



**United Nations  
Environment  
Programme**



Distr.  
Limited

UNEP/OzL.Pro/ExCom/31/58  
25 May 2000

ORIGINAL: ENGLISH

---

EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Thirty-first Meeting  
Geneva, 5-7 July 2000

**REVISED GUIDELINES FOR METHYL BROMIDE PROJECTS  
(DRAFT)**

**Part I****NOTE FROM THE SECRETARIAT**

1. The working group, consisting of the representatives of Australia, Brazil, China, Dominican Republic, Germany, India, Netherlands, Tunisia, Uganda and the United States of America, convened a meeting during the 30<sup>th</sup> Meeting of the Executive Committee.
2. The representative of Uganda, speaking as the facilitator of the group, informed the Committee that considerable progress had already been made on revising the guidelines, however, some issues still required further consideration. The working group proposed to meet again shortly before the 31<sup>st</sup> Meeting of the Executive Committee.

## DRAFT REVISED STRATEGY AND GUIDELINES FOR PROJECTS IN THE METHYL BROMIDE SECTOR

### Introduction and background

1. The intent of the revised strategy is to assist the Executive Committee in allocating resources to the methyl bromide sector for the next twenty-four months. At the end of that time the strategy and guidelines should be reviewed.

2. Since the adoption of the current (interim) strategy and guidelines for investment projects in the methyl bromide (MB) sector, the Executive Committee has allocated resources for the preparation of 53 projects in 43 Article 5 countries, of which 41 demonstration projects for soil fumigation and storage (commodities) and structural fumigation, and three investment projects were approved: two for phasing out MB in tobacco seedbeds and another for storage of peanuts. In addition, the Committee also approved related support activities for global coverage. The total MB consumption in these countries is estimated at 8,500 ODP tonnes, equivalent to 87 per cent of total consumption in Article 5 countries (as reported to the Ozone Secretariat in 1997).

3. As of October 1999, 65 Article 5 countries have ratified the Copenhagen Amendment to the Montreal Protocol. The baseline for compliance with the Montreal Protocol regarding the consumption and production of MB (average of 1995-1998) has been determined for 62 Article 5 countries (some of which have not yet ratified the Copenhagen Amendment), with the following distribution:

Consumption (ODP tonnes)	Number of countries
0	18
>0 and <5	17
>5 and <30	8
>30 and <100	5
>100 and <200	6
>200 and <500	4
>500 and <1,360	4
Total	62

4. The demonstration projects under implementation on soil fumigation cover 12 different crops, five of which have world-wide distribution, including, tomatoes, tobacco, cucurbits, flowers and strawberries. While 13 different alternative technologies are currently under demonstration, only five of them have been proposed in more than 10 applications: low-dose chemicals, soil solarization, non-soil cultivation, steam pasteurisation and bio-fumigation, all in combination with an IPM programme.

5. The demonstration projects in storage applications cover 8 different commodities and structures and 11 alternative fumigation processes, including integrated commodity management

(ICM). However, only four technologies (phosphine alone; phosphine in combination with heat and carbon dioxide; and diatomaceous earth) are the most commonly chosen.

### **Copenhagen Amendment**

6. The MB provisions of the Montreal Protocol only apply to those countries that have ratified the Copenhagen Amendment of the Protocol. Those countries that have not ratified this amendment should be urged to do so and should be informed about the availability to Parties of funding to support reduction projects for the phase out of MB. In order to facilitate faster ratification of this amendment, funding for activities which enhance national capacity building, such as funding for information transfer and policy development, could be made available to countries which have not yet ratified the amendment, provided that a letter has been received from the appropriate agency of that country, indicating its intent to complete the ratification within a period of twelve months.

7. In order to facilitate faster ratification of the Copenhagen Amendment, UNEP's regional networks should concentrate on the issue during their meetings.

### **Determination of MB consumption data**

8. Accurate data on consumption of MB is necessary to: (i) calculate the baseline (average consumption over the period 1995-1998), (ii) assess the ability of Article 5 Parties to meet their obligations under the Protocol (the 2002 freeze and the 20 per cent reduction by 2005), and (iii) determine the technical and financial requirements to meet those obligations.

9. In order to overcome the difficulties in data collection and to assess the baseline, it is recommended to have a comparison of consumption data from several sources of information including: import data collected from customs department and importers; data gathered by the Ministry of Agriculture (pesticide regulatory body); data reported to the Fund and Ozone Secretariats; data reported in implementing agencies surveys; data from MBTOC; and estimation on quantities used based on total area fumigated for a particular crop at an average MB application rate.

10. The Implementing and Bilateral Agencies together with their in-country counterparts should make every effort to collect data on the consumption of MB and the history and pattern of its uses in the concerned country.

### **Tools of intervention**

11. For countries that use little or no MB, the Fund should support information exchange activities and technical assistance programmes in order that these countries do not commence or increase their use or become dependent on this substance. The focus in these countries is to facilitate a policy dialogue to ensure implementation of policies banning the import and/or use of MB.

12. For countries which are [new users] of MB or have rapidly accelerated their use, in addition to the policy dialogue and information exchange programmes, specific investment phaseout projects should be considered in order to ensure compliance with the control

requirements of the Montreal Protocol. Demonstration projects, as defined under paragraph 23 (a) should be considered on a case-by case basis.

13. For countries that are traditional users of MB, the main tools of intervention should be the development of investment projects and the associated regulatory and policy activities to ensure sustainability of the phase out, taking into consideration that the majority of countries in this category are already benefiting from demonstration projects. Demonstration projects, as defined under paragraph 23 (a) should be considered on a case-by case basis.

### **Major use categories**

14. Controlled use of MB can be classified into two broad categories:

- (a) Soil disinfestation, which represents the largest global use consists of 75 per cent or more of total MB in Article 5 countries. The likely beneficiaries of investment projects for the phase out of MB in these applications in any country could range from a large number of small independent farmers to well structured, export-driven crops organised in Associations, like the tobacco sector. Some of these companies could be transnational.
- (b) Storage and structural uses, which amount to 20 to 25 per cent of total use of MB in Article 5 countries. In some Article 5 countries, however, the use of methyl bromide for storage dominates the country's use profile, whereas in others use of methyl bromide in structural fumigation predominates. In general, fumigation of commodities and structures is performed by specialised service companies, several of them belonging to transnational corporations. These companies are considered to be well-organised and thus easy to reach. However, in some cases, MB is directly applied by the personnel working for the facility to be treated (e.g., silos, mills, warehouses). Thus, the target group for MB investment projects in this category could include owners of facilities and providers of fumigation services.

### **Priority areas**

15. The goal of projects in this sector should be the achievement of reductions in MB consumption and production to ensure compliance with the Montreal Protocol control provisions. Projects should strive to facilitate this goal, through a process that facilitates widespread understanding among stakeholders, users and related agencies on how the alternative technology(ies) may be applied to related uses. Where overall effectiveness can be enhanced or when viable in its own right, integrated pest management should be considered.

16. Consistent with the Multilateral Fund rules, the most cost-effective and sustainable MB alternative technology should be funded consistent with the national strategy of the Article 5 country concerned. The selection of alternative(s) technology(ies) should be decided by the country concerned and should involve, as pertinent, government agencies, farmers and farmers' associations, those involved in structural and storage pest control, exporters, research institutions

and universities and NGOs. A crop and/or sub-sector-based approach for MB projects may be the most efficient way of eliminating MB.

### Soil disinfection

17. Because of their contribution to global use, the following crops, including seed beds and nursery crops, should be considered a priority in the development of projects: flowers, tobacco, tomato, strawberries and cucurbits. Nevertheless, investment projects and demonstration projects (as defined under paragraph 23(a)) in crops other than those listed may be considered in cases where their use in a country is significant and related reductions are deemed essential to ensure compliance with the upcoming control provisions. In that respect, projects for crops representing over 25% of a country MB consumption should be given a priority.

18. Article 5 countries which implemented demonstration project(s) may choose the most viable of the demonstrated technologies for the sustained phase out of its MB consumption.

19. Thus, while the viability of any alternative may be country, soil and/or crop dependant, the use of one or a combination of several of the following proven and viable alternative technologies for soil disinfection may be considered: floating tray systems; substrates; steam pasteurisation; biofumigation; non-chemical and physical treatments such as solarization, organic amendments, crop rotation/fallow; resistant varieties and grafting; and low dose chemicals (chloropicrin, dazomet, metham sodium, 1-3-D, and other pesticides) which should be used in the most environmentally friendly manner possible.

20. Other technologies that have been demonstrated as appropriate alternatives to MB for particular crops/conditions should also be considered (in such cases, the burden is on the proponent to provide information on the demonstrated feasibility of the proposed alternative).

### Storage and structural uses

21. Pending the completion of demonstration projects in a number of Article 5 countries, the most prominent alternative technologies to MB for storage and structural applications, are: heat treatment (particularly where a source of heat already exists in the facility to be treated); phosphine alone or phosphine in combination with carbon dioxide and heat to reduce the application rate; sulphuryl fluoride (mainly for wood and wood products); and, in good general management practices, through prevention, monitoring, surveillance and control. While non-chemical techniques would be preferable, chemical alternatives may be more effective in a certain country and/or storage and structural use contexts and may be essential to the phase out for some countries.

### **Project categories**

22. National governments should support project proposals on alternatives to MB by efforts at the national level to establish a policy framework which encourages and links implementation of projects with legislation. Monitoring and verification of the achievements of project milestones through objectively verifiable indicators in connection with fund disbursement should be instituted to ensure enforcement.

23. Project proposals could then be categorised as follows:

- (a) Demonstration projects: Given the limited time to meet the freeze on methyl bromide, where a demonstration project is shown to be necessary, due to the particular circumstances of the country/users, this should be included as part of an investment project. The commitment of the country concerned to implement policy measures directed to eliminating MB use (i.e., bans and import licensing) should be demonstrated in the project.
- (b) Investment projects: Projects whose primary objective is the reduction, and eventual elimination of MB consumption in sectors or for uses where there are clearly demonstrated efficacious alternative technologies. They should be accompanied by a package of policy measures that the country has committed to ensure that the use being phased out will not merely be replaced by an increase from other users shortly after the projects are completed (i.e., bans and import restrictions). Investment projects should have a strong evaluation and information transfer component to ensure that the results of those projects are widely disseminated and understood both within the country and in countries with similar crops or uses of MB.
- (c) Non-investment projects: Projects focused on creating and disseminating information and/or educating stakeholders, and the provision of assistance, where needed, on the creation of policy instruments to restrict or ban the use and/or import of MB.

### **Possible model for project development**

24. The project development process should be open and transparent to enable all appropriate expertise in a country to participate. As distinct from the phase out of other ozone-depleting substances, the process for developing projects for the phase out of MB should take into account the following unique features:

- (a) MB is a very potent and very toxic fumigant, that can control a wide range of pests, diseases and weed seeds. As of today, there is no single cost-effective alternative capable for replacing it in all applications;
- (b) Adoption of new technologies in agricultural-related activities involves changes in traditional practices and attitudes, and covers a large number of end-users;
- (c) Risk associated with implementation of alternative technologies is inherently higher than in industrial processes due to climatic and pest/crop variability and needs to be carefully assessed and managed, taking into account that the target group is individual farmers who are legitimately risk-averse; and
- (d) Unlike other sectors where it may be sufficient to only change the manufacturing equipment to ensure phase out on a one off basis, phase out of MB must take

place every crop cycle and/or pest control treatment. The issue of the possibility of backtracking, reverting to MB, must be addressed in the project (e.g., through import restrictions, bans on specific uses, imposition of taxes).

25. Where appropriate, workshops involving main stakeholders (such as MB importers, suppliers of alternative technologies, relevant government agencies, farmers and farmers' associations, fumigation companies using MB, research institutions/universities and NGOs), should be organised at the outset of activities in a country to decide on the most appropriate alternative technologies. The resource persons should be chosen as far as feasible from local experts or experts from close cultural areas to obviate any cultural barriers.

26. Target pest should be determined and available alternatives should be discussed in terms of their costs and benefits, including environmental and human health impacts.

27. The institutional capacity should be in place to enable the alternative technology used in an investment project to be adopted nation-wide. It would also need to be demonstrated that the country concerned is committed to a package of policy measures directed to eliminating MB use (e.g., labelling of commodities produced without MB, taxes and levies on import of MB, mandatory registration by traders and farmers using MB, phase out schedule for MB) and to sustaining the alternative methodologies on a permanent basis or for as long as needed. Farmers should also be committed to sustainable reductions in MB use.

28. The stakeholders should participate in the implementation of the project, periodic review of results, final evaluation of projects and their potential, if necessary, for more widespread application within the country. A fact sheet summarizing the results of the project should be prepared (for widespread dissemination both within the country and to other countries), including a cost/benefit analysis.

29. Implementing or bilateral agencies should hold discussions with the competent government agencies, including the Ozone Unit, in the implementation of the project; and should work with relevant organisations such as the Food and Agricultural Organization (FAO), national and/or regional agricultural research and extension facilities, grain handling organizations, and others.

30. Extensive coordination of work and sharing of information among implementing and bilateral agencies will be essential in order to avoid costly duplication within projects and to ensure the most effective and efficient delivery of technical and financial assistance by the Multilateral Fund.

### **Categories of incremental costs for the phase out of MB**

31. The Multilateral Fund covers the agreed incremental costs required for the phase out of the consumption and/or the production of substances controlled under the Montreal Protocol. The incrementality of the costs arises from a comparison of the costs of applying the most cost effective, environmentally compatible and economically viable proven substitute technology with an existing baseline. The baseline, in this case, would include cost of MB and the technological set-up and infrastructure available for its application, which could be assessed.

Eligibility criteria

32. Countries that have not used any MB for controlled purposes during the 1995-1998 period will not be eligible for any investment project funding. However, consideration may be given for non-investment assistance to specifically put in place measures to disallow imports of MB in order to ensure compliance with the Protocol requirements.

33. **[The size of the eligible grant could be reduced depending on the degree of export to non Article 5 countries of the finished product]\* or [the participation of multinational corporations in the growing of crops, storage and treatment of commodities and structures] or [the addition of new acreage using MB after July 1995] or November 1997] or [December 1998] or [January 2002]. [The Multilateral Fund will be liable only for the support of phaseout of MB consumption not exceeding the maximum consumption in any given year in the period 1995 to 1998 (baseline for compliance)] or [The Multilateral Fund will be liable only for the support of phaseout of MB consumption not exceeding the average 1995-1998 consumption]**

Definition of categories of incremental costs

34. Incremental costs for MB investment projects should generally be determined in the manner typical of all Multilateral Fund projects (i.e., capital costs of conversion plus incremental operational costs/savings for a period to be determined). However, certain specific considerations could be taken into account including:

- [(a) The transfer of knowledge on the proposed alternative technology is an important component of any MB investment project; some account needs to be taken of the transfer of knowledge which has already started through the demonstration projects;**
- (b) Few items of equipment and/or farm input materials might be needed for implementation of some alternative technologies to MB;**
- (c) Depending on the technology chosen, incremental costs may include operating costs or may result in operating savings].**

\* ***[Draft proposal on export component proposed at the meeting of the working group in March 2000:***

- 1. Where exports to non-Article 5 countries correspond to or are less than 25 per cent of total finished product (e.g., flowers, vegetables, fruits, etc.), the total eligible grant shall not be discounted;*
- 2. Where exports to non-Articles 5 countries exceed 25 per cent of total finished product the eligible grant shall be reduced by a factor equal to half of the percentage of total finished product represented by such exports.]*