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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

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Item 7 of the provisional agenda

COOPERATION WITH RELEVANT INTERNATIONAL ORGANIZATIONS

Views on the IPCC technical paper on the interlinkages between climate change, biodiversity and desertification

Submissions from Parties

Note by the secretariat

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its fourteenth session, supported the request of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD) to the Intergovernmental Panel on Climate Change (IPCC) for a technical paper on the interlinkages between climate change, biodiversity and desertification. It welcomed the scoping paper prepared by the IPCC on this subject. The SBSTA invited Parties to submit their views on the proposed IPCC technical paper by 1 September 2001 for inclusion in a miscellaneous document and also to forward their comments directly to the IPCC (FCCC/SBSTA/2001/2, para. 42 (g)).
2. Four such submissions* have been received. In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced in the language in which they were received and without formal editing.

* In order to make these submissions available on electronic systems, including the World Wide Web, these submissions have been electronically imported. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

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PAPER NO. 1: AUSTRALIA

Introduction

Australia welcomes the opportunity to make a submission on the scoping paper for a technical paper on interlinkages between climate change and biodiversity, which the Intergovernmental Panel on Climate Change (IPCC) provided to the Subsidiary Body on Scientific and Technological Advice (SBSTA) of the United Nations Framework Convention on Climate Change (UNFCCC) at the resumed Sixth Conference of the Parties (COP6) (16-27 July 2001). Australia supports collaboration between the IPCC and the Convention on Biological Diversity (CBD) on the interlinkages between climate change and biodiversity.

Value of the IPCC technical paper

Australia supports the preparation by the IPCC of a technical paper on climate change and biodiversity, and believes that this would provide a valuable contribution to strengthening co-operation between the UNFCCC and the CBD. A technical paper of this kind would be instrumental in drawing together relevant conclusions from the extensive and high-quality assessment work already carried out by the IPCC. Relevant IPCC work would include the recently completed Third Assessment Report (TAR) on Climate Change, the Special Report on Land Use, Land Use Change and Forestry (LULUCF) and the Special Report on the Regional Impacts of Climate Change. The technical paper would be an effective way to inform the work being conducted under the CBD Subsidiary Body on Scientific, Technological and Technical Advice (SBSTTA) on the integration of biodiversity considerations into the implementation of the UNFCCC and the Kyoto Protocol

Australia also supports consideration, in the development of the IPCC paper, of broader interlinkages between other related conventions, such as the United Nations Convention to Combat Desertification and the Ramsar Convention on Wetlands.

Timing of the preparation of the IPCC paper

The decision on whether to proceed with an IPCC technical paper on climate change and biodiversity should be made in the context of IPCC work program priorities. The time needed to complete the work, and the consistency of the timing between the IPCC and CBD processes also need to be taken into account. Australia believes that this work should be considered a priority for the IPCC, but has concerns about the time needed by the IPCC to complete a technical paper of this kind, and how this will accord with the current timelines proposed for the CBD pilot assessment.

The CBD has invited the IPCC to produce this paper as a contribution to its pilot assessment project on interlinkages between biological diversity and climate change, as a first step to a wider assessment. Under the current schedule for the CBD pilot assessment, the work will be carried out in late 2001 and early 2002, with the final report of the pilot to be submitted to the CBD SBSTTA in late 2002. Key elements of the CBD work schedule are two ad hoc technical expert group meetings proposed for late November 2001 and the first half of 2002 respectively. To

adequately inform the CBD process, the IPCC paper would need to be available in time for consideration by at least one of the CBD ad hoc expert group meetings.

IPCC procedures require that technical papers, once drafted, be submitted to two sequential review processes prior to being finalised in consultation with the IPCC Bureau. To be available for consideration at even the second of the CBD expert group meetings, the IPCC paper would need to be completed by early 2002. Assuming that drafting would not be able to start until early October 2001, this would represent a challenging timeframe for the IPCC. Australia believes that these issues should be carefully considered in deciding how to proceed. It would also be helpful if relevant CBD bodies could be encouraged to take IPCC timing considerations into account in finalising their schedules, for example delaying the timing of the second ad hoc experts group to the latest date possible.

Content of the scoping paper

Australia supports the proposed structure of the technical paper, as proposed in the scoping paper.

The introduction to the scoping paper makes reference to biodiversity in highly managed ecosystems and the dependence on this of indigenous, pastoralist and rural communities. However, in Australian circumstances, natural ecosystems are our main source of biodiversity, with managed ecosystems making a limited contribution to our overall biodiversity. It is recommended that the introduction reflect the fact that countries have different ecological circumstances and this will influence their approach to biodiversity and its conservation and protection.

The mitigation section (Section VIII) of the scoping paper focuses heavily on land use, land use change and forestry activities. There is a range of other greenhouse mitigation activities that may have potential impacts on biodiversity, both beneficial and adverse, for example the use of some forms of renewable energy, waste management measures, changes in livestock management and other agricultural practices, and geological or ocean sequestration of greenhouse gases. Australia encourages Parties to the CBD to broaden the scope of their consideration of climate change and biodiversity impacts to include activities in sectors other than land use, land use change and forestry.

Australia supports the consideration of mitigation options proposed in the scoping paper and their focus on eligible activities under both Articles 3.3 and 3.4 of the Kyoto Protocol.

PAPER NO. 2: JAPAN

COOPERATION WITH RELEVANT INTERNATIONAL ORGANIZATIONS

Japan submits the following comments on the issues relating to cooperation between UNFCCC and relevant international organizations including the Convention on Biological Diversity (CBD) and the Convention to Combat Desertification (CCD) as a response to the document FCCC/SBSTA/2001/L.3 para 7 which invites Parties to submit their views on this issues.

Views on IPCC's Technical Paper (FCCC/SBSTA/2001/L.3 para 7)

Japan appreciates IPCC for having prepared the scoping paper and submitted it at COP6 bis.

We believe it important for Parties to direct their views also to biodiversity and desertification in order to address the environmental issues including climate change. This is because biodiversity and desertification are especially affected by climate, ecosystem and artificiality, which are closely linked with activities for removing greenhouse gases by sinks such as revegetation, forest management, cropland management and grazing land management.

Japan positively attended and assisted several activities of the Montreal process, FAO and ITTO for making criteria and indicators on conservation of biological diversity, forest ecosystem and water resources, taking account of socio-economic and cultural aspects. Japan has reflected its opinion, and useful experiences and knowledge have been obtained through the above-mentioned processes so far.

We would like to suggest that in preparing its technical paper, however, IPCC should give the first priority to the UNFCCC's objective while making full use of relevant experiences and knowledge which are already available.

PAPER NO. 3: MOLDOVA

Regarding the request of the SBSTA to the Parties to submit to the secretariat their views on the SBSTA invitation to the IPCC to consider relevant interlinkages between climate change, biodiversity and desertification in developing its technical paper (see document FCCC / SBSTA / 2001 / L.3, para.7.), the position of our country could be identified following the next views:

Concerning this document we'd like to mention that the Republic of Moldova fully sustain the initiative of Australia, Japan, Norway, Sweden (see document *FCCC / SBSTA / 2001 / MISC.3*) and Belgium (see document *FCCC / SBSTA / 2001 / MISC.3 / Add.1*) concerning the co-operation of the UNFCCC with other relevant International Organisations. In addition to the proposes exposed in the above mentioned documents we'd like to emphasise here the necessity of the enhancing of collaboration with the Biodiversity Convention regarding the following aspects:

- Elaboration and creation of a common methodological framework (for UNFCCC and Biodiversity Convention) for estimation of the impact of Climate Change on biological components;
- Essential improving and diversification of the methodologies for estimation of the extent of vulnerability and adaptation potential of the biological systems to the new climate condition. In this aspect a special attention should be accorded to the process of modelling of the biological mechanisms of adaptation on the different level of organisation of the living material (molecular, cellular, organism, population and biocoenosis). The utilisation of these models in the frame of mathematical modelling process could essentially improve the degree of veracity of the prognosis as well as of the costs of the abatement measures of the impact of Climate Change phenomena on various biological systems.

PAPER NO. 4: NORWAY

THE IPCC SCOPING PAPER ON CLIMATE CHANGE AND BIODIVERSITY

At the 14th session of the SBSTA, parties were invited to submit views on a scoping paper on climate change and biodiversity, presented by IPCC on July 24 (referred to in FCCC/SBSTA/2001/1.3, para 7), as a basis for the preparation of a Technical Paper on the issue.

Norway supports the preparation of an IPCC report on the interlinkages between biological diversity and climate change, and welcomes the invitation to submit views and suggestions to the scope and content of a Technical Paper on the issue. The issues related to the impact of climate change on biodiversity, the impact of mitigation and adaptation measures on biodiversity and the potential for synergies in the two fields are important with respect to the implementation of, and future cooperation between, the two conventions. The preparation of the Technical Paper will be done by IPCC at the request of the SBSTA of the CBD, endorsed by the SBSTA at its fourteenth session. We hope that the preparation of the paper, as well as the follow-up activities within the convention bodies, will strengthen the cooperation between the IPCC and the two conventions on these important matters.

As we understand the request, the invitation is to comment on the scoping paper as presented by IPCC and suggest amendments. It is stated by the IPCC that as a Technical Paper, all information in the paper will be drawn from previously approved/adopted/accepted IPCC reports. On this basis, our comments are concentrated on the structure and presentation of the issues to be treated in the proposed report.

The structure of the scoping paper

The scoping paper does seem to include most of the relevant main topics related to climate change and biological diversity. We would however suggest that the report focus more explicitly on the interlinkages between the two topics. If climate and biodiversity change at the same time, such changes may, or may not, have intensifying effects on one another. Monocultural vegetation along riversystems may for instance increase the impacts of heavy precipitation and floods and result in increased erosion. At the same time increased erosion caused by climate change may tend to reduce the biodiversity. On the other hand, managed ecosystems, e.g. in rivers, imply reduced biodiversity but may have better possibility to handle climate changes like increased frequency and magnitude of floods. We realise that it might be difficult to draw solid conclusions from the present IPCC-material on such kinds of interlinkages. Nevertheless, they are important and should in our view be addressed in the report in a new section added to the proposed structure.

The proposed structure for Ch. VI in the report is built around climatic parameters (e.g. mean temperature and precipitation, changes in sea level, extreme climatic events), with different types of biological impacts grouped together under each climatic parameter. This way of grouping can make it difficult to get a clear picture of the impacts on biodiversity. A suggestion is to give the chapters a common structure in the form of subparagraphs related to different types of impacts on biological diversity (e.g. range shifts, changes in productivity, invasion of non-native species). Furthermore, we propose to include the impacts of changes in climate variability. This might be linked to the section dealing with extreme events.

Ch. VIII should in our view cover both positive and negative impacts of adaptation measures on biodiversity. Adjustments in the title of the chapter to reflect this might also be considered.

In Ch. IX Mitigation Options for Climate Change and its Impacts on Biodiversity we suggest a new subparagraph related to impacts of measures aimed at reductions in GHG emissions. Reduced air pollution and acidification related to reduced burning of oil and coal are examples of positive environmental effects that may also have important impacts on biodiversity and which should be dealt with here. Such effects are described in WG III's contribution to TAR.

The understanding of biodiversity

We appreciate that the introduction establishes that biodiversity is taken to include the genetic level, the species level and the ecosystem or landscape level. However, we would suggest that the report gives a description or definition of each of these levels, as well as a description of the connection between them. This would constitute a better platform for understanding in the further treatment of the issue. This may also have bearings to the presentation of both the impacts on biological diversity and the potential for climate change adaptation.

Some paragraphs in the scoping paper leave the impression that a main approach will be to let species number measure biological diversity (the reference to an increase in local diversity due to the introduction of exotic species). The professional literature includes several ways of measuring biological diversity, e.g. species numbers, species densities, diversity indexes, observation of function changes or changes in species interactions. Correspondingly, impacts on biological diversity can be observed in terms of *inter alia* changes in species composition (presence or absence of particular species), changes in dominance of species – species that now occur in small numbers may grow to high densities in response to climate change – or changes in species interactions. Criteria related to rarity and endemism can also form the basis of consideration. This can be relevant with respect to the conversion of non-forest land to forest, if rare or endemic species are dispelled but the overall number of species is increased. However, we are aware that this matter will be subject to the material that can be drawn from previously accepted IPCC reports.

Managed /unmanaged ecosystems

The way ecosystems are managed will have impacts on the implementation of the Kyoto-protocol, as well as the biodiversity in the ecosystems. Forestry is in the introduction listed among the highly managed systems. However, forests might be both managed and unmanaged, and different types of forestry cover a broad spectre from highly managed systems to less managed systems. We would recommend that the report also elaborates on forests as ecosystems, for instance on the differences in structure and function of highly managed forests (plantations) compared to natural (unmanaged) forests. Both chapter VI and IX in the report could address this topic.

Introduced species and LULUCF activities

Introduced species often represent a threat to local biological diversity, and the possibility and consequences of dispersal of introduced species is important at both ecosystem and species level. We appreciate that a new paragraph considering LULUCF –activities has been added in the scoping paper to be presented at the IPCC meeting in September (document IPCC-XVIII Doc.

4(f)), and believe it includes several important issues. However, we suggest that the issue of using exotic species in reforestation and afforestation is also included, particularly with respect to dispersal and ecosystem function. We also think it is important that the Technical Paper presents a thorough discussion of when introduced species can be considered an increase in biological diversity.

We welcome the proposed chapter on tools to assess the impacts of LULUCF activities, and would like to recommend that the obligations of other relevant global conventions, in particular the Convention on Biological Diversity, be used as an authoritative check-list when elaborating on criteria and indicators.

Range shifts and shifts in ecosystem role

As some of the projected climate changes will shift the potential ranges for species (in latitude or altitude), fast-spreading species can rapidly invade ecosystems with unforeseen consequences related to their ecosystem role, be it disease vector, predator, competitor or food source for the initial species. Present keystone species could assume different roles in response to both the invasive species and to the changes in climatic parameters. Altitudinal range shifts may result in habitat fragmentation in mountainous/alpine ecosystems. As a possible widespread consequence of climate change, we suggest that such shifts in species ranges be treated both on a general basis and with respect to different regions.

Changes in carbon and nitrogen cycling

It is pointed out in the scoping paper that terrestrial ecosystems, particularly peatlands with underlying permafrost, could become carbon sources rather than sinks as a consequence of climate change. Changes in the nitrogen cycle, with increased nitrogen runoff due to increased temperature and CO₂-concentration, is another important secondary effect that we hope can be treated in the Technical Paper. Increased nitrogen runoff has been observed in experimental studies under the CLIMEX –programme in Norway. The increased N-runoff contributes to acidification of lakes and rivers.

Social and socio-economic aspects

We welcome the inclusion of social and socio-economic aspects in the report, and would suggest an expansion of the scope for instance in Ch. IX on Mitigation Options to cover these aspects.

Observed changes, and projected impacts of mean changes, in climate or ecosystems

The vulnerability of ecosystems is a critical element for Ch. V Observed Changes in Terrestrial and Marine Ecosystems, as well as Ch. VI Projected Impacts of Mean Changes in Climate on Terrestrial and Marine Ecosystems. A comprehensive treatment of this issue may, however, suffer from limited knowledge on several potentially important issues. Examples of issues that need more investigation in this respect are whether or under which conditions ecosystems under stress are more likely to be negatively affected by external pressures than “healthy” ecosystems, and whether tropical forests may be more vulnerable to fires due to EL-Nino.

Impacts of changes in biodiversity on climate

We would like to propose to add a bullet-point to Ch. VII Impact of Changes in Biodiversity on Climate on the effect on climate from change in land-cover, covering both open-land converted

into forests and forests converted into open land. Some key elements that should be considered are the albedo-effect and implications on the local climate.

This chapter could benefit from having a table or figure illustrating the different ecosystems ability to store carbon. This could be beneficial for land-use planning and it would illustrate the difference between systems. The role of soil when comparing tropical and boreal forests and their carbon-reservoirs is one example, the ability of some grassland-ecosystems to store carbon is another.

Adaptation options

We would like to propose that Ch. X Potential Contributions from the Conservation and Sustainable Use of Biological Diversity to Climate Adaptation Options addresses each of the three levels of biodiversity presented in this report.
