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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

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Marrakesh, 29 October – 9 November 2001

Item 4 (c) of the provisional agenda

## **METHODOLOGICAL ISSUES**

### **METHODS AND TOOLS TO EVALUATE IMPACTS AND ADAPTATION**

#### **Submissions from Parties**

##### **Note by the secretariat**

1. At its fourteenth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) took note of the report of the workshop on methodologies on climate change impact and adaptation held at Sainte Adèle, Canada, in June 2001 (FCCC/SBSTA/2001/INF.4). It drew the attention of the Subsidiary Body for Implementation to the conclusions of the workshop for consideration, as appropriate, in its future work related to adaptation.
2. The SBSTA invited Parties to consider the information provided and to be prepared, at its fifteenth session, to give further consideration to planning its work on the methodologies to assess climate change impacts, vulnerability and adaptation. To facilitate consideration, the SBSTA invited Parties and organizations to submit their views on the issues identified in document FCCC/SBSTA/2001/INF.4 by 1 October 2001 for compilation into a miscellaneous document (FCCC/SBSTA/2001/2, para.18 (b)).
3. Four such submissions<sup>\*</sup> 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.

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\* In order to make these submissions available on electronic systems, including the World Wide Web, they 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

**METHODS AND TOOLS TO ASSESS CLIMATE CHANGE IMPACT  
AND ADAPTATION**

**Report of the workshop on methodologies on climate change impact and adaptation  
(FCCC/SBSTA/2001/INF.4 refers)**

**Background**

From 11-14 June 2001, the UNFCCC and UNDP-GEF convened collaborative sequential workshops on methods and tools to assess climate change impact and adaptation, to review developments, and consider options for further work priorities in this area.

UNFCCC is now seeking views by Parties on the workshop report (referenced above).

Australia congratulates UNFCCC and UNDP-GEF on the cooperation displayed in convening this collaborative workshop. We welcome the opportunity to submit our views on this workshop report and contribute to identifying impacts and adaptation issues of high priority for the SBSTA workplan.

We would also like to congratulate the IPCC Working Group II for its report *Climate Change 2001: Impacts, Adaptation, and Vulnerability*. We believe this comprehensive investigation should be a foundation resource in progressing work on impacts and adaptation under the UNFCCC.

**Workshop report**

We agree the workshop report, in general, accurately recalls the themes, discussions, conclusions and recommendations reached by workshop participants during the workshop.

We understand that workshop participants also discussed advancing this work beyond the currently available methods and tools towards developing policy-relevant and practical methods and tools that assist policy/decision makers and end-users to produce cost-effective assessments, strategies and actions. In addition, workshop participants noted there were further opportunities that could be realised in enhanced international coordination and cooperation of impacts, adaptation and vulnerability efforts. We suggest the text be amended to reflect these issues.

**Conclusions**

The workshop conclusions (paras 32 – 34) outlined in the report are supported.

Investigation of appropriate responses and development of practical guidance to progress each of the elements of these conclusions, both within developing countries and also as part of coordinated international programs, is also clearly warranted.

### **SBSTA Action**

We believe the possible actions (para 5) proposed for SBSTA are useful and appropriate. Further actions could also be considered, such as:

- We would emphasise the need for a “risk management” framework to be applied to all areas of international cooperation, programs and projects relating to impacts and adaptation to maintain a focus on addressing risks of high priority;
- There is merit in encouraging a diversity of approaches to this issue. Nonetheless, there is also a demand for a coherent overarching framework (based on risk management approaches) within the UNFCCC system to guide the development of these approaches;
- As noted earlier, investigation of appropriate responses and development of practical guidance to progress each element of the Workshop Report conclusions (paras 32 –34) is warranted;
- Attention should also be paid to the priorities for improving assessments of impacts, vulnerabilities, and adaptation described in the IPCC Working Group II report *Climate Change 2001: Impacts, Adaptation, and Vulnerability – Summary for Policymakers and Technical Summary of the Working Group II Report, page 16*;
- Key linkages need to be established with climate change funding managed by the Global Environment Facility. Developing and improving methods and tools should also feature as priority issues in the workplans of the Global Environment Facility;
- There is also a need to extend work on climate change impacts and adaptation beyond bio-physical issues to include social and economic impacts and adaptive strategies;
- Capacity building for developing countries to develop and implement adaptation programs and actions is an important element of future work on impacts and adaptation; and
- To improve the quality and dissemination of information on impacts and adaptation methodologies and tools, we would recommend investigating the establishment of an international clearing house whose functions could span a range of climate change issues, including impacts, adaptation and vulnerability (as suggested in the Workshop report, para 31).

PAPER NO. 2: BELGIUM  
ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES

**SBSTA 15**  
**METHODS AND TOOLS TO ASSESS CLIMATE CHANGE IMPACT AND ADAPTATION**

Belgium, on behalf of the European Community and its Member States, would like to thank the Secretariat for the report contained in document FCCC/SBSTA/2001/INF.4.

We would like to thank the Secretariat, UNDP, the GEF, and Environment Canada for organising the workshop in Sainte Adèle. We indeed consider that assessment methodologies for impacts and adaptation are very important.

**The European Union wishes to provide the following comments:**

**(a) Regarding the conclusions of the workshop:**

- We note that some progress has been made in getting to grips with this highly complex and diverse area;
- We welcome the fact that the IPCC Working Group II contribution to the TAR (“Climate Change 2001: Impacts, Adaptation, and Vulnerability”) served as a foundation for the workshop;
- We consider that the workshop has made a good start in defining the issues and exploring a variety of approaches, but there is more scientific work to be done;
- We suggest that since the workshop established that there is no universal best approach to Vulnerability and Adaptation Assessment, there is merit in maintaining a variety of approaches. Sometimes for example expert judgement is appropriate and other times it may be necessary to undertake detailed impacts assessments.

**(b) Regarding the possible actions by the SBSTA :**

- We suggest that SBSTA considers how the IPCC Working Group II contribution to the TAR (“Climate Change 2001: Impacts, Adaptation, and Vulnerability”) could be fully exploited for further work in this area.
- We think that it would be very valuable to assemble the knowledge gathered on the practical implementation of these methodologies (where it exists) in some sort of Best Practice Guidance, that might be used by nations wishing to build adaptation to climate change into their decision-making. We suggest that the guidance should allow a choice of approaches depending on the scale of project (investment decision, policy etc.) and budget available rather than offer prescriptive guidance.
- We feel that information sharing on these methodologies, both among countries and within countries is essential. The quality of reporting about them in the National Communications should be improved through better guidelines. These might be developed under SBSTA (Roster of Experts) or IPCC (Working Group II) if the necessary funding would be available.

We consider that further work could help define recommended or standard approaches that could be used to allow inter-comparisons between regions and define reporting requirements.

- We suggest that National Adaptation Programmes of Action (NAPAs) could strongly benefit from better methodologies and guidelines in this area. These could help to prioritise actions and optimise the use of existing resources. We think that vulnerability and adaptation assessment should be integrated in existing plans and institutions rather than treated separately.
- We suggest that the secretariat consult with various UN bodies and other bilateral and multilateral organisations on how best they see how to take this forward. Options are UNDP, UNEP, the GEF and the IPCC. They could report back to the next session with some options for SBSTA to consider.

PAPER NO. 3: CANADA

**METHODS AND TOOLS TO ASSESS CLIMATE CHANGE IMPACT AND ADAPTATION**

**Report of the workshop on methodologies on climate change impact and adaptation (FCCC/SBSTA/2001/INF.4)**

General Comments:

The document FCCC/SBSTA/2001/INF.4 provides a good summary of the workshop proceedings and accurately reflects the conclusions and suggested actions by SBSTA. It also further demonstrates the value of such deliberations and the need for continuing efforts towards developing and making available methods and tools to assess climate impacts and adaptation.

Noteworthy is the broadening of the intent of such methods and tools to include assessing vulnerabilities. This is consistent with the advances of the science (e.g., the UNDP Adaptation Policy Framework) and the discussion under the workshop conclusions regarding the second generation assessments.

Specific Comments:

Paragraph 20, last sentence - Stakeholders and policy makers interests are not only in immediate climate variations and extremes, however, their immediate interests are driven by the need to address the impacts and their "communities" vulnerabilities to climate variations and extremes. In addition, there is considerable debate as to the relative significance of the impacts of current climate variations and extremes compared to those associated with projected climate change. We suggest that the interests of stakeholders and policy makers in current climate variations and extremes be linked to the very visible impacts and the immediate need to respond to these impacts (adaptation) in the context of safety, livelihood and well-being of their communities.

Paragraph 21, first sentence - Although the incorporation of traditional and local knowledge is a particular need of developing countries, it is a necessity in all countries. We would suggest that the first sentence read "The participants stressed that, particularly in developing countries, there is a need for further studies to incorporate traditional and local knowledge and how this knowledge can be integrated into national sustainable development processes." Traditional and local knowledge is particularly important as it relates to development and cultural aspects of the adaptation process. Integration of these types of knowledge and their acceptance in the adaptation science community as a means of affecting adaptation policy development is a non-trivial issue and could benefit from further exploration within the SB of the UNFCCC.

Paragraph 26, second sentence - "The application of difference methods within one country was pointed out as one of the options for enhancing understanding of the impacts and associated vulnerabilities and adaptations, as well as determining the uncertainties of the results."

Additional Comments:

We are encouraged by the efforts by a number of donor agencies (e.g., World Bank and CIDA) to examine linkages between adaptation and sustainability/development. These donor agencies are bringing together development and adaptation experts to look at lessons learned and to share experiences as a means of moving forward on mutually beneficial initiatives where there are common and/or re-enforcing agendas.

The World Bank is in the process of setting up a "Vulnerability and Adaptation Experts Group (VAG) which would increase awareness of key development decision makers of the vulnerability of developing countries to climate change, including climate variability, and of possible adaptation strategies. In particular the VAG is seen as providing advice to the international development community regarding the integration of climate change adaptation into the development process and will improve collective understanding of the implications of climate variability and change for developing countries (contact at World Bank is Avis Robinson).

It is also worth noting the recent workshop at the Potsdam Institute for Climate Impact Research, Potsdam, Germany (sponsored by CIDA and EnvCan) entitled "Enhancing the Capacity of Developing Countries to Adapt to Climate Change". This workshop involved participants from the adaptation research community, donor agencies and developing country representatives and sought to develop an agenda for research on how best to enhance the capacity of developing countries to adapt to climate change (and related current climate stresses). The discussions during this workshop and the resulting agenda for research highlight the need for such fora, the need to further develop the required methods and tools and their dissemination, and the need for these developments to take place within the adaptation and development nexus.

General Comments on Future Work:

There is a flurry of activity by a number of organizations centered around adaptation in the context of climate change. This includes interest within donor agencies including national and international (e.g., World Bank). There is a need to ensure that there is a level of synergy between these separate efforts and that there are opportunities to bring together the results of deliberations within these various fora.

It is also essential that adaptation be seen within the context of development and that there are opportunities to develop and assess methods and tools in conjunction with experts from the development community.

Canada suggests providing a forum for furthering the dialogue on developing methods and tools is a role that the UNFCCC/SBSTA could play. There is a need to improve collective understanding of the methods and tools needed and the means of continuing to support their dissemination and evolution. This forum could also include discussions regarding mechanisms for supporting the development and dissemination of methods and tools.



Specific Comments on Future Work:

The scientifically valid approach proposed to promote the evolution of methods to better assess risks associated with variability and extreme events (a need identified in the workshop conclusions 32(b)), will pose the question of the criteria to be used to determine the incremental costs of adaptation in the context of the UNFCCC. The use of incremental cost criteria in providing funding for climate change related activities is now well established but will present decision making difficulties to distinguish between those vulnerabilities induced by variability and extremes and those induced by climate change. Further analysis on criteria will be required to be able to make these decisions and help prevent inconsistencies between funding sources. Further analytical work should be done by Parties and we support an international meeting or workshop on financial criteria for adaptation related activities be convened by the Secretariat prior to CoP9.

Canada supports the workshop conclusions (33) regarding the importance of the dissemination of the improved methodologies for adaptation. We support and would like to propose the development of an information database, similar to that developed by the Secretariat for the technology information system, and ask the Secretariat or other appropriate international body, to consider undertaking work on such an information system.

PAPER NO. 4: SAMOA  
ON BEHALF THE ALLIANCE OF SMALL ISLAND STATES (AOSIS)

**View of Samoa on behalf the Alliance of Small Island States (AOSIS)  
of Methods and Tools to Evaluate Adaptation**

Samoa, on behalf of the Alliance of Small Island States (AOSIS) welcomes this opportunity to provide comments on the report of the adaptation workshop contained in FCCC/SBSTA/2001/Inf.4 and the conclusions therein. AOSIS also wishes to provide further views on the general approaches to adaptation work under the Convention, in light of the decision on guidance to the financial mechanism.

AOSIS is grateful to the Chairman of the Subsidiary Body on Scientific and Technical Advice (SBSTA) for his concise summary of the workshop proceedings. Many experts, including some from Small Island Developing States, attended the workshop. In future, it would be beneficial if more experts from the most vulnerable countries, in particular from SIDS, would be invited to participate in these workshops. The Secretariat should ensure adequate representation, and should be invited to liaise closely with the Office of the Chairman of AOSIS and the SIDS Unit of United Nations DESA in this regard.

The workshop report builds on the valuable reports compiled by the Secretariat as a result of Decision 9/CP.3 and the subsequent technical papers and workshop reports. It is evident that the work has progressed and the Secretariat has sought greater specificity for establishing the appropriate modalities. The next steps will require that Parties agree to an approach or modality that would allow vulnerable developing countries, in particular the least developed countries and Small Island Developing States, to assess, access and utilize appropriate and relevant adaptation technologies and methods.

These initiatives to address adaptation are particularly significant following the release of the IPCC's Third Assessment Report which underlines the importance of adaptation as a response to addressing the complex challenges of global climate change. As the IPCC TAR notes small island States face peculiar adaptive difficulties, and it is therefore important that any guidelines or models being developed for use in the UNFCCC processes encompass approaches and methodologies that are relevant to the national circumstances of AOSIS member States.

In this regard, AOSIS reiterates the decision of the Subsidiary Body on Implementation, which at its 14<sup>th</sup> session "took note of the proposed workshop on adaptation, to be held under the auspices of the Alliance of Small Island States (AOSIS), as well as the request of the Chairman of AOSIS for assistance from donors, the Global Environment Facility and the secretariat, to enable AOSIS to conduct the workshop in the last quarter of 2001 and report on its outcomes to future sessions of the SBI". As presently envisaged the workshop would *inter alia* assess existing methodological and policy deficiencies, study pilot or demonstration project ideas, and develop a set of suggested guidelines for implementing adaptation in practice.

AOSIS acknowledges that the current guidelines for national communications do not sufficiently address vulnerability and adaptation, as has been pointed out in previous submissions from AOSIS. Furthermore, the guidelines for national communications do not

give sufficient advice to countries as to how to assess different adaptation methodologies as well as the adaptability of existing technologies for relevant application.

The linkages to other processes under the FCCC must be kept in perspective. The call for action by the least developed countries, and the development of NAPAs will be an important contribution to the climate change process as a whole. The work on technology transfer is also going to have important impact on the future development of new and innovative adaptation technologies. Furthermore, adaptation is likely to be viewed as one of the key measures under capacity building.

AOSIS would like to stress that the process is not starting from scratch. The Secretariat has outlined in past technical papers examples of available technologies to assess coastal processes, characteristics and vulnerabilities, which are key aspects of any studies on coastal adaptation. A survey of the national communications from non-Annex I Parties shows that only a modest number of these technologies have been made available to the countries as part of their enabling activities. For adaptation to be made a viable undertaking, extensive information must be gathered. Hence, any adaptation program must allow countries to avail themselves of the supporting technology and training to undertake these studies, such as shoreline monitoring, GIS and remote sensing.

It will be important to improve on the dissemination and exchange of information and experiences. AOSIS recognizes that having better access to the expertise, methods and literature from the developed countries is essential for developing countries. There should be greater opportunities for information sharing, and for promoting the two-way feedback process between developers of models and end-users and among end-users, as suggested by the workshop. Impacts and vulnerabilities that are common to neighboring countries render the regional context of particular relevance in this process of information exchange. This has been shown extensively by the regional cooperation among SIDS, and has become a featured request from other SIDS in their project proposals.

Information sharing among countries and within countries, is an essential feature of climate change impact, vulnerability and adaptation assessments. The exchange of information should be interactive and involve innovative sources of new information. In order to have a successful and meaningful adaptation program there is a need for flexibility and innovation. Sources of information could also include country submissions (particularly for national communications) and feedback from the Global Environment Facility (GEF). Non-governmental organizations, academic institutions and other interested groups should also be involved.

It has been noted that the quality of information needs to be improved. While previous technical papers have been very informative, there should be a reflection on the appropriateness of the methods for particular purposes. There should also be more detailed examples of the applications of the methods.

It is important, however, as recognized in the IPCC TAR, that adaptive actions need to be taken as early as possible if the adverse effects of climate change are to be addressed in a proactive manner by the most vulnerable countries. In this regard AOSIS countries have already begun to identify key hardware and software needs, including capital projects, that meet the need for sustainable development and addressing climate change concerns. It is important that funding be targeted early towards strengthening such initiatives since these are

important elements of overall adaptation to climate change. It therefore becomes critical that guidelines for adaptation do not restrict themselves to complex technical studies and assessments but instead recognize the dynamics of the interlinkages between sustainable development and efforts at climate change adaptation.

As mentioned, AOSIS believes that all organizations with expertise should become involved in the FCCC work on adaptation. AOSIS sees an important role for the secretariat of the UNFCCC in the exchange and dissemination of information on methods to assess vulnerability and adaptation, serving as a permanent information clearing house in this area. The secretariat should provide continuity and maintain institutional memory about the status of methods. There is a need for the FCCC to maintain close links with the organizations of SIDS, SIDSNet and the SIDS Unit.

Finally, before any new suggestions for adaptation frameworks are considered, there is an urgent need to allow the key stakeholders in the process - the most vulnerable developing countries - to have the opportunity to develop their own views. Some regions have already built proposals for adaptation frameworks, and it is important to utilize these informed and authoritative views and suggestions. As far as possible efforts should be made to build on such attempts, ensuring that these proposals are country driven and reflect national and regional priorities.

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