helsinki, Finland, from 13 to 16 September 2005. The Expert Group comprised 15 experts on biodiversity and climate change nominated by Governments and eight experts from United Nations agencies including a representative of the Secretariat United Nations Framework Convention on Climate Change, intergovernmental, and non-governmental organizations, and local and indigenous communities. Before the meeting, a draft background document was prepared to facilitate the work of the Expert Group and circulated to other experts, national focal points for the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change, and SBSTTA focal points. ^{3/} The views and comments derived from the review process were considered by the Expert Group at its meeting when drafting its report. The full report of the meeting is being circulated as an information document (UNEP/CBD/SBSTTA/11/INF/5).
5. Section II of the present note contains key elements for advice or guidance on promoting synergy among activities addressing biological diversity, desertification, land degradation, and climate change. This section draws primarily on the reports of the above-mentioned expert groups (the CBD Technical Series No. 10 and UNEP/CBD/SBSTTA/11/INF/5), the note by the Executive Secretary on options for enhanced cooperation among the three Rio conventions (document UNEP/CBD/SBSTTA/10/INF/9), and the report of the Viterbo Workshop on Forests and Forest Ecosystems. ^{4/} First, general areas for action at different levels of application are reviewed. Second, advice related to the implementation of specific mitigation and adaptation activities to climate change that interlink across biodiversity as well as land

^{1/} <http://www.biodiv.org/doc/publications/cbd-ts-10.pdf>

^{2/} Report of the Subsidiary Body on Scientific and Technological Advice on its nineteenth session, held at Milan from 1 to 9 December 2003 (FCCC/SBSTA/2003/15) para. 44 (c).

^{3/} Notification 2005-085 dated 15 July 2005.

^{4/} Held in 2004. Accessible at: <http://www.unccd.int/workshop/docs/finalreport.pdf>

degradation and desertification is provided. Section III presents preliminary conclusions including possible future steps.

II. ADVICE FOR PROMOTING SYNERGY AMONG ACTIVITIES ADDRESSING BIOLOGICAL DIVERSITY, DESERTIFICATION, LAND DEGRADATION, AND CLIMATE CHANGE

A. *General advice*

6. As noted in the Millennium Ecosystem Assessment, environmental approaches for combating desertification, conserving biodiversity and mitigating climate change are linked in numerous ways. ^{5/} Desertification and land degradation affects global climate change through soil and vegetation losses, while biodiversity in turn influences carbon sequestration and therefore helps to regulate climate change. Given that climate change and desertification and land degradation are major causes of biodiversity loss and that biodiversity conservation and sustainable use can contribute to both climate change mitigation ^{6/} and adaptation, ^{7/} and to combating desertification, the governing bodies of the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and the United Nations Convention to Combat Desertification have repeatedly emphasized the importance of promoting synergy at the local, national and international levels.

7. In particular, the Conference of the Parties to the Convention on Biological Diversity has noted that there are opportunities to implement climate-change mitigation and adaptation activities in ways that are mutually beneficial and synergistic and that contribute simultaneously to the United Nations Framework Convention on Climate Change and its Kyoto Protocol, the Convention on Biological Diversity, the United Nations Convention to Combat Desertification, the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone Layer, the Ramsar Convention on Wetlands, and other international agreements, all within broader national development objectives. The Conference of the Parties has further acknowledged that the ecosystem approach under the Convention could facilitate the formulation and implementation of activities aimed at mitigating and adapting to climate change while contributing, in a synergistic manner, to sustainable development and biodiversity conservation. ^{8/}

8. In addition, broad options for enhancing cooperation at different levels have been highlighted by the Joint Liaison Group of the three Rio conventions (UNEP/CBD/SBSTTA/10/INF/9). These include:

- (a) Encouraging collaboration among national focal points as a key to fostering synergy at the national level through formal networks;
- (b) Collaboration at the level of the convention bodies and secretariats to promote policy coherence, enhance the provision of technical expertise and to enhance cooperation in achieving complementary objectives;
- (c) Capacity-building at the national level, as one of the essential elements for implementation;
- (d) Technology transfer at both the secretariat and national levels through sharing of experiences, information, and identification of technologies of joint interest and relevance;
- (e) Research and monitoring, including sharing of data;

^{5/} Millennium Ecosystem Assessment Ecosystems and Human Well-being: desertification synthesis. World Resources Institute, Washington, D. C.

^{6/} Defined by the Intergovernmental Panel on Climate Change as an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases.

^{7/} Defined by the Intergovernmental Panel on Climate Change as an adjustment in natural or human systems to a new or changing environment.

^{8/} See paragraphs 7 and 8 of decision VII/15 and the detailed advice in section 4.3 of CBD Technical Series No. 10.

(f) Promoting complementarity between national biodiversity strategies and action plans under the Convention on Biological Diversity, national action programmes under the United Nations Convention to Combat Desertification, and national adaptation programmes of action for the least developed countries under the United Nations Framework Convention on Climate Change.

9. Options and opportunities for further synergy among the three Rio conventions through the forest/forestry sector were also outlined at the Workshop on Forest and Forest Ecosystems on promoting synergy in the implementation of the three Rio Conventions ^{9/} organized in Viterbo, Italy, in April 2004 by the secretariats of the United Nations Convention to Combat Desertification and the Convention on Biological Diversity in cooperation with the Secretariat of the United Nations Framework Convention on Climate Change. These options focus on the following national-level activities:

(a) Activities related to afforestation, reforestation, sustainable forest management, forest landscape restoration, technology transfer, traditional and scientific forest related knowledge; and

(b) Facilitating the interaction between national focal points using existing forest policy and planning mechanisms such as national forest programmes.

10. Many provisions and decisions/resolutions from the governing bodies of the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity, the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, Iran, 1971), and the Convention on the Conservation of Migratory Species of Wild Animals also contain concrete adaptation activities that address climate change. Selected examples derived from the ongoing UNEP project on “issue based modules for coherent implementation of biodiversity conventions” is provided in table 2 in the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5). The table suggests a wide variety of opportunities for synergy and complementarity among Parties to different multilateral environmental agreements in fulfilling their agreements while concurrently addressing climate change mitigation and adaptation under the following elements: (i) development of adaptation options; (ii) assessment of adaptation options; (iii) effective management of particular ecosystems; (iv) promotion of societal actions; (v) restoration of degraded ecosystems; and (vi) integration of adaptation activities into other policies and strategies.

11. Finally, the Scientific and Technical Advisory Panel (3A) of the Global Environment Facility (GEF) developed a draft conceptual design tool to help incorporate interlinkages into project design and implementation. The tool takes into consideration biodiversity, climate change, land degradation and desertification, and aims at capturing synergy among focal areas of the GEF while minimizing potential negative impacts of a given project into other focal areas.

B. Specific advice on mitigation and adaptation activities

12. Advice for promoting synergy as applied specifically to mitigation and adaptation activities is described below. The information related to mitigation derives largely from chapter 4 of the CBD Technical Series No. 10 (*Climate change mitigation and adaptation options: links to, and impacts on, biodiversity*) and focuses on land-use, land-use change and forestry (LULUCF) activities. Information pertaining to adaptation activities draws from the contents of the report of the AHTEG on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5).

13. It should be noted, however, that in many cases, when promoting synergy to address climate change, biodiversity and land degradation, the distinction between mitigation and adaptation activities can become less clear. For example, mixed-species tree-planting in previously deforested and/or degraded land among forest fragments helps both sequester carbon while allowing species migration in response to changes in climate and providing and/or restoring other ecosystem services. Nevertheless, this distinction is maintained below.

⁹ Accessible at: <http://www.unccd.int/workshop/docs/finalreport.pdf>

1. *Mitigation activities*

14. Synergy through mitigation activities is more likely to be retained by society when such activities offer multiple benefits, including environmental and socio-economic benefits. Mitigation activities that include afforestation ^{10/} and reforestation ^{11/} can be designed to restore key watershed functions, establish biological corridors, provide recreational and amenity values, and sequester atmospheric carbon.

15. Afforestation and reforestation projects can have positive, neutral or negative impacts on biodiversity, and the impact will depend on the level of degradation of the ecosystem being replaced. Degraded lands that have been abandoned due to declining productivity offer opportunities for implementing afforestation and reforestation activities that satisfy multiple objectives. Tree plantations under afforestation and reforestation activities in degraded lands can provide further beneficial environmental impacts and enhance the recovery of biodiversity when spatial and species-specific considerations are incorporated. ^{12/} Similarly, agroforestry activities can significantly enhance biodiversity while sequestering atmospheric carbon on degraded sites that have lost their capacity to provide ecosystem goods and services.

16. Revegetation ^{13/} includes various activities designed to increase plant cover on eroded, severely degraded, or otherwise disturbed land and it can be initial step in the long-term restoration of ecosystem structure and function, natural habitats and ecosystem services. Soils of eroded or degraded sites can have high potential for atmospheric carbon sequestration through revegetation.

17. Land management activities designed to mitigate the effects of greenhouse gas emissions include forest management, management of cropland, and grasslands grazing lands. All of these can have a positive effect on overall environmental quality, including soil quality, water quality, air quality, and wildlife habitat. In this context, increased integration of land and water management is key for preventing desertification. Transforming cropped or degraded lands to perennial grasslands can increase above and below ground biomass, soil carbon, and above and below ground biodiversity. In addition, erosion control practices can reduce the global quantity of soil organic carbon displaced by soil erosion and increase biodiversity in aquatic systems and riparian zones.

2. *Adaptation activities*

18. Negative impacts to biodiversity can be minimized, and positive benefits enhanced if biodiversity considerations are incorporated formally and routinely into adaptation planning. In particular, these activities should take into account the maintenance and restoration of ecosystem resilience, which is an essential element to sustain the delivery of ecosystems goods and services. As stressed in the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5), reduction of other pressures on biodiversity arising from habitat conversion, over-harvesting, pollution, and alien species invasions constitute important adaptation measures in order to enhance ecosystem resilience. Section 5 of the Desertification Synthesis of the Millennium Ecosystem Assessment echoes the previous advice that focusing on prevention of desertification and land degradation offers the greatest opportunities for both maintaining the provision of ecosystem services and benefiting biodiversity.

19. Adaptation activities that address climate change, conservation and sustainable use of biodiversity, and land degradation and desertification in the context of relevant thematic areas covered by

^{10/} Afforestation requires planting trees on land that has not contained a forest for over 50 years. An eligible activity under Article 3.3 of the Kyoto Protocol

^{11/} Reforestation requires planting trees on land that was not forested in 1990. An eligible activity under Article 3.3 of the Kyoto Protocol

^{12/} These activities are discussed in detail in section 4.5 of CBD Technical Series No. 10.

^{13/} Defined as a direct-human induced activity to increase on-site carbon stocks through the establishment of a minimum area of 0.05 hectares and does not meet the definitions of afforestation and deforestation. It is an eligible activity under Article 3.4 of the Kyoto Protocol.

the Convention on Biological Diversity. ^{14/} can have positive, neutral, or adverse effects on biodiversity and the sustained provision of ecosystem goods and services. Adaptive-management and risk-assessment tools can help to minimize adverse biodiversity effects during the design, implementation and monitoring of adaptation activities.

20. In this context, various approaches, methods and tools that are currently available can be used for planning, designing and implementing adaptation activities. ^{15/} The amalgamation of these approaches, methods and tools provide concrete opportunities for exploiting and addressing the synergies between the objectives of multiple environmental conventions and sustainable development goals. A comprehensive list of tools and approaches to design and implement adaptation activities has also been prepared under the United Nations Framework Convention on Climate Change. ^{16/}

21. The approaches, methods and tools are complementary and fall into two main categories; “top-down” (modelling or scenario-driven) and “bottom-up” (community or vulnerability-driven) and incorporate information and policy links. These approaches, methods and tools can be combined into a climate change adaptation framework for biodiversity and specific tools can be used in different stages of the framework. The suggested framework, which is annexed to the present note, incorporates both scenario-driven and vulnerability-driven approaches and is also consistent with the framework for assessment of impacts, vulnerability and adaptation suggested by the Intergovernmental Panel on Climate Change, ^{17/} adaptation policy frameworks for climate change, ^{18/} risk-management approaches, Ramsar risk-assessment framework (Ramsar resolution VII.10), and national adaptation programmes of action (NAPAs) by Parties to the United Nations Framework Convention on Climate Change. It includes iterative steps such as problem identification, ensuring and seeking participation from multiple partners, assessing the knowledge base, preparing and implementing adaptation action plans.

III. PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

22. There is wide recognition that addressing in isolation those human activities that result or have resulted in loss of biodiversity will not produce effective actions towards ensuring the sustained provision of ecosystem goods and services. ^{19/} The fact that, in turn, biodiversity underlies many essential ecosystem services underscore the need for promoting synergy among management activities targeted to enhance the prospects of sustainable development.

23. A number of opportunities exist for promoting synergy among activities addressing biological diversity, desertification, land degradation and climate change at different, but linked, levels of action. Close and systematic cooperation within national focal points of the three Rio conventions and other relevant multilateral environmental agreements emerge as one of the pillars towards achieving complementary outcomes during project and policy planning, implementation and monitoring.

24. Although knowledge gaps remain, a great deal of detailed technical information as well as practical advice for promoting synergy between activities to address climate change, conserve biodiversity, and minimize land degradation is already available. ^{20/} Facilitating the flow of this

^{14/} See table 1 of the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5).

^{15/} See, for example, the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5) and chapter 5 of CBD Technical Series No. 10.

^{16/} http://unfccc.int/adaptation/methodologies_for/vulnerability_and_adaptation/items/2674.php

^{17/} Intergovernmental Panel on Climate Change. 1994. Technical Guidelines for Assessing Climate Change Impacts and Adaptations with a Summary for Policy Makers and a Technical Summary. T.R.Carter, M.L.Parry, H.Harasawa, S.Nishioka. Department of Geography, University College London, UK and the Center for Global environmental Research, National Institute for Environmental Studies, Japan.

^{18/} UNDP-GEF. 2005. Adaptation policy frameworks for climate change. Cambridge University Press.

^{19/} Millennium Ecosystem Assessment. 2005. Ecosystems and Human Well-being. Island Press, USA.

^{20/} In addition to those references cited in this note, these are, among others:

information among countries and within different national agencies for the purposes of project and policy planning and implementation is potentially critical. Improving the flow of information related to decisions/resolutions and implementation of commitments derived from relevant multilateral environmental agreements at the national level is also important for maximizing synergy.

25. The design and development of pilot projects explicitly designed to address the objectives of the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, and the United Nations Convention to Combat Desertification, as well as those of other environmental multilateral agreements both at local and national levels is a priority. Systematic collection of lessons learned and documentation of best practices derived from these experiences could be instrumental in effectively addressing climate change, biodiversity and land degradation in a concerted manner while maximizing positive outcomes.

(a) Intergovernmental Panel on Climate Change. 2002 Technical Paper V. Climate Change and Biodiversity. IPCC, Geneva;

(b) Hansen, L. J., Biringer, J. L. , J. R. Hoffman. 2003. A user's manual for building resistance and resilience to climate change in natural systems. World Wildlife Fund Climate Change Program;

(c) German Federal Environmental Agency. 2004. Integration of biodiversity concerns in climate change mitigation activities. A toolkit. (www.umweltbundesamt.de).

Annex

CLIMATE CHANGE ADAPTATION FRAMEWORK FOR BIODIVERSITY

(Source: the report of the Ad Hoc Technical Expert Group on Biodiversity and Adaptation to Climate Change (UNEP/CBD/SBSTTA/11/INF/5))


