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OPEN-ENDED WORKING GROUP OF THE PARTIES TO
THE MONTREAL PROTOCOL ON SUBSTANCES THAT
DEPLETE THE OZONE LAYER
Twenty-third meeting
Montreal, Canada, 7-11 July 2003

SUMMARY OF THE ISSUES ON THE AGENDA

Note by the secretariat

Introduction

1. The present note provides a summary for discussion by the Open-ended Working Group of the Parties to the Montreal Protocol on the issues related to items 3 to 10 of the provisional agenda* for the twenty-third meeting of the Working Group. Recommendations made by the Working Group on the agenda items will be submitted to the Fifteenth Meeting of the Parties to the Montreal Protocol, to be held in Nairobi in November 2003. Items 5, 6 and 10 of the provisional agenda are issues addressed in the 2003 progress report of the Technology and Economic Assessment Panel (TEAP) and TEAP HCFC Task Force report of May 2003, and they are summarized in the present note. The two 2003 TEAP reports have been communicated to all Parties. It is important that the Parties should study the full Assessment Reports of 2003, including the Synthesis Report, as well as the TEAP reports of May 2003 for their valuable information and suggestions, which are not repeated in the present summary.

Item 3: Presentation of the 2002 assessment reports of the Scientific, Environmental Effects and Technology and Economics Assessment Panels (Article 6 of the Montreal Protocol and decision XI/17)

2. Pursuant to Article 6 of the Montreal Protocol and in accordance with decision XI/17, the three Assessment Panels updated their 1998 reports in 2002, including the Synthesis Report prepared by the Co-Chairs of the Panels, and submitted them to the Secretariat in the first quarter of 2003. The reports were posted on the Ozone Secretariat web site during the months of March and April and the printed versions of the reports were sent out to the Parties in May for consideration by the Open-ended Working Group at its twenty-third meeting, in July 2003, and by the Fifteenth Meeting of the Parties to the Montreal Protocol, in November 2003.

3. The Working Group may wish to consider the reports of the Assessment Panels and make appropriate recommendations. The Working Group may also wish to take note of the excellent work carried out by the

* UNEP/OzL.Pro/WG.1/23/1.

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Assessment Panels and their colleagues worldwide in preparing their reports of 2002, including the Synthesis Report.

Item 4: Consideration and consolidation of any amendments and adjustments proposed by the Parties (Article 9 of the Vienna Convention and Article 2 (9) of the Montreal Protocol)

4. Pursuant to Article 9 of the Vienna Convention and paragraph 9 of Article 2 of the Montreal Protocol, the European Community has proposed an amendment and adjustment to the Montreal Protocol. The proposal is reproduced in annex to document UNEP/OzL.Pro/WG.1/23/4, which the Secretariat communicated to the Parties to the Vienna Convention and the Montreal Protocol in May 2003. Under Article 9, paragraph 2 of the Vienna Convention and Article 2, subparagraph 9 (b) of the Montreal Protocol, proposals for amendments and adjustments must be communicated to the Parties at least six months before the meeting at which it is proposed for adoption.

Item 5 (a): Nominations by the Parties for essential-use exemptions for controlled substances (decision IV/25, paragraph 6)

5. Seven Parties, the European Community, Hungary, Poland, the Russian Federation, Switzerland, Ukraine and the United States of America, have requested essential-use exemptions in 2003 for metered-dose inhalers (MDIs), applicable to the years 2004 and 2005. In accordance with the criteria and process set forth in decision IV/25 and subsequent decisions V/18, VII/28, VIII/9, VIII/10, XII/2 and XIV/5 for the assessment of essential-use nominations for MDIs, the TEAP Aerosols, Sterilants, Miscellaneous Uses and Carbon Tetrachloride Technical Options Committee (ATOC) assessed the nominations using the guidelines for essential use set forth in the *Handbook on Essential Use Nominations* (TEAP, 2001).

6. A summary of the nominations and recommendations of TEAP is given in the table below.

Essential-use nominations for 2004-2005 and recommendations by TEAP for consideration by the Open-ended Working Group at its twenty-third meeting
(metric tonnes)

Party	**2004**		**2005**	
	Amount nominated	Amount recommended for approval	Amount nominated	Amount recommended for approval
European Community	--	--	800 a/	800
Hungary	--	--	1.75	b/
Poland	--	--	230 a/	230
Russian Federation	378	378	336	336
Switzerland	--	--	0.4 c/	0.4
Ukraine	98.7	83.5 d/	--	--
United States of America	--	--	1,902	1,902
Total	**476.7**	**461.5**	**3,270.15**	**3,268.4**

a/ The nominations from the European Community and Poland also included requests for laboratory and analytical uses which are not reflected in the above figures. Rather, they have been considered separately and are summarized in paragraph 44 below.

b/ TEAP was unable to make a recommendation and made the following observation: "This nomination appears to represent a company request and does not present full information as to available alternative products. The accounting framework shows an actual use of 0.4 tonnes in 2002. Given the size of the stockpile (1.2 tonnes at the end of 2002) and previous nominations for the years 2003 and 2004, the current nomination seems excessive. TEAP is therefore unable to recommend this

nomination based on data available. Hungary has the option to reapply for a 2005 allocation in 2004 with additional information."

c/ The CFCs requested (0.4 tonnes) is for production of salbutamol MDIs for domestic use. TEAP suggests that the Parties consider transferring this small volume from existing stockpiles outside the country, if feasible.

d/ The nomination is for 83.5 tonnes of CFC for MDIs for asthma/chronic obstructive pulmonary disease (COPD) and an additional 15.2 tonnes for angina medication. As last year, TEAP was unable to recommend CFCs for anti-angina sprays because oral, sublingual, transcutaneous and aqueous sprays are widely available. TEAP noted that the nomination for asthma/COPD for 2004 represents an approximately 20 per cent reduction on the 2003 nomination.

7. Parties are reminded by TEAP of their obligations under decision VIII/9 to provide their accounting framework annually, even if they no longer submit nominations for essential uses, so long as quantities exempted in previous years were used or remain in stockpile. Parties nominating essential uses are also reminded that nominations and accompanying accounting frameworks must be submitted in accordance with the timetable set forth in decisions V/18 and VIII/9.

8. TEAP also noted that, prior to the transition, 60 per cent of all CFC MDIs contained salbutamol. It noted also, however, that a range of suitable alternatives had now become available worldwide and that some Parties had already declared CFC salbutamol MDIs non-essential. In the light of those facts, TEAP suggests that the Parties may wish to consider identifying the proportion of their future essential-use allowances for salbutamol, to better inform the evaluation of those nominations.

9. The Working Group may wish to consider the TEAP conclusions and make appropriate recommendations.

Item 5 (b): Nominations for critical-use exemptions for methyl bromide (decisions IX/6 (2) and XIII/11)

10. In paragraph 2 of decision IX/6, the Parties requested TEAP to review nominations for critical-use exemptions for methyl bromide and make recommendations based on the criteria established in paragraphs 1 (a) (ii) and 1 (b) of that same decision.

11. The following 13 Parties made a total of 63 nominations for critical-use exemptions using the procedure set forth in decision XIII/11 and the *Handbook on Critical Use Nominations for Methyl Bromide* (TEAP and the Methyl Bromide Technical Options Committee (MBTOC), 2002): Australia, Belgium, Canada, France, Greece, Israel, Italy, Japan, Netherlands, Portugal, Spain, United Kingdom and United States of America. After disaggregation of the nominations for the purpose of technical evaluation, there were 84 nominations referring to soil applications, 15 for applications on various commodities and 5 for structures.

12. Some proposals were submitted to the Secretariat by the deadline date of 31 January 2003 as specified in the Handbook, while others submitted proposals by 15 February 2003, the extended deadline granted by the Secretariat in consultation with TEAP and MBTOC. MBTOC met from 17 to 22 March 2003 and reviewed the nominations. Each nomination was evaluated and recommendations were made where possible for Parties to either approve or reject the nomination. In several cases, the nominations lacked sufficient information for MBTOC to make a recommendation. Letters seeking clarification and further information were sent to the Parties concerned through the Ozone Secretariat. Where possible, MBTOC used information available from its own expertise and elsewhere, in order to perform the technical and economic evaluation of the nominations. TEAP notes that closer adherence by the Parties to the suggested format for nominations set forth in the *Handbook* would help resolve the problem of an insufficiency of information for evaluating nominations. It should be noted that the *Handbook* itself may be revised and updated as circumstances require, and that Ozone Secretariat should be consulted to ensure that the latest version is being used.

13. The Agricultural Economic Task Force (AETF) of TEAP provided advice to MBTOC and TEAP on the economic aspects of the nominations and their evaluation, and developed the criteria to be applied for determining circumstances where there are no economically feasible alternatives or substitutes available to the user that are acceptable from the standpoint of environment and health and are suitable to the crops and circumstances of the nomination. TEAP recommends that the Parties may wish to consider the advantage of emissions trading to facilitate critical uses while preserving economic incentives for phase-out, and provides three possible emissions trading options as follows:

(a) To require the collection and destruction of surplus ozone-depleting substances that will otherwise be vented or will slowly leak from the products in which it is contained;

(b) To require a contribution to the Multilateral Fund sufficient to finance the incremental cost of accelerating the phase-out of ozone-depleting substances;

(c) To require a reduction in emissions from quarantine and pre-shipment (QPS) uses where technically and economically feasible but not currently undertaken because the Protocol allows unrestricted use.

TEAP also made recommendations on methodological points that should be considered in critical-use exemptions, such as industry/farm income and supply and demand price elasticities for the commodities in question.

14. The TEAP evaluations and recommendations for critical-use exemptions for soil fumigation and for treatment of post-harvest commodities and structures for 2005 are provided in annex I and annex II to the present note. The tables reproduced in the annexes to the present note are given in appendix A and appendix B in the 2003 TEAP Progress Report. The following criteria were adopted by TEAP in making the recommendations:

(a) Critical-use exemptions (CUEs) are recommended where:

(i) Options are not technically feasible;

(ii) Options are technically feasible but not registered or otherwise available for use, or

(iii) Technically feasible options are not economically feasible;

(b) Reduced CUEs are recommended where:

(i) Dosage is reduced with use of emission control technology as required by decision IX/6, subparagraph 1 (b) (i);

(ii) Time is required to implement alternatives, and

(iii) Alternatives are available for a portion of the nomination;

(c) CUEs are not recommended where:

(i) Technically feasible options are registered and available and are commercially used by similarly situated enterprises;

(ii) Technically feasible options are registered and available and can be implemented at a cost to enterprises less than the median cost of projects funded by the Multilateral Fund (currently calculated $24/kg ozone-depleting potential (ODP)); and

(iii) Information is not sufficient to complete an assessment within the terms of decision IX/6.

15. In cases where a reduced critical-use exemption has been recommended, TEAP requests nominating Parties to confirm the recalculated quantity qualifying for the exemption, noting specific circumstances where options for both reduced methyl bromide use and emission control are not possible.

16. The Working Group may wish to discuss the issues raised by TEAP on nominations and make appropriate recommendations, including a timetable for further evaluation of the nominations for which TEAP and MBTOC were unable to make recommendations.

Item 5 (c): Evaluation of alternatives to methyl bromide for quarantine and pre-shipment treatment and estimation of quantities that would be replaced (decision XI/13 (4))

17. In paragraph 4 of decision XI/13, the Parties requested TEAP to evaluate the technical and economic feasibility of alternative treatments and procedures that can replace methyl bromide for quarantine and pre-shipment (QPS) treatment and to estimate the volume of methyl bromide that would be replaced by the implementation of technically and economically feasible alternatives for QPS, reported by commodity and/or application.

18. TEAP estimated global QPS consumption of methyl bromide at 10,475 to 11,800 tonnes in 2000, accounting for between 19 and 21 per cent of global production. The major constraints on the introduction of alternatives to methyl bromide for QPS, including the difficulties in developing and commercializing alternatives, have been identified by TEAP. The TEAP report states that, given all of the factors, the time from conception to implementation of an alternative disinfestation treatment as a quarantine treatment for perishable and durable commodities could vary from 2 to more than 10 years. A pre-shipment treatment targeting non-quarantine pests could require less time if the proposed treatment is non-chemical, but if registration for use on foodstuffs is necessary then the process could take equally as long.

19. TEAP noted that MBTOC, in its 2002 assessment, detailed the large number of alternative QPS treatments approved for specific goods in trade. Individual tonnages for uses of methyl bromide for QPS treatment of particular commodities were not available on a worldwide basis, though specific surveys were available for several countries. TEAP reports that a survey has been commissioned by the European Community that is scheduled to be available for 2004.

20. The Working Group may wish to note the information provided by TEAP and make appropriate recommendations.

Item 5 (d): Options for the continued supply of hydrochlorofluorocarbons (HCFCs) to Article 5 Parties in the light of the production freeze by non-Article 5 Parties effective 2004 (decision XI/28)

21. In decision XI/28, the Parties requested TEAP to study and report on the problems and options of Article 5 Parties in obtaining HCFCs in the light of the freeze on the production of HCFCs in non-Article 5 Parties in the year 2004. The decision required the report to analyse whether HCFCs are available to Article 5 Parties in sufficient quantity and quality and at affordable prices, taking into account the 15 per cent allowance to meet the basic domestic needs of Article 5 Parties and the surplus quantities available from the consumption limit allowed to non-Article 5 Parties. Parties must consider this report at their meeting this year. TEAP established a Task Force to prepare the report in consultation with the full TEAP membership.

22. A short summary of some of the TEAP conclusions in the HCFC Task Force report is as follows:

(a) HCFCs are, and are likely to remain, important as “transitional substances” in the replacement of CFCs in refrigeration and air conditioning, insulating and integral skin foams, cleaning and in speciality uses. They are also substitutes for halons in some fire protection applications. Non-Article 5 Parties continue

to reduce the consumption of HCFCs to comply with the Montreal Protocol control schedule and, in several cases, to make reductions that go beyond the Montreal Protocol requirements. National and regional bans on specific HCFC applications and the accelerated European HCFC phase-out, which also applies to the new European Union member States as of 2004, are already drastically reducing global HCFC demand. This reduction in global demand will almost certainly lead to a decrease in global supply through the closure of some existing facilities and also raises the potential for restriction of imports of products made with or containing HCFCs to the non-Article 5 Parties. HCFC-22 and HCFC-141b are, and will remain, the most significant HCFCs in use globally and particularly by Article 5 Parties;

(b) Future HCFC-22 consumption is linked heavily with the growth of the refrigeration and air conditioning industry in Article 5 countries, most notably in China as well as in others such as Brazil and India where population concentrations and economic growth rates are high and where living standards are expected to improve;

(c) There are major uncertainties surrounding any economic projections over a period as significant as 12 years. This is particularly the case when high growth scenarios are postulated. There are also significant uncertainties regarding the substitution of HCFC-based technologies with other technology options and only the "most likely" scenarios, based upon currently existing trends, have been considered by TEAP;

(d) According to the best current estimate, the demand for HCFC-22 (excluding feedstock demand) in Article 5 countries in 2015 will be three times that of the demand in 2002. If the scenario used by TEAP proves to be correct, there may already be insufficient installed capacity for HCFC-22 beyond 2005, leading to a tense supply situation. This aspect needs further consideration by the TEAP and its HCFC Task Force after the year 2004, when more production and consumption data will have been reported, and tendencies in feedstock use will have been confirmed. The introduction of additional regulatory controls in non-Article 5 HCFC production after 2005 (over and above the required freeze) is likely to bring forward investment plans for further HCFC-22 capacity in Article 5 regions. This will give these investments more opportunity for commercial return;

(e) Demand for HCFC-141b and HCFC-142b is driven primarily by their respective uses in insulation and other foams. Such applications are expected to grow throughout the period as the use of refrigeration equipment becomes more widespread and interest in energy efficiency grows. Individual production capacities for HCFC-141b and HCFC-142b are more difficult to determine than HCFC-22 since these chemicals are co-produced in some facilities and the process has some degree of flexibility. The other significant use of HCFCs will be in solvent applications where both HCFC-225 and HCFC-141b will be used. These will only be used where no other alternatives are available;

(f) Although the use of HCFC-142b in Montreal Protocol applications will be eliminated in 2010, the feedstock requirements for the chemical may mean that most co-producing facilities will be required to meet this demand in the period 2010-2015. This will limit the availability of capacity for HCFC-141b;

(g) Regarding HCFC-141b, the drop in demand during the period 2005-2010 will require a substantial rationalization of current capacity in order for producers to maintain economic production. This could create shortages of capacity in later years (2010-2015) unless the producers practice well-known "mothballing" techniques. The demand in the non-Article 5 countries is expected to decrease sharply after the year 2003 and amounts in use in these regions by 2015 are expected to be less than 10 per cent of the total 2002 figure. As noted previously, the main ongoing use will be for solvent applications. In contrast, within the Article 5 countries, the demand is forecast to rise by nearly a factor of two over the period 2002-2015;

(h) Regarding HCFC-123, HCFC-124 and HCFC-225, no supply issues are envisaged as demand has already matured. However, there may be some shift between non-Article 5 and Article 5 consumption patterns;

(i) TEAP has factored in a freeze in production in non-Article 5 countries and two additional reduction steps in production in the European Union during 2002-2015 in all of its assessments. This has no impact on the availability of HCFC chemicals to Article 5 countries except in the case of HCFC-22 in the period beyond 2005. However, as mentioned above, there are significant uncertainties in projections, which will require further assessment at an appropriate juncture;

(j) A close inspection of the various Protocol amendments has revealed that the control of trade in HCFCs by the Parties to the Beijing Amendment enters into force on 1 January 2004. As at March 2003, 49 countries had ratified the Beijing Amendment and 39 countries had not ratified the Copenhagen Amendment. The HCFC-producing countries that have not ratified the Beijing Amendment and all the countries that have not ratified the Copenhagen Amendment (both producing and consuming countries) will be treated as non-Parties to the Protocol with respect to HCFCs.

23. TEAP made the following concluding remarks:

(a) Companies depending on HCFCs for domestic and export markets will want to:

(i) Check with local distributors for plans for continued supply,

(ii) Anticipate the possibility of trade barriers that can eliminate export markets,

(iii) Evaluate the potential for transition to non-ODS alternatives where relevant performance criteria can be met;

(b) It would be prudent for companies to develop contingency plans to convert to alternatives should quantities available or price levels become prohibitive to continued HCFC use;

(c) Parties may wish to consider the advantages of an early transition to non-ODS alternatives to avoid the necessity of expanded HCFC production and subsequent increasingly high costs of phase-out, where it involves a steadily growing number of HCFC users. The phase-out of HCFC-22 in non-Article 5 countries would encourage the commercialization of alternative technologies at full economy of scale and could encourage a more rapid transition in Article 5 countries at possibly lower ultimate cost;

(d) Nonetheless, the most cost-effective phase-out strategy in many cases is to use HCFCs to replace CFC where non-ODS alternatives are unavailable, do not meet performance criteria or are too expensive to implement;

(e) Delayed investment due to uncertainties regarding the likely commercial lifetimes of alternatives or replacements may prolong the use of HCFCs as companies wait for clear technical choices, which enable them to comply with both the Montreal and the Kyoto Protocol.

Item 5 (e): Collected data and assessment of the portion of refrigeration service sector made up by chillers and identification of incentives and impediments to the transition to non-chlorofluorocarbon equipment (decision XIV/9)

24. In decision XIV/9, the Parties requested TEAP to collect data and assess the portion of the refrigeration service sector made up by chillers and identify incentives and impediments to the transition to non-CFC equipment and to submit a report to the Open-ended Working Group at its twenty-third meeting.

25. TEAP reported that it was unable to respond adequately to this request in the time available (November 2002 to May 2003). Although substantial progress has been made, TEAP has yet to reconcile the differences in the estimates of the global inventory of chillers; develop credible estimates of service emissions in Article 5 countries; and verify whether the incentives and impediments that are known to apply to chiller investment and servicing in non-Article 5 countries are substantially different in Article 5 countries where investment risk and economic uncertainty may have a stronger controlling influence.

26. TEAP requests additional time to complete the report and suggests that it should submit its report on the issue to the Open-ended Working Group of the Parties in 2004.

27. The Working Group may wish to consider TEAP's suggestion for postponement of the completion of the assessment report and provide any further guidance to TEAP on the issue, if necessary.

Item 5 (f): Status of destruction technologies for ozone-depleting substances and code of good housekeeping (decision XIV/6(4))

28. In paragraph 4 of decision XIV/6, the Parties requested TEAP to update, in time for consideration by the twenty-third meeting of the Open-ended Working Group, the Code of Good Housekeeping to provide guidance on practices and measures that could be used to ensure that during the operation of the approved destruction technologies, environmental release of ODS through all media and environmental impact of those technologies is minimized.

29. TEAP provides the updated Code of Good Housekeeping on Destruction Technologies in its 2003 report. The TEAP Task Force on Destruction Technologies (TFDT) also reviewed:

(a) The list of approved destruction processes given in annex VI of the report of the Fourth Meeting of the Parties (UNEP/OzL.Pro.4/15) as subsequently amended);

(b) The table of suggested regulatory standards given in annex VII of the report of Fourth Meeting of the Parties.

30. TEAP was of the view that decision XIV/6 of the Fourteenth Meeting of the Parties did not fully reflect the list of destruction technologies recommended for approval by TEAP. In particular, it was noted that necessary distinctions between CFC, HCFC and Halon destruction capabilities had not been honoured. TEAP therefore suggests a new list of destruction processes in order to avoid any further misunderstanding; the list would be the same as the original table contained in the Ad Hoc Advisory Committee on Destruction Technologies report of 1992. Also, a revised table of suggested regulatory standards for destruction facilities is suggested by TEAP to correct the term "standards", about which specific concerns were voiced at the Fourteenth Meeting of the Parties. A new table would be produced that would maintain the integrity of the screening criteria selected and used by the TFDT in its 2002 Report, and would allow some flexibility for Governments and other standards-setting authorities to select minimum standards that reflected the variations around the mean values associated with technical capability.

31. TEAP further comments on other issues regarding trends in the field of destruction technologies. Those issues relate to treatment of dilute sources, the definition of the term "production" and the quantities destroyed under the Protocol.

32. The Working Group may wish to consider the recommendations and issues raised by TEAP and make appropriate recommendations.

Item 5 (g): Other issues arising out of 2003 TEAP Progress Report

Metered-dose inhalers (MDIs)

33. In response to decision VIII/9, the Aerosols, Sterilants, Miscellaneous Uses and Carbon Tetrachloride Technical Options Committee (ATOC) has analysed trends in CFC use for MDIs in MDI producer countries. An encouraging gradual decline in the amounts of CFCs exempted, consumed and contained in stock was observed. In 2002, total reported use of CFCs for MDIs in non-Article 5 MDI-manufacturing countries had fallen by almost 40 per cent since 1996. TEAP further noted that CFC consumption for MDIs in Article 5 countries appeared to be increasing. While multinationals that export to those countries may determine how their own exported products are phased out, there were no clear strategies for that proportion of CFC MDIs produced by local manufacturers in Article 5 countries. From the limited available data for countries with

economies in transition, it appeared that the quantities of CFCs used for MDIs may be increasing in some countries and falling in others.

34. TEAP noted that the CFC MDI transition has proved to be complicated as it is influenced by medical, technical, economic and regulatory factors. To date, it appears that the most effective management of the transition (i.e., the phase-out of CFC MDIs) had been achieved through the cooperation of industry and Government in working towards a common goal of having target dates for the cessation of sales of CFC MDI products. This appears to have been successfully accomplished in Australia, Canada and Japan. TEAP also noted that export of MDIs (primarily to Article 5 countries) needs to be managed carefully for those Parties that have significant exports. It has also become increasingly clear that economic considerations have a major impact on the transition and will complicate the final phase-out in non-Article 5 countries, Article 5 countries and countries with economies in transition.

35. In reviewing all possible methods of transition it was clear that action by the pharmaceutical industry alone will not drive the transition.

36. Several countries have developed and implemented effective transition processes. Japan is given as a good example and is expected to phase out CFC MDIs by 2005. This hasd been accomplished through the collaboration of the various pharmaceutical companies and the relevant Government authorities. TEAP states that although Parties are now submitting data under decision XIV/5, further specific data may be needed as a part of nominations to aid in the development of effective transition plans.

37. TEAP suggests that, to achieve an effective phase-out of CFCs, individual Parties may wish to consider implementing a target and timetable approach to achieve domestic CFC MDI phase-out by a certain date. It is likely that this date will differ from Party to Party depending on the rate of introduction of alternatives and the individual circumstances of Parties' healthcare systems. Experience had shown that transition plans can be successfully implemented only through open discussion between the major stakeholders.

38. TEAP believes that more information on the status of transition within individual countries with economies in transition is needed and encourages the participation in ATOC of experts from other such countries in addition to Poland and the Russian Federation .

39. The Working Group may wish to discuss the above issues and make appropriate recommendations.

Laboratory and analytical uses of ozone-depleting substances (decision X/19)

40. In decision X/19, TEAP was asked to report annually on the development and availability of laboratory and analytical procedures that can be performed without using the controlled substances in Annexes A and B of the Protocol, in order to enable the Meeting of the Parties to decide on any uses of controlled substances which should no longer be eligible under the exemption for laboratory and analytical uses and the date from which any such restriction should apply.

41. TEAP reports that the Finnish Environment Institute has carried out an extensive study on the use of ozone-depleting substances for laboratory and analytical uses. The study evaluated the situation in the Nordic region for oil-in-water analysis and describes alternatives for many other laboratory and analytical uses of ODS. A further study is underway covering the European Community.

42. No new non-ODS methods have been forthcoming which would enable TEAP to recommend the elimination of any further uses of controlled substances for analytical and laboratory uses.

43. TEAP restates its suggestion that the Parties may wish to consider holding a workshop on the elimination of controlled substances in laboratory and analytical uses. Such a workshop could review the new methods that have enabled the phase-out of the uses listed in decision XI/15 so as to assist Parties, especially Article 5 Parties, in revising their analytical standards and thereby eliminate their use of ODS. The workshop could also identify remaining uses of controlled substances, and their potential substitutes,

with a view to expediting the incorporation of new analytical methods into national and international standards.

44. Two Parties, the European Community and Poland, have requested emergency exemptions, which were considered by TEAP, for the following uses:

(a) Poland: The emergency exemption was requested for continued use of CFC-113 and carbon tetrachloride for testing of oil, grease and total petroleum hydrocarbons in water. TEAP commented that although by decision XI/5 this use was removed after 2002 from the global exemption for laboratory and analytical uses for controlled substances approved in decision X/19, the nomination indicated that Poland requires more time to implement ODS-free methods and to ensure their accuracy and reproducibility. Poland further stated that final international approval of ODS-free methodology (International Organization for Standardization (ISO), European Committee for Standardization (CEN)) was also not expected before 2002-2003. A similar emergency-use allocation was approved in 2002 for the European Community, Norway and Poland;

(b) European Community: The emergency exemption was requested for emergency allocations of 20 and 5 ODP-kg per year for hydrobromofluorocarbons (Annex C, Group II) and bromochloromethane (Annex C, Group III) for the years 2003 and 2004. TEAP pointed out that the global exemption for laboratory and analytical uses for controlled substances covers only substances in Annex A and B.

In accordance with the procedure set forth in paragraph 10 of decision VIII/9, the requests were approved by the Secretariat in consultation with TEAP.

45. TEAP suggests that Parties may wish to consider adding Annex C substances to the global exemption for laboratory and analytical uses for controlled substances. The same provisos that apply to substances in Annex A and B would apply to substances in Annex C.

46. The Working Group may wish to note the two emergency requests and the approval granted to the requesting Parties. The Working Group may also wish to consider the TEAP suggestions and make any appropriate recommendations.

Rigid regulations on use of ODS

47. Based on a number of incidents in which regional and national laws and regulations interfered with emergency and essential needs for ODS in important applications, TEAP has made recommendations to the Parties to consider reviewing their national and regional laws and regulations to allow prompt authorization for unanticipated emergency uses affecting national priorities and/or life and safety.

48. TEAP noted that very rigid national or regional regulations on ODS, including those banning the use of ODS, may hamper the prevention of accidents or disasters. TEAP urges national and regional authorities to build adequate flexibility into their regulations to ensure that ODS uses would be allowed under emergency, essential-use and critical-use exemptions approved by the Montreal Protocol and to establish mechanisms that would enable users, particularly in emergency cases, to access the necessary information to acquire the needed ODS.

49. The Working Group may wish to consider the above issues. In addition to considering actions to be taken at the national and regional levels, the Working Group may also wish to consider if any additional international mechanisms could be put in place to facilitate and complement national and regional efforts.

Annual report on n-propyl bromide (nPB) use and emissions (decision XIII/7)

50. In response to decision XIII/7, in which the Parties requested an annual update on the evolution of use and emissions of n-propyl bromide, TEAP assessed the most recent available data. A short summary of the TEAP conclusions on this issue is that:

(a) The forecast global expansion of the nPB market has not yet occurred, because of the unclear regulatory situation, the current economic situation and geopolitical tensions. The global production capacity for molecular nPB and blended solvents has expanded considerably and could meet foreseeable immediate demands if the regulatory and economic barriers were removed. Bromine production capacity is sufficient for more nPB to be produced at fairly short notice if needed;

(b) The pharmaceutical, agrochemical and speciality chemical industries consume about 5,000 tonnes of nPB annually. The volume of emissions from these are unknown. There is increased interest in the use of nPB in Article 5 countries;

(c) Although there is no new information about the reproductive toxicity and neurotoxicity of nPB, there are grounds for concern arising from such information as is available. Recommended safety practices regarding the use of nPB are not always being observed. In view of the still unknown toxicology, epidemiology and risk to the ozone layer, the precautionary principle could discourage use of nPB in emissive solvents applications, and could require every measure to be taken to protect the operators from risk of exposure and to minimize emissions.

51. The Working Group may wish to take note of the TEAP information on nPB.

TEAP operation

52. In its 2003 Progress Report, TEAP outlines its future operation, particularly as regards its Technical Options Committees (TOCs), as follows:

> "In 2003, TEAP will continue to recruit experts on the topics of greatest importance to Parties and will continue its reorganization to focus on sectors where technologies are still rapidly evolving. The Methyl Bromide Technical Options Committee will be strengthened further for consideration of nominations for critical-use exemptions, with particular emphasis on assessing the development, demonstration, registration and deployment of technical options and the economics of implementation. The Foams and Refrigeration/Air Conditioning Technical Options Committees will be strengthened in preparation for the rapid introduction of alternatives to HCFCs. The Halons Technical Options Committee will continue operating with TEAP experts maintaining a network of fire protection professionals. Walter Brunner [Co-Chair of Halons Technical Options Committee and a member of TEAP] will be resigning from TEAP by the end of 2003. To maintain the necessary expertise on TEAP also, TEAP is looking for qualified nominations. The Aerosols TOC will be refocused on medical uses including MDIs and sterilization."

53. TEAP proposes also that in place of the current Solvents Technical Options Committee, TEAP should begin building a new "Chemical Uses and Processes Technical Options Committee" to integrate topics such as process agents and feedstocks, destruction, laboratory and analytical uses, solvents, and carbon tetrachloride.

54. The Working Group may wish to consider the proposal for a new TOC and make appropriate recommendations.

Item 6: Further specific interim reductions on methyl bromide for the period beyond 2005 applicable to Article 5 Parties (decision IX/5 (1) (e))

55. In subparagraph 1 (e) of decision IX/5, the Parties decided as follows:

> "In light of the assessment by the Technology and Economic Assessment Panel in 2002 and bearing in mind the conditions set out in paragraph 2 of decision VII/8 of the Seventh Meeting of the Parties, paragraph 8 of Article 5 of the Protocol, sub-paragraphs (a) to (d) above and the functioning of the Financial Mechanism as it relates to methyl bromide issues, the Meeting of the Parties shall decide

in 2003 on further specific interim reductions on methyl bromide for the period beyond 2005 applicable to Parties operating under paragraph 1 of Article 5."

56. In its 2003 Progress Report, TEAP summarizes the 2002 MBTOC assessment of the issue. Various projects on methyl bromide and their implementation, as well as results, are analysed and described. By December 2002 the Multilateral Fund had approved a total of 232 methyl bromide projects in more than 60 countries. This included 44 demonstration projects, 38 phase-out projects and about 150 other projects for information exchange, awareness -aising, policy development and project preparation. Additional activities to trial and/or introduce alternatives (including in China, Kenya, Lebanon and Morocco) had been funded by Article 5 Governments and/or agricultural producers and through bilateral assistance from Governments (including with Australia, Germany/GTZ, Italy and Canada) and through the Global Environment Facility (GEF). The results analysed indicated that substantial progress had been made in the identification of suitable alternatives in Article 5 regions and that the projects were scheduled to phase out more than 70 per cent of Article 5 countries' methyl bromide consumption by 2005, and about 82 per cent before 2006, through stepped methyl bromide reductions throughout the course of the projects. Experience to date shows that alternatives could be adopted within a relatively few years in Article 5 countries. TEAP notes that additional phase-out projects are under development and that the existing and anticipated projects are due to lead to the phase-out of about 10,000 tonnes before about 2007, eliminating more than 50 per cent of peak methyl bromide consumption in Article 5 regions.

57. TEAP concluded from the analysis that it would be feasible for Article 5 countries to make additional, substantial methyl bromide reduction steps before 2015, provided that the necessary support continues for countries that need technical and financial assistance. Experience with demonstration and phase-out projects showed that the technical, climatic, social and economic barriers to methyl bromide alternatives could be successfully overcome for major methyl bromide uses in diverse Article 5 regions.

58. The Working Group may wish to discuss the findings by TEAP and its MBTOC on this issue and make appropriate recommendations.

Item 7: Update on the request by Parties to the Global Environmental Facility to clarify its future commitment to provide continued assistance to countries with economies in transition with respect to all ozone-depleting substances (decision XII/14)

59. Following the successful implementation of the phase out of ozone-depleting substances by the countries with economies in transition with the financial assistance of GEF, the Parties, in decision XII/14, requested GEF to clarify its future commitment to providing continued assistance to those countries with respect to all ozone-depleting substances.

60. The Secretariat worked with the GEF Secretariat and GEF Implementing Agencies towards the establishment of a new programme, and a budget allocation for that programme, to assist countries with economies in transition to phase out ozone-depleting substances, particularly methyl bromide and HCFCs. The Secretariat participated in the Second GEF Assembly, in Beijing in November 2002, and in the GEF Council, in Washington D.C. from 14 to 18 May 2003. At that meeting, the GEF Council approved the GEF Business Plan for 2004 to 2006, which includes a provision of $12 million to fund methyl bromide phase-out projects in eligible countries to enable compliance with the Copenhagen Amendment of the Montreal Protocol.

61. The Working Group may wish to note, with appreciation, the budget allocation by the GEF Council for the continuation of technical and financial assistance to countries with economies in transition. The Working Group may also wish to recommend to the Parties that eligible Parties should be encouraged to contact the GEF Implementing Agencies to develop appropriate projects.

Item 8: Update on the consideration of the use of the United Nations global harmonized system for the classification and labelling of chemicals that deplete the ozone layer (decision XIV/8 (b))

62. In decision XIV/8, the Parties requested the Ozone Secretariat to contact the Subcommittee of experts of the United Nations Economic and Social Council once the Global Harmonized System of Classification and Labelling of Chemicals (GHS) was adopted by the Council, in order to clarify whether ODSs are included in its programme of work, and, if they were not included, to:

(a) Evaluate the possibility for and feasibility of including ODSs in its work programme;

(b) Report to the twenty-third meeting of the Open-ended Working Group.

63. The Secretariat contacted the United Nations Economic Commission for Europe (UNECE) and informed it about decision XIV/8 and the request of the Parties to the Montreal Protocol to the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (UNSCEGHS) to include ODSs in its programme of work.

64. UNECE responded on behalf of UNSCEGHS and informed the Secretariat that GHS has been adopted by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its first session, in December 2002,[1] and would be transmitted for endorsement to the Economic and Social Council at its session in July 2003.[2]

65. UNECE also informed the Secretariat that the programme of work of UNSCEGHS for the biennium 2003-2004, also adopted by the Committee at its first session, does not include ODSs. However, following the request of the Parties to the Montreal Protocol, UNSCEGHS would be prepared to consider the possibility and feasibility of including ODSs in its work programme.

66. In order to facilitate the decision–making process at UNSCEGHS, the Secretariat was requested to prepare and present, by 18 April 2003, a document containing the background to the Montreal Protocol, justification of the need to classify and label ODSs, information on whether the Protocol includes criteria for ODSs and, if so, what these criteria are, and to make a presentation at the fifth session of UNSCEGHS, in Geneva from 7 to 9 July 2003.

67. The Secretariat prepared the document requested by UNSCEGHS in consultation with the group of interested experts on World Customs Organization (WCO) Harmonized System customs codes, established by the Parties to the Montreal Protocol in decision X/18, and submitted it to UNECE on 4 April 2004.[3] The document contains background information on the Montreal Protocol and the actions taken under the Protocol regarding the international classification of ODSs. Annexed to the document is the list of chemicals that are controlled by the Montreal Protocol in its Annexes A, B, C and E, all the relevant decisions taken by the Parties on classification and labelling of ODSs, and a table listing all the ODSs controlled by the Protocol and the customs codes allotted to each of them under the Harmonized System.

68. The Working Group may wish to note the progress made so far on this issue and make appropriate recommendations.

Item 9: Terms of reference and modalities for evaluation and review, by 2004, of the financial mechanism established by Article 10 of the Montreal Protocol (decision XIII/3)

69. Following the adoption of decision XIII/3 in 2001, whose paragraph 1 calls for Parties "To evaluate and review, by 2004, the financial mechanism established by Article 10 of the Montreal Protocol with a view to ensuring its consistent, effective functioning in meeting the needs of Article 5 Parties and non-Article 5 Parties in accordance with Article 10 of the Protocol, and to launch a process for an external, independent study in that regard which shall be made available to the 16th Meeting of the Parties", the Working Group may wish to consider terms of reference and recommend modalities for such evaluation and review for adoption by the Fifteenth Meeting of the Parties, in November 2003.

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1 See documents ST/SG/AC.10/29, para. 16 and annex 3, ST/SG/AC.10/30.

2 See document E/2003/46.

3 Reproduced as information document UNEP/OzL.Pro/WG.1/23/Inf.1.

Item 10: Update on the information submitted by the Parties for a global database concerning inhaler treatments for asthma and Chronic Obstructive Pulmonary Disease that contain chlorofluorocarbons (CFCs) or that do not contain CFCs (decision XIV/5 (1))

70. Under decision XIV/5, the Parties were requested to submit to the Ozone Secretariat, by 28 February 2003, with annual updates thereafter, information concerning inhaler treatments for asthma and COPD that contain CFCs or that do not contain CFCs. TEAP was requested to take this and other available information into account in its annual assessment.

71. By the end of March 2003, the Ozone Secretariat had received information from 26 Parties and one non-Party: Australia, Bosnia and Herzegovina, Brazil, Bulgaria, Cambodia, China (Hong Kong), Croatia, Czech Republic, Eritrea (non-Party), European Community, Georgia, Israel, Jamaica, Japan, Former Yugoslav Republic of Macedonia, Mauritius, New Zealand, Norway, Oman, Panama, Poland, Republic of Moldova, Singapore, Sri Lanka, Tuvalu, Uruguay and United States of America. The information received was reviewed by TEAP at its meeting in May 2003.

72. Since the TEAP review, information has been received from a further seven Parties, Argentina, Belize, Cuba, Guyana, Indonesia, Lithuania and Romania, which will be forwarded to TEAP for review in the future.

73. TEAP noted that Parties had adopted a variety of database templates and suggested that they might wish to consider harmonizing databases to provide a more consistent picture and allow a uniform analysis. It noted also that some of the data contain inaccuracies, which was to be expected given the complexity of the subject.

74. The Working group may wish to discuss this issue further and make appropriate recommendations.

Item 11: Issues arising out of the thirtieth meeting of the Implementation Committee

75. The thirtieth meeting of the Implementation Committee will be held on 4 and 5 July 2003 in Montreal, immediately prior to the twenty-third meeting of the Open-ended Working Group. The Chair of the Implementation Committee will report on the outcome of the deliberations of the Implementation Committee and propose issues for further discussion by the Working Group as appropriate.

Annex I: Evaluation of Critical Use Nominations – Soils

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Australia	CUN2003/001		Cut Flowers - field	120 t (1998), 60t (2001)	40t w/o VIF or 25t with VIF	6	10t	MBTOC recommends that a reduced CUE of 10t be approved to allow for commercial scale up of alternatives. An alternative, 1,3-D/Pic, has been registered since Sept 2001 in Australia, but has only just been made available in northern Australia. The CUN states that 1,3-D cannot be applied within 1.5m of cropped soils. MBTOC recommends that the Party consider a further reduction of the amount requested as MB/Pic (50:50) is technically suitable as a transition strategy until 1,3-D/Pic is available and rates of application can be reduced from 62.5 g/m2 to 30g/m2 by use of VIF films and this will substantially reduce emissions.
Australia	CUN2003/002		Cut flowers - protected	120t (1998), 60t (2001)	60t w/o VIF or 40t with VIF	6	20t	MBTOC recommends that a reduced allocation of 20t be approved. MBTOC has suggested a reduced allocation of MB in consideration of adoption of emission reduction strategies where the maximum amount of MB considered effective could be reduced by use of VIF to 60g/m2 for 100% MB or use of MB/Pic mixtures (50:50) with VIF at 30g/m2 (i.e. adoption of VIF and formulation change). Substrates and steam are considered suitable technical alternatives, though MBTOC recognises that steam may be expensive and that not all flower species can be successfully grown in substrates. Owing to reported phytotoxicity and the need for short plant back times, available chemical fumigant alternatives are at present considered inappropriate in the circumstances of the nomination.
Australia	CUN2003/003		Cut flowers, bulbs - protected	17.6t (1998)	7	2	7t	MBTOC recommends that a reduced CUE of 7t be approved for the basis of the statement that no alternatives exist for cropping on steeply sloping ground, (ie.>10o). MBTOC suggests that the Party substantiate the proportion of crops that can be grown in substrates and identify whether the steam plate application or similar methods are appropriate alternatives. MBTOC recognises that steam may be expensive and that not all crops can be successfully grown in substrates. Owing to the need for short plant back times, no chemical fumigant alternatives are presently considered suitable under the specific circumstances of the nomination. The applicant appears to have accounted for emission reduction strategies when calculating the amount and has restricted the maximum amount of MB used to 60g/m2 when hot gas formulations of MB are used with VIF films.
Australia	CUN2003/005		Strawberry fruit - field	330t? (1998)	90t then 59t (2006) and 58t (2007)	3	24t	MBTOC recommends that a reduced CUE of 24t of MB be approved. An alternative, 1,3-D/Pic, has been available since Sept 2001 in Australia, but time is requested to allow for commercial scale up throughout States received the product in the latter part of 2002. The CUN states that 1,3-D/Pic is phytotoxic, but MBTOC is not aware of any study supporting phytotoxicity in fruiting fields. MBTOC recommends that the Party consider a reduction of 67% of the amount requested as MB/Pic (50:50) is considered technically suitable as a transition strategy until 1,3-D/Pic is available and rates of application can be reduced from 50 g/m2 to 30g/m2 by use of VIF films, thereby substantially reducing emissions.
Australia	CUN2003/006		Strawberry runners	33.6 (1998), 29.8 t (2001)	35,75	3	35.75t	MBTOC recommends that 35.75t be approved The CUN states that MB is required to meet certification standards. The CUN did not provide comparative data to show whether or not available alternatives provide the same disease tolerance threshold as MB. The CUN notes plug plants grown in hydroponics a possible alternative, but time and cost was preventing the adoption of this technology. MBTOC considers plug plant technology a technical alternative to methyl bromide, but understands that further development is required before complete adoption is possible. The applicant has shown that the most promising alternative for open field production of nursery plants, 1,3-D/Pic, has been phytotoxic and that attempts to use VIF films have failed because glues do not work in cold temperatures. The Party may wish to reduce the request for a CUE quantity to account for adoption of plug plant systems. The industry already uses 25g/m2 of MB and is encouraged to try to further reduce amounts by adopting VIF films and better glues which allow a reduction in emissions.
Belgium	CUN2003/007			221.12 (1995); 127.5 t (1998)	100	(b)	(c)	MBTOC is unable to recommend this nomination in entirity because of insufficient information to allow full evaluation relating to specific crops within this CUN. An extensive list of references were provided for research in Belgium, almost no comparative results on pathogen control and yields with alternatives were provided for specific situations for specific crops.Information in needed on registration status of key alternatives and their applicability in open fields or protected crops in Belgium. Although MBTOC acknowledges that fumigant mixtures are more difficult to use in protected environments when other crops are grown in the vicinity of the treatment there was no data given to support the 5 week plant back period for chloropicrin or lack of effect when temperatures are below 20oC. MBTOC is also unclear for what proportion of crops steam and substrates were considered technical alternatives.
Belgium	CUN2003/007	-a,b	Lettuce and endive - open field	65.02 t (1998)	42,25	(b)	0t	MBTOC is unable to recommend this nomination. The CUN is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use (which has been assumed will expand dramatically) is critical. Lettuce and endive are not typically grown with the aid of MB and no justification is made for this unusual nomination. The CUN correctly states that steam and soilless culture are feasible alternatives and that fumigant alternatives are less effective at lower temperatures, but does not provide efficacy data to support this statement. MBTOC is unclear as to what proportion of these crops can be grown in substrates (as occurs at present in neighbouring countries) and why the proportion of crops requiring methyl bromide in 2005 has increased substantially. The applicant should be encouraged to fully evaluate other chemical and non chemical alternatives. Economic analysis of the data submitted with the CUN indicates that some alternatives are economically feasible.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Belgium	CUN2003/007	-c	Tomatoes - protected	29.42 t(1998)	17,17	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The application is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use (which has been assumed will expand dramaticlaly) is critical. Substrates have been adopted for 75-80% of tomato production in Belgium. The applicant correctly states that steam and soilless culture is a feasible alternative and that fumigant alternatives are less effective at lower temperatures but fails to provide comparative efficacy data. MBTOC is also unclear as to what proportion of these remaining MB-using crops can be grown in substrates (as occurs at present in neighbouring countries) and why the proportion of crops requiring methyl bromide in 2005 has increased substantially.
Belgium	CUN2003/007	-d	Pepper, eggplant - protected	13.77 t (1998)	5,27	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The application is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use (which has been assumed will expand dramatically) is critical. The applicant correctly states that steam and soilless culture is a feasible but costly alternative and that fumigant alternatives are less effective at lower temperatures but fails to provide suitable efficacy data. MBTOC is also unclear as to what proportion of these crops can be grown in substrates (as occurs at present in neighbouring countries) and why the proportion of crops requiring methyl bromide in 2005 has increased substantially.The applicant should be encouraged to fully evaluate 1,3-D/Pic and other chemical and non chemical alternatives. Acreage has been significantly reduced by using substrates (75-80% of tomato and up to 100% of cucumber and sweet peppers). Reasons for not using substrates for remaining production are not given.
Belgium	CUN2003/007	-e	Cucurbits	5.48 t (1998)	0,61	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. No information. is supplied in the CUN on area to be treated in 2005. The CUN states that there are technical problems associated with the use of substrates, but these have not been specifically validated for curcubits and they are in use in neighbouring countries for the same crop. In view of the case presented, MBTOC is unable to support a recommendation although it is recognised that some potential alternatives are not registered.
Belgium	CUN2003/007	-f	Beans	0 t (1998)	0,23	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The application is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use (which has been assumed will expand dramaticlaly) is critical. The applicant states that fumigant alternatives are less effective at lower temperatures but does not provide comparative efficacy data. MBTOC is also unclear as to what proportion of these crops can be grown in substrates and why the proportion of crops requiring methyl bromide in 2005 has increased substantially. MBTOC has noted that applicant reports using 0t of MB for this crop in 2001and presented no justification for renewing use. The applicant should be encouraged to fully evaluate 1,3-D/Pic and other chemical and non chemical alternatives.
Belgium	CUN2003/007	-g	Radish	No data	0,14	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The application is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use (which has been assumed will expand dramaticlaly) is critical. No historical use of MB has been provided and the crop is not typically grown elsewhere with the aid of MB. The applicant states that fumigant alternatives are less effective at lower temperatures but does not provide comparative efficacy data. MBTOC is also unclear as to why the proportion of crops requiring methyl bromide in 2005 has increased substantially. Applicant should be encouraged to fully evaluate- chemical and non chemical alternatives.
Belgium	CUN2003/007	-h	Asparagus	No data	0,63	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. No amount of MB has been used (specified) historically. If the Party considers this application should be supported they would need to provide specific data for use of alternatives on asparagus as MBTOC has no other data to reference in support of the use of fumigation on this crop.
Belgium	CUN2003/007	-I	Strawberry fruit	4.05 t (1998)	3,4	(b)	3.4t	MBTOC recommends that up to 3.4t be approved for CUE contingent on the Party providing an update on the registration status of 1,3-D/Pic and provide evidience that substrates are not a technical alternative for production of strawberries under the specific circumstances of the nomination. Whilst significant data and information is lacking from the submission, MBTOC recognises that adequate technical alternatives may not be available for production of strawberries in the circumstances of the nomination but notes that substrate production is extensively used in neighbouring countries.
Belgium	CUN2003/007	-j	Orchard - pome fruit & berries	3.86 t (1998)	1,35	(b)	1.35t	MBTOC is unable to recommend a CUE on the basis of the available information, but notes that other Parties have made apparantly similar nominations that were supported by MBTOC. MBTOC thus recommends a CUE of 1.35t. The application is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use is critical. Applicant also points out that 2001 was an unusually low use year because growers were concerned that high rates of MB beneath VIF films may be phytotoxic. The applicant correctly states that soilless culture is a feasible alternative and that fumigant alternatives are less effective at lower temperatures but does not provide comparative efficacy data. MBTOC is unclear as to what proportion of this nomination is for orchards and fields suffering from Replant Disorder. Although MBTOC has identified Perennial Crop Replant Disorder as a problem for which alternatives to MB may be inadequate, it is not clear whether this is the situation represented by this nomination.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Belgium	CUN2003/007	-k	Chicory (Brussels witloof)	0.54 t (1998)	0,6	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The application is a contingent application based on the justification that all uses that can be accomplished with other methods have already switched and that the remaining use (which has been assumed will expand dramatically) is critical. Amount of MB requested is higher than used in 2001 with no clear justification of why this is necessary. The applicant states that fumigant alternatives are less effective at lower temperatures, but does not provide comparative efficacy data. MBTOC is also unclear as to why the proportion of crops requiring methyl bromide in 2005 has increased substantially. Applicant should be encouraged to fully evaluate chemical and non chemical alternatives.
Belgium	CUN2003/007	-l	Leek, onions	0 t (1998)	1,22	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. No amount of MB has been used (specified) historically. Fumigation is not used to grow leeks and onions in most regions of the world. If the Party considers this application should be supported they would need to provide specific data for use of MB and alternatives for leeks and onions as MBTOC has no other data to refer to to support the use of fumigation for this crop.
Belgium	CUN2003/007	-m	Celery	No data	0,56	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. No amount of MB has been used (specified) historically. If the Party considers this application should be supported they would need to provide specific data for use of MB and alternatives on celery as MBTOC has no other data to reference in support of the use of fumigation for this crop.
Belgium	CUN2003/007	-n	Cut flowers excl. roses and chrysanthemum	19.79 t (1998)	6,11	(b)	0t	MBTOC is unable to recommend this CUN. Significant attempts have not been made to reduce consumption of MB. Amount requested is higher than historical use (2001). MBTOC notes the R & D plan to reduce consumption of MB is restricted to biocontrol, but might cover a wider range of alternatives. Methods which avoid the need for MB (substrate production) are considered technically feasible by the applicant, however, industry needs to validate their use for each particular flower species. Reduced efficacy of metham sodium due to low temperatures may be overcome by improved application techniques (e.g. spading). MBTOC considers steam a technically feasible alternative for small scale use for protected crops.
Belgium	CUN2003/007	-o	Cut flowers-roses	4.37 t (1998)	1,64	(b)	0t	MBTOC is unable to recommend this CUN. Significant attempts have not been made to reduce consumption of MB. Amount requested is higher than historical use (2001). MBTOC notes the R & D plan to reduce consumption of MB is restricted to biocontrol, but might cover a wider range of alternatives. Methods which avoid the need for MB (substrate production) are considered technically feasible by the applicant. Reduced efficacy of metham sodium due to low temperatures may be overcome by improved application techniques (e.g. spading). MBTOC considers steam a technically feasible alternative for small scale use for protected crops.
Belgium	CUN2003/007	-p	Cut flowers-chrysanthemum	11.96 t (1998)	1,8	(b)	0t	MBTOC is unable to recommend this CUN. Significant attempts have not been made to reduce consumption of MB. Amount requested is higher than historical use (2001). MBTOC notes the R & D plan to reduce consumption of MB is restricted to biocontrol, but might cover a wider range of alternatives. Methods which avoid the need for MB (substrate production) are considered technically feasible by the applicant. Reduced efficacy of metham sodium due to low temperatures may be overcome by improved application techniques (e.g. spading). MBTOC considers steam a technically feasible alternative for small scale use for protected crops.
Belgium	CUN2003/007	-q	Ornamental plants	11.96 t 1998)	5,66	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. Significant attempts have not been made to reduce consumption of MB. Amount requested is higher than historical use (2001). MBTOC notes the R & D plan to reduce consumption of MB is restricted to biocontrol, but might cover a wider range of alternatives. Methods which avoid the need for MB (substrate production) are considered technically feasible by the applicant, however, industry needs to validate their use for each particular flower species. Reduced efficacy of metham sodium due to low temperatures may be overcome by improved application techniques (e.g. spading). MBTOC considers steam a technically feasible alternative for small scale use for protected crops in this region.
Belgium	CUN2003/007	-r	Nursery	1.44 t (1998)	not predictable	(b)	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. Applicant has not requested a specific amount of MB nor specified a land area, but has indicated the need as "unpredicatable". The CUN correctly states that soilless culture is a feasible alternative and that fumigant alternatives are less effective at lower temperatures but does not provide comparative efficacy and cost data. MBTOC is also unclear as to what proportion of these crops are for certified nursery production and what regulations apply to certified nurseries.
Belgium	CUN2003/007	-s	Tree nursery	3.86 t (1998)	0,23	(b)	0.23t	MBTOC recommends that 0.23t be approved, on the basis of evaluation of similar applications from other Parties. The amount nominated represents 88% reduction from the amount used in 2001. Although very little information is given in the application, MBTOC recognizes that propagation of healthy plant material is an area where many methyl bromide alternatives may be inadequate. MBTOC recognizes that some alternatives may not be registered and that cool soil temperatures impact efficacy of some alternatives.
Belgium	CUN2003/007	-t	All crops (yellow nutsedge)	No data	not predictable	(b)	(c)	MBTOC unable to recommend this nomination as presented, but requests the Party provides information on the status of herbicides registered to control this weed by crop and comparative data on the effectiveness of alternatives relative to MB to allow further evaluation of the nomination.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Canada	CUN2003/009		Strawberry runners	12.839t	7,952	2	8t	MBTOC recommends a CUE for 8t of MB be approved, based partly on evaluation of similar CUNs from other Parties.This nomination lacked comparative data to determine the technical feasibility of many alternatives, including plug plants, and their comparative performance compared to MB. The nomination does not consider the full range of chemical alternatives reported to be effective by MBTOC. The nomination also contains limited research (one private undisclosed study) to support claims and is relying on research in other countries to support the CUE. Whilst certification to acheive disease tolerance is assumed to be the reason for the CUN, the actual reason is not stated. MB is currently applied as 67:33 (MB/Pic) at 30 to 40 g/m2. MBTOC recommends that for open field use of MB after 2005, that emission reduction techniques, e.g. VIF, are used and a maximum rate of 30g/m2 of MB used unless it can be demonstrated a higher rate is needed.
France	CUN2003/010		Carrots - protected and field	7.7 t	10	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The CUN does not provide comparative data or references to technically validate that alternatives were ineffective and MBTOC is unable to use data from other Parties to assist evaluation because this was the only CUN involving carrot growing. MBTOC is unclear why the amount requested exceeds historic use.
France	CUN2003/013		Cucurbits - protected and field	206 t (1997)	85	4	(c)	MBTOC is unable to recommend a CUE on the basis of the available information. The industry presently uses MB/Pic (98:2) at rates of 60 g/m2 with VIF tarps. As submitted the CUN does not fully substantiate that no alternatives reported by MBTOC are technically appropriate. The CUN provides no analysed technical comparisons of efficacy of alternatives and avoids discussion of alternatives in combination. The CUN states that dazomet gave satisfactory results, but its efficacy is limited by low soil temperatures in the northern part of France. The CUN also states that chloropicrin and metham sodium give good control of weeds and fungi and that steam is applicable on light soils. MBTOC has further information which does not conform to the case presented. The alternatives, 1,3-D/Pic, chloropicrin, solarisation, biofumigants, grafting and their combinations are technically considered to be effective alternatives for cucurbit production in many climatic regions. Chloropicrin use is banned by local legislation. MBTOC recognises that some technically feasible alternatives are not registered in France and that significant attempts to reduce MB usage have been made through rate reduction and use of VIFs.
France	CUN2003/014		Forest nurseries	20 t (1998)	10		10t	MBTOC recommends a CUE for 10t of MB be approved, based partly on evaluation of similar CUNs from other Parties. This CUN represents 50% reduction of the reported usage of methyl bromide since 1995. A total of 20 hectares are crops that are grown outdoors. The industry presently uses MB/Pic (98:2) at a rate of 50g/m2 under VIF, though historically has used 70 g/m2. As submitted the application partially substantiates that all the possible alternatives reported by MBTOC are technically inappropriate, but insufficient detail on efficacy was given. Containerised plant systems apparantly present a non-MB option. The application states that dazomet gave satisfactory results, but its efficacy is limited by low soil temperatures in the northern part of France. Applicant also states that chloropicrin and metham sodium give good control of weeds and fungi and that steam is applicable on light soils. MBTOC is assuming that these alternatives have been considered in asking for a reduced amount in the nomination.
France	CUN2003/015		Orchard and raspberry nurseries	16 t (1997)	5	4	5t	MBTOC recommends a CUE for 5t of MB be approved, based partly on evaluation of similar CUNs from other Parties. This will allow allow the industry time to substantiate claims for CUE or implement existing or new alternatives which are under evaluation and development. The quantity of MB requested represents 70% reduction of the reported usage of methyl bromide in 1997. The industry presently uses MB/Pic (98:2 or 99.5:0.5) at rates of 50 g/m2 under VIF, but historically has used rates as high as 80 g/m2. MBTOC's 2002 Assessment has identified the level of disinfestation required for nursery certification as a problem for which alternatives to methyl bromide are generally inadequate. As submitted the application provides no analysed technical comparisons of efficacy of alternatives specifically for use in certified nurseries. The only trial results presented are from orchard replant trials. Significant attempts have been made to reduce consumption of MB by reducing the land area treated, and reducing the rates of MB application from 800 kg/ha to 500 kg/ha, through use of VIF tarps.
France	CUN2003/016		Cut flowers, bulbs - protected and open field	198 t (1998)	75	4	60t	MBTOC recommends that a reduced CUE of 60t of MB be approved, with the reduction on the basis of progressive adoption of identified alternatives (substrates, steam). MBTOC recognises that several technically feasible alternatives, particularly chloropicrin and chloropicrin mixtures, are not registered in France and that significant attempts to reduce MB usage since 1995 have been made. Conversion to production of crops in substrates was identified as a technically feasible alternative but it was stated that time was required (up to 5 years) to convert some crops. Steam is also a technically feasible alternative which has been made cost effective in similar cropping situations in some countries and it is recommended that the Party determine what proportion of MB could replaced by this treatment. A plan for adoption of MB alternatives might include implementation of substrate production for the different crops (species, cultivar).
France	CUN2003/017		Orchard - replant	53 t (1997)	25	4	25 t	MBTOC recommends that 25t be approved. MBTOC recognizes that perennial crop replant disease is a problem for which alternatives to MB are generally not adequately proven. MBTOC also acknowledges that the applicant has made significant reductions in use of MB since 1995 and that the request is a 55% reduction from the amount used in 2000. Orchard is strip treated at a reduced rate and VIF is applied. The main constraint to the adoption of alternatives is the inability to definitively identify what is causing replant disease.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
France	CUN2003/018		Eggplant, pepper, tomato	452 t (1997)	150 (all solanaceous crops)	4	150 t	MBTOC recommends that 150t be approved, contingent on the use of emission reduction technologies e.g. VIF film and reduced dosage rates. MBTOC recognises that applicant has identified technically feasible alternatives such as 1,3-D/Pic and metham sodium by drip, but these are not registered. Significant attempts to reduce MB usage have been made by the Party. Applicant needs to provide a clearer phaseout plan for MB and specific CUE amounts required for each individual crop, including justification of why substrates and other non-MB technologies could not be used to grow at least part of the crop.
France	CUN2003/019		Strawberry - runners	100 t (1997)	40	4	40t	MBTOC recommends that 40t be approved. The CUN states that MB seems necessary to meet certification standards for plant hygiene. MBTOC acknowledges that France has a reduce range of alternatives available in practice, because products containing chloropicrin are not registered. The nomination did not provide comparative data that other alternatives do or do not provide the same disease tolerance threshold as MB. MBTOC is also unclear about the status of herbicides to control weeds. The applicant does not discuss the potential for plug plants produced in substrates and hydroponics to replace MB. MBTOC considers plug plants a possible alternative and Parties may wish to reduce the CUE quantity to take into account progressive adoption of this non-MB technology. MBTOC understands that further development is required before complete adoption is possible. The applicant has shown that MB amounts can be reduced by use of VIF, but indicates that they are difficult to use on a broad acre basis. MBTOC recognises the reduction in MB of over 50% since 1997 and encourages the applicant to consider further reductions in amounts by adopting better VIF films which substantially reduce emissions.
France	CUN2003/020		Strawberry fruit - protected and open field	200 (1997)	90	4	90t	MBTOC recommends that 90t be approved, on the basis that products containing chloropicrin do not become available before 2005. MBTOC acknowledges that France is in a difficult situation, because it can not use any products containing chloropicrin because they are not registered. France has accepted that 1,3-D/Pic is a feasible alternative and CUE should only be granted on the basis that France continue to seek registration of this product. This registration would also halve the amount of methyl bromide required for future CUN's. In spite of granting a CUE, the applicant fails to discuss the potential for substrates and hydroponics to replace MB. MBTOC understands that further development of substrates may be required before complete adoption is possible.
Greece	CUN2003/021			980 t (1997) All crops	300-350t (all crops)			MBTOC is unable to assess CUNs from this Party on the basis of the information provided. The specific quantity of MB needed for particular crops was not provided. Specific consideration of alternatives by crop is needed, preferably including comparative trials with alternatives. There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques that are apparantly alternatives to the MB uses nominated.
Greece	CUN2003/021	-a	Beans - protected				(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The Party is requested to provide CUNs for individual crops. The CUN did not specify the quantity of MB requested for each crop. Specific consideration of alternatives is needed, preferably including comparative trials with alternatives. Production of beans (green or dried) is not typically carried out elsewhere with the aid of methyl bromide (but see CUNs 2003/007 and 2003/031).There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques that are apparently alternatives to the MB uses nominated. The Party notes the availability of several alternatives.
Greece	CUN2003/021	-b	Cucurbits - protected				(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The CUN did not specify the quantity of MB requested for the crop. Specific consideration of alternatives is needed, preferably including comparative trials with alternatives. Production of curcubits in protected cultivation is carried out elsewhere without the aid of methyl bromide.There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques that are apparently alternatives to the MB uses nominated. The Party notes the availability of several alternatives.
Greece	CUN2003/021	-c	Eggplant - protected				(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The CUN did not specify the quantity of MB requested for the crop. Specific consideration of alternatives is needed, preferably including comparative trials with alternatives. Production of curcubits in protected cultivation is carried out elsewhere without the aid of methyl bromide.There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques that are apparently alternatives to the MB uses nominated. The Party notes the availability of several alternatives.
Greece	CUN2003/021	-d	Peppers - protected				0t	MBTOC is unable to recommend this CUN, on the basis partly of evaluation of similar CUNs by other Parties. The Party did not state the requested MB tonnage for peppers. At a national level MB reductions have been made by the introduction of VIF and reduced doses (25-30 g/m2). The applicant identified, Meloidogyne incognita, as the only target pest relevant to pepper. Combinations of registered products in Greece would appear feasible. According to the applicant, registered products include 1,3-D (including EC formulation), oxamyl, cadusafos, fosthiazate, fenamiphos, dazomet, sodium tetrathiocarbonate and these should be sufficient to control Meloidogyne in the absence of methyl bromide. Substrates are technically effective for protected crops in Mediterranean regions, although investment costs may present a barrier.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Greece	CUN2003/021	-e	Strawberry - protected				(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The CUN did not specify the quantity of MB requested for the crop. Specific consideration of alternatives in relation to this crop is needed, preferably including comparative trials with alternatives. There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques, that are apparantly alternatives to the MB uses nominated. The Party reports very good results with several chemical alternatives, but does not indicate why these cannot be used. A 1-3D/Pic mixture has been recently registered but no validation trials with this alternative are presented.
Greece	CUN2003/021	-f	Tomato - protected			?	(c)	MBTOC is unable to recommend a CUE on the basis of the available information. The CUN did not specify the quantity of MB requested for the crop. Specific consideration of alternatives in relation to this crop is needed, preferably including comparative trials with alternatives. There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques that are apparantly alternatives to the MB uses nominated. The Party reports very good results with several chemical alternatives that are registered in Greece (e.g. 1,3-D, metham sodium, dazomet, oxamyl, cadusafos, fosthiazate, femaniphos, sodium tetrathiocarbonate), but does not indicate why these cannot be used. The Party's research on protected tomato production concluded that 1,3-D, metam (injected) and dazoment combined with other treatments (eg.cadusafos or oxamyl) provided good control of nematode populations including root knot nematode. At a national level MB reductions have been made by the introduction of VIF and reduced doses (25-30 g/m2).
Israel	CUN2003/022							MBTOC is unable to recommend a CUE for any nominations from this Party, as insufficient information was available for full evaluation. No comparative data or references are available to validate the performance of alternatives against MB. Although MBTOC recognises that local restrictions on the use of major alternatives to MB, chloropicrin (large buffer zones) and 1,3-D/Pic (groundwater restrictions), mean that some MB may be justified, information is insufficient to determine this amount. For most of the crops in this nomination, only a limited number of alternatives are considered.
Israel	CUN2003/022	-a	Cut flowers - protected	700 t	175	4	(c)	MBTOC is unable to recommend a CUE on the basis of the available information, but notes that similar CUNs by other Parties hve been suported at reduced allocations or not recommended on the basis of availability of alternatives. In spite of significant data and information gaps, MBTOC recognises that the Party faces registration and regulatory constraints with typical chemical alternatives used elsewhere, e.g. 1,3-D is not registered and chloropicrin use is prohibited in populated areas. Attempts to reduce consumption of MB by changing formulations, rates, etc. are not described, although total consumption has apparently decreased and significant effort have been made to reduce emissions through mandatory adoption of VIF tarps. Further replicated research trials (e.g. with substrates, steam, as appropriate) should be conducted to generate data to substantiate/refute claims and support/deny resubmission for further rounds of CUN's. Specific crops (flower types) and problems should be identified and amounts of MB needed for each case indicated.
Israel	CUN2003/022	-b	Melon -protected & field	700 t	315	4	(c)	MBTOC is unable to recommend a CUE on the basis of the available information. In spite of significant data and information gaps, MBTOC recognises that the Party faces registration and regulatory constraints with typical chemical alternatives, e.g. 1,3-D is not registered and chloropicrin use is prohibited in populated areas. MBTOC acknowledges that specific diseases in open fields in Israel form the basis of the CUN (e.g. control of *Monosporascus cannonballus* and *Fusarium oxysporum*). However, insufficient discussion on alternatives, especially the use of resisitant varieties, has been given. No discussion is given on the suitability of substrates for melon production. Attempts to reduce consumption of MB by changing formulations, rates, etc. are not described, although total consumption has apparently decreased and significant effort have been made to reduce emissions through mandatory adoption of VIF tarps. Further information on alternatives is required to generate data to substantiate/refute claims and support/deny resubmission for further rounds of CUNs.
Israel	CUN2003/022	-c	Potato	600 t	385		(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. Although not stated it was assumed that the request was for potato seed. It is not possible to determine to what extent crop losses are incurred on a given hectare and how much this represents of the total crop grown. Where insufficient information. was provided MBTOC attempted to use information. from other CUNs but this was a unique CUN and therefore a recommendation could not be made. The Party is requested to further justify why the CUN is for a unique situation requiring use of MB as potatoes are grown elsewhere without the use of MB .
Israel	CUN2003/022	-d	Propagation material	120 t	85	10	(c)	MBTOC is unable to recomment a CUE on the basis of the available information. The CUN represents a 42% reduction of the reported historical usage of methyl bromide. As submitted the application does not define what is meant by propagation materials, what type of propagation materials are involved nor if these are certified nursery materials. No information is given on the cropping system (open field, protected, etc.), on the alternatives evaluated, or data on results of these evaluations. The CUN has stated that all alternatives tested are inferior to methyl bromide in cool soil conditions and that phytotoxicity due to short plant-back times are a concern. No discussion was given as to suitability of substrate production as an MB alternative. MBTOC notes that significant attempts have been made to reduce consumption of MB by reducing rate of application to 50 g/m2 and to reduce emissions by use of VIF tarps.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Israel	CUN2003/022	-e	Strawberries - runners & fruit, protected and open field	250 t	140	3	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The CUN is a combined submission for both open fields and greenhouses and covers both nursery and fruit production without providing specific information. about individual industries and situations. No characteristics about nursery productiuon are provided and no detailed technical information. about alternatives are given. MBTOC notes that CUNs applying to apparantly similar applications have been submitted by other Parties.
Italy	CUN2003/023		Eggplant - protected	582 t (1995) 300 t (2001)	280t	4	137.2t	MBTOC recommends that a reduced CUE of 137.5t of MB be approved, to allow time for recently registered alternatives to be deployed. MBTOC is unclear if 1,3-D/Pic is registered or being registered for this CUN. CUE is recommended and calculated on the basis that the industry uses VIF films to minimise emissions and does not exceed 30g/m2 for MB/Pic formulations and 60g/m2 for hot gas MB. MBTOC considers that further dosage reductions may be possible by the adoption of MB/Pic formulations with lower doses of MB (eg. 70:30, 67:33 and 50:50). MBTOC noted the Party's efforts in reducing MB usage and emissions.
Italy	CUN2003/024		Melon - protected	498 t (1995) 257 t (2001)	180	4	88.2t	MBTOC recommends that a reduced CUE of 88.2t of MB be approved, to allow time for recently registered alternatives to be deployed. CUE is recommended and calculated on the basis that the industry uses VIF films to minimise emissions and does not exceed 30g/m2 for MB/Pic formulations and 60g/m2 for hot gas MB. Clarification of the registration status of chloropicrin and 1,3-D/Pic for this CUN is sought. MBTOC considers that further dose reductions may be possible by the adoption of MB/Pic formulations with lower doses of MB (eg. 70:30, 67:33 and 50:50). MBTOC noted the Party's efforts in reducing MB usage and emissions.
Italy	CUN2003/025		Cut flowers, bulbs protected	594 t (1995) 302 t (2001)	250	1	105t	MBTOC recommends that a reduced CUE of 105t of MB be approved, to allow time for recently registered alternatives to be deployed. CUE is recommended and calculated on the basis that the industry uses VIF films to minimise emissions and does not exceed 30g/m2 for MB/Pic formulations and 60g/m2 for hot gas MB. MBTOC notes that substrate culture is widely used for cut flower production. MBTOC considers that further dose reductions are possible by the adoption of MB/Pic formulations with lower doses of MB (eg. 70:30, 67:33 and 50:50). Clarification of the registration status of chloropicrin and 1,3-D/Pic as alternatives is sought. MBTOC noted the Party's efforts in reducing MB usage and emissions. Party should specify amounts needed for each flower species or group. The Party is requested to clearly identify why substrates, steam and resistant varieties (particularly in the case of fusarium wilt) are not technically suitable, especially when used within an IPM approach.
Italy	CUN2003/026		Pepper - protected	781 t (1995) 290 t (2001)	220	1	0t	MBTOC is unable to recommend this CUN. MBTOC notes MB use has been reduced using VIF and 2 year intervals between applications (doses are 50 g/m2, MB/Pic 98:02). Several alternatives/combinations appear to be are available in Italy for controlling the target pests (Meloidogyne spp. and fungal pathogens) in protected peppers. The CUN notes that chloropicrin and 1,3-D are registered separately, and 1,3-D/Pic is registered for greenhouses and being adopted by commercial fumigators. MBTOC notes that Italy has pepper varieties resistant to Meloidogyne (some at high soil temperature). Italian authors have noted the efficacy of metam or dazomet + 2-3 week solarisation, and that nematicides provide effective control of nematodes in Italy . Substrates are technically feasible in Mediterranean regions.
Italy	CUN2003/027	-a	Strawberry-runners	100 t (2001)	100	1	50t	MBTOC recommends a reduced quantity of 50 t of MB be approved, to allow time for recently registered alternatives to be deployed. The reduction has been calculated on the basis that emission reduction strategies are adopted, with associated dosage reduction, use of fumigant mixtures with a reduced concentration of MB and progressive adoption of alternatives. In some protected environments, where hot gas MB/Pic 98:2 may be the only option available, a maximum rate of 60g/m2 has been used to calculate recommended CUE amounts. CUN2003/026 notes that chloropicrin and 1,3-D are registered separately, and 1,3-D/Pic is registered for greenhouses and being adopted by commercial fumigators.. MBTOC recognises efforts made by Party to reduce MB use and emissions. Substrates and hydroponic production are technically feasible alternatives in similar climatic regions to this CUN.
Italy	CUN2003/027	-b	Strawberry - fruit	1502 t (1995) 603 t (2001)	510	1	255t	MBTOC recommends a reduced quantity of 255 t of MB be approved as a CUE. The reduction has been calculated on the basis that emission reduction strategies are adopted, with associated dosage reduction and use of fumigant mixtures with a reduced concentration of MB and progessive adoption of alternatives. In some protected environments, where hot gas MB/Pic 98:2 may be the only option available, a maximum rate of 60g/m2 has been used to calculate recommended CUE amounts. Clarification of the registration status of chloropicrin and 1,3-D/Pic is sought. MBTOC recognises efforts made by the Party to reduce MB use and emissions. Substrates and hydroponic production are technically feasible alternatives in other similar climatic regions.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Italy	CUN2003/028		Tomato - protected	1500 t (2001)	1300	1	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. MBTOC is unable to verify the specific circumstances for which MB is requested, because regions are aggregated in this nomination. MBTOC notes that dosage rates of methyl bromide have increased from former rates. A reduction in the area cropped to tomatoes has not been reflected by a reduction in MB use. The CUN notes that chloropicrin and 1,3-D are registered separately, and 1,3-D/Pic is registered for greenhouses and being adopted by commercial fumigators. Substrates, hydroponic production, grafted plants and alternative fumigant(s) are technically feasible alternatives for this crop in similar climatic regions to that for this CUN, though this CUN notes water supply may limit substrate use.
Japan	CUN2003/029	-a	Melon	188 t (1998)	94,5	3	47.3t	MBTOC recommends a reduced quantity of 47.3t of MB be approved as a CUE, to take into account a maximum rate of 30 g/m2, the use of VIF and the use of mixtures of MB/Pic (67:33). The quantity of MB nominated is 75% of current use. Resistant varieties have inferior yield qualities. MBTOC considers that MB/Pic mixtures (67:33, 50:50) may be technically suitable. MBTOC notes that there is no use of soilless culture, an MB alternative typically adopted elsewhere. A number of viruses occur in single, double and triple cropped cucurbit varieties in Japan. Control is dependent on rapid penetration of MB through soil, often treatment is in cool conditions, and no alternatives are reportedly effective.
Japan	CUN2003/029	-b	Watermelon	92 t (1998)	71,4	3	35.7t	MBTOC recommends a reduced quantity of 35.7t of MB be approved as a CUE, to take into account a maximum rate of 30 g/m2, the use of VIF and the use of mixtures of MB/Pic (67:33). The quantity of MB nominated is 75% of current use. Resistant varieties have inferior yield qualities. MBTOC considers that MB/Pic mixtures (67:33, 50:50) may be technically suitable. MBTOC notes that there is no use of soilless culture, an MB alternative typically adopted elsewhere. A number of viruses occur in single, double and triple cropped cucurbit varieties in Japan. Control is dependent on rapid penetration of MB through soil, often treatment is in cool conditions, and no alternatives are reportedly effective.
Japan	CUN2003/029	-c	Peppers - protected	112 t (1998)	74,1	3	37.0t	MBTOC recommends a reduced quantity of 37.0t of MB be approved as a CUE, to take into account a maximum rate of 30 g/m2, the use of VIF and the use of mixtures of MB/Pic (67:33). The quantity of MB nominated is 75% of current use. Resistant varieties have inferior yield qualities. MBTOC considers that MB/Pic mixtures (67:33, 50:50) may be technically suitable. MBTOC notes that there is no use of soilless culture, an MB alternative typically adopted elsewhere. The CUN does not consider steam (known to be effective for some viruses) and substrates as potential alternatives to MB. The CUN noted that dry heat treatment of seed gave good but not perfect results, but does not provide comparative data with MB. Japanese research has identified two sweet pepper cultivars resistant to PMMoV.
Japan	CUN2003/029	-d	Cucumber	42.4 t (1998)	39,4	3	19.7t	MBTOC recommends a reduced quantity of 19.7t of MB be approved as a CUE, to take into account a maximum rate of MB application, the use of VIF and the use of mixtures of MB/Pic (67:33). The quantity of MB nominated is 75% of current use. Resistant varieties have inferior yield qualities. MBTOC considers that MB/Pic mixtures (67:33, 50:50) may be technically suitable. MBTOC notes that there is no use of soilless culture, an MB alternative typically adopted elsewhere. A number of viruses occur in single, double and triple cropped cucurbit varieties in Japan. Control is dependent on rapid penetration of MB through soil, often treatment is in cool conditions, and no alternatives are reportedly effective.
Portugal	CUN2003/031							MBTOC is unable to assess CUNs from this Party in its entirity on the basis of the available information. Specific consideration of alternatives by crop is needed, preferably including comparative trials with alternatives. There are a number of clear alternatives to MB, including substrate production and metham sodium, with improved application techniques that are apparantly alternatives to at least some of the MB uses nominated.
Portugal	CUN2003/031	-a	Strawberry - protected and open field		30	4	15t	MBTOC recommends this CUN on the basis of similar CUNs by other Parties, with a reduced allocation of 15t on the basis of use of reduced dosages of MB (30 g/m2) in conjunction with VIF films. The industry presently uses MB/Pic (98:2) at high rates in the range from 65 g/m2 to 80 g/m2. Application method is not stated.
Portugal	CUN2003/031	-b	Cut flowers - protected and open field		130	4	50t	MBTOC recommends this CUN on the basis of similar CUNs by other Parties, with a reduced allocation of 50t on the basis of use of reduced dosages of MB in conjunction with VIF films. The industry presently uses MB/Pic (98:2) with VIF but at a very high rate (80 g/m2). Application method is not stated.The application states that particularly the flower market is growing due to increasing national and international interest and investments in this sector, motivated by a most favourable combination of both climatic and environmental conditions. About 14% of growing area is MB treated, but the CUN does not indicate what proportion of this area is suitable for recognised alternatives such as substrate culture.
Portugal	CUN2003/031	-c	Tomato- protected and open field		20	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The industry presently uses MB/PIC (98:2) at high rates of 70 g/m2. Application method is not clear. From other CUNs and MBTOC information. there appear to be a number of alternatives for this crop and situation, together with scope for substantial reduction in MB use when combined with emission control technologies or formulation changes.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Portugal	CUN2003/031	-d	Peppers - protected and field		5	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The industry presently uses MB/PIC (98:2) at high rates of 70 g/m2. Application method is not clear. From other CUNs and MBTOC information. there appear to be a number of alternatives for this crop and situation, together with scope for substantial reduction in MB use when combined with emission control technologies or formulation changes. The CUN does not provide technical comparisons of efficacy of alternatives. The CUN notes that an alternative, 1,3-D/metham sodium, is cheaper than MB. Substrates are technically effective for protected crops including peppers in Mediterranean regions. Portugese experts notes that steam is technically effective but the investment cost may be a barrier.
Portugal	CUN2003/031	-e	Watermelon - protected and open field		4	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The industry presently uses MB/PIC (98:2) at high rates of 70 g/m2. Application method is not clear. From other CUNs and MBTOC information. there appear to be a number of alternatives for this crop and situation, together with scope for substantial reduction in MB use when combined with emission control technologies or formulation changes.
Portugal	CUN2003/031	-f	Melon - protected		5	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The industry presently uses MB/PIC (98:2) at high rates of 70 g/m2. Application method is not clear. From other CUNs and MBTOC information. there appear to be a number of alternatives for this crop and situation, together with scope for substantial reduction in MB use when combined with emission control technologies or formulation changes.
Portugal	CUN2003/031	-g	Green bean - protected and open field		3	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The basis for the CUE is not clear - the CUN is for the control of aerial diseases (Alternaria, Cladosporium, Botrytis) that are not normally controlled with MB or other soil fumigants.
Portugal	CUN2003/031	-h	Cucumber - open field		3	4	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The stated basis for the CUN, control of foliar diseases, are not normally a target for MB and can be controlled by other means. Feasibility of alternatives has not been validated, although the CUN states that two (unidentified) alternatives may be available. The rates of MB used with VIFappear excessive.
Spain	CUN2003/032		Strawberry runners	406 t (1998)	230	2+	230 t	MBTOC recommends that 230t of MB be approved. The CUN states that MB is required to meet EU certification standards and local regulations, but does not provide data that other alternatives do not provide adequate disease control to meet the standard. The CUN has presented results which show a number of alternatives are technically feasible for pathogen control, but most generally fail to give adequate weed control. MBTOC is unclear about the status of herbicides to control weeds. MBTOC considers plug plants grown in hydroponics a possible alternative, but time and cost appears to be preventing the adoption of this technology. MBTOC understands that further development is required before complete adoption is possible. The CUN indicates that the most promising alternative for open field production of nursery plants, a 1,3-D/Pic mixture, has been quite successfully used in combination with VIF films. The CUn states VIF films are difficult to use on a broad acre basis. The industry is to be commended on already reducing amounts by adoption of 50:50 mixtures, the use of 20-40g/m2 of MB and is encouraged to further reduce amounts by adopting improved emission control technology.
Spain	CUN2003/033		Cut flowers (Cadiz & Seville) - protected	est. 2150 t (1998)	53	ndefinite	53 t	MBTOC recommends that 53t of MB be approved. The CUN provided data and references which show that a number of alternatives which MBTOC considers are technically suitable have failed to give consistent results.The Party is requested to show why substrate production and use of resistant varieties are also technically suitable, particularly when used within an IPM approach. MBTOC recognises the very substantial reduction of MB use from high historical levels and also of emissions by adoption of MB/Pic mixtures (67:33), low rates (10g/m2 MB) and VIF films.
Spain	CUN2003/034		Cut flowers (Catalonia) - carnation, protected and open field	23 - 47t	20	ndefinite	20t	MBTOC recommends that 20t of MB be approved. MBTOC recognises the very substantial reduction of MB use from high historical levels and also of emissions by adoption of MB/Pic mixtures (e.g. 67:33), low rates (10g/m2 MB) and VIF films.The CUN does not give evidence that the alternatives for this use are inappropriate in the circumstances of this nomination. In particular, MBTOC notes substrates are used in other major carnation production regions around the world, metham sodium, steam and resistant varieties have also been found technically suitable, particularly when used within an IPM approach.
Spain	CUN2003/035		Strawberry fruit - open field	1846 t (1998)	556	1?	556 t	MBTOC recommends a CUE of 556t, contingent on the non-availability of alternatives, notably 1,3-D/Pic. The Party may wish to reduce its nomination to account for phasing in of alternatives prior to 2005. MBTOC notes that there are several technical feasible alternatives for this use, but they may require time to introduce into the industry. Since 1998, the industry has also made major reductions in the use and emissions of MB by adoption of MB/Pic mixtures (50:50%), VIF films and low rates (10.6 g /m2 MB).

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
Spain	CUN2003/036		Peppers - protected	574 t (1998)	300 t (98:2) or 200 t (67:33)	1?	150 t	MBTOC recommends a CUE of 150t, contingent on the non-availability of alternatives, notably 1,3-D/Pic. The Party may wish to reduce its nomination to account for phasing in of alternatives prior to 2005. The CUN states that a particular formulation of 1,3-D/Pic may also be as effective as MB and has been adopted at commercial level in Spain for peppers. 1,3-D/Pic + grafted plants give good results similar to MB. MBTOC acknowledges that the industry has also made major reductions in the use and emissions of MB by adoption of MB/Pic mixtures (50:50), VIF films and low rates (10.6 g/m2 MB). Several alternatives are available for peppers in Spain. Substrates are used for 10% of production of peppers, usually with greater yield than MB.
UK	CUN2003/039		Ornamental tree nurseries	20 t (1998)	12	1	6t	MBTOC recommends that a reduced allocation of 6t be approved, with the reduction on the basis of use of VIF with lowered rates of MB, possibly in conjunction with chloropicrin. MBTOC has determined that the propagation of healthy plant propagation material is an area where methyl bromide alternatives may not be fuly effective and thus supports this CUN. The industry presently uses MB/Pic (formulation not stated) at rates of 75-100 g/m2. Significant attempts have been made to reduce emissions by adoption of VIF tarps and deep injection.The higher than normal rates may be necessary because of the depth of soil treatment involved. Containerised plant systems would appear to be technically feasible alternatives for this CUN. As submitted, the CUN partially substantiates that most of the possible alternatives reported by MBTOC are technically inappropriate, but does not discuss substrates and steaming.
UK	CUN2003/040		Strawberries & raspberrries - fruit	185 t (1998)	80	2	68t	MBTOC recommends that a reduced allocation of 68t be approved for this CUE, on the basis of reduced dosage rates being used. The CUN states that dazomet, metham sodium, and 1,3-D can give good control, but approval would need to be sought for use in combinations as presently mixtures are not registered in the UK. Applicant states that substrates have been tried commercially but they are considered uneconomic.The CUN relies heavily on overseas studies for its conclusions. Significant attempts have been made to reduce emissions by adoption of VIF tarps, treatment of beds rather than broadacre treatments and deep injection.
USA	CUN2003/049		Cucurbits - field	1267 t (1998)	1187,8	3	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. This nomination did not give comparative data, except some yields, to determine the technical feasibility of many alternatives and their comparative performance compared to MB under the circumstances of the nomination. The nomination states that metham sodium is a technical alternative for southern US States with low to moderate nutgrass pressure and requests MB be given a CUE for 25% of production of the total US crop. The nomination does not discuss key alternatives reported by MBTOC, e.g. 1,3-D/Pic and grafting, and does not explain why herbicides cannot be used for control of nutgrass, the main reason for use of MB in southeastern USA (representing 98% of that requested). Although there has been a change from 98% to 67% MB in formulations to date, no further plan has been presented to reduce emissions.
USA	CUN2003/050		Eggplant - field	191 t (1998)	73,6	1	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. This nomination did not give comparative data, except some yields, to determine the technical feasibility of many alternatives and their comparative performance compared to MB under the circumstances of the nomination. The nomination does not discuss key alternatives reported by MBTOC. MBTOC notes that control of nutgrass is difficult where herbicides or other measures cannot be used and there are areas where alternatives are not available through local restrictions (e.g. township caps). Although there has been a change from 98% to 67% MB in formulations to date, no further plan has been presented to reduce emissions. MBTOC has recommended that MB for a CUE be applied with VIF films or other emission reduction technology, combined with reduced rates of MB..
USA	CUN2003/052		Forest nursery seedlings	545.5 t (1998)	192,515	1	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. This nomination did not give comparative data to determine the technical feasibility of many alternatives and their comparative performance compared to MB under the circumstances of the nomination. The CUN finds that two chemical alternatives are considered technically feasible, but does not discuss the feasibility of utilising substrates and containerised plants for forest seedling production. Containerised plant systems are quite widely in use.
USA	CUN2003/053		Ginger production - field	44 t (1998)	9,2	1*	9.2t	MBTOC recommends a CUE be approved for 9.2t of MB. This crop is grown under unusual terrain and can be considered a minor crop where research is lagging. Time is needed to technically evaluate application methods for alternative fumigants and other alternatives. CUE is recommended on the basis that the industry uses systems to minimise emissions and does not exceed 30g/m2 of MB (present use 42g/m2).
USA	CUN2003/055		Fruit tree nurseries	230 t (1998)	45,789	1*	45.8t	MBTOC recommends a CUE for 45.8t of MB be approved, based partly on evaluation of similar CUNs from other Parties.The CUN notes that use of a particular alternative be restricted because of local regulations and technical efficacy on heavy textured soils. The CUN contained no references to support lack of efficacy of alternatives compared to methyl bromide. The nomination also states that MB is required to treat substrates in the citrus industry, but does not explain why steaming and soilless substrates (containerisation) have not been considered a technical option for seedling production and tree production outdoors. Although there has been a change from 98% to 67% MB in formulations to date, no further plan has been presented to reduce emissions. MBTOC has recommended that MB for a CUE be applied with VIF films or other emission reduction technology, combined with reduced rates of MB.

Party	CUN Number	(a)	Industry	Reported past use (unofficial)	Quantity nominated		Recom-mendation for 2005	Comment
					t/year	Years	Tonnes	
USA	CUN2003/056		Orchard replant	1691 t (1998)	706,176	1*	706.2t	MBTOC recommends that 706.2t be approved for this CUN . Whilst it was difficult to make a recommendation based on the lack of technical data provided or references for the specifc crops in the nomination, MBTOC noted that the industry is aware of the technically available alternatives and appears to be making an effort to adopt these alternatives. Three alternatives,1,3-D alone or 1,3-D combined with chloropicrin or metham sodium were considered to be technical alternatives in the CUN for treatment in light soils. The nomination appears to take this into account when calculating the nominated quantity of MB.
USA	CUN2003/057		Chrysanthemum cuttings - rose plants (nursery)	246 t (1998)	29,412	2	14.7t	MBTOC recommends that a reduced allocation of 14.7t be approved for this CUN, on the basis that feasible alternatives are available for chrysanthemum cuttings (e.g. substrates) and adoption of reduced dosages with emission control strategies. MBTOC noted that the industry is aware of the technically available alternatives and appears to be making an effort to adopt these alternatives. From the case presented MBTOC is unable to recommend a CUE for chrysanthemums as steaming and production in substrates are technically and economically feasible. Roses are successfully grown in substrates worldwide. The Party may wish to recalculate the nomination on the basis of use of reduced MB dosages combined with emission control technologies, and availability of alternatives.
USA	CUN2003/058		Peppers - field	1943 t (1998)	1085,3	1*	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. MBTOC notes that a number of alternatives are in commercial use for this crop and seeks further information. on the applicability of these alternatives, noting that the availability may be restricted by local regulations.
USA	CUN2003/059		Strawberry fruit - field	2757 t (1998)	2468,87	1*	(c)	MBTOC is unable to recommend a CUE on the basis of the available information, but notes that control of nutgrass is difficult where herbicides or other measures cannot be used and there are areas where alternatives are not available through local restrictions (e.g. township caps). As confirmed by the CUN, MBTOC suggests that 1,3-D combined with either chloropicrin or metham sodium are feasible alternatives to MB in the circumstances of the nomination. To date over 10% of the industry has already converted to the use of formulations of 1,3-D/Pic in some regions. MBTOC recognises that application issues, plant back times and reliability restrict adoption of other fumigant alternatives by the industry.
USA	CUN2003/060		Strawberry runners	313 t (1998)	54,988	1*	55t	MBTOC recommends that 55t be approved. MBTOC notes that the applicant has not technically verified that any alternatives are feasible. The CUN states that MB is required to meet certification standards, but does not provide data that other alternatives do not provide the same disease tolerance threshold to satisfy these standards. The CUN also does not consider plug plants grown in hydroponics a possible alternative, but MBTOC considers this technology a technically feasible alternative, but understands that further development is required before complete adoption is possible. The Party may wish to reduce the CUN to account for plug plant development as an alternative. The industry already uses low dosage rates of MB and is encouraged to try to further reduce amounts by adopting further emission control technology and MB formulations with lower rates of MB (e.g. MB/Pic 50:50).
USA	CUN2003/061		Sweet potato - field	246 t (1998)	224,528	1*	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The CUE is based on a contingency of double the land use requiring fumigation with MB. Where insufficient information. was given by a country for a specific crop in this round of CUE, MBTOC attempted to fill in the missing data on alternatives or lack of them wherever possible using MBTOC's technical knowledge or if considered relevant data provided by other applicants from other countries. However, this is the only CUE submitted for MB use on sweet potatoes. The CUN has provided information. suggesting that alternatives may be available for 2005 cropping season.
USA	CUN2003/062		Tomato - field	4,495 t (1998)	2865	2	(c)	MBTOC is unable to recommend a CUE on the basis of the available information, but notes that control of nutgrass is difficult where herbicides or other measures cannot be used and there are areas where alternatives are not available through local restrictions (e.g. township caps). It is also requested that the Party calculate the revised amount consistent with the use of low dosages of methyl bromide in formulations such as MB/Pic (67:33 or 50:50). The nomination noted that a range of alternatives were considered technically feasible for areas of low inoculum levels of pathogens and weeds (e.g. 1,3-D/Pic and metham sodium). Formulations of metham sodium are proving effective at least in some regions.
USA	CUN2003/063		Turfgrass	600 t turf growing (1998), 102 t golf courses (1998)	352,194	1*	(c)	MBTOC is unable to complete its evaluation of this CUN on the basis of available information. The nomination covers several uses of MB, including the establishment and maintenance of golf courses, and production of turfgrass sod. Some or all of the sod may be certified, although no supporting documentation was provided about the certifcation tolerance requirements. An unspecified quantity of MB is reported to be used as a quarantine treatment for red fire ants in sod. Insufficient information. was provided to enable MBTOC to judge whether this might be a QPS treatment. It is requested that these differing uses of MB be disaggregated and the amounts presented as separate CUNs. In the case of golf course maintenance, some technically feasible alternatives have been reported. The nominated quantity may be revised in consideration of adoption of emission reduction strategies.
	Footnotes:							
(a)	CUN index after disaggregation.							
(b)	not stated or indefinite							
(c)	evaluation not completed, pending further clarification sought from the nominating Party							

Annex II: Evaluation of Critical Use Nominations – Post Harvest & Structures

Party	CUN Number	Industry	Type	Quantity nominated		Recommen-dation for 2005	MBTOC recommendation* for the critical uses of methyl bromide for the specific circumstances described by the applicant
				t/year	Years	Tonnes	
Australia	CUN2003/004	Rice	Commodity	12,3	3	12,3	MBTOC recommends that 12.3 tonnes be approved. MBTOC noted that there were no technically feasible alternatives for the specific circumstances of this nomination. The Party is requested to clarify details of reduced dosages to be used, and reduced quantities of commodity to be fumigated
Canada	CUN2003/008	Pasta and Flour Mills	Structures	47,2	2	47,2	MBTOC recommends that 47.2 tonnes be approved. MBTOC noted more than 50% of the Canadian mills were reported not to use MB and that there were technically feasible alternatives apparantly available. The one alternative, regarded as promising by industry, is not yet registered. The Party is requested to ensure that the CUE is restricted to those premises unable to use the alternatives.
France	CUN2003/012	Old buildings and artefacts	Structures and objects	8	4	0	MBTOC was unable to recommend this CUN. Alternatives are available for this use.
France	CUN2003/012	Mills and Processors	Structures	55	4	55	MBTOC recommends that 55 tonnes be approved, conditional on confirmation that the use will be resrticted to those structures unable to be treated with available alternatives.
France	CUN2003/012	Chestnuts	Commodity	2,0	4	2,0	MBTOC recommends that 2.0 tonnes be approved. MBTOC noted that there were no technically feasible alternatives for this use.
France	CUN2003/011	Commodities other than rice	Commodity	8,0	4	(a)	MBTOC was unable to complete its evaluation of this CUN on the basis of available information. MBTOC considered that technically feasible alternatives are available for most commodities in the application but that there may be some commodities in some situations that do not have alternatives.
France	CUN2003/012	Rice	Commodity	2,0	4	2,0	MBTOC recommends that 2.0 tonnes be approved. MBTOC noted that there were no technically feasible alternatives for the specific circumstances of this nomination.
Japan	CUN2003/029	Chestnuts	Commodity	4,6	1	4,6	MBTOC recommends that 4.6 tonnes be approved. MBTOC noted that there were no technically feasible alternatives for this use.
Netherlands	CUN2003/030	Cut flowers (postharvest)	Commodity	1,2	1	0	MBTOC is unable to recommendthis nomination for a CUE, as it is likely that some or all of the quantity requested is likely to be exempt from control under the QPS exemption. Additional information is sought to clarify the status of the MB use. No alternatives were considered.
United Kingdom	CUN2003/037	Food storage (dry goods)	Structures	1,1	2	1,1	MBTOC recommends that 1.1 tonnes be approved. MBTOC recommended 1100 kg of methyl bromide for 2005. MBTOC noted that there were technically feasible alternatives but the one regarded as most promising by industry was not yet registered.
United Kingdom	CUN2003/038	Mills and Processors	Structures	30,752	2	30,8	MBTOC recommends that 30.8 tonnes be approved. MBTOC recommended 35,000 kg of methyl bromide for 2005. MBTOC noted that there were technically feasible alternatives but the one regarded as most promising by industry was not yet registered.
United Kingdom	CUN2003/041	Food storage (spices)	Structures	1,728	2	1,728	MBTOC recommends that 1.728 tonnes be approved. MBTOC recommended 1,728 kg of methyl bromide for 2005. MBTOC noted that there were technically feasible alternatives but the one regarded as most promising by industry was not yet registered.
United Kingdom	CUN2003/044	Mills and Processors	Structures	16,38	2	16,38	MBTOC recommends that 16.38 tonnes be approved MBTOC recommended 16,380 kg of methyl bromide for 2005. MBTOC noted that there were technically feasible alternatives but the one regarded as most promising by industry was not yet registered.

Party	CUN Number	Industry	Type	Quantity nominated		Recommen-dation for 2005	MBTOC recommendation* for the critical uses of methyl bromide for the specific circumstances described by the applicant
				t/year	Years	Tonnes	
United Kingdom	CUN2003/045	Rice	Commodity	1,0	2	0	MBTOC was unable to recommend this CUN. MBTOC noted that there were technically feasible alternatives for this use. Furthermore, the nominated use appears to be potentially a QPS MB treatment against *Trogoderma granarium,* and thus exempt from control.
United Kingdom	CUN2003/037	Whitworth	Commodity	2,4	2	2,4	MBTOC recommends that 2.4 tonnes be approved. MBTOC noted that there were a number of apparantly feasible alternatives that may be suitable for some of this nomination but the one regarded as most promising by industry was not yet registered.
United Kingdom	CUN2003/046	Cheese stores (traditional)	Commodity	0,140	2	0,140	MBTOC recommends that 140 kg be approved. MBTOC noted that there were no technically feasible alternatives for this use.
United Kingdom	CUN2003/047	Cheese stores (traditional)	Commodity	1,50	2	1,50	MBTOC recommends that 1.5 tonnes be approved. MBTOC noted that there were no technically feasible alternatives for this use.
United Kingdom	CUN2003/042	Stored spices	Commodity	0,030	2	0,030	MBTOC recommends that 30 kg be approved. MBTOC noted that there were no technically feasible alternatives registered in the UK for this nomination.
United Kingdom	CUN2003/043	Tobacco (stored)	Commodity	0,523	2	0	MBTOC was unable to recommend this CUN. MBTOC noted that there were technically feasible alternatives for this use in the United Kingdom and other countries.
United States	CUN2003/051	Mills and Processors	Structures	536,328	1	536,328	MBTOC recommends that 536 tonnes be approved, conditional on there being no registered alternatives available in 2005. MBTOC noted that at the time of evaluation in March 2003 there were no technically feasible alternatives for this use.
United States	CUN2003/048	Smokehouse Ham	Commodity	0,907	1	0,907	MBTOC recommends that 0.907 tonnes be approved. MBTOC noted that there were no technically feasible alternatives for this use.
United States	CUN2003/048	Dried fruit, beans & nuts	Commodity	86,753	1	86,753	MBTOC recommends that 87 tonnes be approved, conditional on there being no registered alternatives available in 2005. MBTOC noted that at the time of evaluation in March 2003 there were no technically feasible alternatives for this use.
United States	CUN2003/054	Nursery trays for tobacco	Object	1,323	1	0	MBTOC was unable to recommend this CUN. MBTOC noted that alternatives are in common use in similar circumstances in several countries. These alternatives include chlorine, irradiation, fungicides, steam and quaternary ammonium compounds.

Footnote:
(a) Evaluation not completed, pending further clarification sought from the nominating Party