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OPEN-ENDED WORKING GROUP OF THE PARTIES TO
THE MONTREAL PROTOCOL ON SUBSTANCES THAT
DEPLETE THE OZONE LAYER
Nineteenth meeting
Geneva, 15-18 June 1999
Item 4 and 7 of the provisional agenda*

PRESENTATION OF THE REPORTS OF THE TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL

CONSIDERATION OF THE 1999 REPORT OF THE TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL ON OTHER ISSUES

Note by the Secretariat

INTRODUCTION

1. The present note summarizes the issues addressed in the 1999 report of the Technology and Economic Assessment Panel. The two volumes of the 1999 report of the Technology and Economic Assessment Panel have been communicated to all the Parties. it is essential that the Parties should study this report for its valuable suggestions, which are not repeated in the present summary. The following issues, *inter alia*, require the consideration of the Working Group.

I. ISSUES UNDER AGENDA ITEM 4

A. Agenda item 4 (a): Level of replenishment of the Multilateral Fund for the period 2000-2002

2. The report of the Technology and Economic Assessment Panel on this issue, prepared in accordance with the provisions of decision X/13, has been communicated to all the Parties. In finalizing these recommendations, the Panel has taken into account the control measures, the estimated quantities that

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needed to be phased out by the countries, the projects approved to date by the Multilateral Fund, the time taken by the implementing agencies to complete the projects, the cost figures derived from the previous experience, including those specified by the Executive Committee for the low-volume countries and for small and medium enterprises, the cost of supporting activities and administrative costs. The Working Group may wish to discuss the Panel's report under this subitem.

B. Agenda item 4 (b): Work of the Technology and Economic Assessment Panel on the implications on the implementation of the Montreal Protocol of the inclusion of hydrofuorocarbons and perfluorocarbons in the Kyoto Protocol to the United Nations Framework Convention on Climate Change (decision X/16).

3. The report under this subitem will be presented by the Co-Chairs of the Panel to the meeting.

C. Agenda item 4 (c): Quarantine and pre-shipment exemption of methyl bromide (decision X/11).

4. In decision X/11, the Parties noted the findings of the Technology and Economic Assessment Panel that over 18 per cent of methyl bromide use is estimated to have been excluded from the control measures under the quarantine and pre-shipment (QPS) exemption, and that, according to official data, this use is increasing in some regions. The Parties also noted that the operation of the QPS exemption criteria might lead to unnecessary use of methyl bromide, and requested the Panel, as part of its ongoing work:

"(a) To assess the volumes and uses of methyl bromide under the quarantine and pre-shipment exemption, including the trend in use since the 1991 base year;

"(b) To report on the existing and potential availability of alternative substances and technologies, identifying those applications where alternative treatments do not currently exist, and also on the availability and economic viability of recovery, containment and recycling technologies;

"(c) To report on the operation of quarantine and pre-shipment exemptions as set out in decision VII/5, including the scope of the pre-shipment definition;

"(d) To report on existing and potential options that individual Parties might consider to reduce the use and emissions of methyl bromide from its application under the quarantine and pre-shipment exemption and to elaborate further on their recommendations in previous reports, and taking into account the special circumstances of Parties operating under paragraph 1 of Article 5 of the Protocol;

"(e) To review and report on the amendment by the International Plant Protection Convention (IPPC) to its quarantine and non-quarantine pests definitions, and the FAO/IPPC structure relative to the use of pesticides for regulated non-quarantine pests, to help determine whether clarification of the definitions of quarantine and pre-shipment, taking into account these FAO/IPPC usages, would help encourage consistency in the quarantine and pre-shipment definitions;

"(f) To submit its findings to the Open-ended Working Group of the Parties to the Montreal Protocol at its first meeting in 1999.

5. The Panel's report provides the information requested by the Parties in paragraphs (a)-(e) of

decision X/11. Based on a survey carried out by the Methyl Bromide Technical Options Committee and on its own estimates, the Technology and Economic Assessment Panel presents information on the volumes of methyl bromide used for QPS uses and compares these volumes with earlier estimates.

6. The report presents information on the relationship of the QPS exemption with the provisions of other treaties and conventions; methyl bromide alternatives available for QPS uses; a short list of QPS uses where no alternatives to methyl bromide treatment exist; and a summary of the prospects of methyl bromide for recovery, containment and recycling. Parties may also wish to consider the strengthening of the commitment by the Parties for reporting QPS consumption.

7. The report explores the relationship of the QPS exemption in the Montreal Protocol (as reflected in decision VII/5 and in an earlier decision VI/11) to other international conventions and treaties, namely, the World Trade Organization (WTO) Technical Barriers to Trade Agreement and the Sanitary and Phytosanitary Agreement, as well as the International Plant Protection Convention (IPPC) standards for phytosanitary measures. Whereas the Montreal Protocol interprets "phytosanitary" as officially-authorized pest control treatment applied to plants and plant products, IPPC defines "phytosanitary" as pertaining to plant quarantine and, therefore, to treatments applied to control regulated plant pests, i.e., quarantine pests and regulated non-quarantine pests.

8. The report analyses the scope of the exemptions for QPS uses and proposes options that the Parties may consider when reviewing QPS exemptions. One option would be to remove the blanket exemption for QPS and to use the critical use process to address QPS treatments that remain without an alternative after phase-out.

9. For preshipment, the Panel proposes that the Parties could consider adopting one or more of the following options, as appropriate:

(a) Remove the pre-shipment exemption before the date of the scheduled methyl bromide phase-out. This option implies that current exempted pre-shipment uses, such as disinfestation of grain, cocoa, dried fruit and nuts and treatment of empty shiploads, would be allocated to the country s controlled consumption volumes, and exemptions under critical use and possible emergency use would not be allowed until after phase-out;

(b) Remove the pre-shipment exemption only after phase-out. Exemptions would be allowed after phase-out under either critical use or emergency use;

(c) Place a cap on pre-shipment consumption. Parties could consider capping consumption of methyl bromide for QPS use based on baseline consumption for an agreed number of years. The Parties would need to agree on the appropriate baseline. The European Commission recently agreed on such an approach;

(d) Leave the pre-shipment exemption in place, but interpret "phytosanitary" following the IPPC definition, which includes only those uses that apply to regulated non-quarantine pests (that affect plants for planting). This option implies the exclusions of almost all current pre-shipment exemptions (such as disinfestation of grain, cocoa, dried fruit and nuts and treatment of empty shiploads, as these are not currently carried out for regulated non-quarantine pests;

(e) Leave the pre-shipment in place with current definitions, but add a clarification that such treatments are "official" and interpret "phytosanitary" in accordance with the WTO Sanitary and Phytosanitary Agreement definition, to include all uses related to injurious pests. This option implies the inclusion of all injurious pests that apply to plants, animals and human health;

(f) Revise the definition of pre-shipment. The Technology and Economic Assessment Panel notes that the application of pre-shipment, as intended by the Parties to the Montreal Protocol, appears to be without parallel in other treaties and conventions. In the Protocol, pre-shipment applications are, as determined by the Parties in paragraph (b) of decision V11/5:

> "those treatments applied directly preceding and in relation to export, to meet the phytosanitary or sanitary requirements of the importing country or existing phytosanitary or sanitary requirements of the exporting country."

10. One of the main uses of pre-shipment is for treating cosmopolitan pests in durable commodities such as grain and in treating empty vessels prior to loading. IPCC adopted a narrower definition. The Parties could consider inserting the word "official" into the definition of "pre-shipment" to ensure that methyl bromide is authorized appropriately by a Government, and not by commercial agents, which is in keeping with the intent previously ascribed to this definition by the Parties. In order to ensure efficient and clear implementation of the use of pre-shipment, insertion of the treatment period as "within 14 days prior to export" would ensure that a single treatment is applied, rather than multiple treatments applied during storage. In addition, "stored product authority" could be added to the definition of official control of quarantine applications, as in many cases pre-shipment treatments would be authorized by such authorities.

11. If the Parties consider these suggestions useful, pre-shipment could be clarified as follows (changes in bold):

> "Pre-shipment applications are those applied **within 14 days prior** to export to meet the **official** requirements of the importing country or existing official requirements of the exporting country. Official requirements are those which are performed by, or authorized by, a national plant, animal, environmental health or **stored product** authority."

12. This option would not require any change to the Protocol interpretation of pre-shipment and would provide greater clarity for the Parties. It should also be noted that any of the above options to control QPS use could increase the incentive to develop and adopt alternatives for pre-shipment uses. They would also allow implementing agencies to apply to the Multilateral Fund to implement projects in developing countries to reduce methyl bromide used for QPS purposes.

13. With regard to the quarantine exemption, the Technology and Economic Assessment Panel concludes that the Protocol s definition of quarantine is broader than the use of this term in other international conventions and treaties but suggests that this could be regarded by the Parties as appropriate, as methyl bromide is currently being used for some pest control practices that involve human health. Human health aspects are not specifically considered in the definition in other treaties and conventions which consider plant quarantine.

14. Article VI of the New Revised Text of the International Plant Protection Convention (IPPC), November 1997, states that Parties may require phytosanitary measures only for regulated pests and shall not require phytosanitary measures for non-regulated pests. Regulated pests, are quarantine pests or regulated non-quarantine pests. The definition of a quarantine pest is the same as that given under the Montreal Protocol (see following paragraph), except that the IPPC definition refers to "a pest of potential

economic importance", whereas the Protocol excludes "economic" from its definition, as the Parties requested consideration of environmental factors rather than only economic ones. A regulated non-quarantine pest is defined as "a non-quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party".

15. In decision VI/11, the Parties to the Montreal Protocol defined the term "quarantine" with regard to implementing the controls under Article 2H of the Protocol. This term was further defined under decision VII/5, which reads, in part:

> "(a) Quarantine applications with respect to methyl bromide are treatments to prevent the introduction, establishment and/or spread of quarantine pests (including diseases), or to ensure their official control, where:
>
> "(i) Official control is that performed by, or authorized by, a national plant, animal or environmental protection or health authority;
>
> "(ii) Quarantine pests are pests of potential importance to the areas endangered thereby and not yet present there, or present but not widely distributed and being officially controlled;"

16. The main differences between the two definitions are, first, that the authorities under the Montreal Protocol are much wider than in IPCC, which prescribes only national plant protection organizations as the authorities; and, second, that the IPPC definition allows control of non-quarantine pests with an economically unacceptable impact, whereas the Montreal Protocol definition includes only quarantine pests.

17. The Parties may wish to consider one or more of the following options, as appropriate:

(a) Full harmonization with the IPPC terminology;

(b) Partial harmonization with the IPPC in specified areas, such as insertion of the term economic in the definition of quarantine pest or exclusion of one or more of the different Authorities;

(c) Retention of the broad scope of quarantine exemption under the current definition;

(d) Capping of the quarantine methyl bromide consumption, based on baseline consumption for an agreed number of years. The European Commission has agreed upon this approach;

(e) Removal of the quarantine exemption and instead relying on critical use for the treatments without an alternative to methyl bromide.

18. With regard to recovery, containment and recycling technology, it may be noted that options for recovery, containment and recycling are expensive and limited. Other steps can be taken, however, to minimize the quantity of methyl bromide being used for QPS purposes. The report suggests that Parties may wish to consider encouraging the use of fumigation enclosures that are proven gas-tight, as well as the development and adoption of raised temperature fumigation schedules at lower doses, improvements in measuring methyl bromide doses and better monitoring of methyl bromide during fumigation.

19. The Working Group may wish to discuss the Panel's report on QPS and its conclusions.

D. Agenda item 4 (d): Applications for essential-use exemptions for ozone-depleting substances for 2000 and beyond

20. The Technology and Economic Assessment Panel has recommended the following quantities for the European Union, Hungary Japan and the United States of America for the years 2000 and 2001 for metered dose inhalers for asthma and chronic obstructive pulmonary disease.

	2000				2001			
Country	**CFC-11**	**CFC-12**	**CFC-113**	**CFC-114**	**CFC-11**	**CFC-12**	**CFC-113**	**CFC-114**
European Union	-	-	-	-	1243	1813	7	207
Hungary	0.5	0.5	0.25	0.5	0.5	0.5	0.25	0.5
Japan	32	55	0.2	11	27	54	0.2	7
USA	-	-	-	-	918	1947	-	236

21. The Panel has commended the Parties concerned for submitting the necessary information in the nominations. At the same time, however, they urged Parties to include separate an estimates of CFC use for the manufacture of metered-dose inhalers for domestic use, for export to Article 5 Parties and for export to non-Article 5 Parties, in order to facilitate better evaluation of the nominations. In the case of Hungary, they noted that, in future years, more justification will be needed as to why CFCs need to be used for bromhexin for inhalation when oral preparations are available. Specific information should be provided in future regarding educational activities to move away from CFCs and on new product registrations. In the case of Japan, future nominations should address the issue of whether their stockpiles are excessive. The Panel concluded that the metered-dose inhalers are necessary for the years 2000 and 2001 and requested Parties to monitor and manage their CFC requisition and usage and to adjust their nominated quantities annually on an as - needed basis.

22. The Technology and Economic Assessment Panel recommended the essential use exemption by the Russian Federation for 90 tons of halon 2402 for the year 2000. It was noted that the Russian Federation is planning to close all halon 2402 production facilities during the year 2000.

23. Poland applied for the use of 1.7 tons of CFC-113 for the years 2000-2003, for the cleaning of torpedoes. The Technology and Economic Assessment Panel report is of the opinion that there are alternatives which can be used. In 1998, Poland stated that it needed approval from the manufacturer to use alternatives and that the approval of the manufacturer for the use of such alternatives had not been received by that stage. The Panel encouraged Poland to arrange for a meeting with the representatives of the Polish navy, the manufacturers of the torpedoes and a team from the Solvents Technical Options Committee, so that the manufacturers could be briefed about the alternatives available. Poland has reported that the manufacturer, in Kazakhstan, has not yet responded to their request for such a meeting. The Technology and Economic Assessment Panel has recommended that the matter be considered further by the meeting of the Parties, to provide an opportunity for Poland to present supplementary information.

E. Agenda item 4 (e): Quantity of CFCs likely to be required by Article 5 Parties for the period 1999-2010, as well as quantities which need to be produced and exported by non-Article 5 Parties in the same period (decision X/15)

24. For CFCs, the Technology and Economic Assessment Panel has analysed the likely consumption and production of Article 5 Parties until 2010, taking into account the control measures and the agreement of China with the Executive Committee regarding its phase-out of CFC production. The conclusion of the Panel is that, in principle, no production from non-Article 5 countries will be needed for meeting the basic domestic needs of Article 5 Parties. The Panel observed, however, that some production facilities in Article 5 Parties may be closed earlier than mandated,as a consequence of decisions by the owners of the companies, of agreements with the Executive Committee or of the market situation. There is also a possibility of production rationalization among the Article 5 Parties. The Panel has also observed that the continuing surplus in supply of CFCs has made the phase-out difficult and that a shortage in supply, leading to increased prices of CFCs, will encourage conversion and recycling. In conclusion, the Technology and Economic Assessment Panel recommends that the producing Parties be requested to report information on their production plans for future as and when they have definite information and that the Parties consider these reports annually with a view to taking appropriate decisions.

25. With regard to halons, the Technology and Economic Assessment Panel observes that, currently, China and the Republic of Korea are the only halon producers. In the case of China, taking into account its agreement with the Executive Committee regarding the phase-out of halon production and consumption, the Panel has found a surplus of halon production in all the years under consideration and concludes that there is no need for any halon production by non-Article 5 Parties to meet the basic domestic needs of Article 5 Parties.

26. With regard to carbon tetrachloride, which is used mostly for the production of CFCs, the Technology and Economic Assessment Panel has estimated that the shortfall in production in Article 5 Parties, which is met by production by non-Article 5 Parties, will disappear by 2002. The Panel points out that the emissions of carbon tetrachloride during manufacture are much larger in the facilities of Article 5 Parties and it may therefore be better to keep in operation those facilities of non-Article 5 Parties with the best emission controls rather than the facilities in Article 5 Parties with greater emissions.

27. With regard to methyl chloroform, the Technology and Economic Assessment Panel is unable accurately to assess the trend and requests that it be allowed to analyse these further and to report annually on its findings.

F. Agenda Item 4 (f): Development and availability of laboratory and analytical procedures that can be performed without using controlled substances in Annexes A and B of the Protocol and which should no longer be eligible under the exemption for laboratory and analytical uses and the date from which any such restriction should apply (decision X/19)

28. The Technology and Economic Assessment Panel has not identified any laboratory and analytical procedures that can be performed without using ozone-depleting substances apart from the three listed in its 1998 report. The Panel also observes that the phase-out of ozone-depleting substances in the laboratory and analytical procedures sector depends on the approval of standards by local regulatory and quality control bodies. It recommends that the Parties consider eliminating the following three uses from the global exemption:

(a) Testing of oil, grease, and total petroleum hydrocarbons in surface and saline waters and

industrial and domestic aqueous wastes, including the testing of water which is separated from oil and discharged from off-shore drilling and production platforms;

(b) Testing of tar in road-paving material by dissolving tar and separating it from the aggregate;

(c) Forensic fingerprinting.

29. The Panel has also recommended that all Parties be requested to give information to the Secretariat on new developments in this area.

II. AGENDA ITEM 7: CONSIDERATION OF THE 1999 REPORT OF THE TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL ON OTHER ISSUES

30. The Technology and Economic Assessment Panel has also submitted a detailed report on a number of other issues. These are summarized in the following paragraphs.

31. The Halon Technical Options Committee has analysed the halocarbon (HCFC, HFC, etc.) replacements for halon-1301 in fixed systems, with reference to the ozone depletion potential and the global warming potential of the alternatives. It concludes that there are no alternatives that can be used as a direct (drop-in) replacement for halon-1301 in existing systems.

32. The Solvents Technical Options Committee has given a report on n-propyl bromide in which it has analysed the likely future demands for this substance and concludes that Parties should consider the appropriate action to prevent or limit further depletion of the ozone layer due to this substance. It has given similar advice regarding chlorobromomethane. The Secretariat draws the attention of the Parties to decisions IX/24 and X/8 in this connection.

33. The Halons Technical Options Committee has analysed the reason that the concentrations of halon-1202 are increasing in the atmosphere and suggests the possibility that this halon may be released inadvertently during the production of halon-1211 in Article 5 Parties, where it is used as feedstock. This is in response to decision X/8, paragraph 5 (b).

34. In the report, the Technology and Economic Assessment Panel also provides disclosures by the Panel's members regarding their employment and sources of finance. The Panel has also reviewed the disclosure statements by the members of the Technical Options Committees. It has reviewed its efforts to increase representation by Article 5 countries and countries with economies in transition in the Panel itself and in the Technical Options Committees. Currently, 32 per cent of the total membership belongs to this category.

35. The Aerosols Technical Options Committee has given an update of its 1998 report on the issue of transition to non-CFC metered dose inhalers. It suggests a global transition framework which could underpin national strategies and provides possible elements of both a global framework and national strategies for consideration by the Parties. In addition, the Aerosols Technical Options Committee suggests that the Parties could consider how to impede the continued introduction of CFC metered-dose inhalers as part of their national transition strategy. The Committee also suggests that the Parties may consider assisting Article 5 countries and countries with economies in transition in the development of their own transition strategies and in the transfer of new technologies and that the Executive Committee of the Multilateral Fund may wish to begin to consider investment project proposals in this area.

36. The Technology and Economic Assessment Panel has recommended that it be allowed to simplify its annual reports so that it presents only new information and responses to requests from the Parties. This will allow the Technical Options Committees to meet only as needed, typically once a year or even less frequently. Full assessment reports by the Technology and Economic Assessment Panel and its Technical Options Committees would be submitted under Article 6, as directed by the Parties from time to time.
