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EXTENDED DESK STUDY ON LOW VOLUME METHYL BROMIDE PROJECTS

TABLE OF CONTENTS

ANNEXES

Executive summary

1. Methyl bromide low-volume-consuming (MB-LVC) countries are defined here as all those 95 countries with methyl bromide (MB) baselines of less than 5 ODP tonnes. Such countries have often been assisted with technical assistance and awareness raising activities aimed at preventing increases of MB consumption, which could occur particularly when certain agricultural sectors suddenly expand (i.e., intensive horticulture, floriculture) or fumigation requirements for trade purposes increase (for example, on account of special storage needs in a particular country but also because of QPS increased demands). The potential for illegal trade in MB-LVC countries where regulation and controls for MB have not been put in place yet was also identified as a risk. Although the quantities of MB phased out through projects conducted in MB-LVC countries are small, their impact in terms of preventing the increase of consumption and sustaining compliance with the Montreal Protocol is important.

2. The great majority of countries complied with the freeze of 2002 and the 20 per cent reduction of 2005. According to latest reported consumption data only 5 Article 5 countries (Fiji, Guatemala, Honduras, Libyan Arab Jamahiriya and Saudi Arabia) are in non-compliance with this reduction step of which two (Fiji and Saudi Arabia) are MB-LVC countries. Saudi Arabia had not reported 2006 consumption at the time of writing this report, and has not yet submitted an action plan for returning to compliance but requested a change in its baseline and is preparing, with the assistance from UNEP and UNIDO, a detailed report for the 40th Meeting of the Implementation Committee. In the case of Fiji, non-compliance occurred mainly because the baseline was set at a very low level (0.7 tonnes), possibly because a full reporting system and an appropriate regulatory framework was not in place when consumption data was gathered for the baseline years.

3. Fifty-four projects in MB-LVC countries have been approved since 1995. Of those, 40 are now finished and 14 are still ongoing (12 individual and 2 regional projects in Africa and Central America). Most projects involve technical and regulatory issues associated with MB phase-out and generally include policy development. Many training projects include work with customs departments, to set forth legislation specifically concerning MB if necessary and train officials to detect and prevent possible illegal imports of MB.

4. Very few projects evaluate the economic feasibility of alternatives to MB. This often lies outside the scope of technical assistance projects but is nevertheless an important issue when it comes to convincing potential users of adopting alternatives. Addressing issues, perhaps through the preparation of case studies on alternatives for specific MB uses could be a useful contribution to this end. Low prices and free availability of MB in some countries have posed barriers to fast adoption of alternatives. The possibility of MB imported for quarantine and pre-shipment (QPS) uses being diverted to controlled uses is not addressed in most projects, however it was mentioned on several occasions during interviews conducted in the course of this evaluation.

5. The regional project for MB-LVC countries in Africa, while facilitating compliance for all participating countries, faced some implementation difficulties. They were mainly due to the diversity of the countries involved, low volumes of funding per country, communication problems in some cases and frictions between implementing agencies (IAs). Further regional efforts to focus on harmonizing regional legislation, training customs officials, and sharing experience and information would be best managed by the CAP MB officers, in cooperation with other IAs. Countries involved in such activities would not necessarily all be MB-LVC countries.

The Compliance Assistance Programme (CAP) in Asia/Pacific, for example, developed such activities in cooperation with UNDP very successfully in the past. Actual phase-out of remaining MB consumption on the other hand, is best to be managed by IAs. In light of this, it seems particularly important to work on efficient and robust interagency cooperation efforts.

6. A sub-regional approach still seems appropriate in certain instances (i.e., for regulatory issues, trade agreements, consolidating information on efforts undertaken, sharing experience and focussing on common problems and others). Consolidation of case studies or alternatives suited to particular regions and sectors was suggested on several occasions.

7. Selecting a small but representative sample of MB-LVC countries for field visits as originally intended is difficult. Circumstances in each country vary widely as different sectors, stakeholders, legislative and political issues are involved. A large number of field visits would need to be conducted and the time and cost associated with those cannot be justified in view of the limited volumes of MB consumed. MB-LVC projects often comprise heterogeneous, small-scale activities with unclear causal links to impact, which are more difficult to evaluate than samples of relatively homogeneous investment projects.

8. Discussions in regional network meetings combined with field visits to selected countries are suggested for further analysis and follow-up. Such a study will not only help to confirm that recommendations in the desk study are well targeted, but will also generate lessons learned on the best ways forward at a time when most remaining projects proposed are likely to be in MB-LVC countries.

I. Background

9. The evaluation of MB projects in MB-LVC countries (here defined as 95 countries with baselines of MB consumption below 5 ODP tonnes per year) is part of the 2007 monitoring and evaluation work programme. Numerous technical assistance (TAS) and some training (TRA) projects have been approved to phase-out MB and/or prevent consumption in many countries with low or no consumption of MB. Some of those projects were regional in nature, others individual. This evaluation aims at establishing the usefulness of those measures and their impact in terms of enabling compliance with the 20 per cent reduction step for MB consumption in 2005 and the complete phase-out by 2015.

10. The Multilateral Fund recognized early on the importance of phasing-out methyl bromide and began to fund non-investment projects, mainly demonstration and technical assistance projects from 1994 onwards, with the number of projects peaking in 1998, 2001 and more recently in 2004. Many demonstration projects were followed by investment projects, which in recent years increasingly took the form of multi-year agreements. A total of 77 investment projects for all Article 5 countries have been approved by the Executive Committee by December 2006. Through those projects, 3,548 tonnes of methyl bromide have been phased out already, which corresponds to 38 per cent of the baseline of Article 5 countries. A further 1,619 ODP tonnes will be eliminated upon completion of the approved projects.

11. Methyl bromide projects are complex and unique in the sense that their success depends on many stakeholders and factors. Unlike the industrial sector, their sustainability is not guaranteed by changing the equipment used but depends on the technical and commercial

viability of the alternatives and the enforcement of production, import and use restrictions. Farmers could always, even for one season, go back to using MB if this seemed more advantageous to them. Since MB cannot generally be replaced by one in-kind alternative, users may need to change their approach to production, process management or application methods and adapt to specific local conditions. This is sometimes met with resistance from farmers.

12. Evaluations conducted so far on methyl bromide are the following: a detailed desk study of demonstration and investment projects based on project reports and other sources of information was undertaken in 2004 and presented to the 43rd Meeting of the Executive Committee in June 2004 as document UNEP/OzL.Pro/ExCom/43/8. This was followed by 16 case studies of four sectors (flowers, vegetables and fruits, tobacco, and post-harvest) for which 13 countries were visited in 2004 and 2005. The final report was presented to the 46th Meeting of the Executive Committee in June 2005 as document UNEP/OzL.Pro/ExCom/46/7. MB issues and projects were also analyzed in a recent evaluation of cases of non-compliance or potential non-compliance aimed at identifying common causes of non-compliance. The report was presented to the 50th Meeting of the Executive Committee in November 2006 as document UNEP/OzL.Pro/ExCom/50/9, which had been preceded by a desk study presented to the 46th Meeting of the Executive Committee as document UNEP/OzL.Pro/ExCom/46/8.

13. In the course of those evaluations, the specific situation of low-volume-consuming (LVC) countries for MB was not analyzed. Such countries may have undertaken demonstration and/or investment projects, but more often have been helped through technical assistance and awareness raising activities aimed at preventing increases in consumption. This may occur in particular when certain agricultural sectors suddenly expand (i.e., intensive horticulture, floriculture). The potential for illegal trade with MB-LVC countries where regulation and controls for MB have generally not been put in place was also identified, an issue that was recently emphasised by decision XIX/12 and associated discussion from the Nineteenth Meeting of the Parties.

II. Evaluation issues analyzed and methodology used

14. The main evaluation issues analysed are the following:

(a) The criteria used when developing TAS and TRA projects in countries with zero or low consumption and sometimes investment projects (stakeholders, agricultural sectors in the country, regional factors, i.e., neighbouring countries that are or fwere high consumers, regional regulations, etc.).

(b) Whether those projects were well targeted, that is if they helped compliance and thus prevented consumption increase. Also whether the regional approach was adequate when adopted and whether individual projects or phase-out plans are better suited now although there are few of the latter for LVC countries.

(c) Early global and regional projects were mainly aimed at awareness raising and information diffusion. Presently, the regional CAP offices have largely assumed this role. The role of the CAP in finishing MB phase-out in LVC countries, alone or in coordination with the IAs and possibly others is discussed. The main objective of the CAP is to enable Article 5 countries to comply with the 2005,

2007 and 2010 control measures and to ensure long term sustainability of compliance. As stated in the CAP evaluation conducted in 2007. CAP has made a significant, even if not quantifiable, contribution to facilitating compliance in all regions through direct support to individual countries and activities related to the solution of common problems in the different regions (see document UNEP/OzL.Pro/ExCom/52/9). Its work was deemed as particularly important for LVC countries. Due to CAP's assistance, several countries in actual or potential non-compliance have returned to compliance and have accelerated the development and approval of legislation including licensing systems. Issues which are becoming increasingly important in MB-LVC countries at present include legislation, import controls and monitoring of MB use to avoid diversion of rising quantities imported for QPS to controlled uses.

(d) The key issue is the sustainability the phase-out achieved so far through the projects undertaken in MB-LVC countries, which covers the technical and economical feasibility of alternatives proposed and/or implemented through the projects as well as institutional and political (regulatory) factors.

(e) The lessons learned from those projects should provide recommendations for further activities and adjustments of the Fund's policies and guidelines in the light of compliance requirements, phase-out performance and project results observed so far.

15. During this evaluation, previous studies conducted by the Fund Secretariat in relation to MB as previously described were considered, as well as agreements made between the Executive Committee and the national governments at the time of project approval. Further, the Fund Secretariat's database of approved projects, which gives information on types of projects, MB sectors covered, expected impacts (MB tonnes to be eliminated), and other matters was also consulted. Annual project progress reports submitted by the IAs to the Executive Committee for on-going projects and final reports for completed projects, together with the Ozone Secretariat's database on MB production and consumption also formed part of the material used for this analysis.

16. The information above was complemented through interviews with staff of the IAs who are programme managers and members of the regional CAP teams dealing specifically with MB issues. Further interviews were conducted in the margins of the Nineteenth Meeting of the Parties in Montreal, 17 – 21 September 2007, in particular with ozone officers from some MB-LVC countries. Comments on the draft desk study were received from several ozone officers and other persons interviewed, UNDP, UNEP, and UNIDO and were taken into account for the final version.

III. Methyl bromide consumption trends and countries' compliance

17. The reduction schedule for Article 5 countries foresees a freeze of MB consumption based on the average of 1995-98 levels from 2002, followed by a 20 per cent reduction as of 2005 and total phase-out by 2015.

18. The great majority of countries complied with the freeze of 2002 and the 20 per cent reduction of 2005. According to latest reported consumption data only 5 Article 5 countries (Fiji,

Guatemala, Honduras, Libyan Arab Jamahiriya and Saudi Arabia) are in non-compliance with this reduction step of which two (Fiji and Saudi Arabia) are MB-LVC countries. Saudi Arabia had not reported 2006 consumption at the time of writing this report, and has not yet submitted an action plan for returning to compliance but requested a change in its baseline and is preparing, with the assistance from UNEP and UNIDO, a detailed report for the 40th Meeting of the Implementation Committee. In the case of Fiji, non-compliance occurred mainly because the baseline was set at a very low level (0.7 tonnes), possibly because a full reporting system and an appropriate regulatory framework was not in place when consumption data was gathered for the baseline years. A good Code of Practice to implement alternatives was also not available. In May of this year a solar heat treatment kiln was launched for conducting heat trials for the remaining non-QPS MB uses, mainly artefacts and precious museum related products. Through the project it has been possible to abide by the plan for returning to compliance, with compliance achieved in advance of the time line of the plan and full phase-out likely within a few years.

19. Ninety-four countries have baselines below 5 ODP tonnes and presently report consumption below that figure (see Table 1 in Annex III). Eighty-seven countries in this group reported zero consumption in 2005 or 2006. The remaining 7 countries reported consumption between 0.4 and 3.6 ODP tonnes. One country reporting a very low baseline (Saudi Arabia, 0.6 ODP tonnes) now shows a significantly higher consumption, is out of compliance, and has requested to change its baseline. Seven countries in this group have not ratified the Copenhagen Amendment. Two countries (Angola and Guinea) did not report a baseline figure but show zero consumption at present. Neither has ratified the Copenhagen Amendment.

20. Sixteen countries with baselines above 5 ODP tonnes have now reported consumption below this figure: fourteen have reported zero consumption, one – 0.3 ODP tonnes (the Former Yugoslav Republic of Macedonia), and one (Kyrgyzstan) has reported 2.7 ODP tonnes. Those countries are not considered within the scope of this evaluation since their high baselines allowed for different kinds of projects and activities in various instances. One country in this group (Ethiopia) has not ratified the Copenhagen Amendment.

21. In 2005, the distribution of small, medium and large MB consuming countries was as follows: 66 per cent reported 0 consumption, a further 15 per cent reported consumption of less than 15 ODP tonnes; 6 per cent between 15 and 100 tonnes, while 9 per cent consumed 101-500 tonnes, and only 4 per cent consumed more than 500 tonnes. Forty-seven or 33 per cent of former MB users have reported zero consumption in 2005.

22. The group of MB-LVC countries has changed over time as consumption is being phased out. A number of Article 5 countries changed from being small and medium-sized consumers to non-consumers, and some large consumers became medium-sized consumers in this four-year period.

IV. Projects implemented in MB-LVC countries

IV.1 Overview

23. Projects undertaken in MB-LVC countries can be classified into three main types: global, regional and individual, as shown in Annexes IV and V. Fifty-four projects in MB-LVC countries have been approved to date as illustrated in Table 1 below. Of those, 40 are now

completed and 14, of which 12 are individual, are still ongoing. The regional projects in Africa and one in Central America are close to completion. Details on projects are found in Annex IV and V.

Table 1

OVERVIEW OF APPROVED PROJECTS IN MB-LVC COUNTRIES BY CATEGORY (2007)

Category	Number of approved projects	Number of completed projects	ODP to be phased out	ODP phased out	Total funds approved	Funds disbursed
Individual	22	11	23.9	15.0	1,518,923	1,136,618
Individual (Agreed conditions)	2	1	13.3	13.8	450,032	423,388
Regional	30	28	1.5	1.0	2,927,202	2,709,918
Grand Total	**54**	**40**	**38.7**	**29.8**	**4,896,157**	**4,269,924**

24. Projects in MB-LVC countries have been approved since 1995, with numbers of approved projects peaking in 1998, 2001 and more recently in 2004. The latter is a natural consequence of big consumers having been addressed first. Regionally speaking, Africa has received approval for the largest number of projects (see Table 2). Approved total phase-out associated with all of those projects is 38.7 ODP tonnes, of which 29.8 have already been eliminated. It should be noted however, that a large proportion of such projects had no particular phase-out quantity approved, as they focused on awareness raising and demonstration activities (see overview tables in Annexes IV and V).

Table 2

OVERVIEW OF APPROVED PROJECTS IN MB-LVC COUNTRIES BY REGION

Region	Number of approved projects	Number of completed projects	ODP to be phased out	ODP phased out	Total funds approved	Funds disbursed
Africa	16	13	9.8	7.0	1,861,859	1,571,862
Asia and the Pacific	9	5	9.3	5.0	806,487	658,556
Europe	1	1	11.8	11.8	229,000	221,042
Global	14	14	0.0	0.0	864,123	864,123
Latin America and the Caribbean Caribbean	14	7	7.8	6.0	1,134,688	954,341
Grand Total	**54**	**40**	**38.7**	**29.8**	**4,896,157**	**4,269,924**

IV.2 Global projects

25. The global projects are TAS and TRA projects, mostly developed by UNEP in the early years (1994 – 1998). They share some general objectives such as developing policy measures and raising awareness to avoid MB consumption increase. Some projects in this category are in fact regional but the large majority are focused on information dissemination (manuals, videos, booklets) and training activities (workshops, meetings, seminars). Important publications that

have been extensively used by the national ozone units (NOUs), project directors, consultants and others, date from this time. They cover various topics including alternatives to MB for various sectors, case studies of their successful adoption, data reporting tools, developing training activities, policy packages and more.

26. The majority of global projects covering MB-LVC countries do not have an associated level of MB to be phased out. Within this category, activities in Africa have been more numerous, followed by Latin America and Asia. Interestingly, however, the largest reduction in MB consumption has taken place in Asia, according to reports available in December of 2005. At present, global projects have largely stopped as CAP offices mostly undertake those activities at the regional level.

IV.3 Regional Projects

27. In the early years (1995 – 1999) regional projects were mostly aimed at collecting information on MB usage by identifying sectors that would require phase-out. This was important for classifying or grouping countries with respect to their consumption, the agricultural sectors for which alternatives needed to be identified and the impact of phasing out MB. Such efforts were conducted for example by UNDP in Africa (data collection on MB use 1995 – 1998) and Latin America (1995 – 1996). They were instrumental for laying the basis for the demonstration and investment projects developed later helping MB-LVC countries to reach or sustain compliance with Montreal Protocol commitments, was one of the reasons justifying more recent regional projects. This objective has been achieved mainly due to the large majority of countries complying with the 20 per cent reduction applicable to MB consumption in 2005. Details on those projects can be found in Annex IV.

28. In particular, the regional project conducted by UNDP in Africa (as of 2002) contributed to achieving ratification of the Copenhagen Amendment by several participating countries and the 20 per cent reduction in all MB-LVC countries involved in the project. Further, UNDP reported achieving 85 per cent of the regulatory frameworks needed which, in view of the diversity of circumstances is remarkable. Initial surveys to determine consumption in African countries showed that many MB-LVC countries needed policy and technical assistance to overcome barriers to the elimination of MB and this gave appropriate direction to the project. CAP/Africa and the Ozone Secretariat also contributed to those results, and cooperation between them was instrumental in achieving them.

29. However, it seems that the main reason for grouping those countries together was their low MB consumption. This approach does not seem to have been entirely appropriate in all cases due to the diversity of factors that can influence successful phase-out such as the commitment and continuity of NOUs in each country, the involvement of the key stakeholders at the appropriate time, the capacity and willingness of the government to take up and continue the effort, and the agricultural sector involved together with its size and/or impact on economy and politics. All of those can lead to variable results amongst the countries included in the same regional project, sometimes complicating or delaying the general outcome. Strategic frameworks, pesticide regulations and their enforcement, issues related to possible illegal trade, and economic incentives are as important as technical assistance. The requirement to prevent illegal trade has now been formally established through decision XIX/12 of the Nineteenth Meeting of the Parties. Again, it has not always been possible to deal with those issues at the regional level and more attention to individual countries may be required. Some countries have

withdrawn from regional projects (for example, Mozambique) and others expressed reservations about the equipment provided, consultancies undertaken and other shortcomings (for example, Sudan).

30. Another interesting example in this category is provided by Moldova where two projects were recently approved (workshop, UNIDO 2006 and provision of training and awareness raising materials, 2000 – 2004, Canada). Reported consumption has been zero since 1999, but the project was conceived as a regional initiative for CEIT countries (Countries with Economies in Transition), to avoid MB consumption increase and sustain phase-out where it has already taken place.

IV.4 Individual projects

31. The main reasons justifying individual projects in MB-LVC countries include the planned expansion of a sector typically using MB (i.e., horticulture or turf used in golf courses in some Caribbean countries), or actually increased usage in such a sector even if quantities are still very low. Other reasons include a perceived risk of non-compliance or actual non-compliance in a country that was not included in a regional project or specific circumstances relating to that country. Many of those projects were recently approved as the IAs first addressed high consumers. A large percentage of those projects address post-harvest or soil uses where already proven alternatives are available. They do not need trials and validation of specific circumstances and have thus been implemented rapidly. A complete listing and details on those projects can be found in Annex V.

32. Other factors justifying approval of projects in MB-LVC countries (or groups of countries) included assistance in achieving ratification of the Copenhagen Amendment, achieving the 20 per cent reduction for 2005, organizing MB steering groups (including key stakeholders) and strengthening policy and regulatory frameworks.

33. A good example in this category is Bolivia, where a possible consumption increase was efficiently prevented with the aid of an investment project implemented by UNDP that facilitated the adoption of technically and economically feasible alternatives for potato and vegetable production. The fact that equipment and know-how are locally sourced has proven essential to the sustainability of those alternatives (steam + IPM). Another example is Ghana MB where consumption expanded after the baseline years due to development of a promising sector (melons). MB was completely phased out through a demonstration project implemented by UNDP. In spite of the low quantity consumed, the project was very comprehensive, including a policy package, training through farmer field schools and trials in different locations around the country that were later also transferred to other crops.

34. Further interesting examples of individual projects are provided by Nicaragua, where a TAS project implemented by UNIDO helped raise awareness, especially with the flower and horticulture sectors which are showing expansion. The project has also included a study tour of the UNDP investment project in Costa Rica (which is not an MB-LVC country) to observe alternatives adopted by flower growers in that country. The same model was followed in the UNIDO TAS project carried out in El Salvador.

35. Another example worth mentioning is Botswana, which fell into non-compliance with the 2002 freeze and where project implementation suffered serious delays due to difficulties in

finding a suitable sub-contractor. Once this hurdle had been solved a very successful outcome followed, with complete phase-out achieved in 2003. Quick and efficient adoption of alternatives for tomato and cucurbit production took place (solarisation + IPM, biocontrols and soil-less production). In Jamaica an initial project (UNIDO) was cancelled due to a change in the crop originally considered in the request (stored tobacco which later was changed to rice). A new project implemented by a bilateral agency (Canada) to introduce alternatives for commodities and flour mills is presently ongoing with reportedly good results. A similar project is under development in Trinidad and Tobago, also by Canada.

36. Finally, in several countries workshops and other awareness raising activities have been organized. Oman, Pakistan and Algeria fall within this category and show positive results. Delays or problems reported for individual projects most often refer to difficulties in finding a suitable counterpart institution, communication problems with the NOU and slowness of response.

V. Sustainability issues

37. Sustainability of phase-out involves not only technical factors (suitability of alternatives selected to replace MB use for the specific circumstances of the crop or commodity in question), but also economic considerations (cost/benefit relation as compared to MB), regulatory controls on MB imports and consumption, and political factors. Those can all influence the success of phase-out and its sustainability over time.

38. Except for early TAS and TRA projects, most regional and individual projects address technical and regulatory issues. The African regional project for example, involves comprehensive policy work in all participating countries, as did the regional project in Central America. Most individual projects that are presently ongoing include assistance on policy development, or at minimum are approved with the understanding that no more funding will be provided from the Multilateral Fund for the phase-out of controlled uses of methyl bromide in that country. Many training projects include work with customs departments, to set forth legislation specifically concerning MB, and train officials to detect and prevent possible illegal imports of this fumigant. Legal frameworks are important regardless of the level of consumption, as a country without legislation for MB imports could serve as an illegal source of this chemical.

39. Very few project reports include economic analyses to evaluate the feasibility of alternatives to MB. Although such an analysis normally lies outside the scope of TAS projects, it is nevertheless an important issue when it comes to convincing users of the long-term suitability of alternatives. Addressing this issue through the preparation of case studies on alternatives for specific MB uses, regions and sectors could be a useful contribution to this end and could be conducted by ongoing MB phase-out projects and the regional CAP MB officers.

40. The possibility of diverting MB imported for QPS uses to controlled uses does not seem to be clearly addressed in most countries. However, increased QPS usage mainly as a consequence of ISPM15 was frequently mentioned during interviews. Recently, it has become apparent that some MB-LVC and zero consuming countries are under pressure to recommence importation of MB because of an almost worldwide introduction of ISPM15 requirements (a QPS treatment). However, some zero consumers (e.g., Jamaica, Bangladesh) have avoided this through deployment of locally made heat treatment systems as alternatives to MB.

VI. Conclusions and recommendations

41. MB-LVC projects often comprise heterogeneous, small-scale activities with unclear causal links to impact, which are more difficult to evaluate than samples of relatively homogeneous investment projects. Nevertheless, MB-LVC projects cumulatively represent around US $12 million, which makes them worth a closer look.

42. MB-LVC projects while being heterogeneous with varying objectives and scopes have played a very important role in the phase-out of MB achieved to date, particularly in MB-LVC countries. Their main contribution has been in raising awareness about MB phase-out, disseminating information on alternatives and notably in the early years of the Protocol, in laying the basis and marking the path for projects undertaken at later stages, both in low and high volume consuming countries.

43. The regional approach that groups countries according to levels of MB consumption, such as was used for MB-LVC countries in Africa, seems difficult to implement, due to the diversity of the countries involved. Further, actions needed in one region may well involve both low and high consumers. However, initiatives such as regional trade agreements, harmonized legislation, training of customs officials, documenting academic and research efforts relating to MB alternatives, sharing experience and information are useful. Countries involved in those actions would not necessarily all be MB-LVC countries.

44. In spite of the above, certain regional or sub-regional activities still seem appropriate for initiatives such as information sharing and dissemination, training efforts and awareness raising activities. Specific areas where work is much needed include tracking MB use once it enters a country (to avoid diversion of QPS intended MB to controlled uses), preventing illegal trade, and consolidating regional information on activities undertaken. Consolidating case studies on alternatives to MB suited to particular regions and sectors was suggested on several occasions. Technical workshops at the regional level, to share experiences in the identification, implementation and adoption of alternatives for particular sectors (i.e., flowers, tomatoes, strawberries) are still needed. Such activities could be implemented by regional CAP officers, coordinated with activities already undertaken by the IAs in order to avoid overlaps and friction, which have been reported to exist in some instances.

45. On the other hand, actual phase-out of MB in countries where consumption is still present should continue to be managed by the IAs on an individual basis, in coordination with CAP activities. Thus, and in view of the reasons stated in the paragraph above, interagency cooperation should be encouraged. Specific work plans between the regional CAP office and the IA involved might be needed to address such cooperation efficiently.

46. In a number of the LVC countries, MB legislation, stronger import controls and monitoring of MB use to avoid diversion of rising quantities imported for QPS to controlled uses are issues that were raised as needing particular attention (an increase in MB usage for QPS purposes has been reported among others in the MBTOC 2006 Assessment Report and has been linked to ISPM 15 in particular). QPS uses of MB were raised in relation to meeting quarantine requirements such as ISPM 15, which were sometimes contrary to national MB regulations (i.e., national ban on MB use) and could place LVC countries in possible non-compliance in the future. Specific interaction with the International Plant Protection Convention (IPPC) should be encouraged. If only one particular formulation of MB would be authorized for QPS use, different

to those permitted for soil or post-harvest applications, monitoring of MB use for QPS purposes would be made easier. MB importers could be required to submit a list of customers and destination of use. While MB use in QPS is not controlled under the Montreal Protocol a working group or task force may be set up to further analyze such issues. Consultation with QPS authorities with the assistance of the CAP could be initiated with a view to looking at alternatives to MB for QPS uses. Further, improving linkages between local universities and/or agricultural research institutions and key stakeholders, particularly growers is essential to reinforce technology transfer and sustain phase-out.

47. A number of interviews were conducted during the Nineteenth Meeting of the Parties with ozone officers from different countries, CAP officers, one project consultant and representatives of the IAs, as well as by phone and e-mail (see Annex I). Such interviews were very fruitful and provided important insights for this study. They also revealed that the circumstances in each country vary widely as different sectors, stakeholders, legislative and political issues are involved. In view of this, information about experiences made in a relatively large number of countries need to be collected.

48. Discussions in regional network meetings combined with field visits to selected countries are suggested. Such a study will not only help to confirm that recommendations in the desk study are well targeted, but will also generate lessons learned on the best ways forward at a time when most remaining projects proposed are likely to be in MB-LVC.

VII. Action expected by the Executive Committee

49. The Executive Committee might wish to note the information provided in the extended desk study on low volume methyl bromide projects in document UNEP/OzL.Pro/ExCom/53/8.

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Annex I

INTERVIEW SUMMARIES

1. Asia/Pacific – Ms. Cecilia Mercado (Multilateral Fund Secretariat, formerly CAP MB Officer for that region)

In general terms, methyl bromide (MB) consumption in Asia occurred mainly for post-harvest uses and not as extensively in soils. Alternatives for post-harvest uses of MB are generally available and are being implemented and adopted (i.e., stored grain). The only low-volume-consuming (LVC) country in Asia is Fiji at present, and through the project implemented by UNDP they are on their way back into compliance and develop an appropriate strategy for adoption of alternatives. Some work on quarantine and pre-shipment (QPS), specifically heat as an alternative for ISPM 15 was conducted with excellent results by some countries in the region (i.e., Bangladesh).

Region-specific information and awareness raising activities are still much needed. The Compliance Assistance Programme (CAP) developed such activities in cooperation with UNDP very successfully.

2. Africa Regional Project – Ms. Dominique Kayser (Project Officer, UNDP)

The regional project brought together a group of MB-LVC countries with different conditions and needs with respect to Montreal Protocol commitments. Those included countries with no consumption, countries with no information on consumption, countries needing to ratify the Copenhagen Amendment, countries with low consumption needing to phase-out (one country could fall into various categories at the same time). MB users signed a commitment to achieve the 20 per cent reduction in 2005 and non-users accepted not to request further funding in the future for MB related issues. Although the project has realized important achievements in terms of facilitating compliance for the participating countries there were also difficulties, i.e., 7 countries have not yet signed the Copenhagen Amendment. Lessons learned through this project are summarized below:

(a) It was erroneously assumed that countries with zero MB consumption would have a lot in common.

(b) A number of factors influence success of a project and make management from a group or regional perspective difficult. Those include for example a committed National Ozone Unit (NOU); involving the appropriate stakeholders at the right time; the capacity and willingness of the government to comply and set forth the effort. The main factor is not necessarily the agricultural sector involved or its size. Some countries with larger resources and more infrastructures achieve fewer results than others with less favourable conditions.

(c) Regional efforts are difficult to coordinate. Some countries participating in the project have expressed that they would much rather work independently

(d) Other efforts, not specifically dealing with Montreal Protocol issues but still with issues that are nevertheless related are largely ignored. For example the SEARCH

initiative (South Eastern Commission for Harmonization of Pest Regulation) involves several large users (even South Africa), works at high government level and enjoys credibility. Interaction with such programmes or efforts could be very useful. Harmonization with POP projects and others is another possibility worth considering.

(e) Strategic frameworks, pesticide regulations, legal enforcement and even economic incentives are as important as technical assistance as such. Those activities probably fall more within UNEP's TORs than UNDP's. As a result, there should be more CAP involvement in Africa and perhaps the answer will be a series of small projects to help finalize phase-out and supervise sustainability.

3. **Bolivia – Mr. Alex Suarez, National Ozone Coordinator**

MB consumption has been completely phased-out through the UNDP project. Usage was for potato seed, tobacco nurseries, vegetables, flowers and strawberries. The project was delayed, but due to the political situation and later to a fire, which destroyed the offices of the ozone unit. Collaboration with UNDP was very successful. The key to the sustainability of the alternatives adopted is the local sourcing of substrates and steaming equipment. This not only influences the cost of alternatives (for example, a local mobile boiler with a capacity of generating 350 lbs/hour of steam, sufficient for treating about 3-4 m^3 of substrates in three hours costs US $12,000 with all fittings included) but ensures that maintenance and technical assistance are readily available. Additional support in the form of awareness raising activities, information materials and dissemination was also very important.

MB is presently banned in Bolivia for all controlled uses but there is concern over on-going lobbying efforts encouraging MB use in the country. Among QPS uses, treatment of cotton before exporting to Peru is the most important.

4. **Caribbean countries – Mr. José de Mesa, CAP MB Officer for Latin America and the Caribbean**

Caribbean countries are mostly very little or no MB. The main issue in Caribbean islands where luxury resorts are increasing is maintenance of golf courses, for which MB is the traditional fumigant of choice. Usage is sporadic – about once every 8 to 9 years, when the turf needs to be renovated, so there is a risk of increased MB usage and resulting non-compliance when the time for renovation comes. Presently, only 3 countries in the Caribbean have MB projects and total phase-out is envisioned for 2008. Things have proceeded smoothly and no real problems have occurred except for communication difficulties with some countries.

A sub-regional approach in this case seems appropriate when considering awareness raising or information transfer activities, in view of the international character of potential MB using sectors involved and the use of English in most islands.

5. **Fiji – Dr. Jonathan Banks, Consultant for the UNDP project**

MB use in Fiji was for flour mills, ship fumigation, some grain storage and for artefacts. The country ran into non-compliance mainly because the baseline had been set at a very low level (0.7 tonnes), possibly because a full reporting system and appropriate regulatory framework were

not in place when data was gathered for consumption in the baseline years. A good Code of Practice to implement alternatives was also not available. Through the project it has been possible to abide by the plan for returning to compliance, with compliance achieved in advance of the time line on the plan and full phase out likely within a few years.

Two flour mills are being addressed through the project – an old one which used MB in the past and needed logistical and structural changes in order to adopt alternatives successfully, and a new one, better suited for heat + IPM which is the alternative of choice. Grain storage use has been replaced with phosphine, and hydrogen cyanide has been reintroduced for ship fumigation. In May this year a solar heat treatment Kiln was launched for conducting heat trials to replace remaining controlled uses such as artifacts and precious museum related products.

Information dissemination through workshops, training case studies and other similar activities still seem very important to assist and maintain compliance and could be handled at a regional or sub-regional level.

6. **Ghana – Mr. Emmanuel Osae-Quansah, Deputy Director Ozone**

MB consumption expanded in Ghana after the baseline years due to expansion of a promising sector (melons). The MB importer approached the NOU and indicated that he wanted to bring in larger quantities of the fumigant as results for controlling diseases of melons were excellent. Now MB has been completely phased out through a demonstration project undertaken together with UNDP. Trials were successful in different locations around the country and were also transferred to other crops. Farmer field schools and workshops were conducted successfully. Assistance from UNDP in establishing an appropriate regulatory framework was instrumental in achieving phase-out.

7. **Mozambique – Mr. Leonardo Manuel Sulila, Ozone Officer**

Mozambique is only using MB in the tobacco sector at present but this requires attention as large growers have moved from nearby Zimbabwe and consumption could increase (those are flower and tobacco growers but MB is not being used in flower production). QPS uses are increasing due to ISPM 15. Mozambique has some stocks of MB that have expired and they require assistance with their disposal.

With respect to the regional African project, they moved out because the funds allotted to them (US $8,000) were not sufficient to cover even minimal expenses associated with consultancy, awareness activities and others. Further, involvement from different agencies (UNDP, FAO, the Japanese Government) made things very confusing. UNEP/CAP assisted Mozambique with funds in 2005/ 2006 to conduct a survey on national MB consumption.

However, they still require help with MB issues, alternatives, awareness raising activities and others and are very willing to start a new project. They are nevertheless aware that after signing the regional project they are not eligible for further funding. Legislation (use permits) is in place for MB and the country wants to ban this fumigant entirely.

8. **Paraguay – Mr. José de Mesa, MB Officer CAP – Latin America and the Caribbean**

Consumption in Paraguay was very low (baseline 0.9) and now is imported as zero. Small uses included horticulture and grain storage. Due to its strategic location as a MB-LVC country surrounded by larger users (i.e., Argentina, Brazil) Paraguay needed a strong regulatory framework and adequate training of customs officials to prevent increase of imports and possibly becoming a target for illegal trade. The project is undertaken with Spain as bilateral agency in coordination with CAP. Results are very encouraging at present; MB use was reported as zero in 2005 and 2006 even for QPS.

9. **Sudan – Dr. Abdul Ghani Hassan, National Ozone Coordinator**

Although the country consumed large quantities of MB in the 70's and 80's, adoption of alternatives started in the 1990's even before activities related to the Montreal Protocol started. Usage was mainly in stored grains and passed from 100 tonnes to an actual 1.3 tonnes in 2006. The baseline is 3 tonnes. Alternatives for soil fumigation are in place.

They took part in the African regional project; the assistance was for compliance with 20 per cent reduction. Activities were undertaken including work with a consultant but the experience was negative: equipment acquired through the project was inadequate (although money provided to purchase it was sufficient) and there were communication difficulties.

Swaziland, the Democratic Republic of the Congo and the Congo, and Nigeria have had problems with the regional project as well.

The "Regional workshop on the experiences of using methyl bromide alternatives evaluated under the Multilateral Fund" organized in 2004 proved to be extremely useful.

10. **Sri-Lanka – Dr. W.L. Sumathipala, Director, NOU**

Remaining MB use is Sri-Lanka is for QPS only, but quantities are increasing. Their baseline for controlled uses is 4.1 ODP tonnes; MB was used for tea, cut flowers and horticulture in the past (soil uses) and also for grain storage. Some amounts were used for sterilizing coconut coir (used as a substrate in floriculture and horticulture production). Maximum usage reached 5.8ODP tonnes.

Two projects were conducted by UNDP, one for tea nurseries and the other for remaining uses. Many educational activities have taken place, regulatory issues have been appropriately addressed and they have confidence that the phase-out achieved is sustainable.

They still use canisters for QPS and although their tracking system is good – they are able to follow up on imports and use – there is concern that MB imported for QPS use may in the end be diverted to controlled uses.

11. **Meeting with implementing agency (IA) representatives and the Multilateral Fund Secretariat (MFS)**

Mr. Eduardo Ganem (MFS), Mr. Jeremy Bayze (UNEP Africa), Ms. Cecilia Mercado (MFS), formerly CAP Asia/Pacific), Mr. Guillermo Castellá (UNIDO), Dr. Ansgar Eussner (MFS), Ms. Marta Pizano (consultant)

Although the central focus of the meeting was the regional project in Africa and opportunities for interagency cooperation in the near future, IA officials provided further information based on a questionnaire sent to them before the Meeting of the Parties (for a full list of questions see Annex II). Extensive background information on the progress and development of the African regional project was provided before this meeting by UNDP as presented above.

UNDP will no longer continue managing the regional project in Africa and will submit a final report by the end of the year. The big lesson learned from this experience is that the regional approach did not work well. A strategic framework for interagency cooperation in Africa is being considered in order to avoid overlap between UNDP, UNIDO and UNEP's CAP (this was identified as one of the problems affecting the project). CAP should undertake regional and sub-regional efforts especially where information dissemination and awareness raising are concerned. Specific, actual needs of countries where work is still needed should be addressed individually according to circumstances. UNIDO expressed willingness to conduct such projects. Concern was expressed over countries where communication with NOUs is impossible and countries that have not yet signed the Copenhagen Amendment.

12. **CAP Latin America – Mr. José de Mesa**
CAP Asia/Pacific - Mr. Balaji Natarajan
CAP Africa – Ms. Florence Asher

CAP officers were interviewed by e-mail. Following is a summary of their responses (for a complete list of questions please see Annex II).

12.1 On criteria used when developing technical assistance (TAS) or training (TRA) projects in countries with zero or low (< 5 t) consumption:

(a) Growth in MB use (potential or real) due to an expanding sector and the expected impact on country's achievement of the 20 per cent reduction targets are among the main reasons for a Party to contact an IA and request help. A risk of new consumption starting when foreign investors come to the country and continued sales pressure from MB suppliers.

(b) A need to increase awareness among stakeholders, due to Parties joining the Protocol or ratifying amendments recently. Detection of illegal trade from neighboring countries.

(c) Consumption situation was examined even in cases where QPS uses of MB exist and support project activities, if necessary, were designed. Some countries have made specific reference to ISPM 15.

(d) The need to strengthen weak legislation (regulatory frameworks) with respect to MB.

12.2 On the contribution of MB-LVC projects to compliance and phase-out, including preventing consumption increase, their approach and coverage and regulatory measures:

(a) Although a case by case approach per country is more accurate, in general terms MB-LVC projects have helped maintaining and returning to compliance. Licensing systems implemented have improved data reporting substantially and projects have made it possible to characterize consumption more accurately. Some countries have indicated that if MB availability and price are favorable, there is a risk of restarting MB consumption.

(b) Many countries have general ODS regulations that include MB but few have legislation referring specifically to MB. Difficulties in tracking specific MB imports and usage persist.

(c) Regulations are a key factor in MB phase-out and here involvement of multiple stakeholders becomes very relevant to understand the implications of MB use and compliance requirements. Regulations are mostly local.

12.3 On lessons learned with regard to activities undertaken for TAS, implementation modalities and management approaches for low consumers:

(a) There is still a need for sustained efforts to phase out MB and ensure that dependence of the country on MB is completely eliminated (this requires a combination of end user training, institutional cooperation among MB users and monitoring agencies, implementing of regulations, etc.).

(b) Close monitoring of MB particularly relating to QPS uses is needed at this time, so that no diversion to controlled uses happens.

(c) Constant interaction with the NOUs to keep them informed on alternatives to MB is essential. A frequent problem in MB-LVC countries is that NOUs know very little – if anything – about MB as they have never dealt with it.

(d) The successful implementation of alternatives calls for close cooperation with customs, agriculture and quarantine and fumigation agencies. Project implementation duration is primarily related to technology choice and correct dissemination and adoption.

(e) Sharing experiences and lessons learned at the regional level (at workshops for example) are extremely useful for awareness raising and sustained phase-out. Training is essential.

(f) A wide range of feasible and effective MB alternatives were identified but sometimes the sourcing of local materials and supplies, to replace the imported (expensive) substitutes is difficult.

(g) Some countries undergoing internal difficulties (for example recent wars in Africa) still need surveys to determine and characterize MB consumption.

12.4 On actions needed for assuring the sustainability of phase-out (or maintaining zero consumption) in MB-LVC countries:

(a) Regulatory controls for and banning of MB imports for various uses; increasing awareness about MB alternatives; demonstrations on use of such alternatives (particularly for the post-harvest sector).

(b) Greater institutional coordination on monitoring and reporting on MB supply and use. Regional training programmes/capacity building initiatives on use of alternatives.

(c) Cooperation between CAP and IAs is useful and beneficial. It would be useful to establish a strategic cooperation framework in this phase to assist countries in MB phase-out in cooperation with IAs. This would help sustaining MB phase-out beyond 2015 besides achieving zero consumption by 2015.

12.5 On present and future efforts for information dissemination and awareness raising activities at the regional/ global level:

(a) Because LVC projects are small a regional approach is justified. Further, regions often pose unique MB requirements. The regional approach is more appropriate than the individual country approach primarily in terms of cost effectiveness and ease of technology transfer. There are several examples (i.e., in Asia/Pacific) of successful regional activities.

(b) It seems worthwhile to encourage the creation of sub-regions that are “MB-free” or reaching consensus on a specific (advanced) calendar to phase-out.

(c) Updated information materials such as a compilation of case studies featuring MB phase-out in different sectors and circumstances would be very valuable.

(d) Awareness raising activities and MB monitoring efforts are still much needed.

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Annex II

QUESTIONNAIRE ON METHYL BROMIDE LOW-VOLUME-CONSUMING COUNTRIES AND PROJECTS SENT TO IMPLEMENTING AGENCIES AND CAP MB OFFICERS

1. What criteria were used when developing TAS or TRA projects in countries with zero or low (< 5 t) consumption? (e.g., stakeholders and/or agricultural sectors involved, regional factors such as neighbouring countries that are or were high consumers, regional regulations, etc.).

2. Have those projects helped compliance? Did they prevent consumption increase? Were the regional approach and coverage adequate? Were legislative (regulatory) measures developed and implemented and if yes, are they local (individual for a country) or regional? Have they helped to enable compliance and/or phase-out?

3. What are the lessons learned with regard to activities undertaken for TAS, implementation modalities and management approaches for low consumers? Were there delays and if yes, what are the main reasons? What problems were encountered when undertaking those projects?

4. What measures were undertaken to ensure sustainability of phase-out (or zero consumption) in MB-LVC countries? For example, technical and economical feasibility of alternatives proposed and/or implemented through the projects as well as institutional and political factors (agreements, legislation).

5. Global and regional projects developed in the early days (1995 – 1998) have largely stopped. Should information dissemination and awareness raising activities at the regional/ global level be continued by CAP only? In conjunction with implementing agencies? Is the regional approach appropriate or is individual work more suited for this stage of the (final) MB phase-out process?

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Annex III

Table 1

MB BASELINE AND LATEST ODP CONSUMPTION LESS THAN 5 ODP TONNES

Country	Status	Source	Year of Latest Consumption	Baseline	Latest Consumption
Afghanistan	Non-LVC	A7	2006	0.0	0.0
Albania	LVC	A7	2006	0.0	0.0
Algeria	Non-LVC	A7	2006	4.7	3.6
Antigua and Barbuda	LVC	A7	2006	0.0	0.0
Armenia	LVC	A7	2006	0.0	0.0
Bahamas	LVC	A7	2006	0.1	0.0
Bahrain	LVC	A7	2005	0.0	0.0
Bangladesh	Non-LVC	A7	2006	0.0	0.0
Barbados	LVC	A7	2006	0.1	0.0
Belize	LVC	A7	2006	0.0	0.0
Benin	LVC	A7	2005	0.0	0.0
Bhutan	LVC	CP	2006	0.0	0.0
Bolivia	LVC	A7	2006	0.6	0.0
Bosnia and Herzegovina	LVC	A7	2006	3.5	0.0
Botswana	LVC	A7	2006	0.1	0.0
Brunei Darussalam	LVC	A7	2006	0.0	0.0
Burkina Faso	LVC	A7	2006	0.0	0.0
Burundi	LVC	A7	2005	0.0	0.0
Cambodia	LVC	A7	2006	0.0	0.0
Cape Verde	LVC	A7	2005	0.0	0.0
Central African Republic	LVC	A7	2005	0.0	0.0
Chad	LVC	CP	2006	0.0	0.0
Comoros	LVC	A7	2006	0.0	0.0
Congo	LVC	CP	2006	0.9	0.0
Cook Islands	LVC	A7	2006	0.0	0.0
Democratic Republic of the Congo	Non-LVC	A7	2006	1.4	0.1
Djibouti	LVC	CP	2006	0.0	0.0
Dominica	LVC	A7	2006	0.0	0.0
El Salvador	LVC	A7	2006	0.0	0.0
Equatorial Guinea	LVC	A7	1998	0.0	0.0
Eritrea	LVC	A7	2005	0.5	0.0
Fiji	LVC	A7	2006	0.7	0.7
Gabon	LVC	A7	2006	0.0	0.0
Gambia	LVC	A7	2006	0.0	0.0
Ghana	LVC	A7	2006	0.0	0.0
Grenada	LVC	A7	2006	0.0	0.0
Guinea Bissau	LVC	A7	2006	0.0	0.0
Guyana	LVC	A7	2006	1.4	0.0
Haiti	LVC	A7	2006	0.0	0.0
India	Non-LVC	A7	2006	0.0	0.0
Jamaica	LVC	A7	2006	4.9	1.8
Kiribati	LVC	CP	2006	0.0	0.0
Kuwait	Non-LVC	A7	2006	0.0	0.0
Lao People's Democratic Republic	LVC	A7	2006	0.0	0.0
Lesotho	LVC	A7	2006	0.1	0.0
Liberia	LVC	A7	2006	0.0	0.0
Madagascar	LVC	A7	2006	2.6	0.0

Country	Status	Source	Year of Latest Consumption	Baseline	Latest Consumption
Maldives	LVC	A7	2006	0.0	0.0
Mali	LVC	A7	2006	0.0	0.0
Marshall Islands	LVC	A7	2006	0.0	0.0
Mauritania	LVC	A7	2006	0.0	0.0
Mauritius	LVC	A7	2006	0.1	0.0
Micronesia (Federated States of)	LVC	A7	2005	0.0	0.0
Mongolia	LVC	A7	2006	0.0	0.0
Montenegro	LVC	A7	2006	0.0	0.0
Mozambique	LVC	A7	2005	3.4	0.9
Myanmar	LVC	A7	2006	3.4	0.0
Namibia	LVC	A7	2006	0.8	0.0
Nauru	LVC	A7	2006	0.0	0.0
Nepal	LVC	A7	2006	0.0	0.0
Nicaragua	LVC	A7	2006	0.4	0.0
Niger	LVC	A7	2006	0.0	0.0
Nigeria	Non-LVC	A7	2006	2.8	0.0
Niue	LVC	A7	2006	0.0	0.0
Oman	LVC	A7	2006	1.0	0.0
Palau	LVC	CP	2006	0.0	0.0
Panama	Non-LVC	CP	2006	0.0	0.0
Papua New Guinea	LVC	A7	2006	0.3	0.0
Paraguay	LVC	A7	2006	0.9	0.0
Peru	LVC	A7	2006	1.3	0.0
Qatar	LVC	A7	2006	0.0	0.0
Republic of Korea	Non-LVC	A7	2005	0.0	0.0
Rwanda	LVC	CP	2006	0.0	0.0
Saint Kitts and Nevis	LVC	A7	2006	0.3	0.0
Saint Lucia	LVC	A7	2006	0.0	0.0
Saint Vincent and the Grenadines	LVC	A7	2006	0.0	0.0
Samoa	LVC	A7	2006	0.0	0.0
Sao Tome and Principe	LVC	A7	2006	0.0	0.0
Seychelles	LVC	A7	2006	0.0	0.0
Sierra Leone	LVC	A7	2006	2.6	0.0
Singapore	LVC	A7	2006	5.0	1.2
Solomon Islands	LVC	CP	2006	0.0	0.0
Somalia	LVC	A7	2006	0.5	0.0
Sri Lanka	Non-LVC	A7	2006	4.1	0.0
Sudan	Non-LVC	A7	2006	3.0	1.8
Suriname	LVC	A7	2006	0.0	0.0
Swaziland	LVC	A7	2006	0.6	0.0
Togo	LVC	A7	2006	0.0	0.0
Tonga	LVC	A7	2005	0.2	0.0
Trinidad and Tobago	LVC	A7	2006	1.7	0.4
Turkmenistan	LVC	A7	2006	0.0	0.0
Tuvalu	LVC	A7	2005	0.0	0.0
United Republic of Tanzania	LVC	A7	2006	0.0	0.0
Vanuatu	LVC	A7	2005	0.2	0.0

Table 2

MB BASELINE LESS THAN 5 ODP TONNES AND LATEST CONSUMPTION MORE THAN 5 ODP TONNES

Country	Status	Source	Year of latest consumption	Baseline	Latest consumption
Saudi Arabia	Non-LVC	A7	2005	0.6	27.6

Table 3

NO MB BASELINE REPORTED AND LATEST CONSUMPTION LESS THAN 5 ODP TONNES

Country	Status	Source	Year of latest consumption	Baseline	Latest consumption
Angola	LVC	CP	2006	NDR	0.0
Guinea	LVC	A7	2005	NDR	0.0

Table 4

MB BASELINE MORE THAN 5 ODP TONNES AND LATEST CONSUMPTION LESS THAN 5 ODP TONNES

Country	Status	Source	Year of latest consumption	Baseline	Latest consumption
Colombia	Non-LVC	A7	2006	110.1	0.0
Cote d'Ivoire	LVC	A7	2006	8.1	0.0
Croatia	LVC	A7	2006	15.7	0.0
Democratic People's Republic of Korea	Non-LVC	CP	2006	30.0	0.0
Ethiopia	LVC	CP	2006	15.6	0.0
Kyrgyzstan	LVC	A7	2006	14.2	2.7
Malawi	LVC	A7	2006	112.7	0.0
Pakistan	Non-LVC	A7	2006	14.0	0.0
Republic of Moldova	LVC	A7	2006	7.0	0.0
Romania	Non-LVC	A7	2005	111.5	0.0
Senegal	LVC	A7	2006	53.2	0.0
Serbia	Non-LVC	A7	2006	8.3	0.0
The Former Yugoslav Republic of Macedonia	Non-LVC	A7	2006	12.2	-0.3
Uganda	LVC	A7	2006	6.3	0.0
United Arab Emirates	Non-LVC	A7	2005	7.2	0.0
Venezuela (Bolivarian Republic of)	Non-LVC	A7	2005	10.3	0.0

Table 5

ARTICLE 5 COUNTRIES THAT HAVE NOT RATIFIED THE COPENHAGEN AMENDMENT

Country	Status	Source	Year of latest consumption	Baseline	Latest consumption	Ratified Copenhagen Amendment	Category
Brunei Darussalam	LVC	A7	2006	0.0	0.0	No	Baseline & Latest Consumption < 5
Central African Republic	LVC	A7	2005	0.0	0.0	No	Baseline & Latest Consumption < 5
Gambia	LVC	A7	2006	0.0	0.0	No	Baseline & Latest Consumption < 5
Lesotho	LVC	A7	2006	0.1	0.0	No	Baseline & Latest Consumption < 5
Myanmar	LVC	A7	2006	3.4	0.0	No	Baseline & Latest Consumption < 5
Nepal	LVC	A7	2006	0.0	0.0	No	Baseline & Latest Consumption < 5
Turkmenistan	LVC	A7	2006	0.0	0.0	No	Baseline & Latest Consumption < 5
Ethiopia	LVC	CP	2006	15.6	0.0	No	Baseline > 5 - Latest Consumption < 5
Angola	LVC	CP	2006	NDR	0.0	No	No Baseline - Latest Consumption < 5
Guinea	LVC	A7	2005	NDR	0.0	No	No Baseline - Latest Consumption < 5

OVERVIEW OF GLOBAL AND REGIONAL PROJECTS FOR MB PHASE-OUT

Code	Agency	Status	Type	Sector	Project Title	ODP To Be Phased Out	ODP Phased Out	Date Approved	Approved Planned Date of Completion	Date Completed	Planned Date of Completion for Ongoing Projects	Funds Approved	Funds Returned	Funds Disbursed	PCRs Received
GLO/FUM/19/ TAS/93	UNEP	FIN	TAS	FUM	Produce a video on methyl bromide alternatives	0.0	0.0	May-96	Dec-96	Mar-99		70,000	0	70,000	X
GLO/FUM/19/ TRA/94	UNEP	FIN	TRA	FUM	Develop a technical brochure on methyl bromide	0.0	0.0	May-96	Dec-96	Dec-98		25,000	0	25,000	X
GLO/FUM/23/ TAS/150	UNEP	FIN	TAS	FUM	Technical sourcebook of methyl bromide alternatives	0.0	0.0	Nov-97	Nov-98	Dec-01		100,000	0	100,000	X
GLO/FUM/23/ TAS/151	UNEP	FIN	TAS	FUM	Handbook for NOUs reducing reliance on methyl bromide	0.0	0.0	Nov-97	Nov-98	Feb-99		100,000	0	100,000	X
GLO/FUM/24/ TAS/155	UNEP	FIN	TAS	FUM	Compilation of legislations for regulatory authorities from Article 5 countries that discourage methyl bromide use and promote alternatives	0.0	0.0	Mar-98	Jun-99	Dec-99		50,000	0	50,000	X
GLO/FUM/24/ TAS/156	UNEP	FIN	TAS	FUM	Technical and institutional resources for methyl bromide alternatives projects	0.0	0.0	Mar-98	Oct-98	Sep-99		30,000	0	30,000	X
GLO/FUM/24/ TAS/157	UNEP	FIN	TAS	FUM	Methyl bromide information kit	0.0	0.0	Mar-98	Mar-99	Dec-98		60,000	0	60,000	X
GLO/FUM/24/ TAS/160	UNEP	FIN	TAS	FUM	Compilation of case studies on commercial, low-impact methyl bromide alternatives successfully implemented	0.0	0.0	Mar-98	Mar-99	Sep-00		40,000	0	40,000	X
GLO/FUM/25/ TRA/161	Germa ny	FIN	TRA	FUM	Travel expenses for participants to attend a regional workshop on methyl bromide alternatives for North African countries (Algeria, Egypt, Jordan, Lebanon, Morocco, Syria, Tunisia)	0.0	0.0	Jul-98	Jun-99	Jun-98		33,000	0	33,000	X
GLO/FUM/27/ TRA/178	UNEP	FIN	TRA	FUM	Development of training manuals for extension workers	0.0	0.0	Mar-99	Oct-01	Dec-01		50,000	-4,000	46,000	X
GLO/FUM/27/ TRA/179	UNEP	FIN	TRA	FUM	National farmer's training and establishment of Farmer's Field School (FFS)	0.0	0.0	Mar-99	Apr-01	Dec-01		60,000	-4,000	56,000	X
GLO/FUM/29/ TAS/187	UNEP	FIN	TAS	FUM	Preparation of how-to crop manual on adopting methyl bromide alternatives for cut flowers	0.0	0.0	Nov-99	Nov-00	Dec-01		20,000	0	20,000	X
GLO/FUM/30/ TAS/211	UNEP	FIN	TAS	FUM	Policy development assistance to prevent future methyl bromide growth in low methyl bromide-consuming countries	0.0	0.0	Mar-00	Mar-01	May-01		200,000	0	200,000	X
GLO/FUM/37/ TRA/240	Israel	FIN	TRA	FUM	International methyl bromide compliance assistance workshop (Bahamas, Barbados, Bosnia, Congo, Ecuador, Ethiopia, Moldova, Mexico, and Zambia)	0.0	0.0	Jul-02	Mar-03	Dec-02		98,300	-64,177	34,123	X

Code	Agency	Status	Type	Sector	Project Title	ODP To Be Phased Out	ODP Phased Out	Date Approved	Approved Planned Date of Completion	Date Completed	Planned Date of Completion for Ongoing Projects	Funds Approved	Funds Returned	Funds Disbursed	PCRs Received
AFR/FUM/16/ TRA/10	UNEP	FIN	TRA	FUM	Regional workshop on methyl bromide for English-speaking African countries	0.0	0.0	Mar-95	Mar-96	Sep-95		100,000	0	100,000	X
AFR/FUM/17/ TAS/14	Australia	FIN	TAS	FUM	Replacement of methyl bromide with non-ozone depleting alternative in grain storage	0.0	0.0	Jul-95	Jan-96	Oct-95		38,896	0	38,896	X
AFR/FUM/17/ TAS/15	UNDP	FIN	TAS	FUM	Methyl bromide data collection for Africa	0.0	0.0	Jul-95	Jan-96	Apr-98		179,850	0	179,850	X
AFR/FUM/21/ TRA/18	UNEP	FIN	TRA	FUM	Regional survey and workshop on methyl bromide for French-speaking African countries	0.0	0.0	Feb-97	Feb-98	Apr-98		275,000	0	275,000	X
AFR/FUM/27/ TRA/23	UNEP	FIN	TRA	FUM	Regional training of trainer courses for extension workers	0.0	0.0	Mar-99	Oct-01	Dec-01		80,000	-16,044	63,956	X
AFR/FUM/27/ TRA/24	UNEP	FIN	TRA	FUM	Regional training workshops on policy development	0.0	0.0	Mar-99	Mar-00	Dec-99		130,000	0	130,000	X
AFR/FUM/34/ TRA/28	UNEP	COM	TRA	FUM	Regional workshop on the experiences of use of methyl bromide alternatives evaluated under the Multilateral Fund	0.0	0.0	Jul-01	Jul-02	Mar-04		80,000	-4,610	51,634	X
AFR/FUM/38/ TAS/32	UNDP	ONG	TAS	FUM	Technical assistance for methyl bromide reductions and formulation of regional phase out strategies for low volume consuming countries	1.5	1.0	Nov-02	Feb-06		Jan-08	550,000	0	362,472	
ASP/FUM/17/ TAS/19	UNDP	FIN	TAS	FUM	Methyl bromide data collection for Asia and the Pacific	0.0	0.0	Jul-95	Jan-96	Mar-96		102,000	-64,974	37,026	X
ASP/FUM/17/ TRA/18	UNEP	FIN	TRA	FUM	Regional workshop on methyl bromide for Asia and the Pacific	0.0	0.0	Jul-95	Jan-96	Nov-95		82,500	0	82,500	X
ASP/FUM/34/ TRA/43	UNEP	FIN	TRA	FUM	Regional workshop on the experiences of use of methyl bromide alternatives evaluated under the Multilateral Fund	0.0	0.0	Jul-01	Jun-02	Dec-03		80,000	-13,239	66,761	X
LAC/FUM/17/ TAS/14	UNDP	FIN	TAS	FUM	Methyl bromide data collection for Latin America and the Caribbean	0.0	0.0	Jul-95	Jan-96	Mar-96		57,700	0	57,700	X
LAC/FUM/17/ TRA/13	UNEP	FIN	TRA	FUM	Regional workshop on methyl bromide for Latin America and the Caribbean	0.0	0.0	Jul-95	Jan-96	Nov-95		120,000	0	120,000	X
LAC/FUM/27/ TRA/30	UNEP	FIN	TRA	FUM	Regional training workshop on policy development	0.0	0.0	Mar-99	Mar-00	Apr-00		130,000	0	130,000	X
LAC/FUM/27/ TRA/32	UNEP	FIN	TRA	FUM	Regional training of trainer courses for extension workers	0.0	0.0	Mar-99	Oct-01	Dec-01		80,000	-4,000	76,000	X
LAC/FUM/47/ TAS/37	Spain	ONG	TAS	FUM	Policy assistance to support the methyl bromide phase-out with special focus in Guatemala and Honduras	0.0	0.0	Nov-05	Dec-07		Jul-07	80,000	0	74,000	

OVERVIEW OF INDIVIDUAL PROJECTS IN MB-LVC COUNTRIES

Code	Agency	Status	Type	Sector	Project Title	ODP To Be Phased Out	ODP Phased Out	Date Approved	Approved Planned Date of Completion	Date Completed	Planned Date of Completion for Ongoing Projects	Funds Approved	Funds Returned	Funds Disbursed	PCRs Received
ALG/FUM/50/ TAS/65	UNIDO	ONG	TAS	FUM	Technical assistance to phase out methyl bromide in pulses disinfestations	1.6	0.0	Nov-06	Nov-07		Nov-07	51,000	0	0	
BOT/FUM/25/ DEM/05	UNIDO	FIN	DEM	FUM	Three alternatives to the use of methyl bromide: non-soil cultivation techniques, bio-fumigation with solarization, and application of various mixtures of other chemicals in low dose	0.0	0.0	Jul-98	Aug-00	Dec-04		146,300	0	146,300	X
BKF/FUM/34/ TRA/14	UNIDO	FIN	TRA	FUM	Workshop to raise awareness on use of methyl bromide in tobacco cultivation	0.0	0.0	Jul-01	Aug-02	Dec-02		30,000	-7,497	22,467	X
KAM/FUM/46/ TAS/10	UNIDO	COM	TAS	FUM	Training and awareness workshop in the fumigants sector (methyl bromide)	0.0	0.0	Jul-05	Jul-06	Jul-06		30,000	0	27,173	
ELS/FUM/45/ TAS/18	UNIDO	ONG	TAS	FUM	Training and awareness workshop in the fumigants sector (methyl bromide)	0.0	0.0	Apr-05	Apr-06		Jul-07	40,000	0	18,625	
FIJ/FUM/47/ TAS/13	UNEP	ONG	TAS	FUM	Technical assistance project to install alternatives, achieve compliance and phase-out methyl bromide	0.0	0.0	Nov-05	Dec-08		Mar-08	65,000	0	65,000	
FIJ/FUM/47/ TAS/17	UNDP	ONG	TAS	FUM	Technical assistance project to install alternatives, achieve compliance and phase-out methyl bromide	2.1	0.0	Nov-05	Dec-08		Dec-08	50,000	0	10,021	
GHA/FUM/37/ TRA/18	UNDP	COM	TRA	FUM	Training programme for terminal phase-out of methyl bromide use, excluding QPS applications	6.3	6.0	Jul-02	Aug-05	Dec-06		101,550	0	100,751	
JAM/FUM/47/ TAS/22	Canada	ONG	TAS	FUM	Technical assistance to phase-out the use of methyl bromide	1.2		Nov-05	Dec-07		Apr-08	55,530	0	22,417	
MAG/FUM/45/ TAS/09	UNIDO	COM	TAS	FUM	Training and awareness workshop in the fumigants sector (methyl bromide)	0.0	0.0	Apr-05	Apr-06	Dec-06		40,000	0	31,919	
MLI/FUM/36/ TRA/12	UNIDO	FIN	TRA	FUM	Preparation of an awareness workshop in the methyl bromide sector	0.0	0.0	Mar-02	Apr-03	Jul-03		30,000	-596	29,357	X

Code	Agency	Status	Type	Sector	Project Title	ODP To Be Phased Out	ODP Phased Out	Date Approved	Approved Planned Date of Completion	Date Completed	Planned Date of Completion for Ongoing Projects	Funds Approved	Funds Returned	Funds Disbursed	PCRs Received
NIC/FUM/45/ TAS/12	UNIDO	COM	TAS	FUM	Training and awareness workshop in the fumigants sector (methyl bromide)	0.0	0.0	Apr-05	Apr-06	Dec-06		30,000	0	18,866	X
NIR/FUM/34/ TAS/90	UNEP	FIN	TAS	FUM	Enhancing the capability of local agricultural organizations and non-governmental organizations in methyl bromide communication	0.0	0.0	Jul-01	Jul-02	Jul-03		25,000	-16,990	8,010	X
OMA/FUM/44/ TRA/10	UNIDO	COM	TRA	FUM	Awareness workshop and training on methyl bromide alternatives	0.0	0.0	Dec-04	Dec-05	Sep-06		35,000	0	32,841	
PAN/FUM/36/ TRA/16	UNIDO	FIN	TRA	FUM	Preparation of an awareness workshop on methyl bromide	0.0	0.0	Mar-02	Apr-03	Oct-02		30,000	-5,344	24,617	X
PAR/FUM/47/ TAS/15	Spain	ONG	TAS	FUM	Technical assistance to phase-out the use of methyl bromide	0.2		Nov-05	Dec-07		Dec-07	40,000	0	0	
PER/FUM/31/ INV/28	UNDP	FIN	INV	FUM	Phase-out of methyl bromide in soil fumigation	4.0	4.0	Jul-00	Aug-03	Dec-04		209,770	0	209,770	
STK/FUM/50/ TAS/11	UNEP	ONG	TAS	FUM	Technical assistance to phase out the use of methyl bromide	0.8	0.0	Nov-06	Nov-07		Nov-07	20,000	0	0	
SIL/FUM/47/ TAS/12	UNEP	ONG	TAS	FUM	Methyl bromide communication programme	0.4	0.0	Nov-05	Dec-07		Dec-07	50,000	0	31,250	
SRL/FUM/27/ DEM/13	UNDP	ONG	DEM	FUM	Alternatives to methyl bromide for eradication of tea nematodes in Sri Lanka	3.9	3.0	Mar-99	Apr-01		Oct-07	310,200	0	207,756	
SRL/FUM/38/ TAS/21	UNDP	ONG	TAS	FUM	Methyl bromide phase-out for all remaining uses excluding QPS applications	3.3	2.0	Nov-02	Nov-05		Oct-07	130,000	0	129,478	
TRI/FUM/49/ TAS/19	Canada	ONG	TAS	FUM	Technical assistance to phase out the use of methyl bromide	0.1		Jul-06	Jan-08		Dec-08	30,000	0		

OVERVIEW OF INDIVIDUAL PROJECTS WITH AGREED CONDITIONS

Code	Agency	Status	Type	Sector	Project Title	ODP To Be Phased Out	ODP Phased Out	Date Approved	Approved Planned Date of Completion	Date Completed	Planned Date of Completion for Ongoing Projects	Funds Approved	Funds Returned	Funds Disbursed	PCRs Received
BOL/FUM/35/ INV/16	UNDP	ONG	INV	FUM	Terminal methyl bromide phase-out, excluding QPS applications	1.5	2	Dec-01	Dec-05		Jun-07	221,032	0	202,346	
BHE/FUM/41/ INV/17	UNIDO	COM	INV	FUM	Phase-out of methyl bromide in tobacco seedling vegetables and flower production sector	11.8	11.8	Dec-03	Dec-06	Dec-06		229,000	0	221,042	X