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**BIOLOGICAL DIVERSITY AND CLIMATE CHANGE, INCLUDING COOPERATION WITH
THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE***Note by the Executive Secretary**Executive summary*

The present note provides a progress report on implementation of decisions V/3, V/4, V/15 and V/21 of the Conference of the Parties as they relate to climate change. Since those decisions were adopted, the President of the Conference of the Parties has transmitted them to the United Nations Framework Convention on Climate Change (UNFCCC); the Executive Secretary has consulted with the UNFCCC secretariat and with the Chair of the Intergovernmental Panel on Climate Change (IPCC) with a view to promoting the implementation of the decisions; and the Executive Secretary prepared a discussion note on cooperation between the Convention on Biological Diversity and the UNFCCC for the UNFCCC Conference of the Parties and its Subsidiary Body on Scientific and Technological Advice (SBSTA). SBSTA has agreed to consider the matter at its fourteenth session, to be held in May/June 2001.

The Executive Secretary has also begun to compile relevant information to assist SBSTA in preparing scientific advice to integrate biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, and an overview of such information is contained in annex II to the present note.

The note also identifies matters of potential relevance to the preparation of scientific advice for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, on the basis of the relevant provisions of these instruments. These matters relate to: (i) the impact of climate change on biodiversity in the context of sustainable development; (ii) the role of biodiversity in the mitigation of climate change and the impacts of mitigation measures on biodiversity; and (iii) the role of biodiversity in measures to adapt to the adverse effects of climate change and the identification of fragile ecosystems.

* UNEP/CBD/SBSTTA/6/1.

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Suggested action by SBSTTA and recommendations

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

- (a) Take note of the discussion of the interlinkages between biological diversity and climate change, contained in the discussion note by the Executive Secretary submitted to the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) at its sixth session and the UNFCCC Subsidiary Body on Scientific and Technological Advice at the second part of its thirteenth session, held in The Hague, from 13 to 24 November 2000 (annex I to the present note);
- (b) Welcome the agreement of the UNFCCC SBSTA to consider this matter at its fourteenth session, scheduled for May/June 2001, and its invitation to UNFCCC Parties to submit their views on the issues identified;
- (c) Elaborate a preliminary assessment of the interlinkages between biological diversity and climate change, drawing upon sections III C. and III D of annex I, and annex II, to the present note, and offer this as an additional input to the fourteenth session of SBSTA;
- (d) Promote a wider assessment of the interlinkages between biological diversity and climate change, in order to develop more comprehensive scientific advice to integrate biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, including:
 - (i) The impacts of climate change on biological diversity;
 - (ii) The potential impact on biological diversity of mitigation measures that may be carried out under the UNFCCC and its Kyoto Protocol, and identification of potential mitigation measures that also contribute to the conservation and sustainable use of biological diversity;
 - (iii) The potential for the conservation and sustainable use of biological diversity to contribute to adaptation measures taken under the UNFCCC and its Kyoto Protocol;
- (e) Initiate, as a first step in the wider assessment referred to in subparagraph (d) above, a pilot assessment to prepare scientific advice to integrate biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, and, for this purpose, establish an expert group in accordance with the *modus operandi* of SBSTTA and the terms of reference provided in annex III to the present note, to report on progress to SBSTTA at its seventh meeting;
- (f) Invite the Intergovernmental Panel on Climate Change to participate in this pilot assessment, and also invite IUCN and other relevant international organizations to contribute to this work (see also UNEP/CBD/SBSTTA/6/9);
- (g) Invite the Millennium Ecosystem Assessment to incorporate the issues identified in paragraph (d) above, and to report on this matter at the seventh meeting of SBSTTA;
- (h) Request the Executive Secretary to inform the secretariats of the UNFCCC, IPCC and the Millennium Ecosystem Assessment of these steps taken by SBSTTA, and to invite their continued collaboration, with a view to facilitating the integration of biodiversity considerations in the implementation of UNFCCC and its Kyoto Protocol.

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I. INTRODUCTION

1. At its fifth meeting, the Conference of the Parties made reference to the interactions between climate change and the conservation and sustainable use of biological diversity in a number of thematic and cross-cutting areas, including coral bleaching (decision V/3, paras. 3, 5 and annex), forest biodiversity (decision V/4, paras. 11 and 16-20), and incentive measures (decision V/15, para. 6), and urged strengthened cooperation with the United Nations Framework Convention on Climate Change (UNFCCC) on these matters and in the thematic area of the biological diversity of dry and sub-humid lands (decision V/21, para. 3).

2. Specifically, SBSTTA was requested to consider the impact of climatic change on forest biological diversity (decision V/4, para. 11) and to prepare scientific advice in order to integrate biodiversity considerations, including biodiversity conservation, into the implementation of the UNFCCC and its Kyoto Protocol (para. 18). In both cases, the Conference of Parties called for this work to be carried out in collaboration with the appropriate bodies of the UNFCCC and the Intergovernmental Panel on Climate Change (IPCC), where appropriate and feasible. The Executive Secretary was requested to assemble relevant information.

3. The SBSTTA Bureau has decided that all matters related to climate change would be considered together at the sixth meeting of the Subsidiary Body. To assist SBSTTA in its tasks, the Executive Secretary has prepared the present note. Section II provides a progress report on activities carried out by the Executive Secretary, including cooperation with the UNFCCC and the IPCC. Section III identifies areas of scientific guidance relevant to the integration of biodiversity considerations into the implementation of the UNFCCC. The conclusions are presented in section IV. Annex I, which was prepared for, and circulated at, the sixth meeting of the UNFCCC Conference of the Parties and the resumed thirteenth session of the UNFCCC Subsidiary Body on Scientific and Technological Advice (SBSTA), contains further information on cooperation with the UNFCCC, in particular regarding the integration of biodiversity considerations into the implementation of that Convention. Annex II provides a preliminary assessment of the interlinkages between biological diversity and climate change. Annex III provides the terms of reference for a proposed pilot assessment to prepare scientific advice to integrate biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol.

II. PROGRESS REPORT

4. At its fifth meeting, the Conference of the Parties noted “that there is significant evidence that climate change is a primary cause of the recent and severe extensive coral bleaching, and that this evidence is sufficient to warrant remedial measures being taken in line with the precautionary approach”. It transmitted that view to the UNFCCC and urged it “to take all possible actions to reduce the effect of climate change on water temperatures and to address the socio-economic impacts on the countries and communities most affected by coral bleaching” (decision V/3, para. 5).

5. In its decision on forest biological diversity, the Conference of the Parties urged “the United Nations Framework Convention on Climate Change, including its Kyoto Protocol, to ensure that future activities of the United Nations Framework Convention on Climate Change, including forest and carbon sequestration, are consistent with and supportive of the conservation and sustainable use of biological diversity” (decision V/4, para. 16). Further, in its decision on incentive measures, the Conference of the Parties urged “Parties and other Governments to explore possible ways and means by which incentive measures promoted through the Kyoto Protocol under the United Nations Framework Convention on Climate Change can support the objectives of the Convention on Biological Diversity” (decision V/15 para. 6).

6. These decisions have been transmitted in full by the President of Conference of the Parties to the President of the UNFCCC Conference of the Parties, and by the Executive Secretary to the UNFCCC Secretariat, in line with decisions V/3 (para 5) and V/4 (paras 11 & 16).

7. Additionally, the decisions were discussed in a note prepared by the Executive Secretary and submitted to the UNFCCC Conference of the Parties at its sixth session and its Subsidiary Body on Scientific and Technological Advice at the second part of its thirteenth session, held in The Hague from 13 to 24 November 2000. This note is attached as annex I below, and is also available at <http://www.biodiv.org/climate-change/index.html>. SBSTA considered this note and concluded as follows:

“The SBSTA noted with appreciation the information contained in a discussion note prepared by the Executive Secretary of the Convention on Biological Diversity (CBD). It took note of the decisions of the fifth Conference of the Parties to the Convention on Biological Diversity relating to forest biodiversity and marine and coastal biodiversity, particularly coral reefs, and their links to the UNFCCC. The SBSTA agreed to consider this matter in more detail at its fourteenth session. It invited Parties to submit their views on the issues identified in the discussion note prepared by the Executive Secretary of the CBD to the UNFCCC secretariat.”

8. In line with decisions V/4 (para 20) and V/21 (para 3), the two secretariats also held a number of consultations on matters arising from the above-mentioned decisions. The UNFCCC Secretariat was consulted on the preparation of the aforementioned note and facilitated its distribution at the meetings concerned. The UNFCCC Secretariat clarified that its role in, and capacity for, implementation of many of the actions called for was limited, and advised that the IPCC would be the more appropriate body for considering the impacts of climate change on biological diversity and for assisting in the preparation of scientific advice. It was agreed that further consultations would be held after the sixth meeting of the UNFCCC Conference of the Parties.

9. The Executive Secretary has held discussions with the IPCC Chair on these matters and, in particular, on the participation of IPCC in SBSTTA's work on the impacts of climate change on biological diversity and in the preparation of scientific advice on the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol.

10. In line with decision V/4 (para. 17), the Executive Secretary has begun the task of assembling information relating to the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol. This includes information prepared by the IPCC, notably its second assessment review and its *Special Report on Land Use, Land Use Change, and Forestry*, and by other organizations, both intergovernmental and non-governmental. Some of this information is being assessed in the IPCC third assessment review. Further relevant information will be available in 2001, as the reports of the three working groups of the third assessment review are approved by the IPCC plenary.

11. Information on: (i) Potential impacts on biological diversity of activities proposed to address climate change, and (ii) Possible tools for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, the potential role of the CBD, and collaboration with UNFCCC, has already been compiled in the note contained in annex I below. These aspects were given priority, since they are most relevant to the current discussions under the UNFCCC. Annex II below provides: an overview of relevant information on the impacts of climate change on biological diversity, and information on the potential for the conservation and sustainable use of biological diversity to contribute to adaptation measures taken under the UNFCCC and its Kyoto Protocol .

12. Action is also being taken by other biodiversity-related conventions. For example, risk-assessment methodologies for the impacts of climate change on wetlands and water resources are currently being developed under the Ramsar Convention on Wetlands. Additionally, at the World

Conservation Congress, held in Amman from 4 to 10 October 2000, IUCN concluded that the goals of biodiversity conservation and ecosystem maintenance can no longer be achieved without taking climate change into account and outlined elements of a strategy on biodiversity and climate change.

III. IDENTIFYING AREAS OF SCIENTIFIC GUIDANCE RELEVANT TO THE INTEGRATION OF BIODIVERSITY CONSIDERATIONS IN THE IMPLEMENTATION OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE AND ITS KYOTO PROTOCOL

A. The objective of the United Nations Framework Convention on Climate Change and sustainable development

13. The preparation of scientific guidance for the integration of biodiversity considerations in the implementation of the UNFCCC and its Kyoto Protocol requires an understanding of the relevant provisions of those two instruments, and actions taken to implement them. The UNFCCC and its Kyoto Protocol aim to reduce the impacts of climate change and promote sustainable development. They provide both for mitigation of climate change (including through reduced emissions of greenhouse gases, and increased removals of such gases from the atmosphere by sinks, such as forests), and for adaptation to the adverse effects of climate change. Scientific understanding of the interlinkages between climate change and biological diversity is important in respect of each of these aspects.

14. The ultimate objective of the UNFCCC is the stabilization of greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system. According to article 2 of the Convention, such a level should be achieved within a time-frame sufficient, *inter alia*, to allow ecosystems to adapt naturally to climate change. Therefore, although the UNFCCC makes no specific reference to biological diversity, its objective contributes to the objectives of the Convention on Biological Diversity. Article 2 of the Kyoto Protocol also recognizes the aim of promoting sustainable development.

15. Scientific understanding of the natural adaptability of ecosystems, and their constituent organisms, and the functions and interactions of biological diversity at ecosystem, species and genetic levels, could substantially contribute to the interpretation of this objective, and, therefore, help decision makers clarify the actions required. These may include: (i) actions to maximize the contribution of ecosystems to adaptation for socio-economic benefits; and (ii) any human interventions necessary to adapt ecosystems to climate change. These matters are addressed in section B of annex II below.

B. Response measures under the United Nations Framework Convention on Climate Change and its Kyoto Protocol: mitigation measures and their effects

16. Parties to the UNFCCC are committed to taking measures to mitigate climate change by addressing anthropogenic emissions and removals by sinks (art. 4.1 (a)). More specifically, Parties are to promote sustainable management, conservation and enhancement, as appropriate, of forests, oceans and other terrestrial, coastal and marine ecosystems, as sinks and reservoirs of greenhouse gases (art. 4.1 (d)). "Annex I countries" (that is, developed countries and countries with economies in transition) are required to reduce their aggregate net emissions (art. 4.2(a)).

17. The Kyoto Protocol, which is not yet in force, establishes reduction targets for greenhouse gas emissions by annex I countries (art.3 and annex B). Net changes in greenhouse-gas emissions by sources and removals by sinks resulting from certain direct human-induced land-use change and forestry activities, but limited to afforestation, reforestation and deforestation since 1990, can be used to meet these commitments (art 3.3). Further land-use, land-use change and forestry (LULUCF) activities may also be added by the Conference of Parties serving as the meeting of the Parties to the Protocol (art. 3.4).

Examples of such activities currently under discussion include low-tillage land use, projects that decelerate rates of land-use change through conservation measures, and forest or crop-management practices that increase carbon sequestration.

18. The Kyoto Protocol has provisions that allow annex I parties to meet part of their net emissions reduction through three mechanisms: emissions trading among annex I countries (art. 17); joint implementation between annex I countries (art. 6); and the clean development mechanism (CDM) (art. 12), which allows annex I countries to earn “certified emission reductions” from eligible activities supported in non-annex I countries. LULUCF project-based activities are allowed under article 6, in accordance with articles 3.3 and 3.4. It is not yet clear whether or not LULUCF activities will be included under article 12.

19. The inclusion of land-use, land-use change, and forestry (LULUCF) activities in accounting for net emissions under the Kyoto Protocol and in project activities carried out under its mechanisms could potentially promote the conservation and sustainable use of biological diversity. However, as discussed in annex I below, there is also a risk of negative impacts on biological diversity. The net impact will depend, in part, on decisions of the UNFCCC Conference of the Parties in interpreting the articles referred to above and on the way these are implemented.

20. Improved understanding of the efficacy and reliability of different assemblages of organisms as carbon reservoirs and carbon sinks and the likely effects of climate change on these functions could help decision makers in determining how management of biological diversity in ecosystems can contribute most effectively to the mitigation of climate change. This is addressed in section C of annex II below. Additionally, assessments of the likely effects of mitigation measures involving afforestation, reforestation and deforestation and other land-use change on biological diversity and the goods and services arising from such biological diversity in ecosystems could help decision makers in optimizing the co-benefits of mitigation measures arising from the conservation and sustainable use of biological diversity. These matters are addressed in sections III C and D of annex I below.

21. Such an appreciation of the interlinkages between climate change and biological diversity is pertinent, given that, under the Kyoto Protocol, in achieving its commitments to limit and reduce its greenhouse-gas emissions, in order to promote sustainable development, each annex I Party “shall protect and enhance sinks and reservoirs of greenhouse gases [...] taking into account its commitments under relevant international environmental agreements” (art. 2).

22. Furthermore, the UNFCCC requires Parties to employ appropriate measures, for example impact assessments, with a view to minimizing adverse effects of mitigation measures on, *inter alia*, the quality of the environment (art. 4.1(f)). The use of impact assessments, and other tools, for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, is addressed in section III C of annex I below.

C. Response measures under the United Nations Framework Convention on Climate Change and its Kyoto Protocol: adaptation to adverse effects

23. Parties to the UNFCCC are committed to cooperating in preparing for adaptation to the impacts of climate change (art. 4.1(e)). Particular attention is given, *inter alia*, to small island countries and to countries with: low-lying coastal areas; arid and semi-arid areas, forested areas and areas liable to forest decay, and to fragile ecosystems, including mountainous ecosystems (art. 4.8). Additionally, the clean development mechanism of the Kyoto Protocol makes provision for a share of the proceeds from certified project activities to be used to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation (art. 12.8). ^{1/}

^{1/} The possibility of extending the adaptation levy to the other Kyoto mechanisms is under negotiation.

24. Scientific understanding of biological diversity and the goods and services it provides could help decision makers in identifying some priorities for adaptation measures. This issue is addressed in section D of annex II below. Furthermore, scientific understanding of the vulnerability of ecosystems and species could help decision makers in identifying fragile ecosystems referred to in article 4, paragraph 8, of the climate change convention. This question is addressed in paragraphs 10 and 12-16 of annex II below.

IV. CONCLUSIONS

25. From the foregoing discussion, the following areas can be identified as being potentially relevant to the preparation of scientific advice for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol:

(a) The impacts of climate change on biological diversity, and the vulnerability and adaptability of the components of biological diversity and ecosystems to climate change;

(b) The potential impact on biological diversity of mitigation measures that may be carried out under the UNFCCC and its Kyoto Protocol, and the identification of potential mitigation measures that also contribute to the conservation and sustainable use of biological diversity;

(c) The potential for the conservation and sustainable use of biological diversity to contribute to adaptation measures taken under the UNFCCC and its Kyoto Protocol on biological diversity.

26. In order to respond fully to the request of the Conference of the Parties, SBSTTA may wish to give attention to possible tools to facilitate application of scientific advice for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, including such methodologies as impact assessments, procedures to ensure the participation of stakeholder groups, as well as guidelines, criteria and indicators. In doing so, SBSTTA may wish to draw upon the relevant provisions of the Convention on Biological Diversity, including:

(a) *In respect, especially, of adaptation measures*: national biodiversity strategies and action plans (Art. 6(a)) and 10(a); identification and monitoring (Art. 7); protected areas and ecosystem management (Art. 8(a)-(d), (f), (h), and (j)); *ex situ* conservation (Art. 9); sustainable use (Art. 10); incentive measures (Art. 11); and research and training (Art. 12); and

(b) *In respect, especially, of avoiding negative impacts of climate-change mitigation measures*: the integration of biodiversity considerations into sectoral and cross-sectoral plans, programmes and policies (Art. 6(b)); respect of indigenous and local communities (Art. 8(j)); identification and monitoring (Art. 7; and 8(l)), and impact assessments (Art. 14); sustainable use (Art. 10); incentive measures (Art. 11).

*Annex I***CLIMATE CHANGE AND BIOLOGICAL DIVERSITY: COOPERATION BETWEEN THE CONVENTION ON BIOLOGICAL DIVERSITY AND THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE**

Note by the Executive Secretary of the Convention on Biological Diversity submitted to the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) at its sixth session and the UNFCCC Subsidiary Body on Scientific and Technological Advice at the second part of its thirteenth session (The Hague, 13-24 November 2000)

I. INTRODUCTION

1. The objectives of the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC) are interacting, and, to a large extent mutually supportive: climate change is one of the threats to biodiversity, and the need for its rate to be reduced to allow ecosystems to adjust to climate change is recognized in the objective of the UNFCCC. Measures such as the conservation and sustainable management of forests and other ecosystems can contribute simultaneously to the two conventions.
2. Strengthened collaboration between the two conventions has been called for by the Conference of the Parties to the Convention on Biological Diversity at its third, fourth and fifth meetings. At the latter meeting, the Conference of the Parties called for collaboration concerning: coral bleaching; the impact of climate change on forest biodiversity; incentive measures; ^{2/} and the integration of biodiversity considerations in the implementation of the Kyoto Protocol. The Conference of the Parties also called for efforts to make implementation activities and institutional arrangements of the two conventions mutually supportive. This process would entail a range of activities that may require coordination within countries, and the collaboration of Parties, and the conferences of parties, subsidiary bodies, secretariats and financial mechanisms of the two conventions, and with the Intergovernmental Panel on Climate Change (IPPC).
3. Potential collaborative activities fall into two main groups:
 - (a) Analysis of the impacts of climate change on biological diversity, and consideration of response measures; and
 - (b) Use of incentive measures and consideration of ways to the integrate biodiversity considerations in the implementation of the UNFCCC and its Kyoto Protocol.
4. These categories of activity are examined sections II and III below.

^{2/} Under the Convention on Biological Diversity, "incentive measures" refers to any "economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity" (art. 11).

II. THE IMPACT OF CLIMATE CHANGE ON BIOLOGICAL DIVERSITY, AND RESPONSE MEASURES

A. Relevant decisions of the Conference of the Parties to the Convention on Biological Diversity

1. Coral bleaching

5. The CBD COP, at its fifth meeting, noted that there is significant evidence that climate change is a primary cause of the recent and severe extensive coral bleaching, and that this evidence is sufficient to warrant remedial measures being taken in line with the precautionary approach. It transmitted that view to the UNFCCC and urged UNFCCC “to take all possible actions to reduce the effect of climate change on water temperatures and to address the socio-economic impacts on the countries and communities most affected by coral bleaching”.^{3/}

6. The Conference of the Parties also called for collaboration with UNFCCC in the development and implementation of a specific work plan on coral bleaching, taking into account a number of recommendations for priority actions (decision V/3, para. 4 and annex). These actions include the initiation of efforts to develop joint actions among the Convention on Biological Diversity, the UNFCCC, and the Ramsar Convention on Wetlands in order to:

- (a) Develop approaches for assessing the vulnerability of coral-reef species to global warming;
- (b) Build capacity for predicting and monitoring the impacts of coral bleaching;
- (c) Identify approaches for developing response measures to coral bleaching; and
- (d) Provide guidance to financial institutions, including the Global Environment Facility (GEF), to support such activities.

2. Forest biological diversity

7. Also at its fifth meeting, the Conference of the Parties requested its Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), before the sixth meeting of the Conference of the Parties (in April 2002), to consider the impact of climate change on forest biological diversity, in collaboration with the appropriate bodies of the UNFCCC and the Intergovernmental Panel on Climate Change (IPCC), where appropriate and feasible (decision V/4, para. 11).

B. Relevance of the UNFCCC and its Kyoto Protocol

8. The ultimate objective of the UNFCCC is the stabilization of greenhouse gas concentrations “within a time-frame sufficient [*inter alia*] to allow ecosystems to adapt naturally to climate change” (art. 2). Thus, although the UNFCCC makes no specific reference to biological diversity, its objective contributes to the objectives of the Convention on Biological Diversity. Further, among their Commitments under the UNFCCC (art. 4), Parties shall “promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems” (art. 4.1(d)) and “cooperate in preparing for adaptation to the impacts of climate change (...)” (art. 4.1(e)). Particular attention is given to, *inter alia*, “fragile ecosystems” (art. 4.8(g)). Additionally, the Clean Development Mechanism of the Kyoto Protocol

^{3/} This is further to decision IV/5, by which the Conference of the Parties expressed concern at the recent and extensive coral bleaching, noted that it was a possible consequence of global warming, requested the SBSTTA to analyse the situation, and invited the UNFCCC to address the issue.

makes provision for a share of the proceeds from certified project activities to be used to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation (art. 12.8).

C. Possible options for collaborative actions

9. Possibilities for collaborative or coordinated actions between the Convention on Biological Diversity and UNFCCC and related processes might be explored in the following areas:

(a) Assessments of the impact of climate change on biological diversity, and of vulnerability of certain ecosystems to climate change. The ecosystem approach, developed under the Convention on Biological Diversity provides a useful framework. This area of activity might be pursued through collaboration between the IPCC and relevant assessment processes under the Convention on Biological Diversity;

(b) Coordinated approaches to capacity-building that address common needs of the two conventions. This is an area that could, perhaps, be facilitated by the secretariats, the GEF, and country focal points;

(c) Coordinated approaches to response mechanisms to climate change; and

(d) Coordinated guidance to the GEF and other financial mechanisms.

**III. INCENTIVE MEASURES AND THE INTEGRATION OF BIODIVERSITY
CONSIDERATIONS IN THE IMPLEMENTATION OF THE UNFCCC
AND ITS KYOTO PROTOCOL**

A. Relevant decisions of the Conference of the Parties to the Convention on Biological Diversity

10. At its fifth meeting, the Conference of the Parties to the Convention on Biological Diversity urged Parties and other Governments to explore possible ways and means by which incentive measures ^{4/} promoted through the Kyoto Protocol can support the objectives of the Convention on Biological Diversity (decision V/15, para. 5). It also requested SBSTTA, prior to the sixth meeting of the Conference of the Parties, to prepare scientific advice in order to integrate biodiversity considerations, including biodiversity conservation, in the implementation of the UNFCCC and its Kyoto Protocol, in collaboration with the appropriate bodies of the UNFCCC and IPCC where appropriate and feasible (decision V/4, para. 18). In this respect, the Executive Secretary was requested to assemble relevant information, in collaboration with UNFCCC. (V/4, para. 17).

B. Relevance of the UNFCCC and its Kyoto Protocol

11. Under the Kyoto Protocol, each Annex I Party in achieving its commitments to limit and reduce its greenhouse-gas emissions, in order to promote sustainable development, “shall protect and enhance sinks and reservoirs of greenhouse gases (...) taking into account its commitments under relevant international environmental agreements” (art. 2).

12. The inclusion of land use, land-use change, and forestry (LULUCF) activities in accounting for net emissions under the Kyoto protocol (art. 3.3, 3.4) and in possible project activities carried out under its mechanisms (art. 6, 12) could potentially promote the conservation and sustainable use of biological

^{4/} See footnote 1.

diversity. As noted by the IPCC in its special report on LULUCF, ^{5/} however, there is also a risk of negative impacts on biological diversity. The IPCC recognized that consideration would need to be given to synergies and trade-offs related to LULUCF activities under the UNFCCC and its Kyoto Protocol in the context of sustainable development including impacts on biodiversity and related goods and services. It suggested that the goals and the objectives of relevant multilateral environmental agreements, such as the Convention on Biological Diversity be taken into account.

13. Much will depend on decisions of the UNFCCC Conference of the Parties in:

(a) Developing accounting procedures and definitions for afforestation, reforestation and deforestation (ARD);

(b) Determining which, if any, additional LULUCF activities will be included under Article 3.4;

(c) Determining whether or not LULUCF activities will be allowed under the Clean Development Mechanism (art. 12) and, if so, which ones;

(d) Whether or not any screening for biodiversity considerations will be applied to LULUCF activities (arts. 3.3 and 3.4), and projects (art. 6, and, if allowed, art. 12), though, for example, use of criteria and indicators, and/or impact assessments.

C. Potential impacts on biological diversity of activities proposed to address climate change

14. Whether or not a proposed activity has positive effects on biological diversity may depend on the specific characteristics of the case concerned. In some cases, a proposed activity may have positive impacts on some components of biological diversity, or at certain levels, but negative impacts on others. Further, they may be other non-carbon impacts on sustainable development, besides impacts on biodiversity, that may need to be taken into account. Impact assessments may be necessary to determine likely impacts in some cases.

15. However some general points can be made. For example, converting non-forest land to forest would typically increase the diversity of flora and fauna, except in situations where biologically diverse non-forest ecosystems, such as native grasslands, are replaced by forests consisting of single or a few species. Table 1 below provides an indication of whether potential LULUCF activities (both “ARD” and “additional” activities) are likely, overall, to have negative, positive, or uncertain effects on biological diversity.

16. The definitions for “afforestation”, “reforestation” and “deforestation”, as well as “direct” and “human-induced”, combined with accounting rules and procedures related to certain time periods will determine the incentive structure for such forestry activities and thus impact on forest biological diversity. Under certain definitional scenarios, deforestation followed by replanting could be promoted, and in cases where the original forest was natural there would be significant negative effects on biological diversity. These matters are discussed at length in the IPCC special report. ^{6/} Of particular interest from a biodiversity perspective will be whether avoided deforestation is included since conservation of natural forests has very positive impacts on biological diversity.

^{5/} IPCC (2000). Land Use, Land-Use Change, And Forestry. A special report of the Intergovernmental Panel on Climate Change: summary for policymakers, section 9, paras 84–90, (approved in detail at IPCC Plenary XVI, Montreal, Canada, 1–8 May, 2000), and chapters 2 (sections 2.2, 2.5), 3 (section 3.6), and 5 (sections 5.5 – 5.6), WMO/UNEP. Geneva/Nairobi.

^{6/} IPCC (2000). Op cit chapters 2 (sections 2.2, 2.5.1.1)

Table 1

<i>Likely impact on biodiversity</i>	<i>“Afforestation, reforestation and deforestation (ARD)” activities (Art 3.3)</i>	<i>“Additional” activities (Art 3.4)</i>
Strongly positive	<ul style="list-style-type: none"> Avoiding deforestation of natural forests 	
Positive	<ul style="list-style-type: none"> Reforestation with native trees Afforestation with native trees on degraded land 	<ul style="list-style-type: none"> Forest management (reduced-impact logging, extended rotation) Revegetation (establishment of native vegetation, natural regeneration, agroforestry) Reduced tillage agriculture Reduced grazing (reductions in overgrazing)
Net neutral or uncertain	<ul style="list-style-type: none"> Reforestation (other) Afforestation (other) 	<ul style="list-style-type: none"> Forest management (other) Crop management Revegetation (other)
Negative	<ul style="list-style-type: none"> Afforestation on other native ecosystems (eg: natural grassland or savannah) Conversion of natural forests to plantations 	<ul style="list-style-type: none"> Drainage of wetlands Fertilization of nutrient limited natural ecosystems Irrigation of water limited natural ecosystems

17. Inclusion of additional activities such as reduced grazing, forest management practices such as reduced-impact logging and increased rotation time, and agroforestry could provide incentives for the conservation and sustainable use of biological diversity. However, unless screened out, certain other additional LULUCF activities, such as fertilization of natural ecosystems defined by their low-nutrient status or irrigation of water-limited natural ecosystems, could lead to negative impacts on biological diversity.

18. Inclusion of LULUCF activities under the Clean Development Mechanism could provide significant positive incentives for the conservation and sustainable use of biological diversity in developing countries, if appropriate eligibility criteria, screening procedures of impact assessments are applied.

19. Positive non-carbon benefits of LULUCF activities, such as the conservation and sustainable use of biological diversity, could be promoted through the application of screening procedures, including the use of criteria and indicators, impact assessments, or guidelines, as discussed in the IPCC report. ^{7/} The IPCC suggests that a system of criteria and indicators could be used to assess and compare sustainable development impacts across LULUCF alternatives, and that modified environmental and socio-economic impact assessments could be applied to LULUCF projects. These could be applied on a national or multilateral basis. However, the IPCC warns that if sustainable development criteria vary significantly across countries or regions, there may be incentives to locate activities and projects in areas with less stringent environmental or socio-economic criteria. ^{8/}

20. The IPCC identifies some other critical factors affecting the sustainable development contributions of LULUCF activities and projects to mitigate and adapt to climate change:

- (a) Institutional and technical capacity to develop and implement guidelines and procedures;
- (b) Extent and effectiveness of local-community participation in development, implementation, and distribution of benefits; and
- (c) Transfer and adoption of technology.

^{7/} IPCC (2000). Op cit Summary for policy makers (section 9, paras 86, 89), chapter 2 (sections 2.2, 2.5)

^{8/} IPCC (2000). Op cit Summary for policy makers (section 9, para 87), chapter 2 (section 2.5)

D. Possible tools for the integration of biodiversity considerations in the implementation of the UNFCCC and its Kyoto Protocol, the potential role of the CBD, and collaboration with UNFCCC

21. The Conference of the Parties to the UNFCCC may decide that LULUCF activities, including LULUCF projects, should be screened for their contribution to sustainable development, including the conservation and sustainable use of biological diversity, according to agreed norms. Alternatively, it may decide that this be left to the Parties concerned.

22. There are a number of approaches that Parties may take, for example:

(a) The application of strategic environmental assessments (SEAs) to LULUCF policies and programmes;

(b) The application of environmental impact assessments (EIAs) to project based LULUCF activities; and

(c) The use of procedures to ensure participation of stakeholder groups, including indigenous and local communities, in the assessment and decision-making processes.

23. For Parties to the Convention on Biological Diversity, a number of provisions of the Convention are relevant, including:

(a) The integration of biodiversity considerations into relevant sectoral or cross—sectoral plans, programmes and policies (art. 6(b));

(b) Use of environmental impact assessments, with public participation, for proposed projects that are likely to have significant adverse effects on biological diversity (art 14.1(a)), and arrangements to take into account consequences of programmes and policies that are likely to have significant adverse effects on biological diversity (art 14.1(b)).

24. The ecosystem approach has been adopted by the Conference of the Parties to the Convention on Biological Diversity as the primary framework for action under the Convention (decision II/8). As a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (decision V/6), it provides a useful framework for integrating the conservation of biological diversity with the management of ecosystems for other purposes, such as carbon sequestration and modulation of climate change, while enhancing the flow of benefits to stakeholders, in particular the local communities which manage biological diversity in ecosystems. It recognizes that change is inevitable and, therefore, that adaptive management practices need to be used, that management actions need to be carried out at various scales, and that inter-sectoral cooperation must be ensured.

25. As noted above, the Conference of the Parties to the Convention on Biological Diversity has requested SBSTTA to prepare scientific advice to facilitate integration of biodiversity considerations in the implementation of the UNFCCC and its Kyoto Protocol. Such advice may be drawn upon by UNFCCC Parties. The next meeting of SBSTTA will be held in March 2001.

26. Such scientific advice could include:

(a) Criteria and indicators for the conservation and sustainable use of biological diversity, for example as a component of sustainable forest management, which might be used in the design of activities, or in monitoring and evaluating their implementation;

(b) Positive or negative lists of activities, similar to that in table 1 above. Such lists could be used in determining, for example, which activities should be subject to an SEA or EIA, or even which activities should be eligible; and

(c) Other guidance, such as methodologies to ensure involvement of indigenous and local communities.

27. The Conference of the Parties to the Convention on Biological Diversity has called for the development of advice by SBSTTA to be in collaboration with the appropriate bodies of the UNFCCC and IPCC where appropriate and feasible.

*Annex II***OVERVIEW OF THE INTERLINKAGES BETWEEN BIOLOGICAL DIVERSITY AND CLIMATE CHANGE ^{9/}***A. The climate-change phenomenon*

1. Climate change is variation in either the mean state of the climate or in its variability, persisting for an extended period, typically decades or longer. ^{10/} It encompasses temperature increases (“global warming”), sea-level rise, changes in precipitation patterns, and increased frequencies of extreme events.

2. By the end of this century, global mean surface temperatures are expected to increase by between 1.5 °C and 6 °C, ^{11/} a faster change than any seen in the last 10,000 years. Some regions will experience much greater increases. Sea levels are projected to rise by 15 cm to 95 cm. Increases in global mean precipitation and in the frequency of intense rainfall are predicted, but some already dry areas are expected to become drier. Recent trends in the increased frequency and magnitude of the El Niño-Southern Oscillation (ENSO) phenomena, which lead to severe floods, droughts and fire outbreaks in regions of the tropics and sub-tropics, are projected to continue.

3. The weight of scientific evidence suggests that the observed changes in climate are caused, at least in part, by human activities, primarily the burning of fossil fuels and changes in land cover, which are modifying the concentration of carbon dioxide and other greenhouse gases that absorb heat radiating from the Earth as well as the properties of the surface which absorbs or scatters radiant energy (the albedo effect).

B. Impacts of climate change on biological diversity

4. Climate change may directly affect species through changes in phenology (e.g., earlier flowering of trees and egg-laying in birds), lengthening of the growing season, and changes in distribution, resulting from migration (e.g. pole-ward and altitudinal shifts in insect ranges). In many cases the observed changes are consistent with well-known biological responses to climate.

5. Changes in such characteristics of organisms may thus serve as indicators or early warnings of climate change.

6. Climate change is an additional stress on ecosystems and species that are, often, already under stress from other pressures such as: habitat change resulting from land-use change; over-harvesting; pollution; and the effects of invasive species. Such pressures thus make biodiversity more vulnerable to climate change. For example:

(a) Habitat fragmentation poses barriers to migration reducing the possibility that species may adapt by moving as the climate changes. (Barriers to migration may also exist naturally in areas such as small islands, mountain tops);

^{9/} This annex draws upon many sources, including the IPCC Second Assessment Report, the IPCC Special Report on Land Use, Land Use Change and Forestry, and the presentation of the IPCC chair, Dr R Watson, to the UNFCCC COP-6. Further information will become available in 2001 when the working group reports prepared for the Third Assessment Report are accepted by the IPCC.

^{10/} As defined in the reports of the IPCC. Thus, variations caused by “El Niño” per se are not considered climate change by this definition, but multidecadal trends of change in the frequency of such events are.

^{11/} These estimates are higher than previous estimates due to lower projected emissions of sulphur dioxide (SO₂ aerosols reflect incoming sunlight), resulting less offset of the warming effect of the greenhouse gases.

(b) Habitat fragmentation and over-harvesting may result in small isolated populations with low genetic diversity. These are more vulnerable to extinction, especially if genetic diversity is also reduced, and the populations consequently have low genetic adaptability;

(c) Ecosystem degradation, which may result from unsustainable use of ecosystem components, pollution, pest outbreaks, or changes in fire regimes, can decrease the resilience of ecosystems to climate change.

7. Addressing such exacerbating factors may be an important component of adaptation to climate change (see paras. 27-28 below).

8. The expected result of these interactions is that climate change will lead to reduced biological diversity. At the species level, those that are already critically endangered because of existing pressures, are likely to be driven to extinction by the added stress of climate change. Migratory species may be at particular risk since they require separate breeding, wintering and migrating habitats. Under existing climate-change scenarios, migration rates required to keep up with climate change might be ten times greater than those calculated for the last glacial retreat, and thus may exceed the capacity of some species to migrate.

9. Moreover, different capacities for adaptation and migration between species means that biomes are unlikely to move as discrete units. Thus, at the ecosystem level, established natural communities may be broken up as the constituent species shift at different rates in response to climate change. For example, a substantial fraction of the world's forested area is expected to undergo major changes in broad vegetation types with the greatest changes at high latitudes. New assemblages of species and hence new ecosystems may be established. As noted in paragraph 19 below, this may have major implications for the role of forests as carbon stores.

10. Differential responses to climate change by species in ecosystems may lead to disruption of important functional interactions, with potentially highly serious consequences for the provision of ecosystem services such as pest control, pollination, seed dispersal, decomposition and soil nutrient cycling. In addition to the effects on natural ecosystems, these could have socio-economic consequences for agriculture.

11. Certain ecosystem types will be particularly vulnerable. Ecotones (transition areas between different ecosystems, with high species and genetic diversity), which are important for adapting to climate change (see para. 28 below), are highly threatened by climate change. Examples include semi-arid drylands, which are prone to desertification.

12. Amongst the so-called biodiversity "hotspots" (areas that are high in biodiversity, but are highly threatened), the most vulnerable are the Mediterranean and savanna areas.

13. The impact of climate change on biological diversity is expected to be non-linear. The impact may be particularly severe when certain critical thresholds are crossed. Ecosystem types that are vulnerable to such thresholds include:

(a) *Wetlands overlying permafrost.* These are likely to be severely affected when the ice melts;

(b) *Coral reefs.* As already noted by the Conference of the Parties, there is significant evidence that climate change is a primary cause of the recent and severe extensive coral bleaching. Bleaching is reversible when the increases are short-term and of no more than 1-2°C. However, sustained increases in water temperatures of 3-4 °C above normal maxima can cause significant coral mortality. Severe bleaching events were triggered, for example, by the El Niño events of 1982/83 and 1997/98;

(c) *Mangrove ecosystems*. Many mangrove ecosystems are highly vulnerable to sea-level rise. ^{12/} For example, a 45 cm rise could inundate 75 per cent of the Sundurbans, the world's largest mangrove forest, in Bangladesh.

14. Climate change may also increase threats from invasive alien species:

(a) Firstly, climate change may result in extension or changes in the ranges suitable to certain invasive species. An example may be the increased prevalence of vector-borne infectious diseases transmitted by blood-feeding mosquitoes and ticks;

(b) Secondly, environments may become more favourable to weedy species because of climate change induced ecosystem disruptions.

15. In summary, and as the IPCC second assessment report concluded, ecosystems vital to human development and well-being are vulnerable to climate change. There are likely to be reductions in biological diversity and in the goods and services that ecosystems provide to society, e.g., sources of food, fibre, medicines, recreation and tourism, and ecological services such as controlling nutrient cycling, waste quality, water run-off, soil erosion, pollination services, detoxification and air quality. Additionally there may be an increased provision of ecosystem "bads" such as pests, diseases and other invasive species.

C. The role of biological diversity in measures to mitigate the causes of climate change

Carbon sequestration by terrestrial ecosystems

16. The sustainable management, conservation and enhancement of forests, oceans and other ecosystems, as sinks of greenhouse gases, is promoted by the UNFCCC and its Kyoto Protocol.

17. At present, terrestrial ecosystems are understood to be net sinks. Because of deforestation, tropical forest lands as a whole constitute a net source, while temperate forests are a net sink. In boreal forests, the carbon budgets differ between forest types: some boreal forest regions are net sinks, while others appear to be net sources. Carbon is stored both above and below ground. Below-ground stocks are greater than above ground, particularly in non-forested areas (drylands, grasslands, savannas, tundra, and croplands). Relatively large amounts of carbon are also sequestered in peat lands and other wetlands.

18. There is no unique relationship between the biodiversity and carbon sequestration of an ecosystem. However, as noted above, some forest types are net sinks, while others are sources. Unmanaged forests have more biodiversity and more carbon than managed forests such as plantations, and recent evidence suggests that "old-growth" forests continue to sequester more carbon than managed forests. Nevertheless, newly planted or regenerating forests, in the absence of major disturbances, will continue to uptake carbon for 20 to 50 years or more after establishment.

19. As noted in paragraph 9 above, the species composition of some forests is likely to be altered as a result of climate change — entire forest types may disappear and be replaced by new ones. Large amounts of carbon could be released into the atmosphere during transitions from one forest type to another because the rate at which carbon can be lost during times of high forest mortality is greater than the rate at which it can be gained through new growth.

20. Climate-change-induced changes in the frequency of El Niño and other extreme events and disturbance regimes (fires, pest outbreaks) could also lead to loss of stored carbon or to decreases in the rate of carbon uptake.

^{12/} However, in cases where vertical accretion can keep pace with sea level rise, some other mangrove systems may be able to adapt.

21. Increased uptake of carbon is likely to result from carbon dioxide fertilization effects. However ecosystem models suggest that this effect may gradually diminish and be offset by the effects mentioned in the previous two paragraphs. Forest ecosystems could eventually become carbon sources.

22. The management of agricultural lands and rangelands can also play an important role in enhancing carbon sinks and in reducing current emissions of carbon dioxide, as well as methane and nitrous oxide. ^{13/} Land-use and management measures include:

- (a) Sustaining existing forest cover;
- (b) Slowing deforestation;
- (c) Regenerating natural forests;
- (d) Establishing tree plantations;
- (e) Promoting agroforestry;
- (f) Improving the management of agricultural soils and rangelands (minimum tillage, mulching etc);
- (g) Improving efficiency of fertilizer use;
- (h) Restoring degraded agricultural lands and rangelands;
- (i) Recovering methane from stored manure;
- (j) Improving the quality of the diet of ruminants.

23. Some of these options could have positive or negative impacts on biological diversity as discussed in annex I, section III C above.

24. Additionally, the use of biomass fuels to displace fossil fuels could contribute to reducing net emissions.

Potential impacts on biological diversity of activities proposed to address climate change

25. The potential impacts on biological diversity of activities proposed to address climate change are discussed in section III C of annex I above.

Possible tools for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol

26. Possible tools for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol are discussed in section III D of annex I above.

D. Adaptation measures

Measures to mitigate the loss of biological diversity

27. A number of measures may be taken to mitigate the negative impacts of climate change on biodiversity. Chief among them is the reduction of other pressures on biodiversity arising from habitat conversion, over-harvesting, pollution, and alien species invasions. Since mitigation of climate change

^{13/} Emissions of methane (CH₄) and nitrous oxide (N₂O) are influenced by land use, land-use change, and forestry activities (e.g., restoration of wetlands, biomass burning, and fertilization of forests). Hence, to assess the greenhouse gas implications of LULUCF activities, changes in CH₄ and N₂O emissions and removals—the magnitude of which is highly uncertain—would have to be considered explicitly. There are currently no reliable global estimates of these emissions and removals.

itself is a long-term endeavour, reduction of other pressures may be the most practical options. For example, increasing the health of coral reefs, by reducing the pressures from coastal pollution and practices such as fishing with explosives and poisons, may allow them to be more resilient to increased water temperature and reduce bleaching.

28. A major adaptation measure is to counter habitat fragmentation through the establishment of biological corridors between protected areas particularly in forests. Conservation of ecotones is also an important adaptation measure. Ecotones serve as repositories of genetic diversity that may be drawn upon to rehabilitate adjacent ecoclimatic regions. As an insurance measure such approaches can be completed by *ex situ* conservation. This might include conventional collection and storage in gene banks as well as dynamic management of populations allowing continued adaptation through evolution to changing conditions. Promotion of on-farm conservation of crop diversity may serve a similar function.

Adaptation measures involving the conservation and sustainable use of biological diversity

29. The protection, restoration or establishment of biologically diverse ecosystems that provide important goods and services may constitute important adaptation measures to supplement existing goods and services, in anticipation of increased pressures or demand, or to compensate for likely losses. For example:

(a) The protection or restoration of mangroves can offer increased protection of coastal areas to sea level rise and extreme weather events;

(b) The rehabilitation of upland forests and of wetlands can help regulate flow in watersheds, thereby moderating floods from heavy rain and ameliorating water quality;

(c) Conservation of natural habitats such as primary forests, with high ecosystem resilience, may decrease losses of biodiversity from climate change and compensate for losses in other, less resilient, areas.

30. The ecosystem approach as adopted by the Conference of the Parties to the Convention on Biological Diversity (decision V/6, annex) provides a framework for adaptive management in the face of climate change. Ecosystem processes are often non-linear, and the outcome of such processes often shows time-lags. The result is discontinuities, leading to surprise and uncertainty. Management must be adaptive in order to be able to respond to such uncertainties and contain elements of "learning-by-doing" or research feedback. The ecosystem approach involves a focus on the functional relationships and processes within ecosystems, acknowledgment of the full range of goods and service provided, and attention to benefit sharing among stakeholders. Problems need to be addressed at the appropriate, often multiple, scales, with intersectoral cooperation.

*Annex III***PILOT ASSESSMENT TO PREPARE SCIENTIFIC ADVICE TO INTEGRATE
BIODIVERSITY CONSIDERATIONS IN THE IMPLEMENTATION OF THE
UNFCCC AND ITS KYOTO PROTOCOL***Draft terms of reference for an expert group**

1. The expert group should
 - (a) Analyse the potential impact on biological diversity of mitigation measures that might be taken under the UNFCCC and its Kyoto Protocol;
 - (b) Identify factors that influence the efficacy and reliability of different assemblages of organisms as carbon reservoirs and carbon sinks (and as reflective surfaces), and the likely effects of climate change and other likely future changes on these functions;
 - (c) Identify potential mitigation measures that also contribute to the conservation and sustainable use of biological diversity.
2. The expert group should develop possible tools to facilitate application of scientific advice for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, including methodologies, guidelines, criteria and indicators, as feasible.
3. In carrying out these tasks, the expert group should draw upon relevant documents prepared under the Convention on Biological Diversity (including decisions V/3, V/4, and V/6, and UNEP/CBD/SBSTTA/6/11) and IPCC (including the third assessment review and the *Special Report on LULUCF*), as well as other available literature.
4. The expert group should identify areas where further work is needed to improve scientific advice for the integration of biodiversity considerations into the implementation of the UNFCCC and its Kyoto Protocol, including (i) further assessment, drawing upon existing knowledge; and (ii) further research.

Composition of the expert group

5. The expert group will comprise a regionally balanced group of 10–15 people with expertise in the fields of biological diversity and climate change. The experts will be selected by the Executive Secretary, in consultation with the Bureau of SBSTTA, drawing upon the roster of experts under the Convention on Biological Diversity and scientists involved in the IPCC processes.

Duration of work and reporting

6. The work of the expert group should be initiated as soon as possible. Initially, two meetings should be planned. Nomination of experts should be completed by 15 June 2000, and a first meeting of the group should be convened as soon as funds are made available. Preferably, the group should complete its work and report to SBSTTA at its seventh meeting. If this is not possible, a progress report should be submitted to SBSTTA at that meeting.
7. A decision as to future work of the group will be taken by SBSTTA at its seventh meeting.

* See also the note by the Executive Secretary on scientific assessments: development of methodologies and identification of pilot studies (UNEP/CBD/SBSTTA/6/9).