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Item 5 (g) of the provisional agenda

Methodological issues

Emissions projections of Parties included in Annex I to the Convention

Views on the workshop on emissions projections of Parties included in Annex I to the Convention

Submissions from Parties

1. The SBSTA, at its nineteenth session, requested the secretariat, subject to the availability of resources, to organize a workshop in the second half of 2004 on emissions projections of Parties included in Annex I to the Convention, as a contribution to the preparation of their fourth national communications (FCCC/SBSTA/2003/15, para. 14 (f)). The workshop would cover methods, assumptions, indicators, key parameters of models and sensitivity analysis, and dissemination of methodologies. The SBSTA invited Parties to submit to the secretariat, by 15 May 2004, their views on the workshop. The SBSTA requested the secretariat to prepare a report on the workshop for its consideration at its twenty-first session.
2. The secretariat has received five such submissions. In accordance with the procedure for miscellaneous documents, these submissions are reproduced* in the language in which they were received and without formal editing.

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

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PAPER NO. 1: AUSTRALIA

Submission by Australia

Views on the proposed workshop on emissions projections by Annex I Parties

In paragraph 14(f) of document FCCC/SBSTA/2003/15, the SBSTA requested the secretariat, subject to the availability of resources, to organize a workshop in the second half of 2004 on emissions projections of Parties included in Annex I to the Convention, as a contribution to the preparation of their fourth national communications, and invited Parties to submit to the secretariat their views on the workshop.

Australia welcomes the proposal to hold a workshop on emissions projections, subject to the availability of resources, and intends participating. Australia is not currently aware any other forum that will provide an opportunity for projections practitioners to discuss their approaches to emissions projections in the lead up to the preparation of fourth national communications. Given resource constraints, careful consideration should be given to minimising the cost of the workshop, and, if possible, running the workshop back to back with a related event. The event should be open to projections experts from all parties.

Paragraph 14(f) notes that the workshop 'would cover methods, assumptions, indicators, key parameters of models and sensitivity analysis, and dissemination of methodologies'. Australia supports these topics for the workshop, on the proviso that 'dissemination of methodologies' refers to information sharing on individual Party's methodologies. It would not be useful to discuss the development of a uniform approach to projections across Parties.

In Australia's view, the workshop would provide an opportunity to share information on, and compare and contrast, Parties' approaches to emissions projections. This would enable Parties to understand the key drivers of emissions, to learn from the diverse institutional and modelling approaches of other Parties, and to better understand the emissions projections presented in Parties' national communications.

The focus of the workshop would be on developing a technical, policy-neutral understanding of other Parties' emissions projections. Attendance at the workshop should be by projections practitioners and modellers from all Parties.

PAPER NO. 2: CANADA

VIEWS ON THE WORKSHOP ON EMISSIONS PROJECTIONS OF ANNEX I PARTIES

Introduction

At its nineteenth session, as part of its conclusions on agenda item 4(a) "Review of Methodological Work Under the Convention and the Kyoto Protocol", the Subsidiary Body for Scientific and Technological Advice (SBSTA), requested the secretariat, subject to the availability of resources, to organize a workshop in the second half of 2004 on emissions projections (by sources) of Annex I Parties, as a contribution to their fourth national communications. Canada welcomes the opportunity to submit views on the upcoming workshop.

Canada believes that emissions projections are a key component in planning to address greenhouse gas (GHG) emissions at the national and international level. In order for their usefulness to be maximized, projections should be comparable to historical and current inventories, as required under the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention" (FCCC/CP/1999/7, section II). In addition, as outlined in the "Guidelines", projections should be broken down by sector and gas, with details at the sub-sector and fuel level, and should focus on the short- and medium-term (e.g. up to 2020). It will be also useful for projections to identify the share of imports and exports in energy production, consumption and associated GHG emissions. These considerations permit the subsequent estimation of the impacts of policies and measures to reduce GHG emissions by providing a transparent and detailed baseline that examines the projections in the absence of these measures. Therefore, Canada sees the benefit in developing and comparing methodologies for both "without measures" projections and "with additional measures" projections.

Canada has recently adopted a new modeling structure for projecting Canada's energy-related GHG emissions. The new system replaces a modeling system that was primarily designed to facilitate the traditional role of projecting energy demand and supply and later modified to project associated GHG emissions. It was commonly acknowledged that this system is no longer capable of addressing the issues of the day. The new modeling system, developed from the US National Energy Modeling System (NEMS), is technology-rich and provides a consistent framework for estimating the impacts of a wide variety of alternative assumptions and policies or policy initiatives.

Workshop Objectives

Canada believes that the main objective of the workshop is information exchange and experience sharing. In that regard, it may be useful to look at possibilities for enhancing the comparability of methodologies, assumptions and sensitivity analyses for emissions projections. Enhanced comparability could provide a clear basis by which to better inform Parties on the effectiveness of policies and measures to reduce GHG emissions in various countries, as well as for future negotiations. Approaches should strive to be transparent, practical and easily applicable. However, it is imperative that emissions projections fully reflect a country's specific national circumstances.

The workshop is intended to cover methods, assumptions, indicators, key parameters of models and sensitivity analysis, and dissemination of methodologies. Canada would welcome the opportunity to share its expertise in these matters, notably with respect to its new energy-related modeling structure. In discussing these issues, the workshop should address deficiencies of emissions projections by sources in the third national communications, as outlined in the "Compilation and Synthesis of Third National Communications" (FCCC/SBI/2003/7/Add.3), by:

- i) building capacity in methodologies, including those needed for the projections of non-energy related activities;
- ii) discussing key assumptions forming the basis of the projections (GDP and population growth, international fuel prices, technological progress etc.). A discussion of elements that are common to most Parties, such as the projected international market price for oil, would be particularly useful;
- iii) examining practices for the projections for HFCs, PFCs and SF₆; and
- iv) discussing sensitivity analyses to help Parties in providing comparable quantitative assessments across Parties.

Workshop Logistics

The workshop should involve presentations by experts well as by a few designated Parties. Invited experts should come from varying sectors (governments, academia, NGOs and the private sector) allowing for knowledge at different scales (sub-national, national and international).

In addition, Canada is of the opinion that participation should be open to all Parties. Although the focus is on projections by Annex I Parties, non-Annex I Parties should also be invited, both to provide an opportunity to learn from the experience of Annex I Parties, and to share information on their unique national circumstances and needs in relation to projections.

In designing the workshop, it is essential to be mindful of any recent international conferences on this topic. Doing so will allow us to draw from previous work where appropriate and to not duplicate it.

Presentations could be in the form of panels, addressing specific groupings of issues, with general discussions ensuing after each session as appropriate.

The length of the workshop should be sufficient to allow discussion on all elements mentioned above and to allow time for a discussion of the main elements in the report of the workshop, to aid the secretariat in preparing the report to be given to the SBSTA for its consideration at its twenty-first session. Two days is likely required, at minimum.

PAPER NO. 3: IRELAND ON BEHALF OF THE EUROPEAN COMMUNITY
AND ITS MEMBER STATES

**SUBMISSION BY IRELAND ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS
MEMBER STATES**

This submission is supported by Bulgaria and Romania

**Subject: UNFCCC workshop on emissions projections of Annex I Parties, as a contribution
to their fourth national communication**

Dublin, May 14, 2004

1 Background

In the conclusions from SBSTA 19 (FCCC/SBSTA/2003/15 page 7), the SBSTA noted the need to improve access by Parties to existing data and analytical tools, with a view to, inter alia, assisting Parties to build their capacity for analysis and decision-making and to implement their commitments under the Convention and the Kyoto Protocol. Greenhouse gas projections are an important analytical tool and the EU believes that efforts should continue to improve them. Therefore the EU welcomes the workshop requested by SBSTA on emissions projections that will cover methods, assumptions, indicators, key parameters of models and sensitivity analysis, as well as dissemination of methodologies of Annex I Parties.

The EU welcomes the opportunity to submit views on these matters, and wishes to see the work on projections further advanced in a timely way, to help Parties to improve methodologies as well as reporting for projections in the period running up to their 4th National Communications.

2 General

2.1 Objectives

The workshop should address methods, assumptions, indicators, models and model parameters used for projections of individual greenhouse gases in Annex I Parties. It should also address data availability and the sensitivity of projections to key input parameters and assumptions. It should contribute to

- Sharing current best practice on methods for emissions projections between Parties;
- Dissemination of improved methodologies for projections;
- Making recommendations on ways to improve reporting of projections in the future.
- Making recommendations on how to further improve the projections estimation process.

The workshop should be targeted at experts who have direct experience of establishing and reporting GHG emissions projections including the analysis of scenarios for which projections are required and the policies and measures related to those scenarios. National experts and experts from international organisations should be invited to give presentations.

The UNFCCC secretariat could provide overviews across Parties regarding methods, assumptions, indicators, key parameters of models used for projections and sensitivity analysis of projections.

The European Community would welcome the opportunity to present the additional efforts undertaken so far at EU level under the EC Monitoring Mechanism in order to improve methods, comparability, reporting and sensitivity of projections.

2.2 Specific areas at the workshop

It would be helpful if national Projections Experts could produce a presentation consisting of slides and accompanying text, in a format that could be cross-referenced easily with other presentations or papers addressing the same areas. Suggested issues that should be covered in a Format for Presentations are:

- For which sectors and gases are these projections made and what are the base years and what the first and last projection years?
- Description of the modelling approach (i.e. econometric, linear programming, technology based bottom-up) or other methodology (e.g. expert opinion) and the key parameters of the models used for each of the sectors/gases
- Description of major assumptions e.g. in economic growth or fuel prices, policies and measures that are included, market liberalisation etc.
- Description of the strengths and weaknesses of the approaches used and suggestions for possible improvements
- Description of the activity projections and policies and measures incorporated in the model
- Discussion of how these policies and measures were incorporated into the projections
- Institutions or responsibilities connected with the formulation of national emissions projections
- Description of any independent validation of the assumptions and projection results (i.e. against other national models, expert opinion)
- Description of major differences between the latest projections and earlier projections or actual outturns and reasons for differences
- Description of sensitivity analysis conducted
- Description of indicators used to assess projected progress and their compatibility with IPCC reporting categories
- Identification of areas for improvement in methodology and reporting.

2.3 Output from the Workshop

The UNFCCC secretariat in cooperation with selected relevant experts should prepare recommendations from the workshop for consideration by SBSTA.

PAPER NO. 4: SAUDI ARABIA

SAUDI SUBMISSION ON
“METHODODOLOGICAL ISSUES; REVIEW OF METHODODOLOGICAL WORK UNDER THE
CONVENTION AND THE KYOTO PROTOCOL”

Saudi Arabia would like to thank the UNFCCC Secretariat for their valuable efforts and welcomes the opportunity to submit its views on the up coming workshop on emissions projections of Annex I Parties that proposed to be organized in the second half of 2004, as been invited by the SBSTA at its nineteenth session (FCCC/SBSTA/2003/L.25).

Since methodological work underlies the implementation of the Convention and the Kyoto Protocol, the proposed workshop will contribute to pursuing the ultimate objective of the Convention if carried out with a comprehensive and strategic perspective. To this end, Saudi Arabia would like to submit its views regarding the upcoming workshop and would like it to be emphasized and addressing the following issues:

● **Methodologies on implementing Win/Win policies and Measures**

Methodologies are needed to guide Annex I countries in implementing win-win policies and measures that would meet both the need to reduce emissions and the need to minimize adverse social, environmental and economic impacts on developing country Parties, especially those identified in Article 4, paragraphs 8 and 9 of the Convention. This should be done by SBSTA within the framework of actions taken on policies and measures and should be of high priority since no methodological work is established under Article 4.8 on impacts of response measures.

● **Methodology on assessing terms of trade and socio-economic impacts on individual developing countries:**

There is urgency for methodologies to assist developing countries to examine their vulnerability to terms of trade and socio-economic impacts. This should benefit and improve the effectiveness of current activities for assessing the impact of implemented response measures in a portfolio of approaches. In addition, factors, such as market approaches (taxes, subsidies, cap-and-trade), regulations and research and development also need to be included in the assessments in order to properly assess the effects of policies. It is crucial that Annex I Parties strive to minimize adverse effects, including the adverse effects of climate change, effects on international trade, and social, environmental and economic impacts on other Parties, especially developing country Parties and in particular those identified in Article 4, Paragraphs 8 and 9 of the convention when implementing policies and measures.

● **Methodology on assessing the impacts on developing countries of policies already implemented by Annex I Parties:**

Methodologies are needed to be developed by SBSTA in collaboration with International Organizations such as OPEC to assess the impacts on developing countries of policies already implemented by Annex I parties. Hence, current models for evaluating the effects of response measures need to be expanded in their coverage of countries and of issues. The objective should not be to determine which model or group of models is more advanced, but rather to agree on which existing models can be used as part of a portfolio of tools for decision-making. In addition, It should be of high priority since the Convention is in

force and many Annex-I countries have submitted many national communications outlining their policies and measures. In addition, the Kyoto Protocol may enter into force soon and many policies and measures will have negative impacts on many developing countries.

• Methodologies to improve the guidelines for the preparation of national communications by Annex I Parties to include all activities related to the impact of response measures as been adopted under decision 5/CP.7.

Future work should be done in a way that Parties, relevant organizations and practitioners could submit their views to the secretariat for compilation to be considered by SBSTA for the development of the guidelines.

• Methodologies on assessing the spillover effects of Annex I response measures on non-Annex I countries.

Emphasis here should be given to the potential spillover effects due to climate change implemented response measures taken by Annex I countries. In addition, policy and measures should be done and implemented in a manner to take concerns of vulnerable parties, especially vulnerable parties under Article 4, Para 8 (H).

PAPER NO. 5: UNITED STATES OF AMERICA

**Submission of the United States
FCCC/SBSTA/2003/L.25, paragraph 6
Views on the Workshop on Emissions Projections in Annex I Parties
May 14, 2004**

The Nineteenth Session of the Subsidiary Body for Scientific and Technical Advice in December 2003 (SBSTA-19) requested the Secretariat “to organize a workshop in the second half of 2004 on emissions projections of Annex I Parties, as a contribution to their fourth national communication.” The SBSTA further invited Parties “to submit to the Secretariat their views on the workshop.” The United States welcomes the opportunity to provide views on the technical and methodological aspects of emissions projections, as reflected in FCCC/SBSTA/2003/L.25, paragraph 6, and to provide suggestions on the organization and substance of the workshop.

The United States recalls that, in undertaking an exchange of technical information on emission projections, FCCC/SBSTA/2003/L.25, paragraph 6, provides that the workshop “would cover methods, assumptions, indicators, key parameters of models and sensitivity analysis, and dissemination of methodologies.” Given this, we believe that a workshop or roundtable format focusing on different aspects of national experiences in emissions projections would be of particular benefit to Parties. We note that other discussions on SBSTA agenda items have generated an appreciation for the importance of national circumstances, and this consideration should be factored into the design of this emissions projections workshop.

The projection of emissions for future years (both short and long term) is always subject to various assumptions and uncertainties, most occurring at a national level. These assumptions relate to the prospective implementation and funding of policies and measures adopted but not yet funded; to the discovery, adoption and implementation of technologies; and to the pace of future economic growth.

The United States believes the SBSTA workshop on emission projections should focus on sharing experiences and views among technical experts who compile projections for national communications from various Parties. Presentations and discussions should focus on practical aspects and experiences of emission projections as applied in the formulation of Annex I national communications. Countries use different approaches and models to address projections and will continue to do so; moreover, they are at various stages in developing and using projections. The experiences gained by different countries may be relevant and beneficial to all Parties to the Convention. This discussion should, therefore, include consideration of activities in countries with different circumstances and experience. This SBSTA workshop could enhance understanding of the range of considerations that go into the development and implementation of emission projections by various Parties. This can inform countries as they further refine their respective approaches to emissions projections for their National Communications.

The United States believes the workshop could usefully discuss a broad range of technical and analytical issues, providing an opportunity to identify key topics that we could explore in a constructive and practical manner. We provide below possible elements of an agenda for the projections workshop that take into account the importance of national circumstances in using projections for national communications, and that recognize the different considerations that must be taken into account in applying projections to different sectors.

We suggest three areas to be considered as a potential focus for this workshop:

1. Overview and Broad Projections Issues: This introductory discussion would focus on broad aspects of using emissions projections with a focus on projections used in the preparation of Annex I national communications. A focus could be on the types of models used, general assumptions and uncertainties, and factoring national circumstances into the projection of emissions. Additionally, technical experts could describe ongoing complementary modeling efforts. Effective mechanisms for the application and dissemination of methodologies could also be addressed.
2. Experience in Application of Projections/Modeling into Development of Annex I National Communications – Country Experiences: National circumstances are key in the preparation of country-specific projections for national communications. Experts responsible for the preparation of projections for Annex I national communications would share their approaches, methodologies and technical experiences.
3. Sector-specific Breakout Sessions: Most aspects of emissions projections vary by sector. Workshop discussion would benefit by convening sector-specific breakout sessions on: 1) CO₂ emissions from Energy and Industry (and Non-Energy CO₂); 2) Agriculture and Forestry; and, 3) Non-CO₂ emissions from Fugitives, Industry and Waste. Specific topics under each breakout session could include: approaches/methodologies used for projections (e.g., describe models); assumptions used in projections and treatment of uncertainties (e.g., technological change, regulatory/statutory change, economic growth); treatment of “with” and “without” measures cases; and, sector-specific challenges.
