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UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
Twenty-fourth session
Bonn, 18–26 May 2006

Item 12 (b) of the provisional agenda
Cooperation with relevant international organizations
Special report on safeguarding the ozone layer and the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons

Aspects of the special report on safeguarding the ozone layer and the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons relevant to the objective of the Convention

Submissions from Parties

1. The Subsidiary Body for Scientific and Technological Advice, at its twenty-second session, invited Parties to submit to the secretariat, by 13 February 2006, their views on aspects of the report prepared by the Intergovernmental Panel on Climate Change (IPCC) and the Technology and Economic Assessment Panel (TEAP) of the Montreal Protocol on Substances that Deplete the Ozone Layer, *Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons*,[1] relevant to the objective of the Convention. It requested the secretariat to compile these views into a miscellaneous document for consideration at its twenty-fourth session with a view to finalizing the consideration of this agenda item (FCCC/SBSTA/2005/4, para. 92).

2. The secretariat has received five such submissions. 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.

[1] <http://www.ipcc.ch/activity/sroc/index.htm>.

[*] 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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* This submission is supported by Bulgaria, Romania, Croatia, Albania, Bosnia and Herzegovina, The former Yugoslav Republic of Macedonia, and Serbia and Montenegro.

PAPER NO. 1: AUSTRALIA

Submission by Australia to the UNFCCC

Views on aspects of the Special report of the Intergovernmental Panel on Climate Change on safeguarding the ozone layer and global climate system: issues relating to hydrofluorocarbons and perfluorocarbons relevant to the objective of the Convention

The twenty-second session of the Subsidiary Body for Scientific and Technical Advice (SBSTA), held in May 2005, invited Parties to submit their views on aspects of the *Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbon* (IPCC/TEAP special report), for compilation into a miscellaneous document. Australia welcomes the opportunity to present its views on this matter, which will be considered by the SBSTA at its twenty-fourth session, with a view to finalising consideration of this item.

The IPCC/TEAP special report provides useful information which can assist Parties in determining and implementing appropriate domestic responses to deal with hydrofluorocarbons and perfluorcarbons. Australia is already implementing many of the policies suggested in this report.

Australia encourages all Parties to draw on the information provided by the IPCC/TEAP special report in the ongoing development and implementation of their domestic policy. While the report provides useful information to assist domestic policy formulation, it does not indicate the need for further international measures. Australia believes there is no need for further consideration of this item by the SBSTA.

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

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

This submission is supported by Bulgaria, Romania, Croatia, Albania, Bosnia and Herzegovina, former Yugoslav Republic of Macedonia and Serbia and Montenegro

Vienna, 31 January 2006

Subject: **Special report of the Intergovernmental Panel on Climate Change on safeguarding the ozone layer and global climate system: issues relating to hydrofluorocarbons and perfluorocarbons**
Views on aspects of the Special report of the Intergovernmental Panel on Climate Change on safeguarding the ozone layer and global climate system: issues relating to hydrofluorocarbons and perfluorocarbons relevant to the objective of the Convention

Austria, on behalf of the European Community and its Member States, welcomes this opportunity to submit its views on the further consideration at SBSTA 24 of the IPCC/TEAP Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues related to Hydrofluorocarbons and Perfluorocarbons under agenda item co-operation with relevant international organizations, as requested by SBSTA at its 22nd session.

Background
The Special Report on Safeguarding the Ozone Layer and the Global Climate System was developed in response to invitations by UNFCCC (Decision 12/CP.8) and the Montreal Protocol on Substances that Deplete the Ozone Layer (Decision XIV/10 UNEP/OzL.Pro.14/9). This Special Report provides detailed information on the options for reducing ozone depleting substances (ODS) and greenhouse gas (GHG) emissions and concludes that, through application of current best practices and recovery methods, there is the potential, by 2015, to halve the BAU (business as usual) GHG-emissions (expressed in CO_2-eq) of ODSs and their GHG substitutes such as HFCs, which make up over half the potential reduction.

Domestic action in the European Union
Within the framework of the European Climate Change Programme the EU is working towards regulating the use of fluorinated greenhouse gases. A regulation will introduce measures on the containment, use, recovery and destruction of fluorinated greenhouse gases, and marketing and use prohibitions for some applications and equipment containing those gases, as well as related reporting requirements. A directive will introduce annual leakage limits for Mobile Air Conditioning systems, and will phase out the use of fluorinated gases that have a global warming potential higher than 150 in those applications. It has been estimated that projected emissions of fluorinated gases would be significantly reduced by 2010 and beyond by the above regulations.

Ongoing co-operation
The EU believes that cooperation with the Parties to the Montreal Protocol is essential on issues raised in the Special Report. In this context the EU notes with appreciation that the Parties to the Montreal Protocol decided at their 17th Meeting of the Parties (MoP) to convene an experts workshop in the margins of the 26th meeting of the Open-ended Working Group in 2006 to consider issues arising from the Special Report and the TEAP supplemental report arising out of the deliberations of the Open-ended Working Group on the actions to address ozone depletion. The 17th MoP concluded that, while emissions reductions from banks was not required by the Montreal Protocol, addressing ozone-depletion impacts is

an objective of the Montreal Protocol. It further agreed that mitigation measures designed to reduce ODS and GHG emissions simultaneously would have more benefits, such as a better overall cost-effectiveness. The MoP invited representatives of the UNFCCC secretariat to attend as an observer at this workshop and to report back to the UNFCCC. The EU would like to encourage Parties to nominate also climate experts to attend the workshop. The EU is interested to learn the views of other Parties on how to improve the co-operation between the UNFCCC and the Montreal Protocol.

Areas for further work

The Special Report also identifies a number of issues that would benefit from further investigation, including:

- Actual trends and projected emissions from production and use of fluorocarbons,
- Measures to reduce the emissions of fluorocarbons,
- Low GWP alternatives to ODSs,
- Quantification of the projected radiative forcing when replacing fluorocarbons with low GWP alternatives,
- Indirect emissions associated with energy use of appliances using ODS and their replacements, and
- Emissions from banks and the destruction of halocarbons at the end of life.

The EU proposes to discuss the following questions for these issues:

- How can the scientific knowledge on these issues be improved?
- How can Parties be better informed about these issues?
- How can barriers for effective and efficient measures be identified and overcome, through domestic policies and through international cooperation?
- How can the results of the discussion be incorporated in a strategic approach for a long-term global action to address climate change?

The EU believes that it is important to raise awareness amongst practitioners and share information between Parties on the practical approaches for reducing emissions of fluorocarbons and that the important results of the Special Report should be disseminated widely. The EU also suggests that the UNFCCC secretariat begins to prepare a database on its website identifying practical options to reduce emissions of fluorinated gases.

The EU also notes that in addition to the above mentioned workshop the Multilateral Fund of the Montreal Protocol will have an experts workshop in March 2006 to look at recovery, collection and destruction of halocarbons in banks at the end of life in developing countries. The EU suggests that consideration of both workshop outcomes be placed on the agenda of the 25th session of the SBSTA.

In conclusion, the EU would like to thank the IPCC and TEAP for this excellent Special Report, and highlight the importance of ongoing co-operation with the Parties to the Montreal Protocol to make the most effective and practical use of the information provided in the Special Report.

PAPER NO. 3: JAPAN

Japan's submission of views on aspects of the IPCC/TEAP special report

The SBSTA on its twenty-second session invited Parties to submit to the secretariat, by 13 February 2006, their views on aspects of the IPCC/TEAP special report relevant to the objective of the Convention on para 92 in its report (FCCC/SBSTA/2005/4).

The Government of Japan herewith submits its views on aspects of the IPCC/TEAP special report.

The Government of Japan highly appreciates that IPCC and TEAP have developed the comprehensive report in a close cooperation, and reaffirms the importance of continued collaboration between IPCC and TEAP.

Based on the report, continuous studies and researches are required for updating data and improving its accuracy on the effects of total emissions of ODSs and their substitutes on the climate change and the ozone depletion.

We confirm that policy instruments for reducing GHG emissions from huge amounts of banks existing over the world are extremely effective for the mitigation of global warming as well as for the early recovery of the ozone layer. Thus, we recognize the importance for parties to further promote the recovery, recycling and destruction of substances from end-of-life equipment, which should be stressed as a new challenge to be dealt with in cooperation with the Montreal Protocol. Japan has established a recovery and destruction system of CFCs, HCFCs and HFCs as refrigerants from end-of-life equipment pursuant to the domestic laws, and destroyed approximately 3,000 tonnes of those substances in the previous year.

With regard to holding a workshop which EU and other parties proposed, we would like to consider the necessity after clarifying the objectives of the workshop.

The Government of Japan expects active discussion, under the agenda at the next SBSTA, firstly on possible measures based on the findings and implications contained in this report.

PAPER NO. 4: SWITZERLAND

SBSTA 24
IPCC/TEAP Special Report
Safeguarding the Ozone Layer and the Global Climate System :
Issues Related to Hydrofluorocarbons and Perfluorocarbons

1. Switzerland would like to thank the IPCC for the preparation, in collaboration with the TEAP of the Montreal Protocol, of the Special Report on alternatives to ozone-depleting substances (ODSs) that affect the global climate system. This report is currently the most comprehensive assessment available on these matters.

2. The objective of the Convention to stabilize GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system implies a reduction of GHG emissions and in particular a reduction of hydrofluorocarbons (HFC) and perfluorocarbons (PFC).

3. But currently we are far from this objective since the Special Report points out that :

   - the emissions of HFCs will increase at a rate of 15 % per year in the next decade, namely from 0.4 to 1.2 GtCO2-eq / yr

   - HFCs and PFCs will influence substantially the climate system in the future since the atmospheric lifetimes range from about a year to two decades for most HFCs and even to centuries for some of them, and up to 50,000 years for PFCs

   - the banks of these gases – i. e. the accumulated gases in application such as foams and equipment – are also increasing.

4. Furthermore, the Special Report indicates that the banks of CFCs and HCFCs are not regulated under the Montreal Protocol and are gradually released into the atmosphere.

5. Nevertheless, encouraging information is provided by the Special Report that indicates that for many sectors measures are available to reduce HFC and PFC emissions. These reductions can be achieved through :

   - improved containment of substances
   - reduced charge of substances in equipment
   - end-of-life recovery and recycling or destruction of substances
   - increased use of alternative substances and technologies with a globally reduced or negligible global warming potential, including not-in-kind technologies.

6. We propose that the SBSTA consider HFC and PFC :

   - under its agenda item on mitigation in future sessions
   - through future in-session workshops on mitigation
   - through side-events at its sessions and workshops
   - making available, in its web site, information on national policies, experiences and technologies related to HFC and PFC, drawing on the IPCC Special Report and other relevant IPCC works, the national communications from the Parties and taking into account recommendations from the EGTT.

7. The objective of such consideration should be to exchange experience among Parties on the use of HFC and PFC, as well as of substitutes, with the view to reduce emissions to the atmosphere and to make available informations on existing technologies relevant to HFC and PFC.

8. The SBSTA should also include in its consideration of research needs, issues related to HFC and PFC as identified by the Special Report, including research on climate change and the ozone layer, and on technological and socio-economic aspects of the use and substitution of HFC and PFC.

9. Finally, we propose to establish a dialogue with the Montreal Protocol on the Special Report, on issues related to HCFC, HFC and PFC.

10. Furthermore, the subsidiary bodies should explore ways to establish international cooperation to address issues of financing emission reduction of such gases.

PAPER NO. 5: UNITED STATES OF AMERICA

Submission of the United States
FCCC/SBSTA/2005/4
Views on the Intergovernmental Panel on Climate Change (IPCC) and the Technology and Economic Assessment Panel (TEAP) of the Montreal Protocol *Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons*
March 1, 2006

The Twenty-second Session of the Subsidiary Body for Scientific and Technical Advice in May 2005 (SBSTA-22) invited Parties to submit their views on the Intergovernmental Panel on Climate Change (IPCC) and the Technology and Economic Assessment Panel (TEAP) of the Montreal Protocol *Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons* (IPCC/TEAP Special Report*)* relevant to the objective of the Convention. The United States welcomes the opportunity to provide its views.

Views on the Special Report

The United States welcomes the IPCC/TEAP Special Report, and believes it has achieved the goal of enabling Parties and stakeholders to make informed decisions about the technology options that will contribute to the objectives of both the Montreal Protocol and the Framework Convention. We appreciate the report's coverage of both Ozone Depleting Substances (ODSs) and their substitutes. The report underscores the benefits that actions under the Montreal Protocol have already had, and will continue to have, for climate change as the phaseout continues in both developed and developing and countries, given both high historic and current emissions and Global Warming Potentials (GWPs) of most of the ODSs relative to their substitutes. We note that GWP-weighted emissions from chlorofluorocarbons (CFCs), other ODSs and their substitutes have been reduced from approximately 33% of annual fossil fuel-related carbon dioxide (CO_2) emissions in 1990 to approximately 10% in 2000. The IPCC/TEAP report's business-as-usual (BAU) scenario projects that the radiative forcing from hydrofluorocarbons (HFCs) in 2015 would correspond to about 1.0% of the estimated radiative forcing of all well-mixed greenhouse gases in 2015, with the contribution of ODSs being about 10%. Additionally, the SRES projects that the radiative forcing from all sources of perfluorocarbons (PFCs) in 2015 would correspond to about 0.2%. The report offers a number of cost-effective management options for reducing future HFC and PFC emissions.

The Special Report identifies technologies that protect the stratospheric ozone layer and offer the potential for further reductions of climate impacts. We note that the choice of technology options varies across sectors and depends on national circumstances. We believe the report's attention to other important considerations associated with technology options for specific applications, including safety and cost, adds to its utility for decision makers in considering these options. We also find the report's discussion of the potential reduction in indirect GHG emissions resulting from improved energy efficiency to be an important consideration in seeking the most cost-effective approaches to GHG reduction. By evaluating the alternatives to ODSs in this broad context, the report provides a more comprehensive basis for potential reductions in climate impacts than that obtained from a simple consideration of direct emissions and global warming potentials.

We believe this report satisfies the objectives set forth in decision 12/CP.8 and in prior decisions regarding HFCs and PFCs. In keeping with decision 12/CP.8, the United States considers the most appropriate means for future consideration of strategic management of these substances is in the context of broader considerations taking place in relevant on-going SBSTA agenda items.

Improving information on banks and their emissions

The report clearly illustrates the impacts of emissions from banks on the ozone layer and the climate system. In some cases cost-effective options from a climate perspective are available to reduce these emissions—for example, refrigerant recovery. Other sources also represent significant emission reduction potential, but cost-effective control from a climate perspective requires better information on the definition and size of the banks, sources of emissions, and further development of management options.

Reports of the Parties on emissions of HFCs and PFCs are often inconsistent and incomplete. Even Annex I Party GHG Inventory Submissions frequently do not contain complete information on these emissions, and this has been identified as a problem for in-depth review of Annex I inventories. Because emissions of HFCs and PFCs are significant in some non-Annex I Parties as well, it would also be useful to facilitate non-Annex I reporting on these gases.

Managing emissions

The report highlights that application of current best practices, recovery methods and alternative technologies provide the potential to halve BAU emissions to achieve considerable reductions in HFC radiative forcings. These reductions, if achieved, would reduce this contribution to approximately 0.4% in 2015. The report also identifies specific technical options for various applications and sectors. We encourage Parties to consider these issues within the broader context of mitigation options for greenhouse gases.

In addition, the report highlights the value of responsible practices that have been occurring and should be encouraged by business and governments throughout the world. These practices, including improved containment, recovery and reuse of substances, can produce significant benefits for the climate system at modest costs, and to the extent that management activities for HFCs are also applicable to ODSs, can also benefit the ozone layer.

It would be useful for countries to share their national experiences in managing emissions, including recovery and re-use of refrigerants and recovery and destruction of substances in foams. Voluntary programs, like the global Mobile Air Conditioning Climate Protection Partnership to reduce GHG emissions from vehicle air conditioning systems, can motivate technical innovation and achieve global economies of scale that transform markets in both developed and developing countries. A number of countries including the United States have developed, and are continuing to develop, programs to encourage the recovery, reclamation and, in some cases, destruction of fluorocarbons. These experiences, as well as information in the Special Report, can inform Parties as they implement actions to reduce emissions of HFCs.

At SBSTA-27, under the Mitigation agenda item, Parties are scheduled to address non-CO_2 gases. We believe this will provide an excellent opportunity to share countries' experiences in managing emissions in the context of efforts to address other non-CO_2 gases.

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