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SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE

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IN-DEPTH REVIEW OF THE WORK ON BIODIVERSITY AND CLIMATE CHANGE

Draft recommendation submitted by the Chair of Working Group II

A. The Subsidiary Body on Scientific Technical and Technological Advice *recommends* that the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties

1. *Welcomes* the report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change (UNEP/CBD/SBSTTA/14/INF/21), and *encourages* Parties, other Governments, relevant organizations, processes and initiatives and the Executive Secretary to take its findings into consideration where appropriate when carrying out work on biodiversity and climate change;

2. *Notes* the ongoing discussions on policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, under the United Nations Framework Convention on Climate Change and its importance to helping achieve the objectives of the Convention on Biological Diversity; and encourages Parties to communicate and cooperate at the national level on issues on climate change and biodiversity, including efforts, as appropriate, to promote the importance of biodiversity considerations in ongoing discussions on this issue;

[3. *Recognizes* that the LifeWeb initiative offers a [funding] mechanism to address both biodiversity loss and climate-change-adaptation needs and that by funding protected areas in developing countries, the challenges caused by climate change can also be addressed;

4. *Recognizes* that by improved [funding] protected areas in developing countries, with mechanisms such as the LifeWeb initiative, amongst others, some of the challenges caused by climate change can also be addressed;

5. *Recognizes* the urgent need of developing countries for sufficient financial resources and technical assistance to address the challenges to biodiversity from climate change, (i) calls for the various existing initiatives including LifeWeb and others to provide funding to address such challenges and (ii) invites [the GEF] to consult with the ES on ways and means to provide adequate funding and technical assistance to developing countries for the better implementation of COP decisions on biodiversity and climate change;]

[6. *Invites* the Global Environment Facility to consult with the Executive Secretary on ways and means to better inform its Implementing Agencies about decisions made by the Conference of the Parties on biodiversity and climate change, especially those related to building synergy between the Rio conventions, in order to facilitate the Parties efforts in pursuant to such decisions;]

7. *Suggests* that Parties consider harmonized reporting and data collection related to the biodiversity and climate change interface at the national level, in accordance with the national circumstances;

8. *Further invites* Parties and other Governments, according to national circumstance and priorities, as well as relevant organizations and processes to consider the following guidance on ways to conserve, sustainably use and restore biodiversity and ecosystem services while contributing to climate change mitigation and adaptation:

Assessing the impacts of climate change on biodiversity

(a) Monitor the impacts of climate change and ocean acidification on biodiversity and ecosystem services, and assess the future risks for biodiversity and the provision of ecosystem services using the latest available vulnerability and impact assessment frameworks and guidelines;

(b) Assess the impacts of climate change on biodiversity-based livelihoods, particularly with regards to livelihoods within those ecosystems that have been identified as being particularly vulnerable to the negative impacts of climate change with a view to identifying adaptation priorities;

Reducing the impacts of climate change on biodiversity and biodiversity-based livelihoods

(c) Reduce the negative impacts from climate change as far as ecologically feasible, through conservation and management strategies that maintain and restore biodiversity;

(d) Implement activities to increase the adaptive capacity of species and the resilience of ecosystems in the face of climate change, including, *inter alia*:

- (i) Reducing non-climatic stresses, such as pollution, over-exploitation, habitat loss and fragmentation and invasive alien species;
- (ii) Reducing climate related-stresses, where possible, such as through enhanced adaptive and integrated water resource management;
- (iii) Strengthening protected area networks including through enhancing coverage, quality, connectivity, where appropriate, through the creation of corridors and ecological networks, and through enhancing the biological quality of the matrix areas;
- (iv) Integrating biodiversity into wider sea- and landscape management;
- (v) Restoring degraded ecosystems and ecosystem functions; and
- (vi) Facilitating adaptive management through strengthening monitoring and evaluation systems;

(e) Bearing in mind that under climate change, natural adaptation will be difficult and recognizing that *in situ* conservation actions are more effective, also consider *ex situ* measures such as relocation, assisted migration and captive breeding, among others, which could contribute to maintaining the adaptive capacity and securing the survival of species at risk, taking into account the precautionary approach in order to avoid unintended ecological consequences such as the spread of invasive alien species;

(f) Develop guidelines for biodiversity conservation and sustainable land and seascape use and management for areas becoming accessible to new uses as a consequence of climate change;

(g) Take specific measures for species that are vulnerable to climate change and to maintain genetic diversity in the face of climate change taking into account paragraph 2 of Annex 1 of the Convention;

(h) Undertake awareness-raising and capacity building strategies on the key role of biodiversity conservation and sustainable use as a mechanism for climate change mitigation and adaptation;

(i) Recognize the role of indigenous and local community conserved areas in strengthening ecosystem connectivity and resilience across the regional landscape and seascape thereby maintaining essential ecosystem services and supporting biodiversity –based livelihoods in the face of climate change;

Ecosystem-based approaches for adaptation

(j) Recognizing that ecosystems can be managed to limit climate change impacts on biodiversity and to help people adapt to the adverse effects of climate change; implement where appropriate, ecosystem based approaches for adaptation, that may include sustainable management, conservation and restoration of ecosystems; as part of an overall adaptation strategy that takes into account the multiple social, economic and cultural co-benefits for local communities;

(k) In accordance with national circumstance, integrate ecosystem-based approaches for adaptation into relevant strategies including adaptation strategies and plans, national action plans to combat desertification, NBSAPS, poverty reduction strategies, disaster risk reduction strategies and sustainable land management strategies;

(l) In the planning and implementation of ecosystem based approaches for adaptation, different ecosystem management options and objectives should be carefully considered to assess the different services they provide and the potential trade-offs that may result from them;

Ecosystem based mitigation including the reduction of emissions from deforestation and forest degradation, the conservation of forest carbon stocks, and the sustainable management of forest and forest carbon stocks

(m) Consider the achievement of co-benefits between ecosystem-based approaches for climate change mitigation and adaptation activities;

(n) Implement ecosystem management activities, including the protection of natural forests, natural grasslands and peatlands, the sustainable management of forests, the use of native communities of forest species in reforestation activities, sustainable wetland management, restoration of degraded wetlands, conservation of mangroves, salt marshes and seagrass beds sustainable agricultural practices and soil management as a contribution towards achieving and in consistency with the objectives of the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification and the Convention on Biological Diversity;

(o) In forest landscape subject to harvesting, clearing and/or degradation, implement, as appropriate, improved land management, reforestation and forest restoration which, through the use of native communities of species, can improve biodiversity conservation and associated services while sequestering carbon and limiting the degradation of native primary and secondary forests;

(p) When designing, implementing and monitoring afforestation, reforestation and forest restoration activities for climate change mitigation consider biodiversity and ecosystem services through, for example:

- (i) Converting only land of low biodiversity value or ecosystems largely composed of non-native species, and preferably degraded ones;
- (ii) Choosing, whenever feasible, local and acclimated native tree species when selecting species for planting;

- (iii) Avoiding invasive alien species; and
- (iv) Strategically locating afforestation activities within the landscape to enhance connectivity and increase the provision of ecosystem services within forest areas;

(q) Enhance the benefits from reducing emissions from deforestation and forest degradation; and the conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries and other sustainable land management activities for climate change mitigation for forest-dwelling indigenous and local communities, through, for example, considering land ownership and land tenure; respecting, preserving and maintaining the knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biological diversity; and ensuring space for the full and effective participation of indigenous and local communities in relevant policy-making processes;

(r) Assess, implement and monitor a range of sustainable activities in the agricultural sector and in soil management that may result in the maintenance and potential increase of current carbon stocks and, at the same time, the conservation and sustainable use of biodiversity while recognizing potential risks from increased pesticide use through the promotion of ecologically beneficial tillage regimes and other means of sustainable crop and grass-land management, sustainable livestock management, and agroforestry systems;

(s) Adopt policies that integrate and promote biodiversity conservation, especially with regards to soil biodiversity, while conserving and restoring organic carbon in soil and biomass, including in peatlands and other wetlands as well as in grasslands, savannahs and drylands;

(t) Enhance the conservation, sustainable use and restoration of marine and coastal habitats which are vulnerable to the effects of climate change or which contribute to climate change mitigation, such as mangroves, tidal salt marshes, kelp forests and sea grass beds, as a contribution to achieving the objectives of the United Nation Framework Convention on Climate Change, the United Nations Convention to Combat Desertification and the Convention on Biological Diversity;

Reducing biodiversity impacts of climate change mitigation and adaptation measures, including from energy production

(u) Increase positive and reduce negative impacts of climate change mitigation and adaptation measures on biodiversity inter alia, based on results from strategic environmental assessments (SEA)¹ and environmental impact assessments (EIA) that facilitate the consideration of all available climate change mitigation and adaptation options;

(v) In planning and implementing effective climate change mitigation and adaptation activities, including renewable energies, take into account impacts on biodiversity and the provision of ecosystem services through:

- (i) Considering traditional knowledge, including the full involvement of indigenous peoples and local communities;
- (ii) Defining measurable outcomes that are monitored and evaluated;
- (iii) Building on a scientifically credible knowledge base;
- (iv) Applying the ecosystem approach; and
- (v) Developing ecosystem and species vulnerability assessments;

(w) [Ensure, in line and consistent with decision IX/16 C, on ocean fertilization and biodiversity and climate change, and in accordance with the precautionary approach, that no climate-related geo-engineering activities take place until there is an adequate scientific basis on which to justify

¹ [Decision VIII/28](#) voluntary guidelines on biodiversity-inclusive impact assessment

such activities and appropriate consideration of the associated risks for the environment and biodiversity and associated social, economic and cultural impacts;]

(x) Where appropriate, assess the effects of energy production and transmission infrastructure on biodiversity, avoid, mitigate and compensate for negative impacts through careful design and implementation;

(y) Make sure that ocean fertilization activities are addressed in accordance with decision IX/16 C acknowledging the work of the London Convention/London Protocol;

Valuation and incentive measures

(z) To take into account the economic (market and non-market) and non-economic values of biodiversity and ecosystem services when planning and undertaking climate-change-related activities by using a range of valuation techniques;

[(aa) Implement both economic and non-economic incentives to facilitate climate-change-related activities that take into consideration biodiversity [and related social and cultural aspects], keeping in mind the provisions of relevant environmental international agreements;]

9. *Requests* the Executive Secretary to:

(a) Collaborate with the United Nations Environment Programme and the United Nations Development Programme in reviewing and revising the resource kit for national capacity self assessments (NCSA) with the view to ensure that the resource kit better reflects decisions made by the Conference of the Parties on biodiversity and climate change, particularly those related to enhancing the capacity of developing countries to implement decision IX/16 on biodiversity and climate change and to report progress of this action to SBSTTA at a meeting prior to the eleventh meeting of the Conference of the Parties ;

(b) Collect scientific knowledge and case-studies and identify knowledge gaps on organic soil carbon conservation and restoration, and make the results available to Parties through the clearinghouse mechanism;

(c) Expand and refine analyses identifying areas of high potential for the conservation and restoration of carbon stocks, as well as of ecosystem management measures that make best use of related climate change mitigation opportunities, and make this information openly available, such as to assist with integrated land-use planning;

(d) Compile existing and develop further tools for

(i) Assessing the direct and indirect impacts of climate change on biodiversity including a review of tested and validated indicators to monitor and assess change at the genetic level and in species and ecosystems (including vulnerability and resilience indicators); and

(ii) Addressing uncertainties, which limit the ability to project climate-change impacts on biodiversity, ecosystem services and land systems;

(e) Develop proposals on guidance to Parties and relevant organizations and processes for the design and implementation of ecosystem-based approaches to adaptation and mitigation for consideration by SBSTTA at a meeting prior to the eleventh meeting of the Conference of the Parties;

(f) Convene, in collaboration with the Secretariat of the United Nations Framework Convention on Climate Change an expert workshop, with the full and effective participation of experts from developing countries, on reducing emissions from deforestation and forest degradation in developing countries with a view to enhancing the coordination of capacity-building efforts on issues related to biodiversity and ecosystem-based carbon sequestration and the conservation of forest carbon stocks;

(g) With regard to reducing emissions from deforestation and forest degradation, collaborate with the Secretariat of the United Nations Forum on Forests, the Facility Management Team of the World Bank Forest Carbon Partnership Facility, the Secretariat of the United Nations Framework Convention on Climate Change, the Secretariat of the UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, and the other members of Collaborative Partnership on Forests (CPF), as well as the low forest cover countries Secretariat and in collaboration with Parties through their national CBD focal points to:

OPTION 1

[Contribute to the discussions on and the possible development of biodiversity safeguards and mechanisms to monitor impacts on biodiversity, with the full and effective participation of indigenous and local communities, as appropriate];

OPTION 2

[With effective consultation with Parties, and based on their views, explore opportunities to provide advice, as requested, to the discussions on this issue, in order to avoid any possible negative impacts on biodiversity by such activities, with the full and effective participation of indigenous and local communities, as appropriate];

(h) [Support the development of a toolkit on how to create synergies between the implementation of national forest biodiversity-related measures and climate change measures];

(i) With effective consultation with Parties and based on their views, identify, in collaboration with the Collaborative Partnership on Forests, possible indicators to assess the contribution of reducing emissions from deforestation and forest degradation to achieving the objectives of the Convention on Biological Diversity, taking into account relevant elements of the CBD Strategic Plan and inform other relevant bodies about the progress of this activity and report on the outcomes to SBSTTA at a meeting prior to the eleventh meeting of the Conference of the Parties;

(j) Bring to the attention of relevant organizations the knowledge and information gaps identified by Parties through their national reports that prevent the integration of biodiversity considerations into climate change-related activities and report on activities undertaken by such organizations to address such gaps;

(k) Building on existing tools, develop a toolkit of possible management responses to those observed and projected impacts of climate change on biodiversity that have been identified by Parties through their national reports;

(l) Compile current and additional views and case studies from Parties on the integration of biodiversity into climate-change related activities for submission to the United Nations Framework Convention on Climate Change for publication on its website as appropriate and to report thereon to the conferences of the parties to the Convention on Biological Diversity, the United Nations Framework on Climate Change and the United Nations Convention to Combat Desertification;

(m) Develop proposals on actions to address the obstacles listed in section IV of the compilation of views submitted by Parties on ways to integrate biodiversity considerations into climate change-related activities (UNEP/CBD/SBSTTA/14/INF/22) for the consideration of SBSTTA at a meeting prior to the eleventh meeting of the Conference of the Parties;

(n) Compile and synthesize available scientific information on the possible impacts of geo-engineering techniques on biodiversity and make it available for consideration at a meeting of the SBSTTA prior to the eleventh meeting of the Conference of the Parties;

(o) Compile existing information, including any existing guidelines on invasive alien species and related management responses, reconciling the need for the gradual adaptation of biodiversity and

ecosystems to climate change, with the need to mitigate the impacts of existing and potentially new invasive alien species;

(p) Develop proposals on options for addressing gaps in knowledge and information on the impact of climate change on biodiversity outlined in the report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change for the consideration of the Conference of the Parties at its eleventh meeting;

(q) Contribute to the update and maintenance of the TEMATEA issue based module on biodiversity and climate change as a tool for better implementation of decisions related to biodiversity and climate change;

Climate change and the biodiversity of dry and sub-humid lands

10. *Invites* Parties and other Governments and relevant organizations to develop down-scaled climate change models that combine temperature and precipitation information with multi-stressor biological models in order to better predict the impacts of drought on biodiversity;

11. *Encourages* Parties, other Governments and relevant organizations to make use of the information contained in document UNEP/CBD/SBSTTA/14/6/Add.1 in their future work on implementation of the programme of work on the biodiversity of dry and sub-humid lands.

[Proposed Joint Work Programme]

OPTION 1

[12. *Requests* the Executive Secretary to convey a proposal to develop joint activities, possibly including a joint work programme, between the three Rio conventions, to the Secretariats of the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification *and invites* the conferences of the parties to the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification to collaborate with the Convention on Biological Diversity, through the joint liaison group as appropriate with a view to

- (i) Include the development of joint activities, possibly including a joint work programme in the agenda of the next meeting of the Joint Liaison Group of the three Rio conventions, and consider as appropriate the proposed elements on joint work regarding climate change, biodiversity and land degradation prepared [as included in the Annex]
- (ii) Convene in 2011a joint preparatory meeting between the three Rio conventions, at the appropriate level (expert groups, scientific bodies, bureau, etc), to consider the elements of the draft joint work programme, and
- (iii) Explore options for a joint high level segment or joint extraordinary Conference of the Parties of the three Rio conventions in 2012 as part of the celebration of the Rio+20;]

[13. *Invites* focal points to inform their national counterparts for UNFCCC and UNCCD about the proposal to develop joint activities, possibly including elements of a draft joint work programme with a view to initiating discussions within their relevant processes.]

OPTION 2

[12. Following the consultation completed by the Executive Secretary as requested in SBSTTA recommendation XXX, Parties may wish to consider, inter alia, the following issues:

1. The pertinence of undertaking joint activities and a joint work programme;
2. The pertinence of appropriate joint meetings of the three Rio conventions;
3. The role of the Joint Liaison Group on these matters;

[13. Parties may also wish to consider the views of their UNFCCC and UNCCD counterparts on these issues;]

[B. *The Subsidiary Body on Scientific Technical and Technological Advice*]

[*Noting* the need to bring the biodiversity and climate change agendas closer together and the many scientific issues considered by the SBSTTA that also touch upon the objectives of the UNCCD and UNFCCC, bearing in mind the respective independent legal status and mandates of the three Rio Conventions and different composition of Parties and based upon this, for the purpose of enhancing the capacity of countries, particularly developing countries, to implement the decisions of the Conference of the Parties on biodiversity and climate change, noting, the serious knowledge and information gap at the present in evaluating the biological vulnerability as a result of climate change;]

[*Noting* the need to bring the biodiversity and climate change agendas closer together and the many scientific issues considered by SBSTTA that also touch upon the objectives of the UNCCD and UNFCCC, bearing in mind the respective independent legal status and mandates of the three Rio conventions and the different composition of Parties, and based upon this, for the purpose of enhancing the capacity of countries, particularly developing countries, to implement the Conference of the Parties' decisions on biodiversity and climate change, noting the serious knowledge and information gap at the present in evaluating biological vulnerability as a result of climate change, *requests* the Executive Secretary to consult Parties, in order to explore the possibilities to develop a proposal on joint activities between the three Rio conventions, and report on the progress to the Conference of the Parties for its consideration at its tenth session.]
