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Item 6 (b) of the provisional agenda
Methodological issues under the Kyoto Protocol
Implications of the implementation of project activities under the clean development mechanism, referred to in decision 12/CP.10, for the achievement of objectives of other environmental conventions and protocols

Implications of the establishment of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23)

Submissions from Parties

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its twenty-second session, took note of the information contained in the technical paper prepared by the secretariat: "Issues arising from the implementation of potential project activities under the clean development mechanism: the case of incineration of HFC-23 waste streams from HCFC-22 production" (FCCC/TP/2005/1).

2. The SBSTA invited Parties and admitted observers and relevant intergovernmental organizations to submit to the secretariat, by 5 August 2005, their inputs on: implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention; and means to address such implications. The SBSTA requested the secretariat to compile submissions from Parties into a miscellaneous document for consideration by the SBSTA at its twenty-third session.

3. The secretariat has received 15 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.

4. The SBSTA agreed to consider at its twenty-third session the submissions by Parties and the information document to be prepared by the secretariat with a view to preparing a draft decision on this matter for adoption by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session.

[*] 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 and Romania.

PAPER NO. 1: AUSTRALIA

Implementation of potential project activities under the Clean Development Mechanism, referred to in decision 12/CP.10.

Submission by Australia

Introduction

The twenty-second session of the Subsidiary Body for Scientific and Technical Advice (SBSTA-22) invited Parties to submit to the secretariat input on the implications of the establishment, under the clean development mechanism (CDM), of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) produced as a by-product in HCFC-22 production. Australia welcomes the opportunity to provide its views on this issue.

Australia recognises that HFC-23 is a potent greenhouse gas with a global warming potential of 11,700. Australia also acknowledges that the Montreal Protocol requires developed countries to phase out all but 0.5% of their use of HCFCs by 2020, with complete phaseout by 2030, while developing countries are due to freeze their HCFC consumption from 2016 with a view to complete phase out by 2040. Australia continues to be a world leader in the phase out of ozone depleting substances, in many cases well ahead of the requirements of the Montreal Protocol. Australia is well on track to achieve a reduction of 0.5% of use of HCFCs by 2015.

Background

The current methodology used to determine the inventory baseline against which CERs are allocated (AM0001) has led to the registration of two projects to incinerate HFC-23, one in South Korea and the other in India. These two projects are forecast to generate approximately 4 million carbon credits per year until 2012. Previous submissions to the UNFCCC have estimated that the potential exists for HCFC-22 producers in developing countries to supply a CER amount equivalent to more than 100 million tones of carbon dioxide per year. One of the reasons for the disproportionate load of HFC-23 emission reduction projects in the CDM is the high profit margin of such projects, which generate CERs that cost in the order of 0.5 USD/t CO_2-e compared to current carbon market prices of as much as 9-10 USD/t CO_2-e.

Australia's Approach

Australia is of the view that any decision on this matter should not impact adversely on the achievement of environmental outcomes by incentivising production of HCFC-22 and thereby obstructing the objectives of the Montreal Protocol. Additionally any decision taken on this matter should not weaken the effect on global emissions of the CDM by creating a surfeit of CERs from projects to destroy HFC-23.

Australia contends that the overall environmental benefit of HFC-23 incineration projects needs to be carefully considered because:

- if implemented properly, these projects could produce extensive emissions abatement;
- if the baseline against which CERs are allocated is miscalculated, there is a significant risk of creating "certified hot air" which could undermine real abatement opportunities in other sectors and undermine the environmental integrity of the CDM;
- to the extent that these projects prolong the operation of existing HCFC plants or enable plants that would otherwise not be economically viable becoming profitable, such projects produce adverse climate and ozone impacts; and
- entities involved in the manufacture of HCFC-22 should adopt current best practice in the abatement of HFC-23, regardless of CDM project opportunities.

PAPER NO. 2: BOLIVIA

Implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10
Submission by Bolivia

I. Mandate

The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its twenty-second session (Bonn, Germany, 19–27 May 2005) invited Parties and admitted observers and relevant intergovernmental organizations to submit to the secretariat, by 5 August 2005, their inputs on[1]:

(a) Implications of the establishment, under the clean development mechanism, of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention

(b) Means to address such implications.

II. General Aspects

The technical paper elaborated by the UNFCCC Secretariat[2], as well as the internal background paper *Incineration of HFC-23 Waste Streams for Abatement of Emissions from HCFC-22 Production: A Review of Scientific, Technical and Economic Aspects* prepared for the Secretariat by Marbury Technical Consulting[3], and a wide variety of papers on the matter, like the OPTIONS FOR REDUCTION OF EMISSIONS OF HFCs IN DEVELOPING COUNTRIES Jointly prepared by UNDP, UNIDO and World Bank[4] and the views expressed by the Methodologies Panel of the CDM Executive Board during its thirteenth meeting[5], were the base of the comments and analysis presented on this submission.

In our view there are two basic and important issues to be considered:

The integrity of the objectives of all the environmental conventions should be preserved, and in that aspect a potential negative impact from one Convention's implementation mechanisms to another should be avoided. Taking into account that in the future we might encounter similar situations with other conventions and therefore a precedent should be established.

We considered that being the CDM a market based instrument that should promote both sustainable development and a cost effective GHG mitigation, should not be considered the only mean to deal with HFC 23 emissions reduction in HCFC-22 production facilities, therefore other instruments should be considered to avoid any potential negative impact in the Montreal Protocol objective.

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[1] FCCC/SBSTA/2005/L.3. 25 May 2005

[2] FCCC/TP/2005/1, 26 April 2005.

[3] A. McCulloch, *Incineration of HFC-23 Waste Streams for Abatement of Emissions from HCFC-22 Production: A Review of Scientific, Technical and Economic Aspects*, (Internal background paper prepared for the United Nations Framework Convention on Climate Change secretariat, 4 November 2004) (For the full document go to: http://cdm.unfccc.int/methodologies/inputam0001/Background.html).

[4] OPTIONS FOR REDUCTION OF EMISSIONS OF HFCs IN DEVELOPING COUNTRIES
Jointly prepared by UNDP (Mr. Frank Pinto)1, UNIDO (Mr. S. M. Si- Ahmed)2 and World Bank (Mr. Steve Gorman)

[5] Report of the thirteenth meeting of the Methodologies Panel.

III. Background

HFC-23, a potent GHG regulated by the Kyoto Protocol, is generated as a by-product during the manufacture of HCFC-22, a GHG and an ozone-depleting substance controlled by the Montreal Protocol. Most of the HFC-23 generated during HCFC-22 production is vented to the atmosphere because there is only a small, declining market for HFC-23 and discharges are not regulated because this gas is not toxic.

A methodology for determining the quantity of CERs to be issued for HFC-23 destruction (AM0001) was approved by the Executive Board at its tenth meeting (July 2003). Two HFC-23 destruction project activities that plan to use methodology AM0001 were submitted for registration, on 28 August 2004 (Gujarat) and 7 September 2004 (Ulsan). The Executive Board registered these projects at its eighteenth meeting on 23–25 February 2005

Taking into consideration *new* information that emerged since the approval of methodology AM0001, the Executive Board put this methodology on hold in September 2004 and requested the Methodologies Panel to make a recommendation on a possible revision to address, inter alia, potential leakage. A call for inputs was posted on the UNFCCC CDM web site with a comment period from 22 September to 7 October 2004. Twenty-two submissions were received.

In November 2004, the Methodologies Panel proposed revisions to AM0001 to limit its application to existing HCFC-22 production capacity. The proposed revisions to AM0001 limit the generation of CERs to the destruction of HFC-23 corresponding to no more than the highest historic HCFC-22 annual output multiplied by the lowest historic HFC-23 generation rate, not to exceed 3 per cent. A final formatted revised version of AM0001 is expected to be approved by the Executive Board at its nineteenth meeting (May 2005).

In the report of its thirteenth meeting, the Methodologies Panel also identified several issues that should be addressed by any proposed new methodology for the destruction of HCFC-23 generated by new HCFC-22 production capacity.

The Executive Board at its seventeenth meeting requested guidance from the COP on how to handle proposed CDM project activities that may have implications for the achievement of objectives of other conventions and protocols, such as the Montreal Protocol in the case of projects which imply the establishment of new HCFC-22 facilities which seek to obtain CERs resulting of the destruction of HFC-23.

We welcome the work done by the Executive Board and its Panels and comments during its thirteenth meeting, to deal with this issue through corrections in methodologies AM0001 to an extent that will limit the application of CDM only to existing plants. We favour the methodological treatment of the problem but in our view and based in all the new information, carefully revised, is not enough to resolve the potential harm on the phase out schedule and projected production of HCFC-22.

IV Facts and Figures

The current phases out obligations of developed countries under the MP, introduce incentives to shift the production of HCFC-22 to developing countries. Also the phase out timetable for developed countries will require a 90% reduction by the year 2015, meanwhile for developing countries are to freeze their consumption at 2015 levels, which is out of the reduction timetable commitment of the Kyoto Protocol, 2008 and 2012. A forecast of HCFC-22 production in developing countries range from 50 to a high 500 kt HCFC 22 in 2015 without any incentive coming from CDM projects. Is reasonable to say that if a incentive is placed to increase the production or at least maintain the output level due to a income coming

to HCFC 23 destruction, will have a negative impact in the actual phase out projections, damaging the implementation of MP objectives.

Economic incentive

The net revenue from HFC-23 destruction could exceed the revenue obtained from the sale of the HCFC-22 produced, because the market price of HCFC-22 is reported to range between USD 1 and USD 2 per kg. and the net revenue from the destruction of HFC-23 could be between USD 1.50 and USD 3.00 per kg of HCFC-22 produced. The net revenue is sensitive to the market price of CERs and the HFC-23 generation rate.

Because the CDM is a market based instrument and the Price of CERS are subject to supply and demand equilibrium, it can not be controlled and it may increase as the 2012 arrives, therefore there is a clear possibility that the CERS sale will indeed become and incentive for HCFC – 22 production.

Some public inputs claim that HFC-23 destruction would give developing country producers a strong financial incentive to meet demand for HCFC-22 by adding new capacity due to the revenue from the sale of CERs is large relative to the price of HCFC-22. Therefore limiting HFC-23 destruction to existing HCFC-22 output, as agreed by the Executive Board through the revised methodology AM0001, could not eliminate the incentive to increase HCFC-22 production beyond the 2004 level due to potential of economies of scale in production or marketing relating to total output or market share. Then HCFC-22 producers might choose to use some of the revenue from HFC-23 destruction from existing output to **subsidize additional production.**

Limiting HFC-23 destruction to existing HCFC-22 output is not enough to eliminate the incentive to increase HCFC-22 production.

V. Means to address such implications

To maintain the integrity of the environmental conventions and under the not conclusive information that CDM projects that will generate CERS through the HFC-23 destruction in the HFC22 production will not become and incentive for HFC 22 production. This type of projects and activities should not be address by the CDM.

Therefore, another instruments should be consider to deal with HFC 23 destruction to avoid many of the negative implications listed above. Instruments like the Global Environment Facility, or other source of funding should be analyzed.

Consequently, Bolivia proposes to exclude HFC-23 mitigation project activities in all HCFC-22 facilities from the CDM, because it represents the best option available to avoid negative interference in the fulfilment of the objectives of the Montreal Protocol, integrally achieving the objectives of the CDM and promoting the ultimate objective of the UNFCCC.

La Paz, Bolivia, august 5, 2005.
Oscar Paz Rada
Coordinator
Climate Change National Program
UNFCCC National Focal Point
BOLIVIA

PAPER NO. 3: BRAZIL

SBSTA 22 Conclusions on agenda item 5 (b)

Implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10

Submission by Brazil

The establishment, under the clean development mechanism (CDM), of new hydrochlorofluorcarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions (CER's) for the destruction of hydrofluorcarbon-23 (HFC-23) may lead to an increase of HCFC-22 production in developing countries because the net revenue from HFC-23 destruction could exceed the revenue from the sale of the HCFC-22 produced, according to technical paper FCCC/TP/2005, prepared by the secretariat for the twenty-second session of the Subsidiary Body for Scientific and Technological Advice. This fact could create an incentive to delay the phasing out of production and consumption of HCFC-22 by developing countries under the Montreal Protocol. Therefore, the establishment of new HCFC-22 facilities may have implications for the achievement of the objectives of the Montreal Protocol on Substances that Deplete the Ozone Layer.

In Addition, the establishment of new HCFC-22 facilities may have implications for the achievement of the objectives of the Convention on Climate Change because the emissions of HCFC-22, a greenhouse gas controlled by the Montreal Protocol, may increase with the CDM project activities. The revenue from CER's related to the HFC-23 destruction is an incentive to the establishment of new HCFC-22 facilities that would not be established without this stimulus. The CER's from HFC-23 generated would increase global emissions because those CER's (not to mention the emissions of HCFC 22, also a greenhouse gas) would be used by Annex I Parties to offset emissions of GHG's listed in Annex A to the Kyoto Protocol to meet commitments under the Protocol.

Although HCFC-22 is not included in Annex A to the Kyoto Protocol, being controlled by the Montreal Protocol, it is a greenhouse gas according to Article 1, paragraph 5, of the Convention. This article establishes that greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.

Under the scenario without incentive related to CER's from HFC-23 destruction, the HCFC-22 facilities wouldn't be established and wouldn't have HCFC emissions. So, HCFC emissions from new facilities are attributable to the CDM project activity.

Paragraph 52 of the modalities and procedures for a clean development mechanism (Decision 17/CP.7) establish that the project boundary shall encompass all anthropogenic emissions by sources of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the CDM project activity. It is exactly the case with new HCFC-22 facilities. It's important to note that paragraph 52 doesn't mention emissions of GHG's listed in Annex A to the Kyoto Protocol or not controlled by the Montreal Protocol (Alternative 1).

Another approach could be to consider HCFC-22 as leakage if it is considered that the boundary of the project is limited to the destruction of HFC-23. In the same way, paragraph 51 of the modalities and procedures for a clean development mechanism (Decision 17/CP.7), which defines leakage, doesn't mention emissions of GHG's listed in Annex A to the Kyoto Protocol or not controlled by the Montreal Protocol. According to this paragraph, leakage means the net change of anthropogenic emissions by

sources of greenhouse gases which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity (Alternative 2).

Taking into account both alternatives (project boundary or leakage), HCFC-22 emissions must be considered significant, measurable and attributable to the CDM project activity, because CDM is not limited to gases included in Annex A to the Kyoto Protocol.

GHG emission reduction

Alternative 1: The greenhouse gas emission reduction achieved by the project activity is equal to the quantity of waste HFC-23 actually destroyed less the anthropogenic emissions by sources of greenhouse gases of the CDM project activity within the project boundary (sum of the greenhouse gas emissions generated by the destruction process and HCFC-22 produced).

Alternative 2: The greenhouse gas emission reduction achieved by the project activity is the quantity of waste HFC-23 actually destroyed less the anthropogenic emissions by sources of greenhouse gases of the CDM project activity within the project boundary (greenhouse gas emissions generated by the destruction process) less the leakage (HCFC-22 produced).

GWP for HCFC-22

The 100-year global warming potential of HFC-23 is 11,700. Hence, 1 tonne of HFC-23 actually destroyed is equivalent to 11,700 tonnes of CO_2.

For the existing facilities the quantity of HFC-23 generated is typically 2–3 per cent of the quantity of HCFC-22 produced. But the Revision to approved baseline methodology AM0001 "Incineration of HFC 23 waste streams" establishes that if insufficient data is available for the calculation of HFC23 release for all three (3) most recent years of operation up to 2004, the default value to be used is 1.5%. As the new facilities will not have historic production (they will initiate this), this value should be used.

Another option is to use 2.0%, because this is the average HFC-23 generation rate in industrialized countries where there are often better operating practices and voluntary or mandatory destruction.

Decision 2/CP.3 states that the GWP used by Parties should be those provided by the IPCC in its Second Assessment Report based on the effects of the GHGs over a 100-year time horizon, taking into account the inherent and complicated uncertainties involved in global warming potential estimates.

The GWP values for ozone-depleting substances, such as HCFC-22, are the sum of a direct (positive) component and an indirect (negative) component which depends strongly on its ozone destruction effectiveness. For HCFC-22, table 2.8 (p. 119) of the IPCC Second Assessment Report provides, for a 100-year time horizon, a GWP equal to 1500 for direct effect and 1300 to 1400 for indirect effect, so the net GWP would be 100 to 200.

Considering the uncertainties in GWP for indirect negative radiative forcing, it must be used the conservative value, bearing in mind the Precautionary Approach. Hence, one tonne of HCFC-22 produced represents 200 t CO_2 equivalent.

Destruction of 1 t of HFC-23 generates emissions of 3–4 t CO2 equivalent from the destruction process, the use of fossil fuels and disposal of wastes.

In this context, the reduction achieved by the project activity for each tonne of HCFC-22 produced is 11,700*0.015 – (200 + 4) = -28,5 t CO_{2e} (Scenario 1).

or

11,700*0.015 – 4 – 200 = -28,5 t CO_{2e} (Scenario 2).
Considering that one tonne of HCFC-22 yields 0,02 t of HFC-23, the calculation presents as a result a reduction of 30 t CO_{2e}.

Conclusions

Taking into account the existing facilities, destruction of 1 t HFC-23 would yield about 335 CERs (technical paper FCCC/TP/2005).

Considering the HCFC-22 produced as GHG emission (project boundary or leakage), there would be a GHG emission increase (-28,5 t CO_{2e} – negative reduction) or 30 t CO_{2e} reduced by project activity, depending on the quantity of HFC-23 destroyed.

The last case represents a reduction of about 90% of CERs in comparison with CERs from existing facilities.

Proposal by Brazil: Brazil proposes that new facilities to produce HCFC-22, even if they destroy HFC-23, not to be eligible under the Clean Development Mechanism.

PAPER NO. 4: CANADA

Submission of Canada

Implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention

5 August 2005

1. Introduction

The Tenth Conference of the Parties (COP10) requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to develop a recommendation related to the implications from the implementation of project activities under the clean development mechanism (CDM) for the achievement of objectives of other environmental conventions and protocols, in particular, the Montreal Protocol. This issue was raised in the context of the establishment of new hydrochlorofluorocarbon-22 (HCFC-22) facilities by project participants seeking to obtain certified emissions reductions (CERs) for the destruction of hydrofluorocarbon-23 (HFC-23).

The Twenty-Second session of the Subsidiary Bodies subsequently invited inputs on:

(a) Implications of the establishment, under the clean development mechanism, of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention; and

(b) Means to address such implications.

Canada notes that there is a lack of certainty as to whether any new HCFC-22 production facilities will be established over the next ten years. Canada further notes that there is little likelihood that new legislation will be established in developing countries which will require the capture and destruction of the total HFC-23 waste stream from HCFC-22 facilities in this time-frame. However, in the event that there are new facilities established, it is critical from a climate perspective to provide an incentive to capture and destroy the HFC-23. Based on available data, in the absence of the CDM the status quo would be to vent the HFC-23 into the atmosphere. For that reason, Canada has proposed a package of measures aimed at allowing HFC-23 destruction at new HCFC-22 facilities to be proposed as CDM projects, while managing the potential implications related to the achievement of the objectives of the Montreal Protocol.

2. General principles and considerations for the treatment of new HCFC-22 facilities

In continuing discussions at the Twenty-Third Session of the Subsidiary Bodies in Montreal the objective will be to reach consensus on the means to address implications of the establishment, under the CDM, of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objectives of the Montreal Protocol. Canada would like to frame these discussions in the context of the following general principles and considerations:

(a) HFC is one of the basket of gases included in Annex A of the Kyoto Protocol. HFC-23 is formed as a by-product of HCFC-22 production and has a global warming potential of 11,700(CO2-equivalent).

From a climate perspective it is critical to ensure that measures are taken to reduce and/or eliminate the release of HFC-23 to the atmosphere.

(b) The Montreal Protocol requires developing countries to freeze HCFC consumption starting in the year 2016, based on the average production and consumption in the year 2015. Consumption must be completely phased out by the year 2040.

(c) Substances controlled by the Montreal Protocol which are used in feedstock applications are not subject to phase-out regulations. HCFC-22 is used as a feedstock for fluoropolymers and this use is therefore not restricted under the Montreal Protocol. Feedstock use is the largest projected source of demand for HCFC-22. So long as HCFC-22 is used as a feedstock then HFC-23 emissions will continue to be a problem and will need to be managed.

(d) While in industrialized countries there is a net decrease in consumption of HCFC-22, in developing countries there is a marked increase in consumption for both potentially emissive uses and for feedstock, resulting in a net increase. This trend is expected to continue, contributing to the already occurring shift in production from industrialized to developing countries.

(e) In developing countries there is an absence of incentives (i.e. either economic or regulatory) to destroy HFC-23. The destruction technology costs approximately USD$4 million for a typical unit plus ongoing operation and maintenance costs of approximately USD$250,000 per annum. This is a significant barrier. There is also no evidence to support an expectation of legislation in developing countries mandating capture and destruction of HFC-23 in the near term. Based on the current and expected scenario, in the absence of the CDM there would be no incentive to reduce or eliminate HFC-23 emissions.

(f) The CDM Executive Board approved methodology AM0001 is applicable only to “HFC-23 waste streams from an existing HCFC-22 production facility which has at least 3 years of operating history between the beginning of the year 2000 and the end of the year 2004 where the project activity occurs and where no regulation requires the destruction of the total amount of HFC-23.” Thus, any facility which started operating after the beginning of the year 2002 would be classified as a “new facility”.

(g) The extent to which we might expect new HCFC-22 facilities to be built is unclear. There are clearly limits to the number of new facilities which can be established from a timing perspective. As of now, there is only a ten-year window for the establishment of new facilities before the 2016 deadline under the Montreal Protocol. Establishing a new facility - including planning, approvals and construction - will take several years. Together with the mandated freeze on HCFC-22 production, this does not leave a very large window of time during which a new facility might start operation.

3. Potential implications of the establishment of new HCFC-22 facilities for the achievement of objectives of the Montreal Protocol, and analysis of those implications

Based on the Technical Paper prepared by the Secretariat, as well as other inputs, there are several potential implications associated with allowing the establishment, under the CDM, of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objectives of the Montreal Protocol. For the purpose of this submission, Canada has drawn on relevant literature to undertake an analysis of the potential implications in order to assess the likelihood that these potential implications will be realized. The potential implications and analysis can be summarized as follows:

1. The net revenue of HFC-23 destruction may lead to a shifting, or accelerated shifting, of HCFC-22 production from industrialized to developing countries.

Analysis: Based on available data, production has already started to shift and is expected to increase throughout the next decade regardless of the CDM. This is due to a decline in production and consumption of HCFC-22 in industrialized countries associated with their phase-out obligations and other domestic legislation, and an increase in demand in developing countries. There may be some potential that allowing CERs to be generated from new HCFC-22 facilities could slightly accelerate this trend, but this impact does not seem to be significant when considering other factors.

2. Revenue from HFC-23 destruction could give developing country producers a competitive advantage over producers in industrialized countries because they could afford to offer HCFC-22 at lower prices. A lower price for HCFC-22 could in turn potentially lead to increased consumption of HCFC-22.

Analysis: Relevant literature shows that there are approximately 30 existing HCFC-22 plants in developing countries, including "swing plants", which could be eligible as CDM projects under the approved methodology AM0001. Any potential new facilities which might be built (for which there is dwindling time) would not likely have much impact in relation to the CDM potential which exists from already established facilities if registered as CDM projects.
Nonetheless, the potential that a lower HCFC-22 price could increase consumption of HCFC-22 does not appear to be significant when considering that the price of HCFC-22 is not what drives the market. The market is driven by the price of the product in which the HCFC-22 is used, e.g. the air-conditioning unit. Relevant literature shows that the cost of HCFC-22 constitutes an insignificant part (e.g. 1%) of the value of the equipment in which it is used. As such, the quantity of HCFC-22 produced would depend on the demand for the final product rather that the cost of HCFC-22.

3. Potential impact on the rate at which HCFC-22 is phased out in developing countries and the associated adoption by developing countries of non-HCFC-22 air-conditioning and refrigeration technologies from industrialized countries.

Analysis: As noted in section 2 of this submission, there is already a clear trend of increased HCFC-22 production in developing countries, in large part to meet an increasing demand for feedstock use (which does not have implications for the Montreal Protocol). This trend is projected to continue in the near future. Subsequently, as further noted, a phase-out schedule for HCFCs in developing countries is already prescribed under the Montreal Protocol, mandating a freeze in consumption as of 2016 and a total phasing out by 2040. Adoption of non-HCFC-22 technologies and an associated decline in HCFC-22 consumption will depend on the cost and penetration of those new technologies into developing country markets, rather than on the abundance or cost of HCFC-22.

4. HFC-23 destruction could give developing country producers a strong financial incentive to meet demand for HCFC-22 by adding new capacity or maintaining output at the existing capacity where the HCFC-22 output in developing countries would otherwise have fallen below the existing level.

Analysis: Based on historical rates and phase-out obligations, it is projected that industrialised country production of HCFC-22 for commercial use will continue to decrease, while production for feedstock use will increase. For developing countries, both commercial and feedstock use are projected to increase. If there is a demand for HCFC-22, the market will try to meet that demand regardless of the CDM.

5. The shift of production could lead to an increased volume of HFC-23 produced because the HFC-23 generation rate in developing countries is on average higher than the average in industrialized countries (often due to better operating practices and voluntary/mandatory destruction).

Analysis: As noted previously, shifting production patterns are already occurring. However, in any location, the quantity of HFC-23 produced depends in part on how the process is designed and operated

and the degree of process optimization that has been performed (within the scope dictated by economic constraints). Process optimization can and should be encouraged at new facilities.
6. If the revenue from the sale of CERs is high enough, it could be profitable for producers to increase HCFC-22 output and to release the extra HCFC-22 output to the atmosphere to generate more HFC-23.

Analysis: Given that there is a projected increased demand for HCFC-22, this likelihood does not appear to be significant. Nonetheless the concern of HCFC-22 output and release should be addressed.

4. Proposal to allow the establishment, under the CDM, of new HCFC-22 facilities while addressing the potential implications for the achievement of the objectives of the Montreal Protocol.

Canada proposes the following package of measures to be incorporated in a new methodology applicable to HFC-23 capture and destruction at new HCFC-22 facilities. Based on the analysis of the potential implications for the achievement of the objectives of the Montreal Protocol undertaken in section 3 of this submission, Canada believes that the following measures could be used to address these potential implications:

(1) A methodology to address HFC-23 destruction at new HCFC-22 facilities under the CDM should be applicable to a facility which commenced operation after the start of 2002 (where according to its applicability conditions, AM0001 cannot be applied) and which has at least three years of operating history.

The requirement for a new HCFC-22 facility to first be in operation for three years should serve to demonstrate that the facility was established for the purpose of meeting a real market demand for HCFC-22 and not for the purpose of generating CERs through the capture and destruction of HFC-23.

(2) Parameters for monitoring should include a requirement to monitor the HCFC-22 emissions during the project crediting period in order to ensure that there is no arbitrary release of HCFC-22 into the atmosphere i.e. to demonstrate that the continued level of HCFC-22 production exists to meet a real demand for that product. The monitoring requirement could extend backward to require the provision of data on HCFC-22 emissions from the start of operation of the new HCFC-22 facility.

(3) Only those new HCFC-22 facilities which have a waste generation rate of either (i) 3% or less (IPCC default factor) or (ii) a rate equal to or lower than the average waste generation rate of registered HFC-23 destruction projects under the CDM (currently 2.8%) are eligible under the CDM.

The above requirement should serve to encourage better operating practices, and the use of the best available technology economically feasible to optimize production processes in order to minimize HFC-23/HCFC-22 production ratios.

5. Conclusion

Canada's proposed package of measures is aimed at providing practical solutions to address the potential implications which were outlined in section 3 of this submission. Canada is flexible in considering means and measures which other Parties have proposed to address this issue. To that end, Canada looks forward to considering other Parties' views at the Twenty-Third session of Subsidiary Bodies on the implications of the establishment of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objectives of the Montreal Protocol, and means to address those implications.

PAPER NO. 5: CHILE

IMPLICANCIAS DE LA IMPLEMENTACION DE ACTIVIDADES DE PROYECTOS BAJO EL MECANISMO DE DESARROLLO LIMPIO, A QUE SE REFIERE LA DECISION 12/CP.10, EN EL LOGRO DE LOS OBJETIVOS DE OTRAS CONVENCIONES AMBIENTALES Y PROTOCOLOS
SBSTA 22 – AGENDA ITEM 5(b)

PRESENTACION – CHILE

ANTECEDENTES

La Decisión 12/CP.10 "Orientación relativa al Mecanismo de Desarrollo Limpio", acordada por la Conferencia de las Partes de la Convención sobre Cambio Climático en su 10ª sesión, pide al Organo Subsidiario de Asesoramiento Científico y Tecnológico, en su párrafo 14 que, en colaboración con la Junta Ejecutiva, prepare una recomendación a la Conferencia de las Partes en calidad de reunión de las Partes en el Protocolo de Kyoto en su primer período de sesiones sobre las consecuencias de la ejecución de las actividades de proyectos del mecanismo para un desarrollo limpio para el logro de los objetivos de otras convenciones y protocolos sobre el medio ambiente, en particular el Protocolo de Montreal, que entrañan el establecimiento de nuevas instalaciones de hidroclorofluorcarburo 22 (HCFC-22) a fin de obtener reducciones certificadas de las emisiones por la destrucción del hidrofluorocarburo 23 (HFC-23), teniendo en cuenta los principios establecidos en el párrafo 1 del artículo 3 y las definiciones del párrafo 5 del artículo 1 de la Convención.

Atendido ello, la Secretaría de la Convención preparó el documento técnico FCCC/TP/2005/1 "Issues arising from the implementation of potential project activities under the clean development mechanism: the case of incineration of HFC-23 waste streams from HCFC-22 production". Dicho documento sirvió de base para la discusión del Organo Subsidiario de Asesoramiento Científico y Tecnológico, el que en su sesión 22ª decidió invitar a las Partes, observadores admitidos y organizaciones intergubernamentales relevantes a presentar sus puntos de vista sobre la materia.

Chile agradece la labor de la Secretaría de la Convención y de la Junta Ejecutiva del Mecanismo de Desarrollo Limpio en cuanto a facilitar e ilustrar la discusión de este importante tema y a continuación presenta a las Partes su punto de vista y las siguientes consideraciones generales.

CONSIDERACIONES GENERALES

1. **La necesidad de potenciar cambios estructurales en las economías de los países en desarrollo, en especial en el sector energía, como parte fundamental del logro de los objetivos de la Convención de Cambio Climático.**

El propósito del Mecanismo para un Desarrollo Limpio (MDL) es ayudar a las Partes no incluidas en el anexo I a lograr un desarrollo sostenible, contribuyendo al mismo tiempo con el objetivo último de la Convención de Cambio Climático, ayudando a las Partes del anexo I a

cumplir con sus obligaciones de limitación y reducción de emisiones. Así lo señala expresamente el artículo 12 del Protocolo de Kyoto.

Sin entrar en el análisis y la discusión de emitir un juicio sobre la real contribución al desarrollo sostenible de las actividades de proyecto que mitigan HFC-23, dado que ello atentaría contra la prerrogativa soberana de la Parte de acogida de confirmar dicha condición, no es menos cierto que, más allá del MDL, el espíritu del Protocolo de Kyoto es incentivar la implementación de actividades de proyecto en sectores claves en las economías de los países, en particular, en el sector energía.

Tanto es así, que la Declaración Ministerial de Marrakech, la Decisión 1/CP.7, se refiere específicamente a la importancia del desarrollo del sector energético. La Declaración Ministerial de

Marrakech destaca en su párrafo 4 la importancia del fomento de la capacidad así como del desarrollo y la difusión de nuevas tecnologías respecto de los sectores clave del desarrollo, en particular la energía, y de las inversiones en esta esfera, en particular con la participación del sector privado, enfoques de mercado así como políticas públicas de apoyo y la cooperación internacional.

Las actividades de proyecto que mitigan HFC-23, por el contrario, no potencian en nada el desarrollo del sector energía.

2. La necesidad de asegurar la transferencia de nuevas y mejores tecnologías hacia los países en desarrollo, como medio fundamental para el logro de los objetivos de la Convención de Cambio Climático.

Las actividades de proyecto que mitigan HFC-23 en nuevas instalaciones tampoco se traducen en un aporte significativo de nuevas y mejores tecnologías.

Tal como se encuentra recogido en el Plan de Acción de Buenos Aires, los Acuerdos de Bonn (5/CP.6) y las Decisiones sobre Desarrollo y Transferencia de Tecnologías (4/CP.4 y 9/CP.5), éste es un elemento fundamental en toda la arquitectura del Protocolo y de la Convención.

Asimismo, no se debe olvidar lo señalado en el artículo 10.c) del Protocolo de Kyoto, en cuanto a que todas las Partes cooperarán en la promoción de modalidades eficaces para el desarrollo, la aplicación y la difusión de tecnologías, conocimientos especializados, prácticas y procesos ecológicamente racionales en lo relativo al cambio climático, y adoptarán todas las medidas viables para promover, facilitar y financiar, según corresponda, la transferencia de esos recursos o el acceso a ellos, en particular en beneficio de los países en desarrollo, incluidas la formulación de políticas y programas para la transferencia efectiva de tecnologías ecológicamente racionales que sean de propiedad pública o de dominio público y
la creación en el sector privado de un clima propicio que permita promover la transferencia de tecnologías ecológicamente racionales y el acceso a éstas.

Atentaría contra el espíritu del Protocolo de Kyoto el fomentar el uso del MDL en nuevas instalaciones productoras de HCFC-22.

3. La necesidad de asegurar una distribución geográfica equitativa de los proyectos MDL, como parte de la contribución al desarrollo sostenible que la Convención y el Protocolo comprometen.

Más allá de los principios rectores de la Convención y el Protocolo, las propias Modalidades y Procedimientos de un Mecanismo para un Desarrollo Limpio, acordadas por las Partes en virtud de la Decisión 17/CP.7, establecen como una consideración básica para el desarrollo del MDL, la necesidad de promover una distribución geográfica equitativa de las actividades de proyectos del MDL en los ámbitos regional y subregional.

Esta consideración fundamental, atendido lo señalado incluso en el propio documento técnico FCCC/TP/2005/1, preparado para estos efectos por la Secretaría, no se respetaría si se permite la utilización indiscriminada del MDL en nuevas instalaciones donde se busque implementar actividades de proyectos de mitigación de HFC-23.

Permitir el uso del MDL en nuevas actividades de proyecto que mitigan la emisión de HFC-23 conlleva el riesgo de limitar las inversiones en nuevas y mejores tecnologías en el sector energía o en otros sectores fundamentales para el desarrollo sustentable de los países; siendo especialmente crítico esto en aquellos proyectos que teniendo una menor capacidad de generar reducciones certificadas de emisiones, tienen un mayor beneficio desde el punto de vista del desarrollo sustentable, como es el propio caso de las energías renovables.

4. El uso del MDL en la mitigación de emisiones de HFC-23 bien podría calificar como un caso de abuso del derecho.

Los derechos deben ejercitarse con arreglo a las exigencias de la buena fe. El abuso del derecho, esto es, el ejercicio de un pseudo legítimo derecho, que sobrepasa manifiestamente los límites normales y daña a terceros o a la sociedad toda, está sancionado por el ordenamiento jurídico. Así lo ha reconocido tanto la jurisprudencia de la Corte Internacional de Justicia como la doctrina toda.

Atendido lo señalado anteriormente y a la luz de la historia y el espíritu de la Convención de Cambio Climático y su Protocolo de Kyoto y las consideraciones aquí expuestas, el uso indiscriminado e irracional del MDL en actividades de proyectos como las que son materia de este presentación, bien podría calificar como un caso de abuso del derecho.

(MMain, 26-07-05)

PAPER NO. 6: CHINA

China's Views on the Implications of New HFC-23 CDM

Projects and Means to Address Such Implications

The twenty-second session of the Subsidiary Body for Scientific and Technical Advice invited Parties and admitted observers and relevant intergovernmental organizations to provide inputs on:

(a) Implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention;

(b) Means to address such implications.

China would like to submit the following views.

1. Possible Implications

CDM projects based on the decomposition of HFC-23 through the establishment of new HCFC-22 facilities would lead to more HCFC-22 production, as this would bring about economic benefits from the sales of CERs accruing from such HFC-23 decomposition CDM project, regardless of the real market demand.

2. Means to address such implications

HCFC-22 is very important for developing countries to gradually control and eventually phase out the production and consumption of CFCs. Therefore, the production and consumption of HCFC-22 in developing countries should be encouraged within the framework of Montreal Protocol as long as there's a real market.

To address the above-mentioned implications, China recommends that the approved CDM methodology, which is now applicable to HFC-23 waste streams from existing HCFC22 production facilities with at least three years of operating history between beginning of the year 2000 and the end of the year 2004 where the project activity occurs and where no regulation requires the destruction of the total amount of HFC23 waste, be applied to HFC-23 decomposition CDM project, by adding the following two requirements for application:

a) The project developer for HFC-23 decomposition CDM projects should provide relevant information and evidence to show that the production of HCFC-22 by the facilities is only intended to meet the real market demand; and,

b) The host Government has already issued domestic regulations to charge more than half of the revenues from the transfer of CERs accruing from HFC-23 decomposition projects, in support of activities aimed at the protection of the climate or activities to promote sustainable development.

PAPER NO. 7: COLOMBIA

IMPLICACIONES DE LA IMPLEMENTACIÓN DE ACTIVIDADES DE PROYECTOS BAJO EL MECANISMO DE DESARROLLO LIMPIO MENCIONADAS EN LA DECISIÓN 12/CP.10, EN EL LOGRO DE LOS OBJETIVOS DE OTRAS CONVENCIONES AMBIENTALES Y PROTOCOLOS SBSTA 22 – AGENDA ITEM 5(b)

SUBMISSION – COLOMBIA

I. ANTECEDENTES

La Conferencia de las Partes de la Convención sobre Cambio Climático en su décima sesión que tuvo lugar en Buenos Aires, Argentina, solicitó a través de la Decisión 12/CP.10, párrafo 14 al Órgano Subsidiario de Asesoramiento Científico y Tecnológico que, *en colaboración con la Junta Ejecutiva, prepare una recomendación a la Conferencia de las Partes en su calidad de reunión de las Partes en el Protocolo de Kyoto en su primer período de sesiones sobre las consecuencias de la ejecución de las actividades de proyectos del mecanismo para un desarrollo limpio para el logro de los objetivos de otras convenciones y protocolos sobre medio ambiente, en particular el Protocolo de Montreal, que entrañan el establecimiento de nuevas instalaciones de hidroclorofluorcarburo 22 (HCFC – 22) a fin de obtener reducciones certificadas de emisiones por la destrucción de hidrofluorocarburo 23 (HFC – 23), teniendo en cuenta los principios establecidos en el párrafo 1 del artículo 3 y las definiciones del párrafo 5 del artículo 1 de la Convención.*

Como respuesta a lo anterior, la Secretaria de la Convención preparó el documento técnico FCCC/TP/2005/1 “Issues arising from the implementation of potencial Project activities under the clean development mechanism: the case of the incineration of HFC – 23 waste streams from HCFC – 22 production”, el cual sirvió de base para la discusión que se dio en la 22ª sesión del Órgano Subsidiario de Asesoramiento Científico y Tecnológico, y en donde se invitó a las Partes, observadores admitidos y organizaciones intergubernamentales relevantes a presentar sus opiniones sobre:

a) Las consecuencias del establecimiento, en el marco del mecanismo de desarrollo limpio, de nuevas instalaciones de hidroclorofluorcarburo 22 (HCFC – 22) destinada a obtener reducciones certificadas de emisiones por la destrucción de hidrofluorocarburo 23 (HFC – 23) para el logro del objetivo del Protocolo de Montreal relativo a las sustancias agotadoras de la capa de ozono, teniendo en cuenta los principios establecidos en el párrafo 1, artículo 3, y las definiciones del párrafo 5 de la Convención.

b) Los medios para hacer frente a esas consecuencias.

Colombia agradece los insumos que la Secretaría de la Convención y la Junta Ejecutiva del Mecanismo de Desarrollo Limpio han desarrollado para ilustrar la discusión sobre este importante tema, y se permite presentar su punto de vista y consideraciones referentes a los puntos señalados anteriormente.

II. CONSIDERACIONES GENERALES

i) Potenciar la implementación de actividades de proyectos en sectores claves para las economías de los países en desarrollo, como parte fundamental del logro de los objetivos de la Convención de Cambio Climático.

El numeral 2 contenido en el artículo 12 del Protocolo de Kyoto establece que *el propósito del mecanismo para un desarrollo limpio es ayudar a las Partes no incluidas en el anexo I a lograr un desarrollo sostenible y contribuir al objetivo último de la Convención*, ayudando a las partes incluidas en el anexo I a cumplir con una parte de sus compromisos cuantificados de limitación y reducción de emisiones.

En ese sentido, el espíritu del Protocolo de Kyoto ha estado dirigido a incentivar la ejecución de actividades de proyectos en sectores claves para la evolución y mejoramiento de la economía de los países en desarrollo, tal como lo es el sector energético. La Declaración Ministerial de Marrakech, Decisión 1/CP.7 destaca en su texto la importancia de promover la capacidad y desarrollo de nuevas tecnologías en sectores claves para el desarrollo, haciendo especial énfasis en el sector energía, por sus implicaciones socio – económicas y ambientales.

Teniendo en cuenta lo anterior, las actividades de proyectos que reducen HFC – 23, no potencian claramente este fin de desarrollar los sectores claves, como el energético, desviando el incentivo representado en el MDL de promover el cambio en las tendencias actuales de desarrollo económico de una manera sostenible; tal como lo señala la Convención (art. 2) y reforzado por el Protocolo de Kyoto (considerandos del Protocolo de Kyoto).

ii) La importancia de asegurar una distribución equitativa en términos geográficos de los proyectos elegibles al Mecanismo de Desarrollo Limpio, como parte de la contribución al desarrollo sostenible.

La Decisión 17/CP.7, establece como una consideración básica para el desarrollo del MDL la necesidad de promover *una distribución geográfica equitativa de las actividades de proyectos del mecanismo para un desarrollo limpio en los ámbitos regional y subregional*.

En caso de permitirse el establecimiento de nuevas instalaciones de hidroclorofluorcarburo 22 (HCFC – 22) y/o el aumento de capacidad de las ya existentes; a fin de obtener reducciones certificadas de emisiones por la destrucción de hidrofluorocarburo 23 (HFC – 23), iría en contravía de la consideración adecuadamente prevista en la D17/CP7, impidiendo una participación y distribución equitativa de las diferentes regiones y subregiones en el desarrollo de actividades elegibles al MDL; y en consecuencia de la posibilidad de replicar estos proyectos y de generar los beneficios tanto por las reducciones, como de los beneficios colaterales de los proyectos.

iii) La necesidad de asegurar la transferencia de nuevas y mejores tecnologías para los países en vías de desarrollo como herramienta fundamental para el logro de los objetivos planteados en la Convención de Cambio Climático.

En cuanto a este tema, la Convención hace mención a las actividades que podrían dar respuesta a las necesidades y preocupaciones de los países en desarrollo en torno a temas como la inversión y la transferencia de tecnología.

Por su parte, el literal c del artículo 10 del Protocolo de Kyoto establece que todas las Partes *cooperarán en la promoción de modalidades eficaces para el desarrollo, la aplicación y la difusión de tecnologías, conocimientos especializados, prácticas y procesos ecológicamente racionales en lo relativo al cambio climático, y adoptarán todas las medidas viables para promover, facilitar y financiar, según corresponda, la transferencia de esos recursos o el*

acceso a ellos, en particular en beneficio de los países en desarrollo, incluidas la formulación de políticas y programas para la transferencia efectiva de tecnologías ecológicamente racionales que sean de propiedad pública o de dominio público y la creación en el sector privado de un clima propicio que permita promover la transferencia de tecnologías ecológicamente racionales y el acceso a éstas;

En ese sentido, el Plan de Acción de Buenos Aires, los Acuerdos de Marrakech y los Acuerdos de Bonn, establecen un marco para la adopción de acciones significativas y eficaces en torno al tema de desarrollo y transferencia de tecnología, constituyéndose éste como uno de los pilares fundamentales que busca incentivar tanto el Protocolo como la Convención.

Las actividades de proyectos que mitigan HFC – 23 pueden no traducirse en un aporte significativo de mejores y/o nuevas tecnologías aplicables a países en vías de desarrollo, y si, por el contrario, podrían desincentivar inversiones en otros sectores considerados como fundamentales para el desarrollo sostenible de los países dados sus altos impactos socio – económicos y ambientales.

iv) La importancia de las sinergias entre los diferentes instrumentos ambientales multilaterales que permitan la construcción de un marco global congruente en términos de beneficios sociales y ambientales de largo plazo.

El HCFC – 22 es un gas usado para la refrigeración y fluido en sistemas de aire acondicionado, sin embargo es considerado como una sustancia de transición bajo los criterios establecidos en el marco del Protocolo de Montreal. En ese sentido, los países desarrollados han establecido un plan de eliminación que tiene por fecha final 2030. Para el caso de los países en vías de desarrollo se espera que dicho plan de cierre este completo para el año 2040.

Las actividades de proyectos de destrucción de HFC – 23 proveniente del proceso de manufactura del HCFC – 22 pueden generar un incentivo perverso en términos de prolongar e incluso motivar un aumento en la producción de HCFC – 22 en los países en desarrollo; quienes bajo las actuales consideraciones de los acuerdos internacionales son los únicos que podrían explotar la producción de este gas. Bajo este contexto, se están creando condiciones que afectarían potencialmente el cronograma de cierre que se negociará para los países en desarrollo con respecto a la eliminación de HCFC – 22 en el marco del Protocolo de Montreal. En concordancia con lo anterior, los planes de cierre para los países en desarrollo se definirán a partir del nivel de producción que estos tendrán para el año 2015 (línea base); a partir de esta línea base se definirán los compromisos de eliminación. Al permitir que el MDL sea viable en nuevas instalaciones o el aumento de capacidad de las existentes se esta incentivando más que proporcionalmente la producción de HCFC 22: por un lado para responder a la demanda existente y por otro para vender posteriormente la destrucción de HFC 23 como reducciones certificadas de emisiones vía el Mecanismo de Desarrollo Limpio; en conclusión haciendo que la línea base (2015) sea lo más alta posible.

En consideración con lo que plantea el documento técnico FCCC/TP/2005/1, preparado para estos efectos por la Secretaría, la venta de las reducciones certificadas de emisiones provenientes de este tipo de proyectos pueden generar impactos sustanciales en la producción de HCFC – 22, haciendo que los avances que plantea el Protocolo de Montreal sean poco atractivos a la hora de ser negociadas por parte de los países que concentran la producción.

Teniendo en cuenta que los países desarrollos cuentan con un cronograma de cierre en la producción del HCFC - 22 para el 2030, en el marco del Protocolo de Montreal, las reducciones que se generan de la destrucción del HFC – 23 pueden incentivar el traslado de su producción desde países anexo I a países no anexo, generando con esto, que no exista un beneficio neto real en términos de reducción de gases efecto invernadero

En resumen, el desarrollo de actividades que generen reducciones certificadas de emisiones provenientes de la eliminación del HFC – 23 que surge de la producción del HCFC – 22 generan diferentes incentivos tanto de carácter económico como ambiental que pueden afectar seriamente los logros obtenidos bajo el Protocolo de Montreal y creando condiciones adversas para sus futuras negociaciones, que tendrán lugar bajo el seno de dicho instrumento internacional, haciendo que el balance en términos de metas globales que permitan contribuir al desarrollo sostenible de los países se disminuya.

v) Limitación de generación de reducciones de emisiones certificadas provenientes de proyectos de eliminación de HFC – 23 en instalaciones existentes.

La Conferencia de las Partes, cómo máximo órgano decisorio de la Convención de Cambio Climático, ha adoptado medidas que restringen o limitan el uso de los instrumentos planteados tanto por la Convención como por el Protocolo con el fin de garantizar el logro último que plantea la Convención.

En ese sentido, para Colombia resulta pertinente que se establezcan restricciones para el uso del MDL en la mitigación de emisiones de HFC – 23 en nuevas instalaciones.

En resumen, el desarrollo de actividades que generen reducciones certificadas de emisiones provenientes de la eliminación del HFC – 23 que surge de la producción del HCFC – 22 genera diversos incentivos tanto de carácter económico como ambiental que pueden afectar por: i) desviar el incentivo del MDL en sectores claves asociados al desarrollo sostenible, ii) el cumplimiento de las consideraciones previstas en la D17/ CP7 de promover una distribución geográfica equitativa de las actividades de proyectos del mecanismo para un desarrollo limpio en los ámbitos regional y subregional; iii) desincentivar el aporte significativo de mejores y/o nuevas tecnologías; iv) los logros obtenidos y las metas planteadas bajo el Protocolo de Montreal.

III. RECOMENDACIÓN

Colombia propone no permitir el uso del MDL en las actividades de proyecto que mitiguen las emisiones de HFC – 23 provenientes de nuevas instalaciones productoras de HCFC – 22, incluyendo un incremento en la capacidad productora de las instalaciones actualmente existentes, constituyéndose éste como un paso legítimo y justo en la consecución del objetivo planteado por la Convención y el Protocolo, para avanzar en la construcción de la senda del desarrollo sostenible, sin ir en detrimento de lo logrado previamente en otros escenarios multilaterales.

PAPER NO. 8: EGYPT

At the request of Acting Deputy Executive Secretary, Mr. Richard Kinley on item 3 (a and b):
Implications of the implementation of project activities under the Clean Development Mechanism (CDM) referred to in decision 12/CP.10;
Egypt's view regarding item (a) "Implication of establishment, under the CDM of new hydroflorocarbon - 22, …" is that cooperation between the UNFCCC and its Kyoto Protocol; and the Vienna Convention for the protection of the ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone layer "ODS" should enhance considerations of climate change mitigations and ozone layer protection. Some recent scientific scopes are considering the contribution of ozone layer depletion as the ignition agent of global warming leading to climatic changes. We believe that economic benefits provided from CDM should not encourage production of ODS.
An opportunity for discussions and exchange of views could be through a workshop that should be held prior COP11 or as in session.

PAPER NO. 9: INDIA

Government of India submission on Implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10

Draft Conclusions proposed by the Chair vide FCCC/SBSTA/2005/L.3 dated 25 May 2005

A] New capacities

With regard to setting up of new HCFC 22 production capacities, there may be a genuine increase in demand from developing countries in the areas of refrigeration and PTFE. However there is the possibility that new capacities may be set up with the full knowledge of the CDM benefit, which could lead to a perverse incentive. It may be difficult to determine which of the new capacities have come up because of genuine demand and which have come up with perverse CDM incentive in mind. Accordingly, we feel that CDM benefit should not be made available to any new capacities that are set up after an agreed cut off date.

PAPER NO. 10: JAPAN

Submission by the Government of Japan

Input on implications of the establishment of new HCFC-22 facilities, under the CDM, for the Montreal Protocol, and means to address such implications

Japan welcomes the opportunity to submit its input regarding the implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10, in response to the request in the document FCCC/SBSTA/2005/L.3.

Japan is looking forward to exchanging views on this matter with other Parties, and reaching constructive and practical solutions at SBSTA23 and COP/MOP1.

(a) Implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement if the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention.

The fundamental adverse implications for achieving the objective of the Montreal Protocol, which should be addressed, lie in the case where any benefits from CERs generated from HFC-23 destruction CDM projects result in greater production of HCFC-22 than that which would have occurred in the absence of the CDM project. Hence, issuance of CERs resulting from HCFC-22 production activities which produce, as a result of incentives to seek CERs, more than the demand in the market, should not be permitted. A notable example of adverse cases is where HCFC-22 is produced mainly for the purpose of obtaining CERs and is left unsold to the market.

On the other hand, market data shows a rapid increase in the demand for HCFC-22 in developing countries, particularly in China, as presented in the IPCC/TEAP special report on safeguarding the ozone layer and the global climate system. To the degree that an increase in production of HCFC-22, if any, is in response to expanding demand in the market, such activity should be considered as usual business activities and warranted for issuance of CERs

Furthermore, the Montreal Protocol does not treat HCFC-22 produced as a chemical feedstock as a controlled substance, in contrast to HCFC-22 produced for dispersive usages such as refrigerant, on the grounds that such production does not involve a release into the atmosphere. From this point of view, such differing treatment of HCFC-22 production as a feedstock in the Montreal Protocol should be duly taken into account, on the condition that incentives for introducing alternative substances to HCFC-22 or alternative technologies will not be undermined.

(b) Means to address such implications

Possible means to assess whether and how adverse implications from incentives for CERs actually exist include monitoring relevant data such as production amounts, sales, production costs, and market prices of CERs. It would be better to leave consideration of detailed methodologies to the CDM Executive Board, and to have the Board assess such implications and address them, based on proposals from project proponents.

In assessing HCFC-22 production as a feedstock, it is proposed, for instance, that project proponents should provide DOE with evidence to substantiate users of HCFC-22 produced and the amount of sales to users, as well as availabilities of alternative substances or technologies for project proponents. In any case, the CDM Executive Board should consider detailed methodologies in response to, and based on, proposals from project proponents.

PAPER NO. 11: MALAYSIA

Malaysia's Comment on Issues Arising From The Implementation Of Potential Project Activities Under The Clean Development Mechanism:
The Case Of Incineration Of HFC-23 Waste (Document: FCCC/TP/2005/1)

Dear Sir,

With reference to the above, I am pleased to present Malaysia's comment as follows:

"Malaysia fully agrees with the EB's decision made in its 17th Meeting that only the existing HCFC-22 facilities are allowed to implement the destruction of HFC-23 as CDM projects. For any new HCFC facilities to be set up there after, the destruction of HFC-23 should not be eligible for the CDM. This will avoid the shifting of HCFC-22 production from industrialized countries to developing countries that could lead to higher HCFC-22 production in developing countries and thus increase total HCFC-22 emissions and the quantity of HFC-23 destroyed.

Malaysia is of the opinion that the CDM activities to be carried out must bring more sustainable development benefits to the non-Annex I Parties such as the energy efficiency and renewable energy types of CDM projects."

Thank you.

Yours sincerely,

(CHONG, Poonchai)

Conservation and Environmental Management Division

for Secretary General

Ministry of Natural Resources and Environment

cum Focal Point for UNFCCC Implementation, Malaysia

PAPER NO. 12: MEXICO, ARGENTINA, NICARAGUA AND PANAMA

Implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10
Submission by Mexico, Argentina, Nicaragua and Panama

I. Mandate

The COP, at its tenth session (Buenos Aires, Argentina, 6 - 17 December 2004), requested the Subsidiary Body for Scientific and Technological Advice (SBSTA), in collaboration with the Executive Board, "to develop a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session relating to implications of the implementation of clean development mechanism (CDM) project activities for the achievement of objectives of other environmental conventions and protocols, in particular the Montreal Protocol, and which imply the establishment of new hydrochlorofluorocarbon 22 (HCFC-22) facilities which seek to obtain certified emissions reductions (CERs) for the destruction of hydrofluorocarbon 23 (HFC-23), taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention"[1].

The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its twenty-second session (Bonn, Germany, 19–27 May 2005) invited Parties and admitted observers and relevant intergovernmental organizations to submit to the secretariat, by 5 August 2005, their inputs on[2]:

(a) Implications of the establishment, under the clean development mechanism, of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention

(b) Means to address such implications.

Mexico, Argentina, Nicaragua and Panama welcome this opportunity to provide views and submits the following consolidated inputs on both issues.

II. General comments

In our view, the CDM - being a sustainable development tool for non-Annex I countries - should ensure both the synergies between the different environmental conventions and protocols and the generation of long-term environmental and social benefits in the Host Parties where project activities take place. We also believe that, once these two conditions have been met, the potential of the CDM to reduce the global cost of mitigating greenhouse gas emissions in the long run - and thus contribute to the ultimate objective of the Convention - will only be maximized through an equitable distribution of project activities among sectors and countries.

Bearing this in mind, it becomes clear that CDM project activities aimed at reducing HFC-23 emissions in HCFC-22 production facilities provide a disproportionate overall balance between environmental, social and carbon benefits, as they can only be carried out in a very small number of developing countries

[1] Decision 12/CP.10, paragraph 14.
[2] FCCC/SBSTA/2005/L.3.

– while providing relatively scarce direct sustainable development benefits – and at the same time generate massive amounts of CERs due to the large Global Warming Potential of HFC-23. Consequently, HFC-23 mitigation project activities have the potential to limit investments in a wider range of developing countries and sectors, as well as in other types of projects with lower CER generation capacity but higher sustainable development benefits (e. g., renewable energy and carbon sequestration project activities).

Moreover, HFC-23 destruction projects could provide perverse incentives for lengthening and even increasing the production of HCFC-22 in developing countries, thus potentially affecting the timing and level of their phase -out schedule under the Montreal Protocol.

Therefore, Mexico, Argentina, Nicaragua and Panama support the decision of the CDM Executive Board to limit the generation of CERs by HFC-23 mitigation project activities in existing facilities[3] and, as will be further explained, propose the exclusion of such project activities in new HCFC-22 plants from the CDM unless methodological options are found to ensure that the above-mentioned undesired consequences - particularly, providing perverse incentives for an increased production of HCFC-22 in developing countries – will be avoided.

We welcome the technical paper elaborated by the UNFCCC Secretariat[4], as well as the internal background paper *Incineration of HFC-23 Waste Streams for Abatement of Emissions from HCFC-22 Production: A Review of Scientific, Technical and Economic Aspects* prepared for the Secretariat by Marbury Technical Consulting[5], and the views expressed by the Methodologies Panel of the CDM Executive Board during its thirteenth meeting[6], all of which were extensively consulted in the preparation of this submission.

III. Key background information

HFC-23, a potent GHG regulated by the Kyoto Protocol,[7] is generated as a by-product during the manufacture of HCFC-22, a greenhouse gas[8] and an ozone-depleting substance controlled by the Montreal Protocol.[9] Most of the HFC-23 generated during HCFC-22 production is vented to the atmosphere because there is only a small, declining market for HFC-23 and discharges are not regulated because this gas is not toxic.

HCFC-22 is used as circulating fluid in refrigeration and air conditioning systems, as a blend component in foam blowing, and as a feedstock for manufacturing fluoropolymers such as polytetrafluoroethylene (PTFE). The HCFC-22 used in non-feedstock applications is released in the atmosphere over time; hence

[3] Report of the nineteenth meeting of the Executive Board of the clean development mechanism.
[4] FCCC/TP/2005/1, 26 April 2005.
[5] A. McCulloch, *Incineration of HFC-23 Waste Streams for Abatement of Emissions from HCFC-22 Production: A Review of Scientific, Technical and Economic Aspects*, (Internal background paper prepared for the United Nations Framework Convention on Climate Change secretariat, 4 November 2004) (For the full document go to: http://cdm.unfccc.int/methodologies/inputam0001/Background.html).
[6] Report of the thirteenth meeting of the Methodologies Panel.
[7] The 100-year global warming potential of HFC-23 is 11,700, which means that the cumulative radiative effect of 1 kg of HFC-23 is 11,700 times that of 1 kg of CO2 over 100 years.
[8] The Intergovernmental Panel on Climate Change (IPCC) in chapter 4 of its Third Assessment Report (The Scientific Basis) refers to HCFC-22 as a GHG controlled by the Montreal Protocol. IPCC, *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*, J.T. Houghton, Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.), (Cambridge University Press, Cambridge, United Kingdom and New York, United States of America).
[9] The term Montreal Protocol is used to cover subsequent amendments to that Protocol as well.

these uses of HCFC-22 are being phased out under the Montreal Protocol. Feedstock production, however, is permitted to continue indefinitely in any area of the world because it does not involve the release of HCFC-22 to atmosphere in the same way as the dispersive uses.

Under the Montreal Protocol consumption of HCFCs for non-feedstock uses in industrialized countries was frozen in 1996 followed by a 35 per cent reduction by 1 January 2004. Further reductions are foreseen as follows: 65 per cent as of 1 January 2010, 90 per cent as of 1 January 2015, and 99.5 per cent as of 1 January 2020. Complete elimination is scheduled for 2030.

Developing countries are expected to freeze their HCFC-22 production at their 2015 output level as of 2016. A phase-out schedule, yet to be negotiated, would take effect leading to complete phase out by 2040. Thus, developing country HCFC-22 output will fall below the 2004 level at some point in the future. The available forecasts suggest that this could occur at any time between 2008 and 2030.

Currently there are about 30 HCFC-22 plants in developing countries, with total production estimated at 211 kt HCFC-22 in 2004. This includes "swing" plants that are capable of producing either CFCs or HCFC-22. Forecasts of HCFC-22 production in developing countries range from a low of 50 to a high of 500 kt HCFC-22 in 2015, without considering the possible impacts of HFC-23 destruction on HCFC-22 production. [10]

CDM projects for HFC-23 abatement are likely to have a value of several hundred million dollars a year if all the existing potential is realised. The resulting saving in greenhouse gas emissions could amount to, on average, 160 MTe CO2 equivalent/year.

Public inputs on methodology AM0001 (*incineration of HFC 23 waste streams*) indicate that the sale of CERs from HFC-23 destruction may have a substantial impact on the economics of HCFC-22 production. The quantity of HFC-23 generated is typically 2–3 per cent of the quantity of HCFC-22 produced. At a rate of 2.9 per cent, HFC-23 destruction would reduce GHG by about 335 t CO2 equivalent for each tonne of HCFC-22 produced.[11]

Based on a scenario where the assumed price of a CER is USD 5/t CO2 equivalent, the value of 335 CERs earned through HFC-23 destruction would be USD 1,675 per t of HCFC-22 produced. The cost of HFC-23 destruction is estimated at USD 4–6 per kg (USD 0.34–0.51/t CO2 equivalent). At USD 6 per kg, the HFC-23 destruction cost is USD 175 per t of HCFC-22 produced. [12] Thus the net revenue from the destruction of HFC-23 would be (USD 1,675 – USD 175 =) USD 1,500 per t, or USD 1.50 per kg, of HCFC-22 produced. At an assumed price of USD 10/t CO2 equivalent, the net revenue from the destruction of HFC-23 would thus be (USD 3,350 – USD 175 =) USD 3,175 per t or USD 3.17 per kg of HCFC-22 produced.

[10] There are about 20 plants in China with a combined capacity of about 250 kt HCFC-22 per year, 4 plants in India with a combined capacity of about 50 kt HCFC-22 per year (however, the installation of new HCFC-22 capacity is now prohibited in India), and 1 plant each in Korea, Mexico, Taiwan and Venezuela with a combined capacity of about 40 kt HCFC-22 per year. A. McCulloch, *Incineration of HFC-23 Waste Streams for Abatement of Emissions from HCFC-22 Production: A Review of Scientific, Technical and Economic Aspects*.

[11] One tonne of HCFC-22 yields 0.029 t HFC-23. With virtually complete (>99.999 per cent) destruction; this represents 0.029*11,700 = 339 t CO2 equivalent. Destruction of 1 t of HFC-23 generates emissions of 3–4 t CO2 equivalent from the destruction process, the use of fossil fuels and disposal of wastes. In accordance with the modalities and procedures for the CDM, one CER is equal to 1 t CO2 equivalent. So destruction of 1 t HFC-23 would yield about 335 CERs.

[12] USD 6/kg HFC-23 * 1000 kg/t * 2.9 per cent = USD 175.

Bearing in mind that the net revenue is sensitive to the market price of CERs and the HFC-23 generation rate, the net revenue from the destruction of HFC-23 in the above scenario could be between USD 1.50 and USD 3.00 per kg of HCFC-22 produced. Because the market price of HCFC-22 is reported to range between USD 1 and USD 2 per kg, the net revenue from HFC-23 destruction could exceed the revenue from the sale of the HCFC-22 produced.

In November 2004, the Methodologies Panel proposed revisions to AM0001 to limit its application to *existing*[13] HCFC-22 production levels. The proposed revisions to AM0001 limit the generation of CERs to the destruction of HFC-23 corresponding to no more than the highest historic HCFC-22 annual output multiplied by the lowest historic HFC-23 generation rate, not to exceed 3 per cent.[14] A final formatted revised version of AM0001 was approved by the Executive Board at its nineteenth meeting (May 2005).

IV. Implications of the establishment, under the CDM, of new HCFC-22 facilities seeking to obtain CERs for the destruction of HFC-23 for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention

We share the concerns put forward by the Methodologies Panel on the potential implications of the establishment of new HCFC-22 production capacity seeking to generate CERs under the CDM, namely:

1. The potential acceleration of a shift in HCFC22 production from Annex 1 to non-Annex 1 Parties (with the possibility of no net GHG benefit). Displacing Annex 1 HCFC22 production with non-Annex 1 HCFC22 production would not necessarily yield any net greenhouse emission reductions. To the extent that Annex 1 HFC23 emissions may decline as a result, fewer emissions reductions in other sectors will be required to meet Annex 1 emission targets. Moreover, the shift of production from industrialized to developing countries may lead to a global increase of HFC-23 produced because the average HFC-23 generation rate in developing countries is on average approximately 3 per cent as opposed to 2 per cent in industrialized countries where there are often better operating practices and voluntary or mandatory destruction.

2. The downward pressure on HCFC-22 prices and the possibility of increased HCFC-22 use (and its uncertain impacts on overall GHG emissions). As a result of possible downward pressure on HCFC-22 prices, there may be changes in the production, use, and emissions of Kyoto and non-Kyoto greenhouse gases, including Montreal Protocol gases. For instance, the value of the CERs awarded for HFC-23 destruction could create an incentive to delay the phase out of production and consumption of HCFC-22 by developing countries under the Montreal Protocol. The direction and magnitude of these impacts is unclear given many market complexities, such as the wide mix and evolution of refrigerants and cooling technologies, and manufacturing practices. Significant technical input would be required to clarify the overall impact of methodologies for HFC-23 incineration activities in new HCFC-22 capacity on GHG emissions.

3. The possibility of HCFC-22 production predominantly for CER generation. As mentioned in section III above, CDM projects for HFC-23 abatement have the potential to alter HCFC-22 production economics radically. As pointed out before, it is clear that a CDM project could have a significant impact on the economics of the implementing facility and could even exceed the revenue from the sale of the

[13] According to the revised version of AM0001 (Version 3, 13 May 2005), this methodology is applicable to HFC 23 (CHF3) waste streams from an existing HCFC22 production facility with at least three (3) years of operating history between beginning of the year 2000 and the end of the year 2004.

[14] If insufficient data is available for the calculation of HFC23 release for all three most recent years of operation up to 2004, then the default value to be used is 1.5%.

HCFC-22 it produces, making profitable to increase its HCFC-22 output to generate more HFC-23 and to release the extra HCFC-22 produced to the atmosphere.

4. Perverse incentives to "maximize" (not optimize) HFC-23 production ratios. HCFC-22 producers have several options to optimize production processes to minimize HFC-23/HCFC-22 production ratios. The economic benefits of CERs generated through HFC-23 elimination could provide incentives for producers to avoid optimization.

V. Means to address such implications

Recent studies suggest that limiting HFC-23 destruction project activities to existing HCFC-22 output, as agreed by the Executive Board through the revised methodology AM0001, would largely eliminate the incentive to increase HCFC-22 production beyond the 2004 level,[15] though halving the potential HCFC-23 abatement in the CDM between now and 2015 (reducing it to some 80 MTe CO2 equivalent/year).

While acknowledging the need to address this potentially important source of emissions, we believe - as the Methodologies Panel clearly pointed out in its thirteenth meeting - that the CDM may not be the best instrument to support HFC-23 destruction from new HCFC-22 production capacity, and that the Global Environment Facility, or another instrument, could avoid many of the negative implications listed in section IV above by providing funding to cover the incremental cost of HFC 23 destruction.

Therefore, unless methodological options are found to ensure that the negative implications identified in section IV above - particularly, creating perverse incentives for an increased production of HCFC-22 in developing countries – will be avoided, Mexico, Argentina, Nicaragua and Panama propose the exclusion of HFC-23 mitigation project activities in new HCFC-22 facilities (including any increase in HCFC22 production capacity at an existing production site) from the CDM. Such methodological options should guarantee that any negative interference in the fulfilment of the objectives of the Montreal Protocol will be avoided, that the objectives of the CDM will be integrally achieved and, finally, that project activities will promote the ultimate objective of the UNFCCC.

[15] There might be economies of scale in production or marketing relating to total output or market share. Then HCFC-22 producers might choose to use some of the revenue from HFC-23 destruction from existing output to subsidize additional production

PAPER NO. 13: SWITZERLAND

SBSTA 23
Implications of implementation of HFC-23 related project activities under the clean development mechanisms referred to in decision 12/CP.10
Submission by Switzerland

1. Introduction

At its tenth meeting, the UNFCCC Conference of the Parties (COP), tasked (in its decision 12/CP10) the Subsidiary Body for Scientific and Technological Advice (SBSTA) with developing a recommendation considering implications of CDM project activities for the achievement of objectives of other environmental agreements, in particular the Montreal Protocol It specifically raised the issue of establishment of new HCFC-22 facilities by project participants seeking credits from HFC-23 abatement activities.

The SBSTA was invited to consider the information provided in a technical paper from the Secretariat and to conclude on further steps with a view to preparing, in collaboration with the Executive Board, a recommendation to the COP/MOP, at its first session. At its 22nd meeting, the SBSTA invited Parties, observers and relevant intergovernmental organizations to submit their inputs to the Secretariat by 5 August 2005.

Switzerland acknowledges the opportunity to submit its views on:

(a) implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention and on

(b) means to address such implications.

In the following implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement of the objective of the Vienna Convention for the protection of the ozone layer with its Montreal Protocol on Substances that Deplete the Ozone Layer are addressed first, based on the information available from the IPCC/TEAP special report[1], the technical paper elaborated by the UNFCCC Secretariat[2] and other sources[3]. Based on merits and demerits of options for ensuring environmental integrity, the paper assesses means to address such implications.

2. Background information

HFC-23 is a greenhouse gas of low toxicity but with a high global warming potential (GWP = 11'700). HFC-23 is a by-product from HCFC-22[4] production, which is an ozone depleting substance (ODP 0.055) with a GWP of 1'780 used as fluid in refrigeration and air conditioning systems and as a feedstock for manufacturing fluoropolymers such as polytetrafluoroethylene (PTFE - Teflon). Typically, the ratio of HFC-23/HCFC-22 is 1.5 to 4%.

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[1] IPCC/TEAP special report 2005 : Safeguarding the ozone layer and the global climate system, issues related to HFCs and PFCs"
[2] FCCC/TP/2005/1, 26 April 2005
[3] Report of the thirteenth meeting of the Methodology Panel
[4] $CHClF_2$

As HFC-23 reportedly is only marketed as fire extinguishing agent in small and declining quantity, most of it is presently being emitted to atmosphere from HCFC-22 production plants in China, India, South Korea and Brazil. The US, EU, Japan, China, India and Korea are the major producers of HCFC-22. Consumption of HCFCs is still relatively low in developing countries compared to developed countries. However, production in Asian countries has increased significantly in recent years, notably in China and India. Currently there are also about 20 HCFC-22 plants in industrialized countries with a total production estimated at 313kt HCFC-22 in 2004[5].

The technology for thermal decomposition of HFC-23 is relatively expensive, though HFC-23 very high GWP lower significantly abatement costs per tone CO2-eq considered under the CDM. The IPCC/TEAP special report quotes abatement cost in the order 0.2 USD/t CO2-eq. The Secretariat paper quotes estimated costs of mitigation as being $4-6 per kilogram of HFC-23 destroyed, or USD 0.34-0.51 per tonne of CO2-eq emissions.

At its 10th meeting, the CDM Executive Board adopted a methodology (AM0001) for quantifying emission reductions for projects mitigating emissions of HFC-23 from production of HCFC-22. Such CDM projects could potentially deliver very large numbers of credits at comparatively low cost. The method endorsed by the CDM Executive Board is applicable for decomposition of HFC 23 from waste stream in existing plants only.

The destruction of HFC-23 in HCFC-22 production plants results in a considerable volume of CERs due to the high global warming potential of HFC-23. As a result, CER revenues from the destruction of HFC-23 have a large effect on HCFC-22 production costs. The CDM is thus providing a significant incentive to abate HFC-23 emissions and potentially also a market-distorting incentive to produce more HCFC-22, which is both an ozone-depleting chemical and a (non-Kyoto) greenhouse gas. According to calculations included in the Secretariat's technical paper[6] with CER prices of USD 5/CER or USD10/CER, the value of CER revenues would range between USD 1500 and USD 3175 per tonne of HCFC-22 produced, while current market prices for HCFC-22 range between USD 1100 and USD 2400. Consequently, HCFC-22 production costs could be outweighed by CER revenues.

Under the Montreal Protocol, production and consumption of HCFC-22 in developing countries are only restricted from 2016 onwards to levels determined by production and consumption in the year 2015 (developing countries are then allowed to retain these levels until 2040, though the possibility of introducing earlier restrictions is being considered).

3. Guiding principles

First : According to the Marrakech Accord the CDM was conceived as a sustainable development tool for non-Annex I countries. The CDM should hence avoid significant negative implications for the achievement of the objectives of the UNFCCC and other environmental agreements, in particular in relation to the Vienna Convention with its Montreal Protocol. Rather it should ensure both the synergies between the different environmental conventions and protocols and the generation of long-term environmental and social benefits in the Host Parties where project activities take place. We believe that, once these two conditions have been met, the potential of the CDM to reduce the global cost of mitigating greenhouse gas emissions in the long run - and thus contribute to the ultimate objective of the Convention – are best met through an equitable distribution of project activities among sectors and countries, contributing in particular to the dissemination of low carbon technologies.

[5] A. McCulloch, Incineration of HFC-23 Waste Streams for Abatement of Emission from HCFC-22 Production : A Review of Scientific, Technical and Economic Aspects.
[6] FCCC/TP/2005/1

Second: The issue at stake affects the objectives of both the Vienna Convention with its Montreal Protocol and the UNFCCC. Means to address implications shall comply with the UNFCCC principle set out in Article 3 of the common but differentiated responsibilities of Parties. Though the regulatory issue at stake needs to be settled within the frame of the Kyoto Protocol the implications reach beyond. An agreement on means to address implications shall therefore take into account the principles and objectives of both the Vienna Convention with its Montreal Protocol and the UNFCCC.

Third: Further action on this issue should ensure that production of HCFC-22 is not expanded or shifted from Annex I to non-Annex I countries as a result of the CDM and that perverse incentives for the UNFCCC or the Montreal Protocol resulting from revenues from CERs in new HCFC-22 production facilities are avoided.

4. Implications

HFC-23 destruction in new HCFC-22 production facilities under the CDM may have the following implications:

1. **Effects on HCFC-22 use and HCFC-22 production.** High economic revenues from CERs lower or outweigh HCFC-22 production costs and are likely to induce a downward pressure on HCFC-22 prices. This consequently could change the demand patterns for refrigerants leading to an increased use of HCFC-22 particularly in developing countries and a delayed phase out of HCFC-22 use in industrialized countries. This would impact on both the emissions of ozone depleting substances (ODSs) and greenhouse gases (GHGs). These substitution effects are difficult to determine, since they depend on many factors, such as the regulatory framework, refrigerant prices, equipment costs, technical innovation, safety and reliability concerns etc. The possible consequences of significantly lowered HCFC-22 prices due to the CDM include the following:

    - Lowered HCFC-22 prices may potentially increase the market demand for HCFC-22 for both refrigerant and feedstock uses, resulting in increased GHG and ODS emission levels, with negative implications for achievement of the objectives of the Montreal Protocol and the UNFCCC.
    - The phase out of CFCs is still ongoing in developing countries. Since the Kyoto Protocol is in force and the EU has announced a phase out of HFCs in some market segments an increase of HFC prices can be observed in the world market. This price trend adversely gives some boost to the illegal trade of CFCs. If there is also a CDM induced downwards trend in HCFC prices technology shifts away form ODS in developing countries will face an additional barrier. There is a risk that a larger share of CFC use will shift to HCFC use (due to lower refrigerant and operating cost)
    - Low HCFC prices beyond 2010 are likely to support the incentive for illegal trade with HCFC to industrialized country markets in a period where these markets shall phase out the use of HCFC-22 also from existing plants by retrofit measures. If the refrigerant cost of non-ODS refrigerants are higher than those of ODS refrigerants, many plant owner will feel reluctant to face additional investment and higher operating cost.
    - Mitigation measures as proposed in the IPCC/TEAP special report to contain the emissions of HCFC and HFCs would be adversely affected by low HCFC-22 prices, as there is a low economic incentive to contain refrigerant leaks if the refrigerant cost is low. This adversely affects the objectives of the Montreal Protocol and the UNFCCC.
    - Under the Montreal Protocol and its amendments, production and consumption of HCFC-22 in developing countries is currently only restricted from 2016 onwards to levels determined by production and consumption in the year 2015. Production and consumption levels in 2015 determine allowed production and consumption levels until 2040. Increased HCFC-22 production and consumption levels by 2015 due to the CDM would consequently delay the

phasing out of HCFC-22 in the long term, resulting in increased emission levels of GHGs and ODSs until 2040, and thus well beyond CDM crediting periods.

2. **Possibility of HCFC-22 Production predominantly for CER production**: As indicated in the above section "background", CDM projects for HFC 23 abatement have the potential to alter HCFC-22 production economics radically: new HCFC-22 production facilities may potentially be used primarily to generate CERs and not for satisfying market demand for HCFC-22, as the income from CERs could potentially outweigh HCFC-22 production costs. It would be very difficult to perform proper additionality checks on new HCFC-22 plants and to ensure that production resulting from such plants at some trade point is not vented to the atmosphere if perverse commercial incentives would allow doing so.

3. **Accelerated production shifts from Annex I to non-Annex I countries.** As a result of the CDM, HCFC-22 production shifts from Annex I Parties to non-Annex I Parties (decommissioning plants in Annex I countries and building new plants in non-Annex I countries) are likely to be strongly accelerated due to downward pressure in HCFC-22 prices from non-Annex I production facilities. This applies in particular for production of HCFC-22 for feedstock use which is not controlled under the Montreal Protocol. Such production shifts due to the CDM would result in a global increase of emissions.

4. **Disincentives to optimize the HCFC-22 production process toward low HFC-23 emissions.** There are technology options available to optimize production processes and to minimize the by-product ratio of HFC-23 per unit of HCFC-22 produced. Such optimizations may have cost implications in terms of reduced HCFC-22 output. To reduce the waste stream upfront would however have an additional advantage with regard to reducing the fluorine output which has to be treated as waste after decomposition. Project proponents may, under certain circumstances, have strong incentives not to select state of the art technologies for new HCFC-22 production facilities and not to optimize production efficiency prior to project implementation, where plant emission factors prior to project implementation are used as reference values

5. Means to address such implications

5.1 Accelerated phase out of HCFC-22 production for non-feedstock purposes

As HFC-23 emissions are directly related to HCFC-22 production, the accelerated phase-out of HCFC-22 production for non-feedstock purposes, would have large benefits for the objectives of both the Montreal Protocol and UNFCCC in the longer term, since both HFC-23 and HCFC-22 emissions are avoided. Therefore, phasing out the production and consumption of HCFCs should be prioritized, taking into account the needs of developing countries. In this context Switzerland suggests to engage additional bilateral and multilateral financial resources to support developing countries in their efforts to phase out the use of HCFCs.

5.2 Assessment of options to address implications

There are a number of options to addressing perverse incentives and negative implications:

1. **Provide funding for abatement of HFC-23 via the GEF or other bilateral/multilateral financial resources:** Abatement technology to reduce HFC-23 from new HCFC-22 plants could be financed outside the CDM, e.g. through bilateral and/or multilateral financial resources. The

main advantage of this option is that the implications addressed above would completely be avoided.

2. **Excluding HFC-23 mitigation project activities in new HCFC-22 facilities** (including any increase in HCFC-22 production capacity at an existing production site) **from CDM**. By excluding HFC-23 mitigation in new HCFC-22 plants from CDM emissions in the order of 50 million tCO2-eq and some 100 million tCO2-eq could potentially remain unaddressed in additional HCFC -22 production by 2010 and 2015 respectively from non Annex I parties as set out in the BAU projections contained in the IPCC/TEAP special report. Considering however the risk of accelerated production shift of HCFC-22 plants from Annex I countries to non Annex I countries and the potentially increased production level of HCFC-22 above BAU levels as a consequence of HFC-23 related CDM activities in new plants, only 60'000 t of additional HCFC-22 production per year in the entire world (e.g. due to the downward pressure on HCFC-22 prices) could completely offset the mitigation impact of HFC-23 related CDM activities in new plants. The additional ODS emissions damaging the ozone layers would need to be taken into account in addition.
3. **Address the implications in a new baseline and monitoring methodology:** Ensuring the project baseline is demonstrated for a period prior to crediting
4. Limiting accountable emission reductions (additionality check based on BAU projections, bottom figure of the range of HFC-23 emission rate (1,5%) to be used as default value, etc.)
5. Taxation of accountable emission reductions
6. Treatment of HCFC-22 emissions as leakage

None of the options which are currently discussed to address the implications through a new baseline and/or monitoring methodologies along the lines of the existing methodology AM001 are in a position to address the potentially adverse impacts in a credible manner. None of them ensure the environmental integrity of both Protocols in a consistent manner. The current targets and timetables of Kyoto Protocol and Montreal Protocol for Annex I and non-Annex I do fall too far apart. To establish a level playing field for market based mechanisms for the GHG regulated under the Kyoto Protocol and those GHG controlled under the Montreal Protocol would require a significant overhaul of both Protocols. This may be a long term objective.

In the short run a combination of the above-listed **options 1 (provide funding for abatement of HFC-23 via the GEF or other financial resources) and option 2 (excluding HFC-23 mitigation project activities in new HCFC-22 facilities from CDM)** combined with a joint effort to accelerate the phase out of the production of HCFC-22 for non-feedstock purpose represents probably the best option available for avoiding negative interference in the fulfilment of the objectives of the Montreal Protocol, integrally achieving the objectives of the CDM and promoting the ultimate objectives of the UNFCCC.

PAPER NO. 14: UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES

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

This submission is supported by Bulgaria and Romania

London, August 2005

Subject: Implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10
Input from Parties on:
a) Implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the Convention
b) Means to address such implications
(see document FCCC/SBSTA/2005/L.3, paragraph 2)

1. Introduction

The United Kingdom on behalf of the European Union and its Member States welcomes the opportunity to submit its views on (a) implications of the establishment, under the clean development mechanism, of new hydrochlorofluorocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23) for the achievement of the objective of the Montreal Protocol on Substances that Deplete the Ozone Layer, taking into account the principles established in Article 3, paragraph 1, and the definitions in Article 1, paragraph 5, of the United Nations Framework Convention on Climate Change (UNFCCC) and on (b) means to address such implications.

In the following, we firstly describe the potential implications of the establishment of new HCFC-22 plants under the CDM for the achievement of the objectives of the Montreal Protocol and the UNFCCC. Secondly we establish principles that should be followed in addressing such implications. Thirdly we assess the advantages and disadvantages of different options for addressing such implications, based on these principles.

2. Implications of crediting projects in new HCFC-22 plants under the CDM

The destruction of HFC-23 in HCFC-22 production plants results in a considerable volume of CERs due to the high global warming potential of HFC-23. As a result, CER revenues from the destruction of HFC-23 have a large effect on HCFC-22 production costs. According to calculations included in a report of the Methodological Panel under the CDM Executive Board, with CER prices of US$ 10 / CER the value of CER revenues would be about US$ 2100 per tonne of HCFC-22 produced, while current market prices for HCFC-22 range between US$1100 and US$ 2400. With higher CER prices the value of the related revenues would increase accordingly. Consequently, CER revenues may partly or completely outweigh HCFC-22 production costs.

HFC-23 destruction in new HCFC-22 production facilities under the CDM may have the following implications:

- **Rebound effects on HCFC-22 production.** High economic revenues from CERs lower or outweigh HCFC-22 production costs and consequently would change the demand patterns for refrigerants, thereby changing both the emissions of ozone depleting substances (ODSs) and greenhouse gases (GHGs). These substitution effects are difficult to determine, since they depend on many factors, such as the regulatory framework, refrigerant prices, equipment costs, alternative technologies, technological innovation, safety and reliability concerns etc. The possible consequences of significantly lowered HCFC-22 prices due to the CDM include the following:

    - A potential increase in the market demand for HCFC-22 for both dispersive uses (as a refrigerant or as a foam-blowing agent) and feedstock uses, resulting in increased GHG and ODS emission levels, with negative implications for achievement of the objectives of the Montreal Protocol and the UNFCCC.
    - New HCFC-22 production facilities may potentially be used primarily to generate CERs and not for satisfying market demand for HCFC-22, as the income from CERs could potentially outweigh HCFC-22 production costs, resulting in similar effects.
    - Under the Montreal Protocol and its amendments, production and consumption of HCFCs (such as HCFC-22) in developing countries are currently only restricted from 2016 onwards to levels determined by production and consumption in the year 2015. Production and consumption levels in 2015 determine allowed production and consumption levels until 2040. Increased HCFC-22 production and consumption levels by 2015 due to the CDM would result in increased consumption and production levels in the years beyond 2015 compared to the situation which would have resulted without it, and consequently delay a move to phase out HCFC-22 in developing countries compared to a situation where CDM was not used. As a result of this, emissions of HCFC-22 will grow significantly until 2040, and thus well beyond CDM crediting periods.

- **Accelerated production shifts from Annex I to non-Annex I countries.** As a result of the prospect of generating CERs and related impacts on HCFC-22 production costs, HCFC-22 production shifts from Annex I Parties to non-Annex I Parties (implying decommissioning of generally low emission level plants equipped with abatement technologies in Annex I countries and building new generally high emission level plants without such technologies in non-Annex I countries) are likely to be strongly accelerated. This applies in particular for production of HCFC-22 for feedstock use, which is not controlled under the Montreal Protocol (as it has no impact on the ozone layer) [1]. Such production shifts due to the CDM would result in a global increase of emissions (double counting).
- **Disincentives to optimize the HCFC-22 production process.** Project proponents may, under certain circumstances, have strong incentives not to select state of the art technologies for new HCFC-22 production facilities and not to optimize production efficiency prior to project implementation, where plant emission factors prior to project implementation are used as reference values.

3. Principles for addressing implications

The EU believes the following principles should govern any solution:

- The CDM should avoid negative implications for the achievement of the objectives of the UNFCCC and other environmental agreements, in this case the Montreal Protocol;

[1] Production is defined under the Montreal Protocol as "the amount of controlled substances produced, minus the amount destroyed by technologies to be approved by the Parties and minus the amount entirely used as feedstock in the manufacture of other chemicals. The amount recycled and reused is not to be considered as production".

- The CDM should also avoid stimulating emissions of non-Kyoto basket greenhouse gases;
- The Executive Board has a broad discretion to ensure that additionality and baseline principles are respected in approving methodologies;
- New project activities should not be approved unless it can be clearly demonstrated that they are additional and will be undertaken in a HCFC-22 plant that would have been built in the absence of CDM incentives and the establishment of which reflects business-as-usual demand for HCFC-22;
- Any new methodology should ensure adoption of a baseline scenario or emission factor that reflects a conservative estimate of business-as-usual emissions in the sector in the absence of CDM incentives;
- Further action on this issue should ensure that production of HCFC-22 is not expanded or shifted from Annex I to non-Annex I countries as a result of the CDM and that perverse incentives for the UNFCCC or the Montreal Protocol resulting from revenues from CERs in new HCFC-22 production facilities are avoided.

4. Accelerated phase out of HCFC-22 production for non-feedstock purposes

The EU observes that, as HFC-23 emissions are directly related to HCFC-22 production, the accelerated phase-out of HCFC-22 production for non-feedstock purposes (in developed as well as in developing countries) would have substantial benefits for the objectives of both the Montreal Protocol and UNFCCC in the longer term, since both HFC-23 and HCFC-22 emissions would be avoided. Therefore, phasing out the production and consumption of HCFCs should be prioritised, taking into account the Basic Domestic Needs of developing countries. In this context additional bilateral and multilateral financial resources could be made available to support developing countries in their efforts to phase out the use of HCFCs.

5. Assessment of options to address implications

The EU has identified below a range of potential approaches to addressing negative implications.

Option 1: Funding abatement of HFC-23 via the GEF or other financial resources
Installing abatement technology to reduce HFC-23 emissions from new HCFC-22 plants could be financed outside the CDM, e.g. through bilateral and/or multilateral financial resources. The main advantage of this option is that the negative implications addressed above would completely be avoided. In addition greenhouse gas emissions would truly be reduced. Multilateral or bilateral financial resources to deal with the abatement of HFC-23 emissions would remove this class of project from the CDM and focus CDM investment in other sectors. However, some efforts might be required to ensure that new HCFC-22 production plants in developing countries made use of the financial resources to install HFC-23 destruction equipment. Drawbacks of this approach include that it transfers the problem and avoids the need to address the issue within the UNFCCC context. It also seems unlikely that there will be any additional financial resources available for this purpose from the GEF within an appropriate timescale.

Option 2: Addressing the implications in a new baseline and monitoring methodology
There might be several options to address the implications illustrated above methodologically, in a new baseline and monitoring methodology. Generally, new methodologies could either strive to address the implications by avoiding them (options 2a and 2b) or address the implications by taking negative effects into account in determining emission reductions (option 2c).

Option 2a: Ensuring the project baseline is demonstrated for a period prior to crediting
The Board could demand that the project activity is demonstrated to be additional by seeking to ensure that the plant is supported by demonstrated market demand for HCFC-22 production. They could require

that this be demonstrated by showing that the new plant has operated for a period of years before it is eligible for hosting a truly additional project activity. The period would need to be sufficiently long to give reasonable assurance of the viability of the plant without crediting.

One disadvantage of this approach would be that emission reduction activities would be deferred while the project baseline was being established and demonstrated. But the most important drawback would be that any crediting levels in excess of the HFC-23 destruction costs would always impact on the market price of HCFC-22, thus stimulating market **demand and so** hindering use of alternatives to HCFC-22. It should also be considered that investors will consider future expected CER revenues in their decisions. It would therefore need to be demonstrated that expectation of such revenues would not alone provide sufficient economic incentive to undertake the investment or to shift production from Annex I to non-Annex I countries.

Option 2b: Limiting accountable emission reductions

In order to reduce economic incentives to produce HCFC-22 beyond levels expected in the absence of the CDM or to increase the shift in HCFC-22 production from Annex I to non-Annex I countries, a baseline methodology for new HCFC-22 production could limit accounted emission reductions to a level that avoid these incentives, whilst at the same time ensuring that project participants still have sufficient economic incentive to use the CDM. For example, an adjustment factor could be introduced limiting emission reductions in a way that HCFC-22 production costs are only reduced by a certain extent (e.g. less than 20%). Alternatively, the maximum HFC-23/HCFC-22 ratio may be reduced respectively for the baseline scenario or a relatively high benchmark may be chosen as a conservative baseline scenario.

However, while this approach seems in principle feasible, it should be noted that emission reductions accounted under the CDM would need to be adjusted considerably in order to limit the perverse incentives illustrated above. The percentage which would be sufficient to pay for the investment will vary between different installations (according to processes employed and capacity). The percentage should therefore ideally be varied accordingly.

A disadvantage of this approach is that the extent to which emission reductions should be limited is relatively arbitrary. Firstly, it is arbitrary what reduction in HCFC-22 production costs would be acceptable to avoid significant leakage effects or negative impacts on the objectives of the UNFCCC and the Montreal Protocol. Secondly, the appropriate adjustment level would depend on the market price for CERs – which is subject to change over time. Thus, an adequate limitation is rather arbitrary to determine *ex-ante* in the baseline scenario, particularly taking into account the price fluctuations for GHG emission allowances observed recently. This problem might partly be addressed by an *ex-post* calculation of the adjustment factor, based on actual market prices during the monitored period. Lower CER market prices could accordingly result in a lower adjustment of emission reductions and higher prices result in a higher level of adjustment. But again, any funding in excess of HFC-23 destruction costs will always impact on the market price for HCFC-22, thus stimulating market demand and hindering use of alternatives to HCFC-22.

Option 2c: Taxation of accountable emission reductions

Similarly to option 2a, economic incentives may be limited through a charge on CERs received from HFC-23 destruction projects. This might be imposed directly by the host government or the Board were it to impose a differential share of the proceeds. In both cases project participants would only receive a certain fraction of the CERs, while the charging institution would receive CERs relative to the established tax. This approach could potentially remove the perverse incentives from the operators, as in option 2a above, but also implies similar problems: it is methodologically difficult to assess which taxation level is appropriate, and this level would depend on varying market prices for CERs. In addition, even if the entire excess value of the CERs were taxed, this approach would not remove any

perverse incentives but would rather pass them from companies to the (governmental) institutions taxing the CERs.

Options 2b and 2c could be combined by limiting the accountable emission reductions to a specified extent and additionally taxing the CERs.

Option 3: Disallowing crediting

A simple, though drastic solution, would be simply to disallow registration of CDM projects in new facilities. In support of such a position, Decision 17/CP.7 states in its preamble that "Clean Development Mechanism project activities should lead to the transfer of environmentally safe and sound technology and know-how". Based on the potential economic and environmental implications of crediting new plants set out above, it could be argued that it would not be "environmentally safe" to risk the proliferation of new HCFC-22 plants by crediting projects in new facilities.

Another consideration is that the annex of the draft CDM Decision stipulates that Project Design Documents should include an analysis of environmental transboundary impacts of the project activity, and that the proliferation of new HCFC-22 plants due to expectation of CER revenues may be considered as having negative environmental transboundary impacts. However, the obvious drawback with this approach is that it would prevent use of the mechanism and its incentive for abatement in new plants.

6. Other options

There are many other options which could be considered. However, the EU believes that these options need further study.

7. Conclusion

Given the difficulties and problems related to the options proposed so far, the EU believes that destruction of HFC-23 emissions from HCFC-22 production in new installations should not be credited unless a satisfactorily robust solution is found to prevent perverse effects for the objectives of the UNFCCC and the Montreal Protocol. We look forward to hearing the views of other Parties on these issues and to discussing potential solutions which ensure that the negative impacts of CDM incentives are resolved in a manner consistent with the objectives of the UNFCCC and the Montreal Protocol.

PAPER NO. 15: UNITED STATES OF AMERICA

Submission of the United States
FCCC/SBSTA/2005/L.3
Views on the implications of the implementation of project activities under the clean development mechanism referred to in decision 12/CP.10
August 5, 2005

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 implications of the establishment, under the clean development mechanism, of new hydrochloroflourocarbon-22 (HCFC-22) facilities seeking to obtain certified emissions reductions for the destruction of hydrofluorocarbon-23 (HFC-23), and on means to address such implications. The United States welcomes the opportunity to provide its views on this important issue.

Implications

Although the United States is not a party to the Kyoto Protocol, we consider that the issue of eligibility for certified emissions reductions (CERs) for HFC-23 destruction from new HCFC-22 facilities under the CDM raises issues broader than Kyoto implementation. We are concerned about allowing these projects to be eligible for two primary reasons, both of which relate to implications for requirements under the Montreal Protocol.

First, we are concerned that CDM eligibility would increase global production of HCFC-22. Granting CERs for HFC-23 destruction may also accelerate shifts in HCFC-22 production capacity from developed to developing countries just as industrialized countries will be instituting Montreal Protocol controls on HCFCs. Offering CERs would, in effect, provide a subsidy that might encourage greater production of HCFC-22 in developing countries. Production would very likely greatly exceed demand in developing countries, resulting in low prices for HCFC-22. Therefore, revenue from the sale of CERs may be comparable to or greater than the revenue from the sale of the HCFC-22 product. Granting CER credit for HFC-23 destruction could give producers a perverse incentive to produce more HCFC-22 and HFC-23, including by:

- building HCFC-22 facilities that they might not otherwise have built;
- building larger facilities than they would have otherwise built;
- producing more HCFC-22 than they would have otherwise; and
- structuring their production processes to produce more HFC-23 per unit of HCFC-22 production than otherwise.

We are concerned that increased production capacity, if not subject to proper oversight, could create difficult trade pressures on industrialized countries as they try to reduce HCFC consumption in accordance with Montreal Protocol obligations, thereby undermining the effectiveness of the Montreal Protocol. Given past experience with illegal trade in ozone depleting substances, we are concerned about the difficulties this excess supply of HCFC-22 would create.

In particular, an increase in HCFC-22 production in developing countries would raise the baseline from which developing countries will have to reduce emissions starting in 2015 under the Montreal Protocol. Because developing countries will not have to complete phase-out of HCFC-22 production until 2040, a higher initial baseline would lead to significant emissions from developing countries. Since the multilateral fund of the Montreal Protocol may be used to assist developing countries in meeting their phase-out goals, industrialized countries may find themselves in the position of effectively paying first for an increase in HCFC-22 production through the CDM, and then for its phase-out through the

multilateral fund. This would not be a productive use of resources and would once again undermine the effectiveness of the Montreal Protocol.

Means

We believe that it is important for Parties to the Kyoto Protocol to determine viable alternatives for achieving the climate benefit of destruction of HFC-23 from HCFC-22 production, while ensuring the continued benefit to the stratospheric ozone layer that results from effective implementation of the Montreal Protocol. To contribute to this process, we would like to suggest a few initial ideas on means to address the implications described above.

First, CERs could be limited to the incremental cost of installing and operating an incinerator at a new facility. Capping the number of credits would ensure that operators have sufficient incentive to destroy HFC-23 byproduct without either creating a perverse incentive to build HCFC-22 facilities or to over-produce HCFC-22 once the facility is in operation.

Second, alternative mechanisms could potentially help finance the installation of incineration technology at the time of construction of any new HCFC-22 facility as well as the operation of the incinerators.

Finally, it is important to note that approaches that reduce demand for HCFC-22, and thereby reducing the incidental production of HFC-23 byproduct, are preferable to “end-of-pipe” solutions. Parties to the Montreal Protocol and UNFCCC Parties should encourage, through domestic policies and programs, the adoption by industry and consumers of equipment using HCFC-22 substitutes.

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