



EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Twenty-fourth Meeting  
Montreal, 25-27 March 1998

**REPORT OF THE THIRTEENTH MEETING OF THE SUB-COMMITTEE ON  
PROJECT REVIEW**

Introduction

The Sub-Committee on Project Review of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol met at the International Civil Aviation Organization, Montreal, on 23 and 24 March 1998.

The meeting was attended by representatives of Burkina Faso, India (Chairman), Italy, Peru, Switzerland, and the United States of America, as well as by representatives of the implementing agencies, the Ozone Secretariat and the Secretariat of the Global Environment Facility.

The meeting was also attended by representatives of Canada and Japan, as observers, and by an observer from the Alliance for Responsible Atmospheric Policy (ARAP) and an observer representing environmental NGOs.

**AGENDA ITEM 1: OPENING OF THE MEETING**

1. The meeting was opened by the Chairman of the Sub-Committee, Mr. Vinod Vaish (India), at 10 a.m. on Monday, 23 March 1998.

**AGENDA ITEM 2: ADOPTION OF THE AGENDA**

2. The Sub-Committee adopted the following agenda on the basis of the provisional agenda contained in document UNEP/OzL.Pro/ExCom/SCPR/13/1:

1. Opening of the meeting
2. Adoption of the agenda
3. Introductory remarks by the Chief Officer
4. Organization of work
5. Strategy and guidelines for investment projects in the methyl bromide sector
6. Overview of issues identified during project review
7. Projects and activities recommended for blanket approval by the 24th Meeting of the Executive Committee
8. Projects for individual consideration
9. Work Programmes and Work Programme Amendments
10. Resource allocation

11. Policy papers and status reports

12. Other matters

#### AGENDA ITEM 3: INTRODUCTORY REMARKS BY THE CHIEF OFFICER

3. The Deputy Chief Officer, speaking on behalf of the Chief Officer, called attention to the Overview of Issues Identified During Project Review contained in document UNEP/OzL.Pro/ExCom/24/19 and its Corr.1. He noted that there was a smaller-than-usual number of investment projects before the current meeting, because those submitted pertained only to the balance of the 1997 business plans of the implementing agencies. A number of non-investment projects and activities had been submitted, dealing mainly with methyl bromide, which would need to be considered in the light of the draft strategy and guidelines for methyl bromide projects. There was also a substantial proposed addition to UNEP's 1998 work programme, amounting to some US \$3 million. As indicated in the corrigendum to the overview paper, there were now only three projects which remained unresolved.

4. The situation regarding funds available for allocation at the current meeting had improved considerably since the time of dispatch of the document, primarily as a result of contributions from Japan and the United States. Some US \$20 million was now available for allocation by the Executive Committee at this meeting. Finally, he noted that, when considering the overall level of funding for 1998 work programmes, it would be necessary to offset advances made to the three implementing agencies at the Twenty-third Meeting. The Fund Secretariat would make the necessary adjustments when the report was prepared.

#### AGENDA ITEM 4: ORGANIZATION OF WORK

5. Following the suggestion of the Chairman, the Sub-Committee decided on the order in which it would discuss the items of the agenda.

AGENDA ITEM 5: STRATEGY AND GUIDELINES FOR INVESTMENT PROJECTS IN  
THE METHYL BROMIDE SECTOR

6. The Sub-Committee considered this item on the basis of document UNEP/OzL.Pro/ExCom/24/18. The representative of the Secretariat, introducing the document, noted that, in accordance with the decision of the Executive Committee at its Twenty-third Meeting (November 1997), the Secretariat convened a meeting (in Montreal, on 3 and 4 February 1998) bringing together implementing agencies, experts and interested bilateral donors, with the participation of representatives of the Methyl Bromide Technical Options Committee and some interested non-governmental organizations. That meeting had elaborated a draft strategy for investment projects in the methyl bromide sector, as well as guidelines for demonstration projects, investment projects and non-investment projects, which were contained in the document before the Sub-Committee. He drew attention to the fact that the strategy and guidelines set out specific priority areas for projects. In addition, the strategy and guidelines were to be subject to review after an agreed period of time.

7. Following a discussion of the appropriate duration of the strategy, the Sub-Committee recommended to the Executive Committee that the strategy be reviewed after a period of fifteen months. (See the Strategy contained in Annex I to the present report, paragraph 1.)

8. There was general agreement in the Sub-Committee that the strategy should draw attention to the importance of having countries ratify the Copenhagen Amendment. After an exchange of views, the Sub-Committee recommended to the Executive Committee that the strategy should explicitly state that further demonstration and/or investment projects for a country that had not yet ratified the Copenhagen Amendment should proceed only when the country had submitted a letter to the Secretariat indicating its progress towards ratification of the Copenhagen Amendment and its intent to complete the ratification within a period of nine months. (See the Strategy contained in Annex I to the present report, paragraph 4.)

9. The Sub-Committee considered that it was necessary to define more clearly the phrase "little or no use" of methyl bromide by inserting language referring to use of 300 kg or less for non-exempt uses, or no use of methyl bromide. (See the Strategy contained in Annex I to the present report, paragraph 3.).

10. The Sub-Committee considered that it was necessary for the strategy to reinforce the idea that, where chemicals were to be applied as alternatives to methyl bromide, such selection and use of chemicals should be carried out in the most environmentally friendly manner possible. The Sub-Committee recommended to the Executive Committee that language to that effect be included in the strategy. (See the Strategy contained in Annex I to the present report, paragraph 12.)

11. The Sub-Committee recommended to the Executive Committee that the strategy should also include, within the non-investment project category, projects to provide training in activities to reduce methyl bromide use for an interim period. (See the Strategy contained in Annex I to the present report, paragraph 15 (c)).

12. The view was expressed that it was important for successful demonstration projects to develop, in turn, into full investment projects. The Sub-Committee recommended the inclusion of phrasing to the effect that, should a demonstration project prove to be successful, and the proposed alternative technology be acceptable to the country concerned, it should be developed into a full investment project. (See the Strategy contained in Annex I to the present report, paragraph 24.)

13. With respect to the guidelines for investment projects, it was pointed out that the cost structure of methyl bromide projects was not the same as CFC projects. Subsequently, the Sub-Committee recommended the addition of phrasing to the effect that the Secretariat, in consultation with appropriate experts, should provide further advice to the Committee on the

calculation of incremental costs. (See the Strategy contained in Annex I to the present report, paragraph 39.)

14. Following the discussion, the Sub-Committee approved the text of the strategy and guidelines for the methyl bromide sector, as amended in the course of the discussion, for transmission to the Executive Committee for approval. The text of the strategy and guidelines, as amended, is contained in Annex I to the present report.

#### Methyl Bromide Projects and Activities

##### Project Proposal: Algeria (UNEP/OzL.Pro/ExCom/24/31)

15. The Sub-Committee identified certain difficulties with the proposed project. Algeria had not ratified the Copenhagen Amendment and another demonstration project in the same sector was proposed in Tunisia, a neighbouring country. The representative of UNIDO pointed out that the problems in Algeria and Tunisia were different, given the very different climatic conditions in the two countries.

16. The Sub-Committee recommended to the Executive Committee that the project not be approved at the present time, but that it be retained in the work programme of UNIDO. Should Algeria provide an appropriate commitment regarding ratification of the Copenhagen Amendment, UNIDO should re-examine the proposed project in the light of the project in Tunisia to determine whether, in fact, two separate projects were needed and, if so, should resubmit the proposal for consideration at the Twenty-fifth Meeting.

##### Project Proposal: Colombia (UNEP/OzL.Pro/ExCom/24/32)

17. In considering the proposed demonstration project for alternatives to the use of methyl bromide in banana growing at Cenibanano, the Sub-Committee noted that bananas were not among the priority crops listed in the draft guidelines just proposed for approval by the Executive Committee. Neither were they crops of international significance, the criterion used up to now. The Sub-Committee recommended that the Executive Committee defer this project, it being understood that it could be resubmitted for consideration at the end of 1998, when the Executive Committee would be taking stock of the use made of the funds allocated - should the US \$29 million not have been totally used. At that time, consideration might be given to approving projects for crops not on the priority list. Otherwise, it could be reconsidered once the guidelines had been reviewed and revised to include crops not included at present on the priority list.

Project Proposal: Kenya (UNEP/OzL.Pro/ExCom/24/33)

18. The Sub-Committee recommended that the Executive Committee approve the demonstration proposal on alternatives to the use of methyl bromide for soil fumigation in cut flowers at Kenya Agricultural Research Institute (KARI), at a level of US \$328,900.

Project Proposal: Democratic Peoples Republic of Korea (UNEP/OzL.Pro/ExCom/24/34)

19. Concerning the proposal for a demonstration project on alternatives to the use of methyl bromide in the preparation of seedbeds for the cultivation of rice and maize at Agrochemical Research Institute (ACRI), the Sub-Committee noted that the use of methyl bromide in the Democratic Peoples Republic of Korea was not increasing and that the intention was to focus on crops of international significance that would affect the world community, and that corn and maize did not meet that criterion. It was important to ensure that the principles embodied in the draft guidelines were followed. What was involved here, it was suggested, was essentially information flow and information transfer (which were allowable under the draft guidelines), and

perhaps the answer would lie in making available to the Democratic Peoples Republic of Korea a non-investment, information-transfer type of project.

20. The Sub-Committee recommended that the Executive Committee defer this project. Subject to submission of a letter by the Democratic Peoples Republic of Korea regarding ratification of the Copenhagen Amendment, UNIDO could resubmit an alternative non-investment, information-transfer type of project.

Project Proposal: Syrian Arab Republic (UNEP/OzL.Pro/ExCom/24/35)

21. The Sub-Committee recommended that the Executive Committee defer the demonstration project on alternatives to the use of methyl bromide in horticulture and commodities fumigation pending receipt of an appropriate status report/commitment by the Syrian Arab Republic regarding ratification of the Copenhagen Amendment.

Project Proposal: Tunisia (UNEP/OzL.Pro/ExCom/24/36)

22. The Sub-Committee recommended that the Executive Committee approve the demonstration project on alternatives to the use of methyl bromide in horticulture (dates) at Société Méditerranéenne Fruitière, at a level of US \$301,730.

Project Proposal: Viet Nam (UNEP/OzL.Pro/ExCom/24/37)

23. The Sub-Committee recommended that the Executive Committee approve, at a level of US \$411,180, the demonstration project on alternatives to the use of methyl bromide on stacked bags of rice, grain in silos, and timber on a warehouse under tarps at Vietnam Fumigation Company, on the understanding that none of the funds approved for the project would be used to demonstrate alternatives to methyl bromide for quarantine and pre-shipment purposes.

Methyl Bromide Project Preparation

24. The Sub-Committee then turned its attention to the 44 requests for project preparation funding for methyl bromide projects included in the 1998 work programmes of UNDP (UNEP/OzL.Pro/ExCom/24/21), UNIDO (UNEP/OzL.Pro/ExCom/24/23 and Corr. 1) and the World Bank (UNEP/OzL.Pro/ExCom/24/24), as well as in the work programme amendments of UNEP (UNEP/OzL.Pro/ExCom/24/22 and Corr.1). Introducing the documentation, the Chairman drew attention to the comments and recommendations of the Secretariat contained therein.

25. On the question of how to proceed with regard to project preparation requests for countries that had not ratified the Copenhagen Amendment, after an exchange of views the Sub-Committee recommended that, in line with its recommendation concerning the strategy, the proposals should not be approved but would be retained in the 1998 work programme until such time as the countries had submitted a letter declaring their intent to ratify the Amendment within nine months, after which the Committee could re-examine the proposal.

26. Projects that were not recommended for that reason are listed below:

UNDP

China: Project preparation for one methyl bromide alternative demonstration project

Costa Rica: Project preparation for 2 methyl bromide alternative demonstration projects

Lebanon: Project preparation for one methyl bromide alternative demonstration project

Peru: Project preparation for a methyl bromide alternative demonstration project  
Philippines: Project preparation for a methyl bromide alternative demonstration project  
Tanzania: Project preparation for a methyl bromide demonstration project  
Zambia: Project preparation for a methyl bromide alternative demonstration project

UNIDO

China: Preparation of a demonstration project (grain fumigation)  
Cote D'Ivoire: Preparation of a demonstration project (cocoa)  
Dominican Republic: Preparation of a demonstration project (tobacco, cucurbits, flowers, tomatoes)  
El Salvador: Preparation of a demonstration project (tobacco, broccoli, cucurbits)  
Honduras: Preparation of a demonstration project (tobacco, tomatoes, cucurbits, strawberries)  
India: Preparation of a demonstration project (grain fumigation)  
Indonesia: Preparation of a demonstration project (tobacco, tomatoes, pepper)  
Macedonia: Preparation of a demonstration project in methyl bromide (tobacco, pepper, tomatoes)  
Nicaragua: Preparation of a demonstration project (tobacco, cucurbits, seed beds)  
Paraguay: Preparation of a demonstration project (cotton fumigation)  
Romania: Preparation of a demonstration project (tomatoes, cucumber, strawberries, grains)  
Senegal: Preparation of a demonstration project (tobacco, peanuts)  
Zambia: Preparation of a demonstration project (tobacco, flowers)

27. In cases where a project was dropped from the work programme following this procedure the Secretariat recommended that the Executive Committee allow the implementing agencies to come forward with alternative proposals, to the degree consistent with the overall allowable funding level.

28. Following a discussion, the Sub-Committee recommended that the Executive Committee impress upon all implementing agencies the importance of ensuring that all project preparation

work, particularly in the area of methyl bromide projects, was carried out with the necessary care and scrutiny to ensure the subsequent success of the project. There was concern at the possible lack of available expertise as well as the high cost of using internationally recruited experts. In view of this, the Sub-Committee recommended that the implementing agencies consider the use of locally based experts and contact Article 2 countries with a view to recruiting low- or no- cost government experts from those countries. That would bring the double advantage of lowering costs and providing valuable knowledge.

29. Concerning the question of project proposals that did not fall within the scope of the priority list of crops for soil fumigation agreed in the strategy for methyl bromide, the Sub-Committee recommended that those projects should be deferred for 15 months, until the strategy had been revised, after which time they could be resubmitted for consideration under the new eligibility criteria, except if methyl bromide consumption was growing.

30. Projects that were not recommended for approval because of insufficient information are listed below:

World Bank

Argentina: Project preparation in the methyl bromide sector

Turkey: Project preparation in the methyl bromide sector

31. A project preparation request for methyl bromide recycling in Zimbabwe was withdrawn by the World Bank after discussion on whether such recycling projects should be considered for funding at this time.

32. The Sub-Committee then examined the non-investment methyl bromide-related activities included in UNEP's work programme amendments (UNEP/OzL.Pro/ExCom/24/22, paragraphs 17-26). It recommended that the Executive Committee approve the following activities, with funding as indicated;

(a)	Methyl bromide information kit	US \$ 60,000
(b)	Compilation of case studies on commercial, low-impact methyl bromide alternatives successfully implemented	US \$ 40,000
(c)	Compilation of legislations for regulatory authorities from Article 5 countries that discourage methyl bromide use and promote alternatives	US \$ 50,000
(d)	Technical and institutional resources for methyl bromide alternative projects	US \$ 30,000

33. For the following activities, it was recommended that UNEP further examine the proposed activities and, if it was found to be necessary, present revised proposals to the Executive Committee at the Twenty-fifth Meeting.

- (a) Manuals (5) for small farmers for tomatoes, strawberries, cucurbits, nurseries/seedbeds, and tobacco
- (b) Guidebook (Trainer's tool) for farming extension workers
- (c) Sectoral policy plan for methyl bromide phase-out

34. With respect to the sectoral policy plan for methyl bromide phase-out, it was suggested that UNEP was perhaps not the most appropriate implementing agency to undertake this activity, and that consideration might be given to a partnership with another implementing agency, if that would be agreeable for China.

35. The Sub-Committee recommended that the Executive Committee not approve the following activities which may be undertaken within the demonstration projects:

- (a) Farmer to farmer workshops (3) on exchange of experience.
- (b) Information and training support for demonstration projects on methyl bromide.

#### AGENDA ITEM 6. OVERVIEW OF ISSUES IDENTIFIED DURING PROJECT REVIEW

(UNEP/OzL.Pro/Ex/Com/24/19)

##### (a) Terminal umbrella projects

36. The representative of the Secretariat, drawing attention to paragraphs 11-13 of the overview paper (UNEP/OzL.Pro/ExCom/24/19) and stressing that an increasing number of terminal umbrella projects covering large numbers of enterprises were now starting to be seen, pointed to the problem of how to obtain a sufficient level of information on which to base a funding eligibility decision. Because not all the enterprises in a project were visited, the level of CFC consumption and phase-out, on which funding was based, could only be estimated. It thus sought guidance on whether, in the case of such terminal umbrella projects, estimates of CFC consumption were acceptable to the Committee for project approval, or whether it would be necessary to go into a greater level of detail, as was currently required for individual projects.

37. One representative mentioned that another issue in such projects was the removal of cost effectiveness thresholds, and there was a need to consider similar issues for near-terminal umbrella projects and group projects.

38. The Sub-Committee agreed that terminal umbrella projects per se should be encouraged, since they represented a good method to cover phase-out for a large number of small enterprises. However, such projects gave rise to issues on which special guidance was needed as a matter of priority: the problem of obtaining satisfactory, corroborated data on CFC consumption or an

acceptable alternative level of information on which to base a funding decision; the difficulty in identifying all the small enterprises that could benefit from a terminal umbrella project; the question of how to monitor project implementation, for example by means of a mid-term review, and ensure that phase-out did in fact take place; and the need to ensure that Governments also put in place a structure to ensure that the phase-out was sustained.

39. Following the discussion, the Sub-Committee recommended that the Executive Committee request the Secretariat and the implementing agencies to meet, as a matter of priority, in the period prior to the next meeting of the Committee in order to examine the issues raised by terminal umbrella projects in light of the deliberations at the current meeting. In particular, that meeting would need to examine a possible new methodology to be applied to such projects in order to obtain a satisfactory level of information about enterprises on which to base funding decisions and the necessary safeguards that should be put in place to ensure phase-out. It should submit, to the next meeting of the Committee, a paper on the problems faced and possible solutions to expedite the approval of such projects.

(b) Renewal of institutional strengthening

40. The representative of the Secretariat drew attention to paragraphs 15-18 of the overview paper and sought guidance from the Committee on (i) how to proceed in cases where progress reports showed variations between the original proposed budgets and what the monies were actually spent on; (ii) how to proceed when an institutional strengthening request had been received without the accompanying progress reports required under Decision 23/21; and (iii) whether the Committee required to see the full and sometimes bulky progress reports, or whether a summary would suffice.

41. The representative of UNDP said that the requests for renewal of institutional strengthening included in its 1998 work programme that were unaccompanied by the required progress reports were due to an error, as it had been intended to submit those requests to the Committee at a meeting later in the year, together with the required documentation. The Sub-

Committee stressed the importance attached to the provision of the progress reports, since, together with the action plans, they were an important indicator of how countries were proceeding towards the freeze.

42. On the question of budget variations, the Sub-Committee recommended that some flexibility should be shown in how countries used the funds approved. Slight variations in funds transferred between budget lines could be accepted, but overall accountability was essential.

43. The Sub-Committee recommended that, while a full copy of a progress report submitted under an institutional strengthening renewal should be made available to those members of the Executive Committee that requested one, provision of a summary in documentation for the meeting would suffice.

(c) Refrigerant management plans (RMPs)

44. The representative of the Secretariat drew attention to paragraph 19 of the overview paper, noting that RMPs were becoming an automatic part of the phase-out process for many Article-5 countries. The Secretariat sought guidance on whether the approval of funding for preparation of an RMP should be related to specific criteria, such as the need for RMP activities to assist in meeting the freeze, whether the country had an industrial sector which should be phased out before embarking on management of installed refrigerant, or whether the country had enacted a policy to regulate consumption of CFCs.

45. Following the discussion, the Sub-Committee agreed that it was not necessary for unduly restrictive conditionalities to be set as preconditions for preparation of an RMP. A process of scrutiny could be applied at the time of approval, but the really important factor was a clear political commitment to be shown by the concerned country and the preparation of high-quality, comprehensive RMPs, containing a strategy, including institutional and legislative aspects, for

phasing out CFCs in the entire sector and including the consideration of how to approach the problem of the informal sector.

AGENDA ITEM 7: PROJECTS AND ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL BY THE 24TH MEETING OF THE EXECUTIVE COMMITTEE

46. The Sub-Committee examined the list contained in annex I to document UNEP/OzL.Pro/ExCom/SCPR/13/1/Add.1, as amended by the corrigendum. The projects and activities recommended for approval are included in the list contained in Annex II to the present report. (Investment projects are included as part of the agencies' 1997 business plan allocation per Decision 23/36). The total amount of funds recommended for approval for the 1998 work programmes for UNDP and the World Bank should be offset by the advances provided for those agencies at the Twenty-third Meeting in the following amounts:

UNDP US \$256,000 plus 13% support costs (\$33,280)

World Bank US \$275,600 plus 13% support costs (\$35,828).

47. As indicated below, the following projects and activities were either recommended for approval with conditions or were withdrawn:

China: Umbrella project to complete CFC phase-out in general purpose aerosols at NCLI and Fujiang Light Industry Co. (IBRD). (UNEP/OzL.Pro/ExCom/24/25)

48. The Sub-Committee recommended approval of the above project on the understanding that this was a terminal umbrella project for non-pharmaceutical applications in the aerosol sector.

(a) India: Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Vijay Fire Protection Systems Ltd. (UNDP)  
(UNEP/OzL.Pro/ExCom/24/27)

(b) India: Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Nitin Fire Protection Industries Ltd., Bombay (UNDP)

(c) India: Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at NewAges Industries, Bombay (UNDP)

(d) India: Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Steelage Industries Limited Minimax Division/Chennai (UNDP)

(e) India: Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Vimal Industrial Safety Equipment Corporation Baroda - Gujrat (UNDP)

(f) India: Conversion of production halon 1211 fire extinguishers at Atkins, New Delhi (UNDP)

(g) India: Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Ashoka Engineering Co., New Delhi (UNDP).

49. The Sub-Committee recommended approval of the above seven projects under the condition that the conversion to CO<sub>2</sub> should be maintained, at the ratio specified, after implementation, or the operating costs associated with CO<sub>2</sub> should be recalculated and any ineligible costs returned. The Sub-Committee also recommended that these projects should be undertaken within the context of the sector strategy prepared by UNDP, and that the strategy should be submitted to the Executive Committee.

Mexico: Preparation of projects in the production sector (UNIDO)  
(UNEP/OzL.Pro/ExCom/24/23)

50. The above project was withdrawn.

51. Equipment to be Destroyed or Rendered Unusable

52. The Sub-Committee recommended to the Executive Committee that all investment projects should be approved on the understanding that project implementation would not go forward until a list of equipment to be destroyed or made unusable had been prepared, and an undertaking given by the enterprise concerned that the dismantling or destruction would be carried out. The Sub-Committee further recommended that projects should not be prepared in cases where the countries or enterprises involved did not agree to destruction of the equipment.

Implementation Delays and Project Preparation

53. In so far as project preparation was concerned, the Sub-Committee also recommended that no proposals should be put forward by implementing agencies if there were impediments at policy level in the country concerned to active and expeditious implementation. Furthermore, in cases where counterpart contributions were needed to ensure implementation, those counterpart contributions should be known to the implementing agency to be in place before the projects were submitted, to avoid delays in the projects' implementation.

AGENDA ITEM 8: PROJECTS FOR INDIVIDUAL CONSIDERATION.

54. The Sub-Committee took up for individual consideration the projects listed in Annex II to the overview paper (UNEP/OzL.Pro/ExCom/24/19 and Corr.1).

Thailand: Umbrella project to convert CFC-12 commercial refrigeration to HFC-134a, and CFC-11 to HCFC-141b as the blowing agent for foam insulation at 224 small- and medium-sized enterprises (Kulthorn Engineering Co. Ltd.)  
(UNEP/OzL.Pro/ExCom/24/29)

55. The Sub-Committee recommended that this project be deferred and that information on the methodology used to calculate corroborated data on CFC consumption be provided to the Executive Committee as a basis for a funding decision, as well as details of the assurances given by the Government of Thailand concerning its commitment to the implementation of the phase-out.

Thailand: Elimination of ODSs used in the production of household refrigerators at Hitachi Consumer Products (Thailand) Co., Ltd. (UNEP/OzL.Pro/ExCom/24/29)

56. For capital equipment, the Sub-Committee recommended that only those items which the Secretariat found to be eligible should be considered for funding. On operating costs, the Sub-Committee did not consider that adequate justification had been given for the project being undertaken on a retroactive basis, or for the unusually high incremental operating costs for which funding was being requested, and recommended that funding of operating costs be approved on the scale of costs agreed to earlier for similar projects in Thailand. In making that recommendation it noted that this should not constitute a precedent. On this basis, the Sub-Committee recommended that the Executive Committee approve this project, at a level of US \$253,381 plus 13% agency support costs of US \$32,939.

Turkey: Conversion to non-CFC foam blowing agents in the production of polyurethane (PU) insulation panels, spray/in situ foam and one component foams at Izopoli Yapı Elemanları Taahhüt Sanayii ve Ticaret Ltd. Sti. (UNEP/OzL.Pro/ExCom/24/30/Rev.1)

57. The Sub-Committee recommended that the Executive Committee approve this project at a level of US \$1,141,500 plus 13% agency support costs of US \$148,395, on the basis of funding for the non-fire-related costs and the retrofitting of one machine needed to restore the production of foam panels to the pre-fire level, taking into account the amount received in insurance payments.

AGENDA ITEM 9: WORK PROGRAMMES AND WORK PROGRAMME  
AMENDMENTS.

UNDP

58. The representative of UNDP presented document UNEP/OzL.Pro/ExCom/24/21, containing UNDP's 1998 work programme, drawing attention to the recommendations of the Secretariat on its page 8 and noting that the Committee had already considered those projects contained in the work programme that pertained to methyl bromide (see paragraphs 15 to 35 above).

59. After a discussion, the Sub-Committee recommended to the Executive Committee that it approve the non-methyl bromide elements of the work programme of UNDP, with the following amendments concerning specific proposals:

- (a) Bangladesh: Project preparation in the refrigerant recovery/recycling sector
- (b) Dominican Republic: Preparation of a refrigerant management plan
- (c) El Salvador: Project preparation of refrigerant management plan

(d) Gabon: Project preparation of refrigerant management plan

(e) Niger: Preparation of refrigerant management plan

60. Action on the above five projects was deferred until the Twenty-fifth Meeting of the Committee, at which time it was expected that the final cost requirements of the projects would be known.

Nigeria: Preparation of 8 projects in the foam sector

61. Action on the proposal was deferred, pending the finalization of Nigeria's country programme.

Institutional strengthening renewal projects for Bangladesh, Costa Rica, Cuba, India, Kenya, Mexico, Thailand, Trinidad and Tobago, Uruguay and Venezuela

62. The above proposals were withdrawn as they had been submitted in error, prematurely.

Congo (Kinshasa): Preparation of an umbrella project in the foam sector

Mongolia: Preparation of an umbrella project in the foam sector

63. Action on the above two proposals was deferred, pending finalization of their country programmes.

Brazil: Institutional strengthening renewal

64. The Sub-Committee recommended the project for funding at a level of US \$270,000, and that the Committee inform Brazil of its concern at the low rate of disbursement of funds and of ODP phase-out in the country and regulatory impediments (e.g. imposition of customs duties on fund-supported equipment).

Colombia: Institutional strengthening renewal

65. The Sub-Committee recommended the project for funding at a level of US \$212,000, with the requirement that the Committee inform Colombia of its concern at the low quantity of ODS phased out. The representative of UNDP subsequently informed the Sub-Committee that more recent data indicated that 33 per cent of Columbia's ODS consumption had been phased out.

66. It was also agreed to ask the implementing agencies, when submitting requests for institutional strengthening renewal projects, to provide the very latest information available when preparing the summary of the project and country profile.

UNEP Work Programme Amendments

67. Noting that the projects in the field of methyl bromide had already been dealt with (see paragraphs 15 to 35. above), the Sub-Committee examined the remainder of the UNEP work programme amendments presented in document UNEP/Ozl.Pro/ExCom/24/21 and Corr.1.

68. The Sub-Committee recommended to the Executive Committee that it approve the non-methyl bromide elements of the UNEP work programme amendments, with the following amendments concerning specific projects:

Honduras: Refrigerant management plan

St. Kitts and Nevis: Implementation of refrigerant management plans

69. The above proposals were withdrawn.

Malawi: Institutional strengthening project renewal

70. The Sub-Committee recommended that the Executive Committee defer the above project to its next meeting, pending clarification of a number of issues raised in the course of the discussion. The Secretariat should be asked to write to the Government of Malawi and to UNEP to express the Executive Committee's concern that funds allocated be used for the purposes for which they were approved, with only minor variations where necessary, and underlining the need to accelerate implementation of the programme.

UNIDO

71. The Sub-Committee next examined the UNIDO work programme as presented in UNEP/OzL.Pro/ExCom/24/23 and Corr.1, taking into account the Secretariat's comments on pages 9-11, noting that the Committee had already considered those projects contained in the work programme that pertain to methyl bromide (see paragraphs 15 to 35 above).

72. The Sub-Committee recommended to the Executive Committee that it approve the non-methyl bromide elements of the UNIDO work programme, with the following amendments concerning specific projects:

Institutional strengthening requests

(a) Bosnia and Herzegovina: Establishment of an ozone secretariat

(b) Qatar: Establishment of an ozone secretariat

(c) Yugoslavia: Establishment of an ozone secretariat

73. The Sub-Committee recommended that approval of the above projects be deferred pending approval of the country programmes.

Saudi Arabia: Establishment of an ozone secretariat

74. In accordance with the practice followed in the case of other countries previously classified as Article 2 countries, the Sub-Committee recommended that the Secretariat be requested to send a letter to Saudi Arabia urging it not to seek funding from the Multilateral Fund.

Syrian Arab Republic: Project support to strengthening the general commission for environmental affairs to implement MP-related activities

75. The Sub-Committee recommended to the Executive Committee that the above project be deferred, pending the submission of the relevant documentation to support the request.

Refrigerant management plans

Morocco: Preparation of refrigerant management plan

76. The above proposal was withdrawn, the Sub-Committee noting the incorporation of the component of a refrigerant management plan in a bilateral project with France already approved.

Nigeria: Preparation of refrigerant management plan

77. The Sub-Committee recommended that the above request be deferred, pending completion of the country programme of Nigeria.

Yugoslavia: Preparation of refrigerant management plan

78. The Sub-Committee recommended that the Executive Committee approve the above request, noting an undertaking by UNIDO to seek a very modest amount, in order to keep this component within the country programme of Yugoslavia.

Project preparation

Cuba: Preparation of an investment project in the aerosol sector at IMEFA

79. The above request was not recommended for approval, since it was deemed premature to undertake work in the pharmaceutical sub-sector at this time.

Cuba: Preparation of an investment project (hospitals) in the commercial refrigeration sector

80. Having been informed that it was intended to apply for funding of the above project on a loan basis, the Sub-Committee recommended that the Executive Committee approve the proposal on an exceptional basis and on the understanding that policy issues regarding concessional loans would have to be resolved before the project could proceed.

Mexico: Preparation of projects in the production sector

81. The above proposal was deferred.

Yugoslavia: Preparation of investment project in the solvents sector (CF 113) for Hemofarm

82. The Sub-Committee deferred this proposal, pending completion of the country programme for Yugoslavia.

World Bank

83. The Sub-Committee then turned its attention to the World Bank work programme contained in UNEP/OzL.Pro/ExCom/24/24, taking particularly into account the comments of the Secretariat contained in its paragraph 3.

84. The Sub-Committee recommended to the Executive Committee that it approve the World Bank work programme, with the following amendments concerning specific projects:

Argentina: Project preparation in the refrigeration, halon and MAC sectors

85. The Sub-Committee recommended approval of the proposal at a level of US \$60,000, noting that the investment projects resulting from the project preparation should not be approved until the Executive Committee was assured that all regulatory impediments had been resolved.

Chile: Project preparation for the phase III of the Chile auction programme

Uruguay: Project preparation to formulate a national programme to phase out the residual use of CFCs

86. The above projects were withdrawn.

Tunisia: Project preparation in the aerosol and foam sectors

87. The aerosol component of the projects was dropped and the request was recommended at a funding level of US \$25,000.

Project Preparation in the Production Sector

88. One representative asked how a proposal for funding for the preparation of a sector plan and technical audit in the production sector, not included in the 1998 work programme of the

World Bank, could be introduced, based on recent discussions in the Subgroup on the production sector. The Sub-Committee concluded that the issue might be taken up in the Executive Committee during consideration of the reports of the Subgroup on the production sector.

#### AGENDA ITEM 10: RESOURCE ALLOCATION

89. In the light of the recent improvement in the status of the Fund, it was decided to defer consideration of this agenda item to the meeting of the Executive Committee.

#### AGENDA ITEM 11: POLICY PAPERS AND STATUS REPORTS

##### Safety-related costs of hydrocarbon technology (UNEP/OzL.Pro/ExCom/24/28)

90. Introducing the document on this issue, the representative of the Secretariat said that it outlined the progress made in the work of the Secretariat and the implementing agencies in the development of guidelines for determination of safety-related costs in hydrocarbon projects. A study by a consultant had been undertaken and had been sent to the agencies for discussion and also for peer review. At the conclusion of this process, the study would be forwarded to the Executive Committee.

91. Following the discussion on the issue, the Sub-Committee recommended to the Executive Committee that it request the Secretariat to continue its process of completing the report and submit it to the Twenty-fifth Meeting in July 1998, so that the Executive Committee could discuss it on its technical merits. On the basis of the Committee's consideration of the report, the guidelines for hydrocarbon safety-related costs would emerge and would be applied to projects submitted for approval to the Twenty-sixth Meeting.

Revised draft guidelines for liquid carbon dioxide technology in foam projects  
(UNEP/OzL.Pro/ExCom/24/39)

92. The Secretariat introduced the document, indicating that some revisions had been made to the draft guidelines originally submitted to the Twenty-third Meeting.

93. The Sub-Committee recommended that the revised draft guidelines be approved by the Executive Committee.

Incremental operating costs for compressors (UNEP/OzL.Pro/ExCom/24/40 and Corr.1)

94. The Secretariat introduced the document, which had been prepared pursuant to Decisions 22/26, 23/12 and 23/13 of the Executive Committee.

95. One member expressed appreciation for the fine work of the Secretariat, in collaboration with the implementing agencies, for producing this consensus document and indicated his delegation's desire to approve the document and recommendation as proposed.

96. One representative was of the view that the Secretariat should pursue its work on the methodology for establishing the market prices of compressors, on the understanding that the results would be reviewed by the Executive Committee when they became available, and extend the methodology to non-hermetic compressors used in large commercial refrigeration systems;

97. The Sub-Committee recommended that:

- (a) Since the representative of India had a number of comments to make, he be requested to submit his detailed comments in writing;

(b) Further consideration of the matter be deferred, in the light of the above.

Report on database of major capital equipment costs (UNEP/OzL.Pro/ExCom/24/41 and Corr.1)

98. The Secretariat introduced the report and said that since its preparation there had been a number of positive developments. The database now contained detailed specifications and costs for the seven items of equipment in the foam and refrigeration sectors included in the pilot stage of the database. This was extremely useful information that would be made available to Executive Committee members upon request.

99. The Sub-Committee noted with satisfaction the progress made and urged the implementing agencies and the Secretariat to pursue the work.

AGENDA ITEM 12: OTHER MATTERS.

100. No other matters were raised for discussion at the meeting.

**ANNEX I****STRATEGY AND GUIDELINES FOR INVESTMENT PROJECTS  
IN THE METHYL BROMIDE SECTOR****STRATEGY FOR THE METHYL BROMIDE SECTOR**

1. The intent of the strategy is to assist the Executive Committee in allocating resources to the methyl bromide sector for the next fifteen months. At the end of that time the strategy and guidelines should be reviewed.
2. National policy makers in Article 5 countries need to be better informed of alternatives to methyl bromide and the weaknesses contained in information provided by some methyl bromide advocates. Funding for education programmes and technology transfer should be a priority. Timing is important and restrictions on use of methyl bromide need to be consistent with the availability of alternatives.

**Categories of countries**

3. Global users of methyl bromide can be categorized as three major groups: (i) those countries that traditionally use methyl bromide for more than quarantine and preshipment purposes<sup>1</sup>, (ii) those countries that in recent years have become new users or have rapidly accelerated their use, and (iii) those countries that use up to 300 kg of methyl bromide per annum for non-exempt uses, or no methyl bromide.

**Copenhagen Amendment**

4. The methyl bromide 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 the Copenhagen Amendment should be urged to do so and should be informed about the availability to signatories of funding to support reduction projects for the phase out of methyl bromide. Funding for information transfer and policy development should be made available to countries which have not yet ratified the amendment. However, further demonstration and/or investment projects should proceed only when a letter has been received from the appropriate agency of a country, indicating its progress towards ratification of the Copenhagen Amendment and its intent to complete the ratification within a period of 9 months.

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<sup>1</sup> The use of methyl bromide for quarantine and preshipment purposes is exempt from controls by the Montreal Protocol. Since the purpose of the Multilateral Fund is "to enable compliance" with the Protocol's provisions, projects addressing quarantine and preshipment uses would not be funded by the Fund, and they are not included in this paper.

### **Major use categories**

5. As requested by MBTOC, controlled use of methyl bromide can be classified into two broad categories:

- (a) Soil fumigation: The use of methyl bromide for soil fumigation represents the largest global use and amounts to 75 per cent or more of total Article 5 countries use.
- (b) Storage and structural uses: The use of methyl bromide for storage and structural uses amounts to 20 to 25 per cent of total Article 5 countries use. In some developing countries, however, the use of methyl bromide for storage dominates the country's use profile. In some other countries a small amount of methyl bromide is used for structural fumigation.

### **Tools of intervention**

6. For countries that use little or no methyl bromide, the Fund should strive to support activities in these countries with the intent of ensuring that these countries do not begin or increase their use or become dependent on this substance. To achieve this goal, the focus in these countries is to facilitate a policy dialogue for consideration and implementation of policies banning the import and or use of methyl bromide through information exchange programmes, and technically related non-investment activities. For these countries, according to the priorities set out below for non-investment projects, development of projects should focus on creating and disseminating information and/or educating stakeholders, and may include, *inter alia*, development and dissemination of information materials, holding of targeted, structured workshops and the provision of assistance, where needed, for the creation of policy instruments to restrict or ban the use and/or import of methyl bromide. An information package should be developed for use by these countries to facilitate consideration and implementation of import bans or use restrictions.

7. For countries which are new users of methyl bromide, or have rapidly accelerated their use, in addition to the policy dialogue and information exchange programmes, specific demonstration and investment projects targeted on certain crops and viable technologies should be demonstrated in order to arrest the growth in consumption.

8. For countries that are traditionally users of methyl bromide, the full range of tools of intervention will be required. These include policy development, information exchange, and demonstration and investment projects.

9. All demonstration and 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 methyl bromide. In addition, in countries that use little or no controlled methyl bromide non-investment activities will dominate.

### **Priority areas**

10. The initial goal of both demonstration and investment projects should be the demonstration of alternatives through a process that facilitates widespread understanding among users and related agencies on how the alternative (if proven successful) may be applied to related uses throughout the industry. For the duration of the strategy, projects should be prioritized on the basis of global benefits. Crops and processes which represent significant global use, and/or on which alternatives are most well understood should be given priority.

### **Soil fumigation**

11. Because of their contribution to global use, the following crops, including seed beds and nursery crops, should be given priority in the development of projects: flowers, tobacco, tomato, strawberries and cucurbits. While projects for these crops should receive priority, projects in crops other than those listed may be considered in cases where the use in a country is expanding, and the demonstration is deemed necessary to stop the growth.

12. Similarly, priority should be given to the use of one or a combination of several of the following proven and viable alternative technologies for soil fumigation: integrated pest management (IPM), solarisation, organic amendments, crop rotation/fallow, resistant varieties, grafting, chemical products (chloropicrin, dazomet, metham sodium, 1-3-D, and other nonfumigant pesticides). Consideration should also be given to technologies that have been demonstrated as appropriate alternatives to methyl bromide for particular crops/conditions (in such cases, the burden is on the proponent to provide information on the demonstrated feasibility of the proposed alternative). While non-chemical techniques would be preferable, chemical alternatives may be more effective in certain country and/or crop contexts and may be essential to the phase out for some countries. However, chemical alternatives should be selected and used in the most environmentally friendly manner possible.

13. For those alternatives which have been recommended by MBTOC for either limited or widespread commercial use, demonstration projects should be approved for adaptation to local conditions and, in some cases, investment projects could also be considered.

### **Storage and structural uses**

14. For storage and structural uses, phosphine is the widely documented replacement fumigant and is ready for investment projects where appropriate. Demonstration projects may be required for other alternatives indicated by MBTOC as viable.

### **Project categories**

15. Project proposals on alternatives to methyl bromide could be categorized as follows:

- (a) Demonstration projects: Projects whose primary objective is the demonstration of alternatives or alternative technologies that have proven effective elsewhere in a controlled setting. While such projects may, in the course of field testing, bring about small reduction in methyl bromide use, their primary purpose is to demonstrate the efficacy of alternatives to facilitate the broader scale implementation of informed investment projects. These projects should include a dissemination project and a discussion of how this demonstration project can be scaled up to an investment project. In accordance with existing Multilateral Fund guidelines, incremental cost of related demonstration projects is considered to be the full cost of the project.
- (b) Investment projects: Projects whose primary objective is the reduction of methyl bromide consumption. These projects be undertaken in sectors or for uses where there are clearly available efficacious alternatives or alternative technologies. They should be accompanied, to the greatest degree possible, 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 similar users shortly after the projects are completed (i.e., bans and import restrictions). Incremental costs for such investment projects could 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, taking into account, *inter alia*, the relative cost of the technology and available alternatives). In addition, 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. This could have an impact on the eligibility and viability of a large number of projects.
- (c) Non-investment projects: Projects focused on creating and disseminating information and/or educating stakeholders. Such projects may include, *inter alia*, development and dissemination of information materials, holding of targeted structured workshops, training in activities to reduce methyl bromide use for an interim period, and the provision of assistance, where needed, on the creation of policy instruments to restrict or ban the use and/or import of methyl bromide.

16. It is noted that some project submissions may include components of all three categories.

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

17. The project development process should be open and transparent to enable all appropriate expertise in a country or a region to participate.

18. Where appropriate, carefully structured workshops involving methyl bromide importers, competent and relevant government agencies, farmers and farmers' associations, exporters, research institutions, universities, NGOs, etc., should be mounted at the outset of activities in a country to decide on the most appropriate alternative. The resource persons should be chosen as far as feasible from local experts or experts from neighboring countries to obviate any cultural barriers. Specifically, main users of methyl bromide for the specified use(s) should be brought together with relevant agriculture, certification and environment agencies, and farmers who have already used the likely alternatives (designated group).
19. Target pest should be determined and available alternatives should be discussed in terms of their costs and benefits, including environmental and human health impacts.
20. The group should together select the alternative(s) field testing. It should participate in application of the alternative, periodic review of results, final evaluation of projects and their potential for more widespread application within the country.
21. A fact sheet summarizing the results of the project should be prepared for widespread dissemination both within the country and to other countries. Evaluation and reporting components of the project should include a delineation of costs and benefits, and outline the actions that the country intends to take to implement the alternative (if proven feasible) on a wider scale.
22. The Implementing Agencies should hold discussions with the competent government agencies, including the NOU, in the implementation of the project. The Implementing Agencies and their in-country counterparts should make every effort to collect data on the consumption of methyl bromide and the history and pattern of its uses in the concerned country. Where possible, exporting countries are encouraged to develop labels and appropriate certification procedures to attest the absence of the use of methyl bromide where their exports were produced without the fumigant.
23. Extensive coordination of work among Implementing Agencies and bilateral partners will be essential in order to avoid costly duplication of travel or other efforts. This will be important particularly for demonstrating methyl bromide eliminated by the introduction of the alternative and for data collection purposes.

## **GUIDELINES FOR DEMONSTRATION PROJECTS**

24. The goal of demonstration projects should be demonstration of alternatives through a process that would facilitate wider understanding among users on how the alternative being demonstrated, if proven successful, might be applied to related uses throughout the country and perhaps throughout the surrounding region. Should the demonstration project prove to be

successful, and the proposed alternative technology be acceptable to the country, then the project should be developed into a full investment project.

25. Preparation of demonstration projects should commence with a participatory transparent process to identify all the promising alternatives for a specific target crop or use in a specific region, consistent with the recommendations of the MBTOC report. Priority should be given to the alternatives indicated in the strategy. Main users of methyl bromide for the specified uses should be brought together with relevant agricultural and environmental agencies, farmers who have already used the likely alternatives and other stakeholders. Target pests should be determined by this group and available alternatives should be considered in terms of their costs and benefits (including environmental impacts). The group should together select the alternative(s) to be field tested. In the controlled setting, which could be an existing respected agricultural research and demonstration facility, or a working farm setting, wherever practicable, these alternatives could be adapted to local conditions, applied, and evaluated. In order to produce results which might lead to widespread adoption of alternatives which prove successful, these demonstrations should be on plots sufficiently large to employ locally-used practices and equipment, while small enough to allow evaluation of a number of different alternatives.

26. If necessary, for crops in a parallel crop cycle, one or two of the most successful alternatives could be applied in nearby working farm settings where methyl bromide is currently being used. These applications would be relatively small, with the aim of demonstrating the effectiveness and efficiency of the alternative(s) in a commercial agricultural production setting.

27. Initial demonstration projects should focus on the widespread crop uses, to ensure the widest possible relevance of the results and include a process for disseminating the results of the project. In order to ensure this, it is suggested that initial projects should be limited to Article 5 countries which have important crops for which substantial amounts of methyl bromide are used for soil fumigation, and in countries and on important crops where the use of methyl bromide for soil fumigation is growing rapidly. It is hoped that by focusing in on crops on which the use of methyl bromide is widespread, that the results would be applicable to a large number of countries.

28. To the extent not redundant with other already proven technologies, demonstration projects on stored commodities as recommended by MBTOC and indicated as priority areas in the strategy could also be eligible.

### **Incremental Cost**

29. In the initial phase of projects of the type being proposed, crops would be raised for the purposes of adapting and evaluating alternatives, and would not produce crops of commercial value. In the second phase of such projects, likely savings from the use of alternatives are likely to be insignificant because of the scale of the demonstrations. Accordingly, it is proposed that for an initial round of projects, incremental cost be considered as being equal to full project cost.

The initial projects would be expected to produce highly useful information to help determine incremental cost for subsequent methyl bromide projects.

30. The group assembled to select the alternatives should also monitor implementation of the demonstration project(s), periodic review of results, final evaluation of projects and their potential for more widespread application.

31. Fact sheets should be prepared so that they are suitable for widespread dissemination both within the country and to other countries. Evaluation and reporting components of the project should include a delineation of costs and benefits, and outline the actions that the country intends to take to implement the alternative (if proven feasible) on a wider scale.

32. Implementing agencies and/or bilateral partners should take the opportunity of working in the country to gather additional information on the use of methyl bromide to encourage the early adoption of reduced dosages and other good management practices where warranted and to identify key decision makers who will be instrumental in the phase-out of methyl bromide in the country concerned.

## **GUIDELINES FOR INVESTMENT PROJECTS**

33. Investment projects can be considered for funding for crops, technologies or applications listed as priority areas in the strategy and for which alternative technologies are well established under similar conditions.

34. It would need to be demonstrated that the country was committed to a package of policy measures directed to eliminating methyl bromide use (i.e., bans and import licensing) and to sustaining the alternative methodologies on a permanent basis or for as long as needed. This will ensure that the consumption being phased out will not merely be replaced by an increase from other similar users shortly after the projects are completed. Farmers should also be committed to sustainable reductions in methyl bromide use.

35. Within the priority areas, emphasis should be placed on projects resulting in significant reduction of methyl bromide use and those whose results are most easily transferable to similar conditions at the national or regional levels (globally applicable).

36. During an open and transparent project preparation process, implementing agencies and/or bilateral donors should provide sound and comprehensive information on alternative technologies to methyl bromide application, including environmental and health impacts. However, selection of the alternative technology(ies) should be the responsibility of the recipient country, and not the implementing agency and/or bilateral partner. This ensures the sustainability of project results.

37. The institutional capacity should be in place to enable the alternative technology used in an investment project to be adopted on a nation-wide, and possibly region-wide basis.

38. Whenever possible, an investment project should be supported by policy, awareness or promotional activities (such as labeling) to enhance the economic viability of the alternative technology and thus the sustainability of the project.

39. More experience is needed before detailed incremental costs of individual projects can be delineated. For the first tranche of projects, a careful review by the Executive Committee should be undertake to determine the level of eligible funding. The Secretariat, in consultation with appropriate experts, should provide further advice to the Executive Committee on the calculation of incremental costs.

40. As experience is gained, templates specific to alternative replacement could be developed.

## **GUIDELINES FOR NON-INVESTMENT PROJECTS**

41. A wide range of specific non-investment activities are necessary to facilitate the phase out of methyl bromide in Article 5 countries. For the duration of the strategy, priority should be given to information exchange activities particularly to facilitate ratification of the Copenhagen Amendment, an understanding of the importance of methyl bromide phase out, assistance available under the Multilateral Fund, available alternative technologies and practices to reduce or eliminate the use of methyl bromide in specific applications, and policy options that could assist a country in the phase out process.

42. The focus should be on information exchange on a regional basis, for crops, technologies or applications listed as priority areas in the strategy. Information exchange on a regional basis could be achieved through forums devoted to particular crops in the priority list, in which all stakeholders are involved (including, farmers, government officials, research institutes, pesticide manufacturers, NGOs).

43. Policy dialogue is critically important. Effort should be made to inform relevant high level decision makers, such as Ministries of Agriculture, and should be conducted by the most credible persons, perhaps calling upon the agricultural experts of relevant implementing agencies or other international agencies.

44. Specifically:

- (a) Well compiled case studies on alternative technologies to methyl bromide uses that have been successfully implemented should be prepared as an effective information tool.
- (b) Legislation and regulation models already in place should be compiled to assist Article 5 countries in developing similar policy instruments.

- (c) The lack of awareness that methyl bromide is a controlled substance should be combated. UNEP could work on this through networks and preparation of information documents.
- (d) Although the development of management plans for methyl bromide phase out is premature, the preparation of management plans should not be excluded for countries which are well advanced in reduction of methyl bromide use and planning for phase out.

**LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING**

UNEP/OzL.Pro/ExCom/24/17

Annex II

Page 1

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project	Funds Recommended (US\$) Support	Funds Recommended (US\$) Total	C.E. (US\$/kg)
<b>ARGENTINA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation in the foam sector	UNDP		\$25,000	\$3,250	\$28,250	
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for methyl bromide (tobacco) demonstration project	UNDP		\$25,000	\$3,250	\$28,250	
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the refrigeration, halon and MAC sectors	IBRD		\$60,000	\$7,800	\$67,800	
<i>Investment projects resulting from the project preparation should not be approved until the Executive Committee was assured that all regulatory impediments had been resolved.</i>						
<b>Total for Argentina</b>				<b>\$110,000</b>	<b>\$14,300</b>	<b>\$124,300</b>
<b>BELIZE</b>						
<b>SEVERAL</b>						
<b>Country programme/country survey</b>						
Country programme preparation	UNEP		\$52,000	\$6,760	\$58,760	
<b>Total for Belize</b>				<b>\$52,000</b>	<b>\$6,760</b>	<b>\$58,760</b>
<b>BOLIVIA</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Project preparation for 2 projects in commercial refrigeration and one in domestic refrigeration sub-sectors	UNDP		\$40,000	\$5,200	\$45,200	
Development of refrigerant management plan	UNEP		\$30,000	\$3,900	\$33,900	
<b>Total for Bolivia</b>				<b>\$70,000</b>	<b>\$9,100</b>	<b>\$79,100</b>
<b>BOTSWANA</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (grain fumigation)	UNIDO		\$25,000	\$3,250	\$28,250	
<b>Total for Botswana</b>				<b>\$25,000</b>	<b>\$3,250</b>	<b>\$28,250</b>

**LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING**

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Funds Recommended Support	(US\$) Total	C.E. (US\$/kg)
<b>BRAZIL</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation to prepare 16 projects in the foam sector	UNDP		\$70,000	\$9,100	\$79,100	
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for two methyl bromide demonstration projects (soil fumigation for flowers, tomatoes, cucumbers and strawberries)	UNDP		\$40,000	\$5,200	\$45,200	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Project preparation for 4 projects in the commercial refrigeration subsector	UNDP		\$30,000	\$3,900	\$33,900	
Project preparation in the commercial refrigeration sector (Tecpur, Crios, Panamante and others)	UNIDO		\$50,000	\$6,500	\$56,500	
<b>SEVERAL</b>						
<b>Institutional strengthening</b>						
Renewal of institutional strengthening project for the phaseout of ozone depleting substances	UNDP		\$270,000	\$35,100	\$305,100	
<b>Total for Brazil</b>				<b>\$460,000</b>	<b>\$59,800</b>	<b>\$519,800</b>
<b>BURKINA FASO</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Development of refrigerant management plan	UNEP		\$30,000	\$3,900	\$33,900	
<b>Total for Burkina Faso</b>				<b>\$30,000</b>	<b>\$3,900</b>	<b>\$33,900</b>
<b>CAMEROON</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of demonstration project (tobacco, tomatoes, strawberries)	UNIDO		\$25,000	\$3,250	\$28,250	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
<b>Total for Cameroon</b>				<b>\$55,000</b>	<b>\$7,150</b>	<b>\$62,150</b>

**LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING**

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>CHILE</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation in the methyl bromide sector for tomatoes	IBRD		\$25,000	\$3,250	\$28,250	
Project preparation for a methyl bromide alternative demonstration project for soil fumigation in nurseries and seed beds for apples and kiwis	UNDP		\$25,000	\$3,250	\$28,250	
	<b>Total for Chile</b>		<b>\$50,000</b>	<b>\$6,500</b>	<b>\$56,500</b>	
<b>CHINA</b>						
<b>AEROSOL</b>						
<b>Filling plant</b>						
Umbrella project to complete CFC phaseout in general purpose aerosols at NCLI and Fujiang Light Industry Co.	IBRD	1,224.0	\$547,675	\$71,198	\$618,873	0.45
<i>Approved on the understanding that this was a terminal umbrella project for non-pharmaceutical applications in the aerosol sector.</i>						
<b>FOAM</b>						
<b>Rigid</b>						
Conversion to cyclopentane in the manufacture of heating pipes at Jixi City Thermal Power Company	UNDP	86.0	\$673,380	\$87,539	\$760,919	7.83
<b>Preparation of project proposal</b>						
Project preparation for 10 projects in the rigid and integral skin foam sub-sectors	UNDP		\$90,000	\$11,700	\$101,700	
Preparation of investment projects (50 companies) in the foam sector (polystyrene/polyethylene)	UNIDO		\$100,000	\$13,000	\$113,000	
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the aerosol, foam, MAC commercial refrigeration and CFC production sectors	IBRD		\$600,000	\$78,000	\$678,000	
<b>OTHER</b>						
<b>Preparation of project proposal</b>						
Preparation of a sectoral strategy in the tobacco sector	UNIDO		\$200,000	\$26,000	\$226,000	
<b>REFRIGERATION</b>						
<b>Domestic</b>						
Conversion to cyclopentane and R-134a in the manufacture of domestic freezers at Wanbao Freezer Industrial Corporation	UNDP	138.2	\$1,402,370	\$182,308	\$1,584,678	6.60

**LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING**

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>Preparation of project proposal</b>						
Project preparation for 2 projects in the domestic refrigeration (hydrocarbon) subsector	UNDP		\$50,000	\$6,500	\$56,500	
		<b>Total for China</b>	<b>1,448.2</b>	<b>\$3,663,425</b>	<b>\$476,245</b>	<b>\$4,139,670</b>
<b>COLOMBIA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 2 projects in the foam sector	UNDP		\$25,000	\$3,250	\$28,250	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Project preparation in the commercial refrigeration sector	IBRD		\$90,000	\$11,700	\$101,700	
<b>SEVERAL</b>						
<b>Institutional strengthening</b>						
Renewal of institutional strengthening project for the phaseout of ozone depleting substances	UNDP		\$212,000	\$27,560	\$239,560	
		<b>Total for Colombia</b>	<b>\$327,000</b>	<b>\$42,510</b>	<b>\$369,510</b>	
<b>COSTA RICA</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Project preparation for 2 projects in commercial refrigeration subsector	UNDP		\$20,000	\$2,600	\$22,600	
		<b>Total for Costa Rica</b>	<b>\$20,000</b>	<b>\$2,600</b>	<b>\$22,600</b>	
<b>COTE D'IVOIRE</b>						
<b>REFRIGERATION</b>						
<b>Recovery/recycling</b>						
Implementation of a refrigerant management plan	France		\$227,650		\$227,650	
<b>Preparation of project proposal</b>						
Preparation of an investment project in the domestic refrigeration (hydrocarbon) sector for Serti	UNIDO		\$20,000	\$2,600	\$22,600	
		<b>Total for Cote D'Ivoire</b>	<b>\$247,650</b>	<b>\$2,600</b>	<b>\$250,250</b>	
<b>CROATIA</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (tobacco, tomatoes)	UNIDO		\$20,000	\$2,600	\$22,600	

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
		<b>Total for Croatia</b>		<b>\$50,000</b>	<b>\$6,500</b>	<b>\$56,500</b>
<b>CUBA</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a phase out project (tobacco)	UNIDO		\$20,000	\$2,600	\$22,600	
		<b>Total for Cuba</b>		<b>\$70,000</b>	<b>\$9,100</b>	<b>\$79,100</b>
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of an investment project (hospitals) in the commercial refrigeration sector	UNIDO		\$50,000	\$6,500	\$56,500	
<i>The proposal was approved on an exceptional basis and on the understanding that policy issues regarding concessional loans would have to be resolved.</i>						
		<b>Total for Cuba</b>		<b>\$70,000</b>	<b>\$9,100</b>	<b>\$79,100</b>
<b>DOMINICAN REPUBLIC</b>						
<b>REFRIGERATION</b>						
<b>Commercial</b>						
Elimination of CFC 11 & CFC 12 consumption in the manufacture of unitary commercial refrigeration equipment at Metalgas S.A. by replacement with HCFC 141b & HFC 134a respectively	UNDP	20.8	\$316,368	\$41,128	\$357,496	15.21
<b>Preparation of project proposal</b>						
Project preparation for one project in commercial refrigeration subsector	UNDP		\$20,000	\$2,600	\$22,600	
		<b>Total for Dominican Republic</b>		<b>20.8</b>	<b>\$336,368</b>	<b>\$43,728</b>
						<b>\$380,096</b>
<b>ECUADOR</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation in the methyl bromide sector for cut flowers and tobacco	IBRD		\$20,000	\$2,600	\$22,600	
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the foam, refrigeration and halon sectors	IBRD		\$49,000	\$6,370	\$55,370	
		<b>Total for Ecuador</b>		<b>\$69,000</b>	<b>\$8,970</b>	<b>\$77,970</b>

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>EGYPT</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for two methyl bromide alternative demonstration projects (strawberries, tomatoes and curcubits)	UNDP		\$40,000	\$5,200	\$45,200	
<b>HALON</b>						
<b>Preparation of project proposal</b>						
Project preparation to prepare one halon sector programme	UNDP		\$30,000	\$3,900	\$33,900	
<b>Total for Egypt</b>				\$70,000	\$9,100	\$79,100
<b>EL SALVADOR</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 2 projects in the foam sector	UNDP		\$20,000	\$2,600	\$22,600	
<b>Total for El Salvador</b>				\$20,000	\$2,600	\$22,600
<b>HONDURAS</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of a refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
<b>Total for Honduras</b>				\$30,000	\$3,900	\$33,900
<b>INDIA</b>						
<b>AEROSOL</b>						
<b>Filling plant</b>						
Aerosol conversion at Chem-Verse Consultants	UNDP	18.0	\$67,324	\$8,752	\$76,076	3.74
Aerosol conversion at Sara-Chem Pvt. Ltd.	UNDP	23.3	\$89,164	\$11,591	\$100,755	3.83
Aerosol conversion at Spray Products	UNDP	16.8	\$65,486	\$8,513	\$73,999	3.91
Aerosol conversion at Sunder Chemical	UNDP	15.0	\$59,892	\$7,786	\$67,678	3.99
Aerosol conversion at Maja Cosmetics Pvt. Ltd.	UNDP	31.3	\$125,240	\$16,281	\$141,521	3.99
Aerosol Conversion at Midas Care Pharmaceuticals	UNDP	25.2	\$110,880	\$14,414	\$125,294	4.40

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Steelage Industries Limited Minimax Division/ Chennai	UNDP	116.0	\$131,915	\$17,149	\$149,064	1.14
<i>Approved under the condition that the conversion to CO2 should be maintained, at the ratio specified, after implementation, or the operating costs associated with CO2 should be recalculated and any ineligible costs returned. The project should also be undertaken within the context of the sector strategy prepared by UNDP, and that the strategy should be submitted to the Executive Committee.</i>						
Conversion of halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Vimal Industrial Safety Equipment Corporation Baroda - Gujrat	UNDP	133.0	\$186,152	\$24,200	\$210,352	1.40
<i>Approved under the condition that the conversion to CO2 should be maintained, at the ratio specified, after implementation, or the operating costs associated with CO2 should be recalculated and any ineligible costs returned. The project should also be undertaken within the context of the sector strategy prepared by UNDP, and that the strategy should be submitted to the Executive Committee.</i>						
Conversion of production halon 1211 fire extinguishers at Atkins, New Delhi	UNDP	37.0	\$54,760	\$7,119	\$61,879	1.48
<i>Approved under the condition that the conversion to CO2 should be maintained, at the ratio specified, after implementation, or the operating costs associated with CO2 should be recalculated and any ineligible costs returned. The project should also be undertaken within the context of the sector strategy prepared by UNDP, and that the strategy should be submitted to the Executive Committee.</i>						
Conversion of Halon 1211 fire extinguisher production and elimination of its consumption of virgin halon 1301 at Ashoka Engineering Co., New Delhi.	UNDP	34.0	\$50,320	\$6,542	\$56,862	1.48
<i>Approved under the condition that the conversion to CO2 should be maintained, at the ratio specified, after implementation, or the operating costs associated with CO2 should be recalculated and any ineligible costs returned. The project should also be undertaken within the context of the sector strategy prepared by UNDP, and that the strategy should be submitted to the Executive Committee.</i>						
<b>Preparation of project proposal</b>						
Project preparation for 5 halon extinguisher projects	UNDP		\$20,000	\$2,600	\$22,600	

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the refrigeration, solvent and production sectors	IBRD		\$80,000	\$10,400	\$90,400	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of an investment project in the commercial refrigeration sector	UNIDO		\$25,000	\$3,250	\$28,250	
Project preparation for 5 projects in commercial refrigeration subsector	UNDP		\$15,000	\$1,950	\$16,950	
<b>SOLVENT</b>						
<b>Preparation of project proposal</b>						
Preparation of investment projects in the solvent (CFC 113) sector at Harbans Lal Malhotra & Sons Ltd. Calcutta	UNIDO		\$25,000	\$3,250	\$28,250	
<b>Total for India</b>		1,086.6	\$1,673,351	\$217,536	\$1,890,887	
<b>INDONESIA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 4 projects in the rigid foam subsector	UNDP		\$30,000	\$3,900	\$33,900	
Preparation of investment projects in the foam (rigid polyurethane) sector, including Nirwana and PT Success	UNIDO		\$10,000	\$1,300	\$11,300	
<b>HALON</b>						
<b>Preparation of project proposal</b>						
Project preparation in the halon recycling sector	IBRD		\$18,000	\$2,340	\$20,340	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Project preparation for 5 projects in commercial refrigeration subsector	UNDP		\$10,000	\$1,300	\$11,300	
<b>Total for Indonesia</b>			\$68,000	\$8,840	\$76,840	
<b>IRAN</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (flowers, tobacco, grains)	UNIDO		\$15,000	\$1,950	\$16,950	

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>REFRIGERATION</b>						
<b>MAC</b>						
Conversion to non-CFC facilities of 4 companies producing cars and wagons equipped with MAC-umbrella project	France	23.5	\$138,600		\$138,600	5.60
		<b>Total for Iran</b>	<b>23.5</b>	<b>\$153,600</b>	<b>\$1,950</b>	<b>\$155,550</b>
<b>JAMAICA</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a phase out project (tobacco fumigation)	UNIDO		\$25,000	\$3,250	\$28,250	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Development of refrigerant management plan	UNEP		\$30,000	\$3,900	\$33,900	
		<b>Total for Jamaica</b>	<b>\$55,000</b>	<b>\$7,150</b>	<b>\$62,150</b>	
<b>JORDAN</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (tomatoes, strawberries, cucumber, melon)	UNIDO		\$15,000	\$1,950	\$16,950	
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the foam and halon recycling sectors	IBRD		\$30,000	\$3,900	\$33,900	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
		<b>Total for Jordan</b>	<b>\$75,000</b>	<b>\$9,750</b>	<b>\$84,750</b>	
<b>KENYA</b>						
<b>FUMIGANT</b>						
<b>Methyl bromide</b>						
Demonstration project - alternatives to the use of methyl bromide for soil fumigation in cut-flowers at Kenya Agricultural Research Institute - KARI	UNIDO		\$328,900	\$42,757	\$371,657	
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (flowers)	UNIDO		\$15,000	\$1,950	\$16,950	
		<b>Total for Kenya</b>	<b>\$343,900</b>	<b>\$44,707</b>	<b>\$388,607</b>	

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project	Support	Total	C.E. (US\$/kg)
<b>KOREA, DPR</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (rice and maize)	UNIDO		\$10,000	\$1,300	\$11,300	
			<b>Total for Korea, DPR</b>	<b>\$10,000</b>	<b>\$1,300</b>	<b>\$11,300</b>
<b>MACEDONIA</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
			<b>Total for Macedonia</b>	<b>\$30,000</b>	<b>\$3,900</b>	<b>\$33,900</b>
<b>MALAWI</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for a methyl bromide (tobacco) alternative demonstration project	UNDP		\$25,000	\$3,250	\$28,250	
			<b>Total for Malawi</b>	<b>\$25,000</b>	<b>\$3,250</b>	<b>\$28,250</b>
<b>MALAYSIA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 4 projects in the rigid foam subsector	UNDP		\$30,000	\$3,900	\$33,900	
Preparation of investment projects in the foam sector (rigid polyurethane) for Chon Son, Ngu Soon, Ming Soon, Yon Tuck	UNIDO		\$20,000	\$2,600	\$22,600	
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for a methyl bromide alternative demonstration project (timber)	UNDP		\$30,000	\$3,900	\$33,900	
			<b>Total for Malaysia</b>	<b>\$80,000</b>	<b>\$10,400</b>	<b>\$90,400</b>
<b>MALI</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNEP		\$10,000	\$1,300	\$11,300	

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>SEVERAL</b>						
<b>Institutional strengthening</b>						
Institutional strengthening project for Mali	UNEP		\$70,000	\$9,100	\$79,100	
			<b>Total for Mali</b>	<b>\$80,000</b>	<b>\$10,400</b>	<b>\$90,400</b>
<b>MEXICO</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 5 projects in the foam sector	UNDP		\$40,000	\$5,200	\$45,200	
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for 2 methyl bromide (flowers and crop storage) alternative demonstration projects	UNDP		\$30,000	\$3,900	\$33,900	
<b>HALON</b>						
<b>Preparation of project proposal</b>						
Project preparation to prepare one halon sector programme	UNDP		\$20,000	\$2,600	\$22,600	
<b>REFRIGERATION</b>						
<b>MAC</b>						
Manufacture of complete heat exchanger systems for air conditioning equipment that use HFC-134a at Climas de Mexico	IBRD		\$2,359,812	\$306,776	\$2,666,588	
<b>Preparation of project proposal</b>						
Project preparation in the commercial refrigeration (end users) conversion projects	IBRD		\$80,000	\$10,400	\$90,400	
			<b>Total for Mexico</b>	<b>\$2,529,812</b>	<b>\$328,876</b>	<b>\$2,858,688</b>
<b>MOROCCO</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 2 projects in the foam sector	UNDP		\$20,000	\$2,600	\$22,600	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of investment project in the commercial refrigeration sector for Allom du Nord and others	UNIDO		\$15,000	\$1,950	\$16,950	
			<b>Total for Morocco</b>	<b>\$35,000</b>	<b>\$4,550</b>	<b>\$39,550</b>

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Recommended Support	(USS) Total	C.E. (US\$/kg)
<b>NAMIBIA</b>						
<b>REFRIGERATION</b>						
<b>Recovery/recycling</b>						
Recuperation and recycling of R-12, integrated with the introduction of hydrocarbon technology in the service sector	Germany		\$34,400		\$34,400	
			<b>Total for Namibia</b>		<b>\$34,400</b>	
<b>NEPAL</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Development of refrigerant management plan	UNEP		\$10,000	\$1,300	\$11,300	
			<b>Total for Nepal</b>		<b>\$10,000</b>	<b>\$1,300</b>
<b>NICARAGUA</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
			<b>Total for Nicaragua</b>		<b>\$30,000</b>	<b>\$3,900</b>
<b>PAKISTAN</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (tobacco, tomatoes, cucurbits)	UNIDO		\$30,000	\$3,900	\$33,900	
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the foam and refrigeration sectors	IBRD		\$63,000	\$8,190	\$71,190	
			<b>Total for Pakistan</b>		<b>\$93,000</b>	<b>\$12,090</b>
<b>PANAMA</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Development of refrigerant management plans to assist	UNEP		\$30,000	\$3,900	\$33,900	
			<b>Total for Panama</b>		<b>\$30,000</b>	<b>\$3,900</b>

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>PHILIPPINES</b>						
<b>SOLVENT</b>						
<b>Preparation of project proposal</b>						
Project preparation to prepare the second and final phase for phaseout of ODS by solvent blenders	UNDP		\$25,000	\$3,250	\$28,250	
			<b>Total for Philippines</b>	<b>\$25,000</b>	<b>\$3,250</b>	<b>\$28,250</b>
<b>ROMANIA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Preparation of investment project for Romcarbon in foam sector	UNIDO		\$10,000	\$1,300	\$11,300	
			<b>Total for Romania</b>	<b>\$40,000</b>	<b>\$5,200</b>	<b>\$45,200</b>
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of a refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
			<b>Total for Romania</b>	<b>\$40,000</b>	<b>\$5,200</b>	<b>\$45,200</b>
<b>SAINT KITTS AND NEVIS</b>						
<b>REFRIGERATION</b>						
<b>Recovery/recycling</b>						
Implementation of a refrigerant management plan for St. Kitts & Nevis	Canada		\$124,300		\$124,300	
			<b>Total for Saint Kitts and Nevis</b>	<b>\$124,300</b>		<b>\$124,300</b>
<b>SENEGAL</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Development of refrigerant management plan	UNEP		\$30,000	\$3,900	\$33,900	
			<b>Total for Senegal</b>	<b>\$30,000</b>	<b>\$3,900</b>	<b>\$33,900</b>
<b>SRI LANKA</b>						
<b>SOLVENT</b>						
<b>Preparation of project proposal</b>						
Project preparation for one project in the solvent sector	UNDP		\$20,000	\$2,600	\$22,600	
			<b>Total for Sri Lanka</b>	<b>\$20,000</b>	<b>\$2,600</b>	<b>\$22,600</b>

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	(US\$) Support	(US\$) Total	C.E. (US\$/kg)
<b>SUDAN</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$20,000	\$2,600	\$22,600	
<b>Total for Sudan</b>			<b>\$20,000</b>	<b>\$2,600</b>	<b>\$22,600</b>	
<b>SYRIA</b>						
<b>AEROSOL</b>						
<b>Preparation of project proposal</b>						
Preparation of investment project in the aerosol sector at Nweylati Al Fayer	UNIDO		\$15,000	\$1,950	\$16,950	
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Preparation of investment project for NPC in Damascus and others in rigid foam sector	UNIDO		\$15,000	\$1,950	\$16,950	
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (horticulture and grain)	UNIDO		\$15,000	\$1,950	\$16,950	
<b>Total for Syria</b>			<b>\$45,000</b>	<b>\$5,850</b>	<b>\$50,850</b>	
<b>TANZANIA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation to formulate one flexible foam sector project	UNDP		\$20,000	\$2,600	\$22,600	
<b>Total for Tanzania</b>			<b>\$20,000</b>	<b>\$2,600</b>	<b>\$22,600</b>	
<b>THAILAND</b>						
<b>AEROSOL</b>						
<b>Preparation of project proposal</b>						
Project preparation for 4 projects in the aerosol sector	UNDP		\$30,000	\$3,900	\$33,900	
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation for 3 projects in the foam sector	UNDP		\$25,000	\$3,250	\$28,250	

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the foam, halon, commercial refrigeration (end users), and solvent sectors	IBRD		\$110,000	\$14,300	\$124,300	
<b>REFRIGERATION</b>						
<b>Domestic</b>						
Elimination of ODSs used in the production of household refrigerators at Hitachi Consumer Products (Thailand) Co. Ltd.	IBRD	127.2	\$253,381	\$32,940	\$286,321	6.33
		<b>Total for Thailand</b>	<b>127.2</b>	<b>\$418,381</b>	<b>\$54,390</b>	<b>\$472,771</b>
<b>TRINIDAD AND TOBAGO</b>						
<b>AEROSOL</b>						
<b>Preparation of project proposal</b>						
Project preparation for 1 project in the aerosol sector	UNDP		\$15,000	\$1,950	\$16,950	
		<b>Total for Trinidad and Tobago</b>	<b>\$15,000</b>	<b>\$1,950</b>	<b>\$16,950</b>	
<b>TUNISIA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Project preparation in the foam sector	IBRD		\$25,000	\$3,250	\$28,250	
<b>FUMIGANT</b>						
<b>Methyl bromide</b>						
Demonstration project - alternatives to the use of methyl bromide in horticulture at Société Méditerranéenne Fruitière	UNIDO		\$301,730	\$39,225	\$340,955	
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of a refrigerant management plan	UNIDO		\$30,000	\$3,900	\$33,900	
		<b>Total for Tunisia</b>	<b>\$356,730</b>	<b>\$46,375</b>	<b>\$403,105</b>	
<b>TURKEY</b>						
<b>FOAM</b>						
<b>Flexible</b>						
Conversion from CFC-11 into all-water for flexible slabstock foam at IDAS	IBRD	37.0	\$230,510	\$29,966	\$260,476	6.23
<b>Rigid</b>						
Conversion to non-CFC foam blowing agents in the production of polyurethane (PU) insulation panels, spray/in situ foam and one component foams at Izopoli Yapı Elemanları Taahhüt Sanayii ve Ticaret Ltd. Sti.	IBRD	274.0	\$1,141,500	\$148,395	\$1,289,895	4.17

**LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING**

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
Phase out of CFC-11 for flexible moulded, integral skin and rigid foam at Pimsa Poliuretan Imalat Sanayii Ve Ticaret A.S.	IBRD	57.9	\$551,501	\$71,695	\$623,196	9.53
<b>Integral skin</b>						
Conversion from CFC-11 into methylene chloride and dop for flexible molded hot cured foam at Teknik Malzeme	IBRD	17.2	\$122,443	\$15,918	\$138,361	7.13
<i>The funds approved may be applied to the technology selected in cooperation with the company's joint venture partner.</i>						
Conversion from CFC-11 into LCD for flexible moulded foam at Elele Doseme Sanayii Ve Ticaret A.S.	IBRD	41.4	\$311,768	\$40,530	\$352,298	7.54
Conversion from CFC-11 into all-water and HCFC-141b for integral skin foam at Polifleks Sentetik Maddeler Sanayii Ve Ticaret A.S.	IBRD	26.7	\$252,558	\$32,833	\$285,391	9.47
Conversion from CFC-11 into all-water for flexible moulded and HCFC-141b for integral skin foam at EPS Entegre Poliuretan Sunger Ve Koltuk San Tic. Ltd. Sti.	IBRD	11.2	\$188,280	\$24,476	\$212,756	16.74
<b>Multiple-subsectors</b>						
Phaseout of CFC-11 for flexible molded, integral skin and rigid foam at Purplast	IBRD	54.0	\$551,101	\$71,643	\$622,744	10.21
<b>Preparation of project proposal</b>						
Preparation of investment project in the rigid foam subsector	UNIDO		\$15,000	\$1,950	\$16,950	
Preparation of investment projects in the foam sector (polyurethane) at Sungersan AS and Serra Sunger	UNIDO		\$15,000	\$1,950	\$16,950	
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (flowers, tobacco)	UNIDO		\$25,000	\$3,250	\$28,250	
<b>MULTI-SECTOR</b>						
<b>Preparation of project proposal</b>						
Project preparation in the aerosol, foam and recycling sectors	IBRD		\$100,000	\$13,000	\$113,000	
<b>Total for Turkey</b>		<b>519.3</b>	<b>\$3,504,661</b>	<b>\$455,606</b>	<b>\$3,960,267</b>	
<b>URUGUAY</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Preparation of a demonstration project (tomatoes, cucumber, strawberries, flower)	UNIDO		\$25,000	\$3,250	\$28,250	
<b>Total for Uruguay</b>			<b>\$25,000</b>	<b>\$3,250</b>	<b>\$28,250</b>	

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Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
<b>VENEZUELA</b>						
<b>FOAM</b>						
<b>Preparation of project proposal</b>						
Preparation of investment project in the foam sector (rigid polyurethane) for Fanesi Barquisimeto	UNIDO		\$10,000	\$1,300	\$11,300	
			<b>Total for Venezuela</b>	<b>\$10,000</b>	<b>\$1,300</b>	<b>\$11,300</b>
<b>VIETNAM</b>						
<b>AEROSOL</b>						
<b>Preparation of project proposal</b>						
Project preparation for 1 project in the aerosol sector	UNDP		\$20,000	\$2,600	\$22,600	
<b>FUMIGANT</b>						
<b>Methyl bromide</b>						
Demonstration project - alternatives to the use of methyl bromide on stacked bags of rice, grain in silos, and timber on a warehouse under tarps at Vietnam Fumigation Company	UNIDO		\$411,180	\$53,453	\$464,633	
<i>Approved on the understanding that none of the funds approved for the project would be used to demonstrate alternatives to methyl bromide for quarantine and pre-shipment purposes.</i>						
			<b>Total for Vietnam</b>	<b>\$431,180</b>	<b>\$56,053</b>	<b>\$487,233</b>
<b>YUGOSLAVIA</b>						
<b>REFRIGERATION</b>						
<b>Preparation of project proposal</b>						
Preparation of refrigerant management plan	UNIDO		\$10,000	\$1,300	\$11,300	
			<b>Total for Yugoslavia</b>	<b>\$10,000</b>	<b>\$1,300</b>	<b>\$11,300</b>
<b>ZIMBABWE</b>						
<b>FUMIGANT</b>						
<b>Preparation of project proposal</b>						
Project preparation for a methyl bromide alternative demonstration project	UNDP		\$25,000	\$3,250	\$28,250	
			<b>Total for Zimbabwe</b>	<b>\$25,000</b>	<b>\$3,250</b>	<b>\$28,250</b>
<b>GLOBAL</b>						
<b>FUMIGANT</b>						
<b>Technical assistance/support</b>						
Compilation of legislations for regulatory authorities from Article 5 countries that discourage methyl bromide use and promote alternatives	UNEP		\$50,000	\$6,500	\$56,500	

## **LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING**

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## Appendix

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