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**Seventeenth Meeting of the Parties  
to the Montreal Protocol on Substances  
that Deplete the Ozone Layer**

Dakar, 12–16 December 2005

Item 4 (n) of the provisional agenda of the preparatory segment\*

**Discussion on Montreal Protocol issues:  
Proposal by the European Community for adjustment  
of the Montreal Protocol**

**Proposal by the European Community for adjustment of the  
Montreal Protocol**

**Note by the Secretariat**

The annex to the present note contains a proposal submitted by the European Community for adjustment of the Montreal Protocol, which was considered by the Open-ended Working Group of the Parties to the Montreal Protocol at its twenty-fifth meeting, and some updated background information provided by the European Community on the status of methyl bromide reductions in Parties operating under Article 5. The text of the annex is reproduced as received from the European Community and has not been formally edited by the Secretariat.

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\* UNEP/OzL.Pro.17/1.

## Annex

### **Proposed adjustment by the European Community on further interim reduction steps for methyl bromide in Parties operating under paragraph 1 of Article 5**

#### **Introduction - Update on methyl bromide reductions in Article 5 Parties: May 2004**

Article 5 (A5) regions have made progress in achieving further MB reductions since the last EC report in October 2003 <sup>(1)</sup>:

- MB consumption fell to about 12,830 tonnes in 2002, which shows substantial progress (27% reduction) from the peak of more than 17,500 tonnes in 1998 <sup>(2)</sup>.
- A5 consumption in 2002 was 19% below the A5 Baseline <sup>(3)</sup> – see Figure 1 below.
- 50% of A5 Parties reported zero MB consumption in 2002 <sup>(4)</sup>.
- 105 A5 countries achieved their national freeze in 2002, and about 20 Parties failed to do so <sup>(5)</sup>. Of the latter group, 10 countries consume less than 10 tonnes MB, and most are undertaking MLF projects to assist them to achieve compliance. 2003 data indicate that additional countries have achieved compliance.
- 40 A5 countries have achieved much greater reductions than the Protocol requires at this stage, reducing national consumption in 2002 to less than 50% of the national Baseline.

Progress in the 15 highest MB consuming countries, which together accounted for about 86% of total A5 consumption in 2000 and 2001:

- China and Mexico have had MLF projects approved recently. All but Thailand and South Africa are now implementing MLF MB reduction or phase-out projects. Thailand is preparing a national phase-out plan. Due to its special status, South Africa has applied for funding from the Global Environmental Facility (GEF).
- The 15 countries in total achieved a rapid MB reduction of 28% between 2001 and 2002 – from about 15,240 tonnes to less than 11,000 tonnes (Table 2).
- 5 countries eliminated more than 40% of their Baseline consumption by 2002 (Table 2).

#### **Footnotes**

(1) *Proposal by the European Community. Addendum: Information to facilitate discussions on the appropriate A5 reduction steps for MB.* UNEP/OzL.Pro.15/3/Add.1. 14 October 2003.

(2) Based on official national reports of MB consumption made by Article 5 Parties to the Ozone Secretariat.

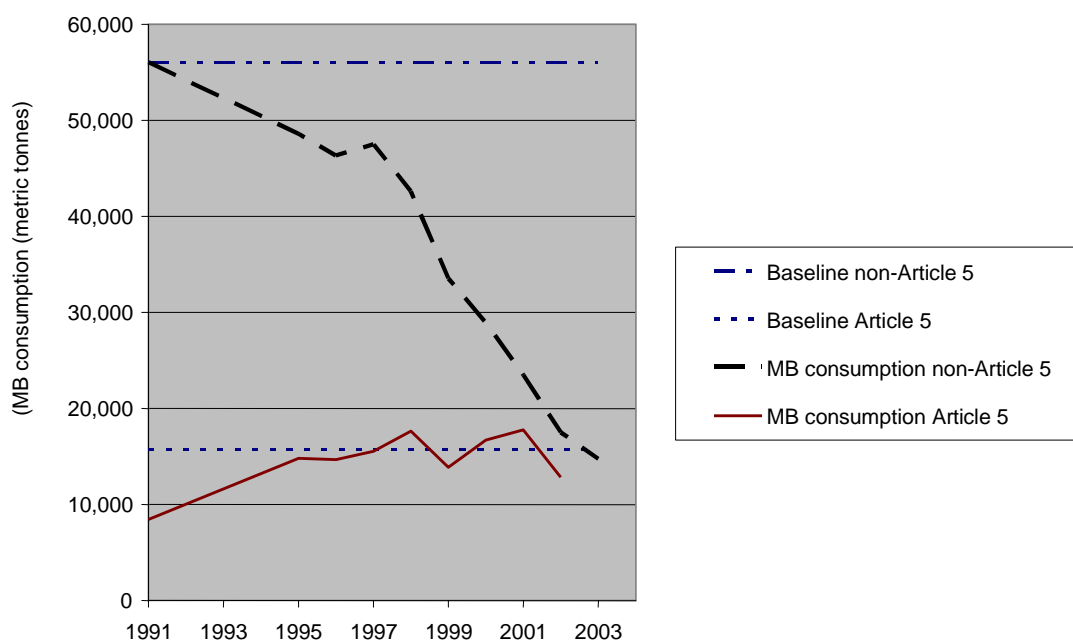
(3) Baseline is about 15,850 tonnes (average of 1995 – 98).

(4) 125 A5 countries have reported their consumption data for 2002, of these, 62 countries reported zero MB consumption.

(5) Analysis of data from 125 countries that have reported so far.

**Figure 1. Baselines and reported MB consumption in non-Article 5 and Article 5 regions, 1991 – 2002 (metric tonnes)**

Source: calculated from Ozone Secretariat data



**Table 1: MB reductions in the top 15 MB consuming A5 Parties (countries that consumed more than 300 metric tonnes in 2000)**

Country	MB consumption (metric tonnes)			MB reduction in 2002 since peak year	MB reduction (in 2002) from Baseline	MLF project <sup>(d)</sup>
	in peak year <sup>(b)</sup>	2001	2002			
China	3,501	2,613	1,813	48 %	1 %	Yes
Morocco	2,702	2,702	645	76 % <sup>(a)</sup>	45 % <sup>(a)</sup>	Yes
Mexico	2,397	1,834	1,779	26 %	6 %	Yes
Brazil	1,408	429	398	72%	67 %	Yes
Zimbabwe	1,365	907	417	69 %	55 %	Yes
Guatemala	1,311	1,311	1,182	10 %	<sup>(e)</sup>	Yes <sup>(e)</sup>
South Africa	1,007	994	990	2 %	2 %	<sup>(c)</sup>
Turkey	964	379	468	51 %	42 %	Yes
Honduras	852	852	688	19 %	<sup>(e)</sup>	Yes <sup>(e)</sup>
Argentina	841	598	281	67 %	59 %	Yes
Thailand	784	485	784	0 %	<sup>(e)</sup>	In prep.
Costa Rica	757	650	467	38 %	18 %	Yes
Egypt	720	720	450	38 %	<sup>(f)</sup>	Yes
Chile	497	398	275	45 %	22 %	Yes
Lebanon	391	365	329	16 %	<sup>(e)</sup>	Yes
<b>Total</b>	<b>19,497</b>	<b>15,237</b>	<b>10,966</b>	<b>Average 44 %</b>		

(a) Unusually low consumption in 2002 due to higher-than-normal imports in 2001

(b) Maximum reported MB consumption in the country

(c) South Africa has requested a GEF project.

(d) In prep = in preparation for submission to the MLF

(e) Consumption in 2002 was higher than the Baseline because consumption grew rapidly from 2000. Guatemala, Honduras and Lebanon are implementing MLF projects designed to bring compliance rapidly. Thailand is due to submit a national phase-out plan to the MLF soon.

(f) Egypt's consumption was above the Baseline in 2002, but achieved Baseline level in 2003.

## Appendix I

### **Report from the Contact Group meeting on adjustments relating to the controlled substance in Annex E**

1. A Contact Group was established on 11 November 2003 to discuss further interim reduction steps for methyl bromide for Parties operating under Article 5 (1) as called for by decision IX/5, which states that “*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.*”
2. Participants in the meeting examined both the *timing* and *percentage reduction* of the step-downs in methyl bromide consumption. Representatives from the European Community agreed to show flexibility in the timing and percentage reduction of step-downs, particularly the first and the last. Step-downs were seen as important in assisting Parties to meet phase-out targets.
3. Participants thanked the European Community for the detailed information posted on the Ozone Secretariat web site showing the progress in the phase-out of methyl bromide in Article 5 (1) Parties (UNEP/OzL.Pro.15/3/Add.1). That information showed that 57 per cent of methyl bromide use was scheduled to be phased out by 2007 based on current Multilateral Fund contracts with Article 5 (1) Parties for methyl bromide reduction and phase-out.
4. Participants in the Contact Group were mindful of the differences in the individual circumstances of Article 5 (1) Parties in their progress toward the phase-out of methyl bromide and the need for sufficient methyl bromide in the last three years, when finding alternatives could be challenging.
5. A short prolongation of the time to complete an Multilateral Fund contract was seen as important in particular circumstances, where necessary, for Article 5 (1) Parties that had accelerated phase-out agreements with the Multilateral Fund. Such a “safety net” could help to maintain Government and grower confidence in attaining methyl bromide reduction targets, particularly when non-Article 5 (1) Parties were applying for critical uses of methyl bromide.
6. Participants agreed that there would be advantages in having further step-downs after 2005 as the Multilateral Fund would need to examine the step-down commitments occurring during each funding triennium and the need to assist Article 5 (1) Parties in meeting those commitments.
7. A linear reduction consisting of mostly 20 per cent step-downs was considered practical and potentially achievable. Representatives of the European Community agreed to submit a revised schedule (see attached) for the consideration of the Parties that took into account both the discussions in the Contact Group and the data provided by the European Community in document UNEP/OzL.Pro.15/3/Add 1.

## Proposed adjustments – revised 12 November 2003

### Adjustments to the Montreal Protocol on Substances that Deplete the Ozone Layer

#### Adjustments relating to the controlled substance in Annex E

1. The following three paragraphs shall be added after paragraph 8 *ter* (d) (ii) of Article 5 of the Protocol:

- (ii) *bis* Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on **1 January 2008**, and in each twelve-month period thereafter, its calculated levels of consumption and production of the controlled substance in Annex E do not exceed, annually, **sixty per cent** of the average of its annual calculated levels of consumption and production, respectively, for the period of 1995 to 1998 inclusive;
- (ii) *ter* Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on **1 January 2010**, and in each 12-month period thereafter, its calculated levels of consumption and production of the controlled substance in Annex E do not exceed, annually, **forty per cent** of the average of its annual calculated levels of consumption and production, respectively, for the period of 1995 to 1998 inclusive;
- (ii) *qua* Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on **1 January 2012**, and in each twelve-month period thereafter, its calculated levels of consumption and production of the controlled substance in Annex E do not exceed, annually, **thirty per cent** of the average of its annual calculated levels of consumption and production, respectively, for the period of 1995 to 1998 inclusive;

#### Draft decision .../...: Further adjustments with regard to the substance in Annex E

To adopt, in accordance with the procedure laid down in paragraph 9 of Article 2 of the Montreal Protocol and on the basis of the assessments made pursuant to Article 6 of the Protocol, the adjustments regarding the controlled substance in Annex E to the Protocol, as set forth in Annex \*\* to the report of the fifteenth Meeting of the Parties;

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Comment: The above legal text is equivalent to the following:

Year	Control schedule	Percentage reduction	Comment
2002	Freeze on 1995-1998	--	Current control schedule
2005	20% reduction on baseline	20%	Current control schedule
2008	40% reduction on baseline	20%	
2010	60% reduction on baseline	20%	
2012	70% reduction on baseline	10%	
2015	Phase-out	--	Current control schedule

## Appendix II

### Annex

#### **Further interim reduction steps for methyl bromide in Parties operating under Article 5 (1)**

#### **Information submitted by the European Community and its acceding States, as requested by the Parties at the Open-ended Working Group meeting held from 7 to 11 July 2003 in Montreal**

##### **1. Current control measure**

The current methyl bromide (MB) control measure for Parties operating under paragraph 1 of Article 5 (hereafter called A5 Parties) is as follows:

- Baseline as the average consumption in 1995, 1996, 1997, and 1998
- Freeze on consumption in 2002;
- 20% reduction in consumption in 2005;
- Phase-out of consumption by 2015.

Decision IX/5 states that *'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.'* To assist the Parties to take a decision on the appropriate reduction steps, the European Community and its 10 Acceding Countries agreed at the Open-Ended Working Group meeting 7-11 July 2003 in Montreal to provide further information for the consideration of the Parties.

##### **2. Demonstration and phase out projects**

Multilateral Fund (MLF) demonstration projects have been completed in many A5 countries. MBTOC analysed the results and found that for all situations and all crops tested, one or more of the alternatives proved comparable to MB for the control of target pests/diseases. There were only two exceptions: suitable alternatives were not identified for ginseng in China and fresh dates in North Africa (MBTOC 2002, TEAP 2003).

MBTOC also identified many examples where alternatives are used successfully at commercial level in A5 and non-A5 countries (MBTOC 2002, TEAP 2003).

The Executive Committee of the MLF has approved 38 methyl bromide phase-out projects which are currently phasing-out major MB uses in thirty-five A5 countries. Some projects will phase out 100% of MB uses, excluding QPS. These projects are installing effective alternative equipment/materials on farms, and are training large numbers of farmers/MB users in proper methods for applying alternatives.

Most countries that have projects have agreements with MLF for early MB reduction steps and/or early phase-out as a condition of funding.

##### **3. Consumption of methyl bromide in Article 5(1) Parties**

Baseline A5 consumption was approximately 15,550 tonnes (1995-98). It rose to a peak of about 17,600 tonnes in 1998, and recently fell to about 13,400 tonnes in 2002<sup>1</sup>. A5 countries in total achieved a MB reduction of that averaged about 20% between 2000 and 2002 (See Annex 2 for details).

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<sup>1</sup> The estimate for 2002 is probably an overestimate because it used 2002 data where reported, but where this was unavailable, it used 2001 data which does not reflect the reductions made to meet the freeze. Total A5 consumption was about 14% lower than the Baseline in 2002. Total A5 consumption was about 14% lower than the Baseline in 2002.

Analysis of the consumption data reported by A5 Parties to the Ozone Secretariat showed that 48% of A5 Parties have recently reported zero MB consumption<sup>2</sup> (Table 1). Twenty-two A5 Parties that previously reported MB use have reported zero consumption recently. Almost 80% of A5 Parties now consume zero or less than 60 metric tonnes of MB.

**Table 1: MB consumption bands in A5 countries**

<b>MB consumption</b>	<b>Number of A5 countries</b>	<b>%</b>
Zero	60	48 %
>0 – 60 tonnes MB	39	31 %
61 – 300 tonnes MB	13	10 %
> 300 tonnes MB	14	11 %
<b>Total countries</b>	<b>126</b>	<b>100 %</b>

**Source:** Ozone Secretariat database. Analysis based on latest reported year for each Party.

Seventy-two of the A5 Parties that reported data for 2002 have achieved the freeze.<sup>3</sup> Of the 12 Parties that reported they did not meet the freeze, 5 are now implementing MLF projects that will bring them into compliance, and a further 3 or more are in the process of preparing compliance project proposals.

Between 1998 and 2000/2, large MB national reductions of more than 20% were achieved by about 47 small, medium and large consuming A5 countries. The average MB reduction was 67% among these countries (in 1998 to 2001/2). Actual reductions among these countries varied from 100 to 2056 metric tonnes of MB during this period.

By 2001/02, about 50 A5 Parties had reduced national MB consumption below their national baseline level (see Annex 1, Table B for details). About 43 of these countries reported MB consumption 20 - 100% lower than their national baselines.

Table 2 show the MB reductions achieved by 2001/2 in the 15 highest MB consuming A5 Parties. The average reduction was 40% since the national peak. Most of these countries are implementing MB phase-out projects, while several have recently started projects after these data were compiled. China, Mexico and Thailand are preparing MLF project proposals (see Annex 2 for details).

<sup>2</sup> Analysis of 126 A5 countries based on the most recent year reported by each Party (Table 2).

<sup>3</sup> 72 of a total of 84 Parties that reported 2002 MB consumption to the Ozone Secretariat by 30 Sept 2003.

**Table 2: Historical MB reductions in the top 15 MB consuming A5 Parties (countries that consumed more than 300 metric tonnes in 2000)**

Country	MB consumption (metric tonnes)		MB reduction in 2002 (or 2001)	MLF project <sup>(d)</sup>
	in peak year <sup>(b)</sup>	in latest year (2001 or 2002)		
China	3,501	1,813	48 %	In prep.
Morocco	2,702	645	76 % <sup>(a)</sup>	Yes
Mexico	2,397	1,779	26 %	in prep.
Brazil	1,408	429	70 %	Yes
Zimbabwe	1,365	907	34 %	Yes
Guatemala	1,311	1,182	10 %	Yes
South Africa	1,007	994	1 %	<sup>(c)</sup>
Turkey	964	379	61 %	Yes
Honduras	852	688	19 %	Yes
Argentina	841	281	67 %	Yes
Thailand	784	784	0 %	In prep.
Costa Rica	757	467	38 %	Yes
Egypt	720	720	0 %	Recent
Chile	497	398	20 %	Yes
Lebanon	391	365	7 %	Yes
<b>Total</b>	<b>19,497</b>	<b>11,831</b>	<b>Average 32 %</b>	

(a) Unusually low consumption in 2002 due to higher-than-normal imports in 2001

(b) Refer to Annex 1 for details of peak year.

(c) South Africa has requested a GEF project.

(d) In prep = in preparation for submission to the MLF

#### 4. Impact of MLF projects on MB consumption

The existing MLF projects are contracted to eliminate almost 8,000 tonnes MB, which is almost half of the consumption in A5 countries in 2000. About 75% of the 8,000 tonnes (ie. 5,984 tonnes) is scheduled to be eliminated by the end of 2005; while 95% (7,574 tonnes) is scheduled to be eliminated by the end of 2007 (Table 3). Reductions of MB by region are shown in Annex 3.

**Table 3: MB scheduled for elimination of almost 8000 tonnes of MB in existing MLF projects**

Years for elimination of MB	Quantity of MB to be eliminated by existing projects (metric tonnes)	Cumulative percentage	Parties
1999-2002	1,529	19 %	Argentina, Bolivia, Brazil, Chile, Congo, Congo DR, Costa Rica, Croatia, Cuba, Dominican Republic, Ecuador, Egypt, Georgia, Ghana, Guatemala, Honduras, Iran, Jordan, Kenya, Lebanon, Macedonia, Malawi, Morocco, Nigeria, Peru, Romania, Senegal, Sri Lanka, Sudan, Swaziland, Syria, Turkey, Uganda, Uruguay, Zimbabwe
2003-2005	4,455	75 %	
2006-2007	1,591	95 %	
2008-2009	399	100 %	
<b>Total</b>	<b>7,974</b>		

In 2002, the projects were scheduled to reduce MB consumption in 23 countries to a total of about 3,740 tonnes, but in fact these countries achieved faster reductions, reducing MB to a total of 2,600 tonnes in 2002<sup>4</sup>. They achieved early MB reductions, 30% below the level required by the MLF.

Additional MB phase-out projects are expected to be approved in the next two years by the MLF, the Global Environment Facility (GEF) and under bilateral assistance. Large consumers of MB are expected to agree new projects for phasing out about 7,000 tonnes of MB (see Annex 2 for details).

<sup>4</sup> Analysis of 23 countries that have reported data to the Ozone Secretariat for 2002. All but one of the countries achieved the MB reductions required by their MLF projects.



It appears feasible to phase out a large proportion (more than 85 %) of MB before 2010, given the large reductions achieved already (see Annex 4 for details). A number of small, medium and large consuming countries need to make MB reductions to meet the 20% reduction step in 2005, so they will be eligible for new MB projects under the current ExCom MLF policy. These countries are expected to eliminate an additional 2,000 tonnes MB by 2005.

## 5. Rate of methyl bromide reductions

The existing MB phase-out projects require on average about 4.5 years per project to complete. Most of the existing projects are due to be completed in the period 2002 – 2007. The phase-out period depends on the policies of national governments and to a lesser extent on the quantity of MB and types of uses. The amount of MB eliminated per year varies greatly from project to project. Reductions of more than 100 tonnes per year are scheduled in some countries.

About 93% of the MB will be eliminated in the first 5 years of the existing MLF project. The rate of scheduled reductions is approximately 20% per year on average. This indicates that A5 countries have made commitments to eliminate MB substantially faster than required under the current Montreal Protocol control measure.

As mentioned previously, A5 countries in total achieved a substantial MB reduction of about 20% between 2000 and 2002. Analysis of actual MB reductions achieved by 2001/2 in 47 individual A5 countries showed that very large reductions are feasible, especially in cases where governments and MB users make constructive efforts to transfer and adopt existing alternatives. The average MB reduction rate was 33% per year for countries that achieved reductions (in 1998 to 2001/2).<sup>5</sup> This analysis included small, medium and large consuming countries, some of which do not yet have MLF phase-out projects.

Experience in projects to date shows that large numbers of farmers can be trained per year. In Argentina, for example, more than 2,760 farmers (mainly poor farmers with small plots of land dispersed over a wide area) were trained to use alternatives in the first year of the project.

## 6. Synthesis report

The Synthesis of the Assessment Reports also contributes to our understanding of the phase out in developing countries. It has been prepared by the Co-chairs of the Assessment Panels on the basis of their reports: “Scientific Assessment of Ozone Depletion: 2002”, “Environmental Effects of Ozone Depletion: 2002 Assessment” and “2002 Assessment Report of the Technology and Economic Assessment Panel”, pursuant to Article 6 of the Montreal Protocol. The full assessment reports can be viewed at: <http://www.unep.org/ozone> and <http://www.unep.ch/ozone>

The Synthesis report stated that suitable alternatives are available to allow substantial reductions in MB use in Article 5(1) countries provided that financing is available from the Multilateral Fund and markets in non-Article 5(1) countries continue to provide economic incentives for commercialisation and registration of alternatives.

With two exceptions (control of ginseng root rot and stabilisation of high-moisture fresh dates), the completed demonstration projects, for all Article 5(1) locations and all crops or situations tested, identified one or more alternatives comparable to MB in their effectiveness in the control of targeted pests and diseases. In many cases, combined techniques have provided more effective results than individual techniques, particularly when they are part of an Integrated Pest Management programme.

Projects in Article 5(1) countries have demonstrated that a similar range of alternatives to those in non-Article 5(1) countries can be successfully adopted. Differences in costs and resource availability can lead to a preference for different alternatives in Article 5(1) compared to non-Article 5(1) countries. Demonstration projects showed that it is feasible to introduce the tested alternatives into Article 5(1) countries and adapt them successfully within 2-3 years, in some cases even including registration of pesticide products.

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<sup>5</sup> Analysis of 47 A5 countries that achieved MB reductions in the period 1998 to 2002 (or to 2001 in cases where data has not yet been reported for 2002).

With regard to Decision IX/5(1e), experience with demonstration and investment projects to date, such as those supported by the Multilateral Fund, indicates that the many technical, climatic, social and economic barriers to MB alternatives present in diverse Article 5(1) regions can be successfully overcome. The commercial availability of certain alternatives for some applications in Article 5(1) countries is of continued concern.

Adapting the alternatives to the specific cropping environment and local conditions of particular Article 5(1) countries is essential to success. For example, local materials such as coconut coir and rice hulls have made it possible to adapt substrate systems that would normally have required know-how and technically-demanding materials (e.g. rockwool) not widely available in Article 5(1) countries.

## 7. Proposed reduction steps after 2005

Decision IX/5 states that *'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.'*

This report together with the MBTOC assessment of 2002 and TEAP Synthesis Report of 2003 show that alternatives demonstrated in many A5 Parties as a result of MLF demonstration projects have led to substantial reductions in the consumption of MB in those Parties. Alternatives are used successfully at commercial level in A5 countries (MBTOC 2002, TEAP 2003) and many A5 Parties are now implementing phase out projects.

The evidence above indicates that A5 countries can undertake MB reductions and phase-out faster than the current MP schedule of 2015. As a result, the EC and its 10 Acceding Countries have proposed the following interim reduction steps after 2005:

Year	Proposed MB reduction schedule
2007	60% reduction on baseline
2009	75% reduction on baseline
2012	95% reduction on baseline
2015	Phase out
2015	Critical uses for MB uses in specific cases if there are no alternatives (following the criteria of Decision IX/6)

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## Appendix 1

## MB Consumption in A5 Parties

Table A: Trends in MB consumption, by region, compiled from Ozone Secretariat data

Article 5 regions (a)	Regional MB consumption (metric tonnes)				MB reduction 2000 – 2002
	Baseline (1995-98)	2000	2001	2002 <sup>(c)</sup>	
Latin America & Caribbean	6,391	6,425	6,513	5,528	897 (14%)
Africa	4,300	4,412	5,929	3,491	921 (21%)
Asia & Pacific	3,679	5,132	4,546	3,849	1,283 (25%)
Eastern & Central Europe, CIS <sup>(b)</sup>	1,186	739	554	535	204 (28%)
<b>Total</b>	<b>15,556</b>	<b>16,708</b>	<b>17,542</b>	<b>13,403</b>	<b>3,305 (20%)</b>

(a) A5 countries classified according to UNEP regional networks of ozone officers

(b) A5 countries only, including Turkey

(c) Calculated from Ozone Secretariat data. Where 2002 was not yet reported, 2001 reported data were used. This means the estimate for 2002 is likely to be an over-estimate.

Table B: A5 Parties that in 2002 reduced their national MB consumption below their national baseline

MB reduction in 2002	Countries that achieved MB reductions lower than the national Baseline in 2002
1 – 10% below Baseline	4 countries: China, Chile (2001 data), Mexico, Yemen
11 – 20% below Baseline	4 countries: Congo DR, Costa Rica, Kyrgyzstan, Syria
21 – 50% below Baseline	9 countries: Bolivia, Ecuador, Ethiopia, Georgia, Jordan, Kenya, Morocco, Nigeria, Peru
51 – 99% below Baseline	16 countries: Argentina, Brazil, Cuba, Fiji, Indonesia, Iran, Jamaica, Macedonia, Malawi, Romania, Singapore, Sri Lanka, Trinidad and Tobago, Turkey, Vietnam, Zambia
100% below Baseline	18 countries: Colombia, Congo, Croatia, Cyprus, El Salvador, Guyana, Korea DPR, Moldova, Myanmar, Nicaragua, Oman, Panama, Papua New Guinea, Senegal, Tonga, Vanuatu, Venezuela

Source: Ozone Secretariat database.

## Appendix 2

Top<sup>(a)</sup> 15 MB consuming A5 countries: Consumption and Projects.

Country	MB consumption (metric tonnes)		Party commitment to eliminate MB tonnes - in existing project agreements with ExCom <sup>(b)</sup>	Additional MB reductions – likely from future projects by MLF/GEF	Comments
	Peak year	Latest year			
China	3,501 (2000)	1,813 (2002)	-	648 in 1 <sup>st</sup> phase and 1,164 in 2 <sup>nd</sup> phase	Ratified Copenhagen Amendment recently. Has submitted sector total phase-out strategy and MLF project proposal in 2 phases.
Morocco	2,702 (2001)	645 (2002)	1,673	275	Implementing 2 out of 3 MLF projects. Govt said it is willing to have additional project (cucumber) for phase-out in all sectors
Mexico	2,397 (1995)	1,779 (2002)	-	531 in 1 <sup>st</sup> phase and 1248 in 2 <sup>nd</sup> phase	Investment project proposal for phase out in 2 phases submitted to MLF.
Brazil	1,408 (1996)	429 (2001)	140	429	Has implemented one MB reduction project. Additional project in preparation.
Zimbabwe	1,365 (1998)	907 (2001)	245	250?	MB use decreased due to projects and economic-agricultural situation. Govt has requested further projects.
Guatemala	1,311 (2001)	1,182 (2002)	780 in 1 <sup>st</sup> phase and 531 in 2 <sup>nd</sup> phase <sup>(c)</sup>	-	Agreement in principle with MLF to phase out all MB by end of 2007
South Africa	1,007 (1998)	994 (2001)	0	994	South Africa has requested a GEF project, subject to a decision by the MOP in 2003
Turkey	964 (1996)	379 (2001)	620	34	Projects are scheduled to phase out almost all MB by end of 2007. Further project planned with World Bank.
Honduras	852 (2001)	688 (2002)	355	324?	Scheduled to reduce MB by more than 40% in 2005.
Argentina	841 (1998)	281 (2002)	812	30	Scheduled to phase out almost all MB by end of 2006. Requested a project to phase out remainder (postharvest sector)
Thailand	784 (2002)	784 (2002)	-	784?	Thailand is preparing a MB phase-out strategy with a view to submitting a project soon
Costa Rica	757 (1999)	467 (2002)	757	-	Scheduled to phase out 100% by end of 2007

Country	MB consumption (metric tonnes)		Party commitment to eliminate MB tonnes - in existing project agreements with ExCom <sup>(b)</sup>	Additional MB reductions – likely from future projects by MLF/GEF	Comments
	Peak year	Latest year			
Egypt	720 (2001)	720 (2001)	310 in 1 <sup>st</sup> phase and 316 in 2 <sup>nd</sup> phase (c)	-	Agreement with MLF in principle to phase out MB by end of 2008, in 2 phases.
Chile	497 (1998)	398 (2002)	127	203?	Chile is implementing a MLF phase-out project, and preparing a 2 <sup>nd</sup> project
Lebanon	391 (2000)	365 (2002)	394	-	Lebanon is implementing a MLF phase-out project, scheduled to phase out 100% MB by 2007
<b>Total</b>	<b>19,497</b>	<b>11,831</b>	<b>7,060</b>	<b>6,914</b>	

(a) Those that consumed more than 300 tonnes in 2000 were classified as in the top 15 MB consuming countries.

(b) Governments have signed agreements to phase-out this quantity of MB as part of written agreements with ExCom for MLF projects approved by July 2003. In some countries part of this tonnage has been eliminated already because projects were implemented from about 1999.

(c) Scheduled reductions, provided MLF approves funds for second portion of project.

### Appendix 3

#### Regional analysis of methyl bromide consumption in countries with current MLF projects (as at July 2003)

Article 5 regions <sup>(a)</sup>	Consumption in 2000 (metric tonnes)	MB to be eliminated by MLF projects	
		metric tonnes	% of 2000 cons.
Latin America & Caribbean	6,425	3,924	61 %
Africa	4,412	2,289	52 %
South & Southeast Asia & Pacific	4,269	33	1 %
West Asia	863	869	100 %
Eastern & Central Europe, CIS <sup>(b)</sup>	734	859	100 %
<b>Total</b>	<b>16,703</b>	<b>7,974</b>	

(a) A5 countries classified according to UNEP regional networks of ozone officers

(b) A5 countries only, including Turkey

## Appendix 4

## Calculation of MB phase-out based on existing and anticipated project requirements

MB reductions in A5 regions	Latin America & Caribbean	Africa	Asia & Pacific	CEIT, Europe	Total MB reductions
Baseline	6,391	4,300	3,679	1,186	15,556
Total MB to be eliminated <sup>(c)</sup>	6,905	4,300	4,146	1,186	16,538
1. MB reductions committed in 2002-5 in existing MLF project agreements	2,725	1,673	830	757	5,985
2. Other reductions since 1998		137		186	323
3. Further MB reductions required to meet 20% cut in 2005	467	352	1,140	43	2,002
<b>4. Sub-total MB reductions by the end of 2005</b>	<b>3,192</b>	<b>2,162</b>	<b>1,970</b>	<b>986</b>	<b>8,310</b>
5. MB remaining after 2005	6,905 – 3,192 = 3,713	4,300 – 2,162 = 2,138	4,145 – 1,970 = 2,175	1,186 – 986 = 200	16,538 – 8,310 = 8,228
6. MB remaining as % of baseline	58 %	50 %	59 %	17 %	53 %
7. Currently permitted MB consumption after 2005 (80% of Baseline)	5,113 (80%)	3,440 (80%)	2,943 (80%)	949 (80%)	12,445 (80%)
8. MB reductions committed in 2006-07 in existing MLF projects	932	217	72	102	1,323
9. 2006-07 feasible expected MB reductions in future projects <sup>(a)</sup>	989	548	841	56	2,434
<b>10. Sub-total MB reductions by end 2007</b>	<b>1,921</b>	<b>765</b>	<b>913</b>	<b>158</b>	<b>3,757</b>
11. MB remaining end 2007	3,713 - 1,921 = 1,792	2,138 – 765 = 1,373	2,175 – 913 = 1,262	200 – 158 = 42	8,228 – 3,757 = 4,471
12. MB remaining, as % of Baseline	28 %	32 %	34 %	4 %	29 %
13. 2008-09 MB reductions committed in existing MLF projects	267	399	0	0	666
14. 2008-09 feasible expected MB reductions in future projects (a)	989	548	841	42	2,420
<b>15. Sub-total by end 2009</b>	<b>1,256</b>	<b>947</b>	<b>841</b>	<b>42</b>	<b>3,086</b>
16. MB remaining end 2009 (% of Baseline)	1,792 – 1,256 = 536	1,373 – 947 = 426	1,262 – 841 = 421	42 – 42 = 0	4,471 – 3,086 = 1,385
17. MB remaining, as % of Baseline	8 %	10 %	11 %	0 %	9 %
18. 2010-12 feasible MB reductions in future projects	536	427	422	0	1,385
<b>19. Sub-total MB reductions by 2010-12</b>	<b>536</b>	<b>427</b>	<b>422</b>	<b>0</b>	<b>1,385</b>
20. MB remaining end 2015 (% of Baseline) <sup>(b)</sup>	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>21. Total</b>	<b>6,905</b>	<b>4,300</b>	<b>4,146</b>	<b>1,186</b>	<b>16,538</b>

(a) Calculated from planned and anticipated MLF and GEF projects, taking into account the feasible MB reduction rate experienced in A5 countries to date;

(b) Except for critical use exemptions if there are genuine cases where MB alternatives are not available by this date;

(c) Total based on recent national consumption after the baseline period.

## Update on methyl bromide reductions in Article 5 Parties (September 2005)

Parties operating under paragraph 1 of Article 5 (“A5 Parties”) have continued to make substantial progress in achieving MB reductions since the previous EC reports<sup>(1)</sup>. Information in Section 1-2 is taken primarily from the TEAP Progress report of May 2005 (pages 109-111), which provided an update based on 2003 consumption data.

### 1. Trends in total A5 consumption

- MB consumption in A5 Parties peaked at about 18,140 tonnes in 1998 (excluding QPS). MB consumption was reduced to about 11,860 tonnes in 2003, which shows substantial reduction (35%) from the historical peak<sup>(2)</sup>.
- Consumption in 2003 was 25% below the A5 total Baseline<sup>(3)</sup> – see Figure 2 below.

### 2. Reductions at national level

- The vast majority of A5 Parties achieved their national freeze in 2002.
- The majority of Parties are on track for national compliance with the 20% reduction step in 2005, according to the consumption data reported for 2003<sup>(5)</sup>.
- National MB consumption in 106 A5 Parties was less than 50% of national Baseline in 2003<sup>(4)</sup> – see Table 1 below (TEAP data).
- 61% of A5 Parties reported zero MB consumption in 2003<sup>(4)</sup>. This is an increase compared to the previous year (2002) when 50% of A5 Parties reported zero MB consumption.
- Only 25 A5 Parties consumed more than 80% of national baseline in 2003 – see Table 1 below.
- Further progress has been made in 2004 and 2005 according to national reports.



**Table 1: National MB consumption (in 2003) compared to national baselines**

National consumption status in 2003	Number of A5 Parties
MB consumption was 0% of national baseline	87
MB consumption was 1 - 50% of national baseline	19
MB consumption was 50 - 80% of national baseline	11
MB consumption was more than 80% of national baseline	25

**Source:** TEAP Progress report, May 2005, page 111, table 7-1. Based on TEAP analysis of Ozone Secretariat data of April 2005 covering 142 Article 5(1) countries.

### 3. Reductions by large consumers

Substantial progress has been achieved in A5 countries that consumed large quantities of MB. The top 15 countries together accounted for about 86% of total A5 consumption in 2000 and 2001. Details are provided in Table 3 below.

- The top 15 A5 Parties recently made rapid MB reductions (from 15,237 tonnes in 2001 to less than 10,390 tonnes in 2003) - 32% reduction in 2-year period (Table 3).
- In 2003, MB consumption in the top 10 A5 Parties averaged 21% below baseline (Table 3).
- By 2003, the top 10 consuming A5 Parties had phased out almost 50% of their historical peak use of MB (Table 3).

### 4. Progress in MLF projects

- 14 of the 15 large-volume A5 consumers are now implementing MLF phase-out projects. The remaining country, South Africa, is preparing a GEF project.<sup>(6)</sup>
- The vast majority of A5 Parties that still consume MB are implementing MLF projects to reduce or totally phase-out MB.
- More than 11,220 tonnes MB are scheduled for early phaseout in the MLF projects, according to reports of ExCom.
- Most A5 Parties have achieved the MB reductions scheduled in MLF projects. ExCom (46<sup>th</sup> meeting) reported that Argentina, for example, phased out 51 tonnes more than the amount committed in its MLF project agreement (ie. MB reductions were achieved faster than the project schedule)<sup>(7)</sup>.

## 5. Adoption of alternatives continues to increase

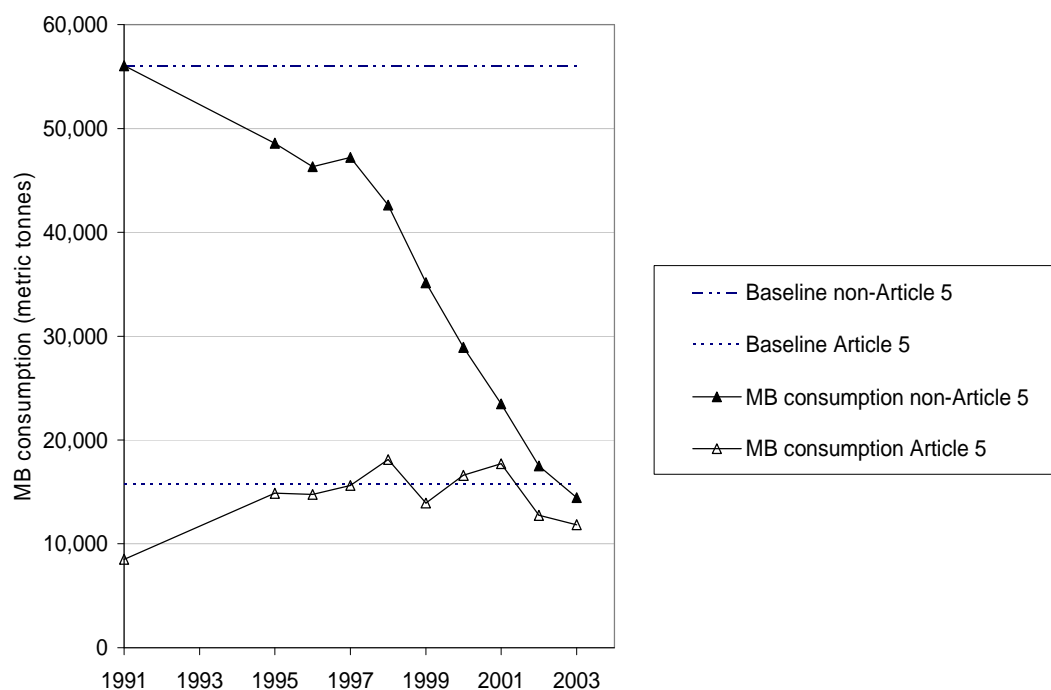
The TEAP Progress Report of May 2005 provided many examples of alternatives that are now used in A5 (and non-A5) countries for strawberries, tomato, cucurbits, other vegetables, flowers and tobacco (pages 113-136). TEAP noted that “Commercial adoption of alternatives to MB continues to increase in Article 5(1) countries...” often with assistance from MLF projects <sup>(8)</sup>

### Footnotes

- (1) *Proposed adjustment by the European Community on further interim reduction steps for methyl bromide in Parties Operating under paragraph 1 of Article 5.* UNEP/OzL.Pro.16/16, and *Addendum: Information to facilitate discussions on the appropriate A5 reduction steps for MB.* UNEP/OzL.Pro.15/3/Add.1. 14 October 2003.
- (2) Based on official national reports of MB consumption made by Article 5 Parties to the Ozone Secretariat.
- (3) TEAP Progress Report of May 2005, page 110. Baseline is about 15,765 tonnes (average of 1995 – 98).
- (4) 87 countries (61%) reported zero consumption in 2003. Analysis of 142 A5 countries – Table 7-1 in TEAP report May 2005 page 111.
- (5) TEAP report May 2005 page 111.
- (6) TEAP report May 2005 page 110-111.
- (7) Report of 46<sup>th</sup> ExCom meeting. UNEP/PzL.Pro/ExCom/46/47 page 34, paragraph 118.
- (8) TEAP report May 2005 page 140.

**Figure 1: MB consumption trends in non-A5 and A5 regions, 1991 – 2003**

Source: TEAP Progress Report, May 2005, page 109



**Table 2: MB reductions in the top<sup>1</sup> 10 MB consuming A5 Parties**

Country	MB consumption (metric tonnes)			MB reduction in 2003 since peak year	MB reduction in 2003 compared to Baseline	MLF project
	in peak year <sup>(a)</sup>	2001	2003			
China	3,501	2,613	1,680	52 %	9 %	Yes
Morocco	2,702	2,702	1,162	57 %	0 % <sup>(b)</sup>	Yes
Mexico	2,397	1,834	1,613	33 %	14 %	Yes
Brazil	1,408	429	364	74 %	69 %	Yes
Zimbabwe	1,365	907	162	88 %	83 %	Yes
Guatemala	1,311	1,311	879	33 %	<sup>(d)</sup>	Yes
South Africa	1,007	994	1,000	1 %	1 % <sup>(c)</sup>	Prep. <sup>(c)</sup>
Turkey	964	379	309	68 %	61 %	Yes
Honduras	852	852	611	28 %	<sup>(d)</sup>	Yes
Argentina	841	598	588	30 %	14 %	Yes
<b>Total of top 10 countries</b>	<b>16,348</b>	<b>12,619</b>	<b>8,368</b>	<b>49% average</b>	<b>21% average</b>	
<b>Total of top 15 countries</b>	<b>19,497</b>	<b>15,237</b>	<b>10,386</b>	-	-	

<sup>1</sup>Countries that consumed more than 300 metric tonnes in 2000, Ozone Secretariat data

#### Footnotes to table

(a) Maximum national MB consumption in the past.

(b) Unusually high imports in 2003, compensating for unusually low imports in previous year.

(c) South Africa has not been eligible for MLF projects, and is preparing a GEF project with the World Bank.

(d) Consumption in 2002 was higher than the Baseline because consumption grew rapidly from 2000, primarily in melon. Guatemala and Honduras are implementing MLF projects designed to bring compliance rapidly. TEAP reported that "in Honduras and Guatemala, grafting and 1,3-D/pic are replacing MB in the melon and watermelon sectors... with 22% MB reduction achieved in the 2004-2005 season for Honduras" (TEAP report, May 2005, page 140).