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**EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

Twenty-fifth Meeting
Montreal, 29-31 July 1998

**REPORT OF THE FOURTEENTH 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 27 and 28 July 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 and the Ozone Secretariat.

The meeting was also attended by representatives of Canada, China 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, 27 July 1998.

AGENDA ITEM 2: ADOPTION OF THE ANNOTATED AGENDA

2. The Sub-Committee adopted the following agenda on the basis of the annotated provisional agenda contained in document UNEP/OzL.Pro/ExCom/SCPR/14/1/Add.1/Rev.1:

1. Opening of the meeting
2. Adoption of the annotated agenda
3. Introductory remarks by the Chief Officer
4. Organization of work
5. Generic issues identified during project review
6. Bilateral cooperation
7. Work Programme Amendments
8. Investment projects (including methyl bromide)
9. Papers on policy issues outstanding from previous meetings
10. Papers on new policy issues
11. Other matters.

AGENDA ITEM 3: INTRODUCTORY REMARKS BY THE CHIEF OFFICER

3. The Chief Officer said that, for the first time, the Secretariat had experimented with the distribution of documents by electronic mail. Things had not gone smoothly at first, but various technical problems had been overcome and the Secretariat was now able to e-mail documents to participants individually. Electronic transmission had important time and cost benefits, and the Secretariat would shortly have available a web site specifically for members of the Executive Committee and those entitled to receive meeting documentation, from which documents could be downloaded at leisure.

4. The meeting documentation itself showed that large numbers of projects had not been resolved at the time the documents were distributed, and that there were a number of projects on which an agreed recommendation was still pending. The Secretariat found itself in somewhat of a dilemma in attempting to discharge its responsibilities in a professional manner. The Executive Committee had instructed it to continue dialogue with the implementing agencies up to the time of the Meeting. But that did not permit the members of the Sub-Committee to be in full possession of the facts when making recommendations. There had been considerable discussion between the implementing agencies and the Secretariat in what was meant to be the two-week moratorium period prior to the commencement of the current Meeting. However, once submitted, a project remained on the business list unless it was withdrawn by an implementing agency. He believed that there might be a need for the Sub-Committee to consider the circumstances in which there was a cut-off date, after which projects with outstanding issues could no longer be kept on the

business list for the meeting in question. The quality of projects was on the agenda of the current Meeting, and members might wish to consider the present remarks in that context.

5. The Chief Officer concluded by reporting that some US \$50 million was available for allocation by the Executive Committee, which was sufficient to fund the programme before the Meeting.

AGENDA ITEM 4: ORGANIZATION OF WORK

6. Following the suggestion of the Chairman, the Sub-Committee decided to organize its work in accordance with the proposals outlined in the provisional annotated agenda (UNEP/OzL.Pro/ExCom/SCPR/14/1/Add.1/Rev.1).

AGENDA ITEM 5: GENERIC ISSUES IDENTIFIED DURING PROJECT REVIEW

(a) Flexibility of timing for crediting bilateral cooperation funding

7. The representative of the Secretariat, drawing attention to paragraphs 4 to 7 of the overview paper (UNEP/OzL.Pro/ExCom/25/18/Corr.1), said that Germany had advised that it wished to have the flexibility to seek approval of bilateral projects up to the full amount of its 20 per cent share of contributions at any stage up to the end of the current triennial replenishment period. The Secretariat sought guidance on how to proceed with regard to the request by Germany.

8. Following the discussion, the Sub-Committee recommended that the Executive Committee take a decision to allow flexibility in the year for which bilateral projects would be credited, provided that the donor country informed the Secretariat, early in the planning process or early in any given year, of the amount of bilateral funding that it intended to seek to have offset against its assessed contribution for the year.

(b) Renewal of institutional strengthening in countries where there are delays in project implementation

9. The representative of the Secretariat drew attention to paragraph 10 of the overview paper, which described the case concerning renewal of the institutional strengthening project for Kenya. The request was consistent with Executive Committee Decisions 19/29 and 24/23. Separately, the Secretariat had been informed of a significant delay in the implementation of investment projects associated with the clearance of project equipment through customs in Kenya. The Secretariat had written to the Ministry of Environment and Conservation of the issue, and had been informed that the equipment had been granted an exemption from duty and cleared through customs. The Secretariat sought guidance on whether, in future, issues that delayed project implementation should be taken into consideration prior to institutional strengthening projects being renewed.

10. Following the discussion, the Sub-Committee recommended that the Executive Committee request the Secretariat, in cases where a renewal request for an institutional strengthening project had been received, to implement the guidelines for renewal, to continue to examine what progress had been made in the implementation of the country's phase-out programmes and to draw to the attention of the Executive Committee any issues that delayed project implementation so that it could take an informed decision.

(c) Quality of project proposals

11. The representative of the Secretariat, pointing to paragraphs 12 and 13 of the overview paper, said that the task of reviewing projects had become more complex because of the variability of data in project documents. In virtually all sectors, initial project analysis by the Secretariat had revealed internal inconsistencies in the data submitted on some projects. If the current trend were to continue, given the time limitation between the submission of projects and the dispatch to members of the Sub-Committee on Project Review, it might not be possible for the Secretariat to continue to provide both a quality control and a review function.

12. Following the discussion, the Sub-Committee recommended that the Executive Committee adopt the following guidelines for submission of investment projects:

- (i) Projects submitted for the consideration of the Executive Committee should follow the project format agreed between the Secretariat and the implementing agencies (incorporating the requirements of the Executive Committee).
- (ii) Projects which need major revision, after submission, to comply with the agreed project format will be deferred.
- (iii) There will be a cut-off date of 10-working days (two calendar weeks) prior to the commencement of a meeting of the Sub-Committee on Project Review, when discussions between the Secretariat and the implementing agencies to resolve projects will conclude. After this date no new information is to be presented by the Secretariat to the Executive Committee in writing or otherwise.
- (iv) Projects with policy issues will continue to be brought forward to the Executive Committee before the 10-day deadline.
- (v) Projects for which agreement cannot be reached on major technical eligibility issues before the 10-day period will be deferred. The Executive Committee will be informed of the issues arising from those projects. The issues will be taken up in a technical discussion immediately after the meeting of the Executive Committee with a view to reaching a technical agreement which will be applied to this and similar projects at the next meeting.

- (vi) Technical agreements once reached should remain extant as a minimum for the remainder of the annual business planning cycle, as appropriate.
- (vii) Emphasis should continue to be placed on the use of technical conferences involving the Secretariat and the implementing agencies and technical experts to reach agreement on technical issues related to project design and the determination of incremental costs.

(d) Operating costs in previously approved refrigeration projects

13. The representative of the Secretariat drew attention to paragraphs 17 to 20 of the overview paper, regarding requests seeking incremental operating costs (IOC) for three domestic refrigeration projects which had already been implemented in Turkey. The proposals had been submitted on the basis of a decision of the Executive Committee taken at its 13th Meeting which provided that incremental costs could be approved for "one year's duration calculated on the basis of the costs prevailing following the start of operations" (UNEP/OzL.Pro/ExCom 13/47, page 43, paragraph 159). Decision 21/6 established that the level of production for calculating IOC was the level prior to preparation of the project as specified in the approved project proposal.

14. Concerning the first project (Profilo), a policy issue concerning the year for calculation of the level of production had been resolved and costs had been agreed with the implementing agency. However, as the project represented the first proposal of its type to be submitted for approval, it was being referred for individual consideration.

15. The second project (Klimasan) had been approved at the 15th Meeting with a cost-effectiveness of 25.4 US \$/kg, for capital costs only, which was already 60 per cent greater than the threshold of 15.21 US \$/kg subsequently established for the sub-sector at the 16th Meeting.

16. The third project (Arcelik) had been approved in 1992, before modalities for calculation of incremental capital or operating costs were considered. Therefore, IOC were not originally requested. Costs for the project were very high and included a number of significant items which, on the basis of current knowledge and practice, would be considered ineligible.

17. Following the discussion, the Sub-Committee recommended that the Executive Committee adhere to the commitments made at the time of approval. On this basis, the proposals for the Klimasan and Profilo projects could be approved, subject to any other specific issues to be taken up when the projects were considered individually under agenda item 8. It further recommended that the IOC for the Arcelik project should not be approved.

(e) Possible consideration of a new sub-sector for transportation refrigeration

18. The representative of the Secretariat drew attention to paragraphs 24 to 27 of the overview paper, noting that a project had been submitted by the World Bank for an enterprise in Turkey which assembled, installed and serviced both transportation refrigeration equipment and

mobile air-conditioning (MAC) equipment. The project had been submitted as a commercial refrigeration project, and both incremental capital costs and IOC had been requested.

19. The Secretariat sought guidance as to whether the Executive Committee might wish to consider the assembly and installation of transportation refrigeration as a new sub-sector and investigate what, if any, costs might be eligible for compensation. Alternatively, on the basis of the position taken in other relevant projects, the two principal cost elements of the proposal (IOC and capital costs for servicing) could be deleted from it, in which case the project might lapse.

20. The Sub-Committee recommended that the Executive Committee request the Secretariat to examine methods to initiate a study on whether transportation refrigeration could be considered a new sub-sector, and what, if any, costs might be eligible.

(f) Aerosol projects

(i) Possible cancellation of an aerosol project for Jordan

21. The representative of the Secretariat drew attention to paragraph 32 of the overview paper, noting that the incremental operating savings of the aerosol project approved for JIPCO in Jordan at the 20th Meeting at a net funding level of US \$102,855 had been calculated on the basis of the enterprise filling its own aerosol cans. The enterprise subsequently advised the World Bank that it was also working as a "contract filler" for other enterprises, in which case there would not be incremental operating savings for that proportion of its activities. The World Bank advised that the Government of Jordan wished to either bring forward a proposal for additional funding of some US \$73,000 or to cancel the project and return the funds. However, in the event of cancellation, it had requested preparation of a new project for the same enterprise.

22. Following the discussion, the Sub-Committee recommended that the Executive Committee communicate to the Government of Jordan that the project should be either implemented as originally agreed, or canceled and the money refunded. There should be no preparation of a new project for the enterprise, but the Executive Committee could indicate to the Government of Jordan that, if a terminal umbrella project proposal were to be submitted if the project were cancelled, the Committee would consider what flexibility, if any, could be applied for implementation of the JIPCO project within that framework and with the funding level approved at the 20th Meeting.

(ii) Corroboration of status of contract fillers

23. The representative of the Secretariat drew attention to paragraph 33 of the overview paper, stressing that there were indications that the Executive Committee could expect to see a greater number of aerosol projects emanating from "contract fillers". He pointed out that there would be a need for the status of the enterprises as contract fillers to be fully corroborated in project documentation to demonstrate that they were entitled to IOC calculated on the correct basis.

24. Following the discussion, the Sub-Committee recommended to the Executive Committee that it require that a project document should include verification by the agencies' consultants and certification by the Government concerned that the enterprise operated as a "contract filler".

(iii) Additional use of terminal umbrella projects

25. The representative of the Secretariat stated that, in order to provide assistance from the Multilateral Fund to smaller aerosol enterprises in a cost-effective way, emphasis would need to be placed on development of terminal umbrella projects.

26. Following the discussion, the Sub-Committee recommended that the Executive Committee encourage the development of innovative approaches, including terminal umbrella projects for the remainder of this sector in all Article 5 countries.

(g) Proposals for change in technology

27. The representative of the Secretariat drew attention to paragraph 35 of the overview paper, noting that two proposals had been received from implementing agencies to change technology in approved projects. Each of the projects had been approved before Decision 22/69 on technology transfer had been taken by the Executive Committee. No additional costs were being sought for either project and the proposals did not raise any policy issues.

28. Following the discussion, the Sub-Committee took note of the following changes of technology in two approved projects:

(a) Brazil: Phasing out CFC-12 with HCFC-22 and R404A as refrigerant and CFC-11 with cyclopentane as blowing agent in commercial refrigeration equipment for supermarkets at Electrofrío S.A. (UNIDO). (The original project proposed HFC-134a as a replacement for CFC-12).

(b) China: Conversion to LCD technology in the manufacturing of flexible (slabstock) polyurethane foam at Chengdu Plastics Factory # 7 (World Bank). (The original project proposed methylene chloride as a replacement for CFC-11).

(h) MAC sector in China

29. The representative of the Secretariat drew attention to paragraph 36 of the overview paper. Noting that the World Bank had developed a proposal to complete the phase-out of the MAC sector in China, he said that the proposal was in the form of a terminal umbrella project covering separate projects for 12 individual enterprises involved in manufacturing or assembling MAC components which had originally been submitted to the 25th Meeting for funding, but had been subsequently deferred. The total cost of the 12 proposals, as originally prepared, was US \$12,577,740. Relevant issues were summarized in Annex III to the overview paper.

30. Following the discussion, the Sub-Committee recommended that, in preparing a final proposal for submission to the 26th Meeting, the World Bank take into account the comments and suggestions made in the course of the discussion on the need to consider a number of significant cost and eligibility issues. It also emphasized that, as a special case, this project might not need to meet the requirements of Decision 17/6, but must fall within the US \$15.15 million estimated by China to be the total requests from the Multilateral Fund for the entire sector and should not contain proposals for IOC.

AGENDA ITEM 6: BILATERAL COOPERATION

31. The Sub-Committee considered requests for blanket approval of bilateral cooperation by the Governments of Canada and of Finland (UNEP/OzL.Pro/ExCom/25/19).

32. The Sub-Committee recommended to the Executive Committee that it approve the two requests at the level of funding indicated in the annex to the present report.

AGENDA ITEM 7: WORK PROGRAMME AMENDMENTS

UNDP

33. The Sub-Committee recommended to the Executive Committee that it approve UNDP's work programme amendments as contained in document UNEP/OzL.Pro/ExCom/25/20 at the level of funding indicated in the annex to the present report.

UNEP

34. The representative of UNEP, referring to UNEP's work programme amendments (UNEP/OzL.Pro/ExCom/25/21), noted that the Yemen country programme (UNEP/OzL.Pro/ExCom/25/63) included a request for the establishment of an Ozone Unit within the Environmental Protection Council (institutional strengthening), for which the Government of Yemen was requesting a total of US \$151,000. Following further discussion between the Secretariat and UNEP, UNEP revised the request to US \$120,000, the figure recommended by the Secretariat.

35. Following the discussion, the Sub-Committee recommended that the Executive Committee approve UNEP's work programme amendments at the level of funding indicated in the annex to the present report, with the following exception:

36. On the subject of RMPs, the Sub-Committee recommended that the Executive Committee ask UNEP to organize, in association with the tenth Meeting of Parties, a workshop involving bilateral donors, the implementing agencies and the Secretariat, to review experience to date with RMPs, in order to improve the quality of the preparation and implementation of RMP projects.

Yemen: preparation of refrigerant management plan (UNEP/OzL.Pro/ExCom/25/21)

37. The Sub-committee recommended that the above proposal be deferred until after the workshop on RMP projects had been held.

UNIDO

38. The Sub-Committee examined the proposed amendments to the UNIDO work programme contained in document UNEP/OzL.Pro/ExCom/25/22. In relation to a non investment project "Promotion and information transfer of alternatives to the use of methyl bromide in the preparation of seedbeds for the cultivation of rice and maize (cereals)" in the Democratic People's Republic of Korea, UNIDO re-examined the proposal in the context of reconsideration of its methyl bromide demonstration projects. UNIDO advised the Sub-Committee that it had reduced the request for funding for this information-transfer project to US \$27,500.

39. The Sub-Committee recommended that the Executive Committee approve the UNIDO work programme amendments, as revised at the level of funding indicated in the annex to the present report.

WORLD BANK

40. The Sub-Committee considered the proposals for amendments to the World Bank work programme contained in document UNEP/OzL.Pro/ExCom/25/23.

41. The Sub-Committee recommended that the Executive Committee approve the amendments to the World Bank work programme at the level of funding indicated in the annex to the present report, with the following exceptions and conditions:

Argentina: Project preparation for methyl bromide (citrus and cotton) demonstration project

Turkey: Project preparation for methyl bromide

42. The Sub-Committee deferred its recommendation on the above two projects pending its examination later in the meeting of other methyl bromide demonstration projects (see paragraphs 58 to 60 below).

Chile: Project preparation for the Phase II auction scheme

43. The Sub-Committee recommended approval of the above request at the level of funding indicated in the annex to the present report and recommended that the Executive Committee request the World Bank to submit project completion reports on the projects approved at the 7th and 19th Meetings of the Executive Committee.

Turkey: Project preparation for commercial refrigeration

44. Following consideration of document UNEP/OzL.Pro/ExCom/25/57 on umbrella project guidelines, the Sub-Committee recommended that the Executive Committee approve the above project at the funding level contained in the annex to the present report.

Uruguay: Project preparation

45. The above project was withdrawn by the World Bank.

AGENDA ITEM 8: INVESTMENT PROJECTS (INCLUDING METHYL BROMIDE)

(a) Projects recommended for blanket approval

46. The Sub-Committee, noting an observation by one representative to the effect that the administrative costs of the implementing agencies were to be discussed under the agenda of the Executive Committee, agreed to present its recommendations for the funding of projects without the 13 per cent support costs, which could be reconsidered in light of the conclusions of the debate in the Executive Committee.

47. The representative of the Secretariat drew attention to documents UNEP/OzL.Pro/ExCom/SCPR/14/2 and Add.1. Any technical issues raised by the projects listed in the documents, he said, had been resolved and there were no policy issues. In consequence, the Secretariat recommended all of the projects for blanket approval at a level of funding indicated in the annex to the present report.

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

(a) Dominican Republic: Implementation of the refrigerant management plan; Train the trainers programme in the refrigeration sector (UNEP/OzL.Pro/ExCom/25/33)

(b) Dominican Republic: Implementation of the refrigerant management plan; Monitoring of the activities included in the RMP (UNEP/OzL.Pro/ExCom/25/33)

(c) Dominican Republic: Implementation of the refrigerant management plan; Customs training (UNEP/OzL.Pro/ExCom/25/33)

(d) Dominican Republic: Implementation of the refrigerant management plan; Implementation of a national programme for recovery and recycling of refrigerants (UNEP/OzL.Pro/ExCom/25/33)

(e) El Salvador: Implementation of the refrigerant management plan; Customs training (UNEP/OzL.Pro/ExCom/25/34)

(f) El Salvador: Implementation of the refrigerant management plan; Train the trainers programme in the refrigeration sector (UNEP/OzL.Pro/ExCom/25/34)

(g) El Salvador: Implementation of the refrigerant management plan; Monitoring of the activities included in the RMP (UNEP/OzL.Pro/ExCom/25/34)

(h) El Salvador: Implementation of the refrigerant management plan; Implementation of a national programme for recovery and recycling of refrigerants (UNEP/OzL.Pro/ExCom/25/34)

49. Recalling that the guidelines for recovery and recycling projects stated that such projects would not be implemented until appropriate legislation or policies were in force in the country concerned, the Sub-Committee recommended that the Executive Committee should approve the above eight project proposals for refrigerant management plans for the Dominican Republic and El Salvador, pending the establishment of relevant legislation or policies in those countries at the level of funding indicated in the annex to the present report. In addition, concerning projects (c) and (e) above, the Sub-Committee recommended the customs training components of those projects for approval at a funding level of US \$38,000 each, and that the possibility of carrying out more cost-effective regional training be considered in future projects.

50. The Sub-Committee also recommended that the Executive Committee request the Secretariat to undertake further study on the question of the gains arising from recovered and recycled ozone-depleting refrigerants, which would lead to a renewed discussion within the Sub-Committee on the issue of offsetting benefits in large recycling efforts.

China: Conversion of refrigerator manufacture in Foshan from CFC-11 to cyclopentane foam blowing agent in the production of PU insulation panels

51. The above project was withdrawn from the list of investment projects for blanket approval by the World Bank.

(b) Projects for individual consideration

52. The representative of the Secretariat drew attention to annex I of the overview document, which made reference to nine demonstration projects for alternatives to methyl bromide, and 18 other projects for individual consideration.

Methyl bromide demonstration projects

(a) Botswana: Demonstration project - three alternatives to the use of methyl bromide: non-soil cultivation techniques, bio-fumigation with solarization, and application of various mixtures of other chemicals in low doses in tomatoes and cucurbits (UNIDO) (UNEP/OzL.Pro/ExCom/25/26)

- (b) Cameroon: Demonstration project - two alternatives to the use of methyl bromide: non-soil cultivation techniques and application of various mixtures of other chemicals in low doses in tobacco (UNIDO) (UNEP/OzL.Pro/ExCom/25/28)
- (c) Chile: Demonstration project for testing methyl bromide alternatives in soil treatment applications for tomatoes and peppers (World Bank) (UNEP/OzL.Pro/ExCom/25/29)
- (d) Croatia: Demonstration project: 3 alternatives to the use of methyl bromide in tobacco production; namely: solarization plus bio-fumigation, the use of low-dose chemicals, and non-soil cultivation, all in combination with an integrated pest management programme (UNIDO) (UNEP/OzL.Pro/ExCom/25/32)
- (e) Jordan: Demonstration project: three alternatives to the use of methyl bromide: steam pasteurization, non-soil cultivation and optimal use of soil fumigants in combination with an integrated pest management (IPM) in cucumbers and tomatoes (UNIDO) (UNEP/OzL.Pro/ExCom/25/32)
- (f) Mexico: Demonstration project: alternatives to the use of methyl bromide in the cultivation of tomatoes, strawberries, tobacco, melons, and cut flowers (UNIDO) (UNEP/OzL.Pro/ExCom/25/39)
- (g) Thailand: Demonstration project: alternatives to the use of methyl bromide in grain storage (rice, maize, tapioca, feed grains and pulses) (UNIDO) (UNEP/OzL.Pro/ExCom/25/47)
- (h) Turkey: Demonstration project: alternatives to the use of methyl bromide as soil fumigant in protected horticulture (tomatoes and cucumbers) and ornamental (carnations) crops (UNIDO) (UNEP/OzL.Pro/ExCom/25/51)
- (i) Uruguay: Demonstration project: alternatives to the use of methyl bromide as a soil fumigant in protected horticultural crops (cucumbers and peppers), seedbeds, and nurseries (vegetables, tobacco and forestry) (UNIDO) (UNEP/OzL.Pro/ExCom/25/52)

53. The representative of UNIDO said that the costs for its above eight projects had been reviewed and cost adjustments had been made on international and national consultants and on internal travel. The savings varied from project to project but were between 30 and 40 per cent.

54. The representative of the Secretariat confirmed that it was now prepared to recommend those revised projects for approval.

55. The representative of the World Bank said that the Bank had reduced the cost of national consultants for the Chile project in the same manner as had UNIDO. Also, internal travel costs had been reduced by 34 per cent from the original submission.

56. The representative of the Secretariat confirmed that it was now prepared to recommend approval of the amended proposal for the above World Bank project in Chile.

57. The Sub-Committee recommended that the Executive Committee approve the above eight projects from UNIDO and one from the World Bank at the level of funding indicated in the annex to the present report.

Argentina: Project preparation for methyl bromide (citrus and cotton) demonstration project (UNEP/OzL.Pro/ExCom/25/23)

Turkey: Project preparation for methyl bromide (UNEP/OzL.Pro/ExCom/25/23)

58. The Sub-Committee recommended that the Executive Committee approve the above projects at the level of funding indicated in the annex to the present report.

59. The Sub-Committee also recommended that the Executive Committee request the World Bank, in consultation with the representative of the United States of America and with the Bank's country partners, to explore the possibility of proposing to the Executive Committee at its 26th Meeting a new modality for the preparation of future project proposals in the field of methyl bromide that might, for example, involve employing a competitive tender approach for project implementation.

60. In this regard, the representative of the United States of America expressed the intention to submit a formal proposal to the next meeting. The proposal would take into account the need to ensure the best information dissemination.

Foam Sector

China: Elimination of CFC-12 in manufacturing of EPE foam packaging nets at 25 enterprises (umbrella project) (UNEP/OzL.Pro/ExCom/25/30 and Add. 1)

61. The representative of the Secretariat drew attention to paragraphs 21 to 23 of the overview document, which referred to an umbrella project submitted by UNIDO to phase out the use of CFC-12 at 25 enterprises in China which produce polyethylene foam for net bags.

62. The Sub-Committee recommended that the Executive Committee approve the above project at the level of funding indicated in the annex to the present report.

63. The Sub-Committee also recommended that the Executive Committee request UNIDO to prepare, in collaboration with the Government of China, a sectoral strategy plan for the polyethylene/polystyrene foam sub-sector, and that approval of future projects in the sub-sector be dependent on the preparation of such a plan.

China: Conversion of PU slabstock manufacture to forced cooling and methylene chloride at Wuxi New Type Raw Material Plant (UNEP/OzL.Pro/ExCom/25/30 and Add.1)

China: Conversion from CFC-11 to methylene chloride and forced cooling system in the manufacture of flexible polyurethane foam (slabstock) at Cangzhou New-Type Foam Decoration Material Plant (UNEP/OzL.Pro/ExCom/25/30 and Add.1)

64. The representative of the Secretariat said that the above two projects were being referred to the Sub-Committee to enable it to examine them against the background of the Executive Committee's earlier decisions about the provision of foam-grade methylene chloride in China and to give directives to the Secretariat and the implementing agencies on how to deal with such projects in future.

65. The Sub-Committee recommended that the Executive Committee approve the above two projects at the level of funding indicated in the annex to the present report.

66. The Sub-Committee also recommended that the Executive Committee request the Secretariat, in consultation with the implementing agencies, to examine the technical options available as an alternative to the use of low-grade methylene chloride for foam-blowing in China and to develop, for submission to the Executive Committee at its 26th Meeting, proposals on how future projects in the sub-sector should be handled.

China: Conversion of HCFC-141b in the manufacture of rigid and spray polyurethane foams at Daqing Petroleum Organization Bureau (UNEP/OzL.Pro/ExCom/25/30 and Add.1)

67. The Sub-Committee recommended that the above project be deferred to allow the Secretariat and the implementing agencies to resolve outstanding issues by the next meeting of the Executive Committee.

China: Conversion of rigid and spray polyurethane foam manufacture from CFC-11b to HCFC-141b foam blowing agent at Victory Petroleum Organization Bureau (UNEP/OzL.Pro/ExCom/25/30 and Add.1)

68. The Sub-Committee recommended the Executive Committee approve the above project at the level of funding indicated in the annex to the present report.

Malaysia: Conversion to water-based and HCFC-141b technology in the manufacture of polyurethane foam blowing at Griorich (UNEP/OzL.Pro/ExCom/25/38)

Malaysia: Conversion to water-based and HCFC-141b technology in the manufacture of polyurethane foam blowing at Minply (UNEP/OzL.Pro/ExCom/25/38)

69. The Sub-Committee recommended that approval of the above two projects be deferred, pending determination of the cost of equipment necessary to implement the project, and pending

provision of a more detailed justification for the use of HCFC technology, as shall be provided for each project based on HCFCs submitted to the Executive Committee.

Thailand: Conversion to water-based and HCFC-141b technology in the manufacture of polyurethane foam at World Plaster/Euro Plan Furniture Co. (UNEP/OzL.Pro/ExCom/25/47)

70. UNDP confirmed that the above project had been withdrawn.

Refrigeration sector

India: Elimination of CFC-11 and CFC-12 converting to HCFC-141b and HFC-134a in the manufacture of commercial refrigeration equipment at Prashant Refrigeration Appliances (UNEP/OzL.Pro/ExCom/25/35)

India: Elimination of CFCs in the manufacture of commercial refrigeration equipment at Sandeep Refrigeration (UNEP/OzL.Pro/ExCom/25/35)

71. During the discussion, it was recalled that the terms of approval of the four commercial refrigeration projects approved for India at the 23rd Meeting had provided that “no further projects would be considered by the Executive Committee until its requirements from the 22nd Meeting had been met,” and that the requirement from the 22nd Meeting had been “to develop a group approach with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the original projects”. Following discussions between the World Bank and some representatives, project costs were adjusted to meet this requirement.

72. The Sub-Committee recommended that the Executive Committee approve the above two projects, at the level of funding indicated in the annex to the present report on the understanding that the costs of training and technology transfer had been reduced in line with the Executive Committee’s guidelines and that future groups should comprise more than two companies.

China: Conversion to HFC-134a as refrigerant and cyclopentane as foam blowing agent at refrigerator manufacturer Changling Huanghe Group Co Ltd. (“Changhe”) (UNEP/OzL.Pro/ExCom/25/30)

73. Following the completion of consultations between the Secretariat and the World Bank, the Sub-Committee recommended that the Executive Committee approve the above project for funding at a level of US \$1,267,638.

China: Conversion to cyclopentane and isobutane in the manufacture of domestic refrigerators at Hangzhou Household Electrical Appliance Industrial Corporation (HHEAIC) (UNEP/OzL.Pro/ExCom/25/30)

74. Following the completion of consultations between the Secretariat and UNDP, the Sub-Committee recommended that the Executive Committee approve the above project for funding at a level of US \$2,238,580.

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 (UNEP/OzL.Pro/ExCom/25/47)

75. The representative of the Secretariat noted that this project had been put forward by the World Bank at the 24th Meeting of the Executive Committee, and that the Committee had decided to defer its consideration. It had further decided that, on an exceptional basis, the project should be retained in the World Bank's 1997 business plan; and that information on the methodology used to calculate corroborated data on CFC consumption should 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 (Decision 24/28).

76. Following a discussion, the Sub-Committee recommended that the Executive Committee approve the above project at a maximum funding of US \$2,631,486, on the understanding:

- (a) That the amount be released in tranches;
- (b) That an initial distribution of a tranche of US \$750,000 be made to allow the project to move forward;
- (c) That it be understood that no further tranches would be forthcoming until specific data were provided to the Executive Committee; and
- (d) That if the specific data provided demonstrated that the project, through the non-service-related foam and refrigerant components, would achieve less than the 173 ODP-tonne reduction anticipated, the amount approved for the project would be reduced proportionally.

Turkey: Conversion project from CFC-12 into HFC-134a and HFC-404a for commercial refrigeration at Safkar (UNEP/OzL.Pro/ExCom/25/51)

77. The representative of the Secretariat drew attention to paragraphs 24 to 27 of the overview document, noting that all of the considerations in those paragraphs were relevant to the Safkar project. The subject had been discussed earlier in the meeting (see paragraphs 18-20 above), and the guidelines that the Sub-Committee was recommending for this new, emerging sub-sector would also be relevant to the Safkar project.

78. The Sub-Committee recommended that consideration of the above project be deferred until the guidelines were available.

Solvent Sector

Sri Lanka: National programme for the replacement of carbon tetrachloride with n-butane in the activated carbon industry (6 companies) (UNEP/OzL.Pro/ExCom/25/45)

79. The representative of the Secretariat said that the above project was the first to involve the use of carbon tetrachloride for industrial testing purposes. Several issues had been discussed with UNDP, and all but one had been resolved. The outstanding issue related to the policy issue of exports to non-Article 5 countries, on which the Executive Committee had taken a decision at its 15th Meeting. The decision included the provision that "where the exports are in the form of agricultural products, the project shall be eligible for total incremental costs". Guidance was sought as to whether activated charcoal produced by burning the shells of coconuts should be considered as an agricultural product, in terms of application of the decision on exports.

80. Following a discussion, the Sub-Committee recommended that the above project proposal be deferred.

(a) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam insulated thermoware at Ajay Corrugating & Plastics P. Ltd.

(b) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam insulation products at Duab International

(c) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam insulated thermoware at Jaypee Technoplast P. Ltd.

(d) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam insulated thermoware at Jayson Industries

(e) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam insulated thermoware at National Flask Industries Ltd.

(f) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam Puff Insulators

(g) India: Elimination of CFCs with HCFC-141b (and partial water) based systems, in the manufacture of rigid polyurethane foam insulation products at Sintex Industries Ltd.

81. The Sub-Committee recommended that the above seven projects, contained in document UNEP/OzL.Pro/ExCom/25/Inf.3, be deferred and presented, together with extensive explanation

of the justification for using HCFC-141b technology, to the next meeting of the Executive Committee.

(a) Turkey: Conversion from CFC-11 and CFC-12 into cyclopentane and HFC-134a for commercial refrigerators (incremental operating costs) at Klimasan (Incremental Operating Costs) (UNEP/OzL.Pro/ExCom/25/51)

(b) Turkey: Conversion from CFC-11 and CFC-12 into cyclopentane and HFC-134a for domestic refrigerators (incremental operating costs) at Profilo (Incremental Operating Costs) (UNEP/OzL.Pro/ExCom/25/51 and Add.1)

82. Since the request for IOC for the above two projects included funding for compressors, guidelines for which had not yet been completed, the World Bank proposed that the projects be deferred.

AGENDA ITEM 9: PAPERS ON POLICY ISSUES OUTSTANDING FROM PREVIOUS MEETINGS

(a) Hydrocarbon safety

83. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/25/54, on the subject of hydrocarbon safety. He recalled that the safety cost study had been prepared pursuant to decisions taken at the 23rd and 24th Meetings of the Executive Committee, and had been reviewed both by the German TÜV and at an inter-agency meeting convened to discuss the second draft of the study. The document was intended to provide guidance to the implementing agencies and to the Secretariat.

84. The representative of the World Bank requested that the Bank's concern be noted with regard to the proposed technical solution contained in section 9.3.1 of the safety cost evaluation study.

85. Following the discussion on the issue, the Sub-Committee recommended that the Executive Committee approve the Hydrocarbon Safety Cost Study to be used as guidance to the implementing agencies, enterprises in Article 5 countries in preparation of investment projects and to the Secretariat in reviewing the submitted projects.

86. One representative, recalling document UNEP/OzL.Pro/ExCom/16/20, paragraph 32 (e), and Decisions 17/14 and 20/45, expressed the wish that the Executive Committee might, in the future, consider increasing the 35 per cent discount for cost-efficiency in hydrocarbon refrigeration projects. Such an increase could be proportionate to the percentage cost increase due to implementation of the guidelines on hydrocarbon safety.

87. Another representative, noting the requirement of the indicative list that the most cost-effective option for ODS phase-out be utilized, suggested that, if the 35 per cent discount for

hydrocarbon technology conversion projects were to be re-examined, account would need to be taken of the high additional costs of hydrocarbon projects over other, more cost-effective technologies and the possibility that funds could be better directed to projects demonstrating a higher level of cost-effectiveness.

(b) Baseline equipment

88. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/25/55 on baseline equipment, drawing attention in particular to its Annex I, which contained some examples of approved projects to which the baseline concept had been applied.

89. Following consideration of the document and an exchange of views, the Sub-Committee suggested that the baseline approach might not be entirely appropriate to small and medium-sized enterprises (SMEs) and that a separate decision on that sector might be needed, and noted that the implementing agencies could raise any specific technical inaccuracies with the Secretariat.

90. [The Sub-Committee:

- (a) Noted that the provision of replacement equipment constituted a technological upgrade in relation to the baseline conditions of enterprises for which retrofit of existing equipment was not feasible;
- (b) Recommended that unavoidable technological upgrade was to be taken into account in determining eligible incremental costs.]

91. The Sub-Committee also recommended that the baseline concept be adopted and implemented selectively, through application of Decision 18/25 on technological upgrade utilizing pro-rating of equipment costs, to the specific circumstances indicated below, and with the methodologies as also indicated:

- for the domestic and commercial refrigeration and rigid polyurethane foam sub-sectors:
 - the incremental cost of providing new foam machines where these are essential for conversion and none exist in the baseline should be based on either the difference between the cost of a low-pressure and a high-pressure foam machine, where a high-pressure machine is essential, or, alternatively, an agreed percentage of the cost of a low-pressure machine
 - for foam machines nearing the end of their useful life, the incremental cost of conversion should be based on the cost, from the same supplier, of a new machine, from which has been deducted the cost of a replacement ODS-technology machine, or a proportion thereof calculated according to Decision 18/25
 - for foam machines in all other circumstances, the incremental cost of conversion should be based on the cost of retrofitting similar machines available through international bidding.

- for the solvents sector:
 - the incremental cost of conversion of existing solvent cleaning machines to use non-CFC or non-TCA solvents should be based on the cost of retrofitting similar machines available through international bidding (excluding conversion to aqueous/semi-aqueous technology which requires different equipment).

(c) Incremental operating costs for compressors

92. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/25/56 and Corr.1, recalling that it incorporated document UNEP/OzL.Pro/ExCom/24/40, which represented an earlier attempt to establish a methodology for implementation of the main principles of the guidelines set out in paragraphs (a), (b) and (c) of Decision 22/26.

93. Some representatives thanked the Secretariat and others for all the work which had gone into document UNEP/OzL.Pro/ExCom/25/56, noting that the outcome had ultimately proved too complex for practical use.

94. Following an extensive exchange of views, the Sub-Committee recommended that the Executive Committee request the Secretariat to rethink the whole question of incremental operating costs for compressors, and to produce a new document based on a much simpler approach, such as, for example, a percentage of the capital costs.

AGENDA ITEM 10: PAPERS ON NEW POLICY ISSUES

(a) Terminal umbrella projects

95. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/25/57, explaining that proposals for terminal umbrella projects had now arisen involving much larger numbers of enterprises. Such projects presented additional and different challenges, which might require new approaches.

96. Following an exchange of views, the Sub-Committee recommended to the Executive Committee adoption of the following modalities on a trial basis:

- (a) Where the number of enterprises is large (over 50) and the quality of information is not high, umbrella projects are not an appropriate methodology.
- (b) If a country wishes to approach the sectoral phase-out in a single step, a sectoral strategy could be implemented based on a performance agreement with the government concerned.
- (c) Where a country does not wish to implement a sectoral strategy, enterprises could be grouped in a series of separate umbrella projects. The final project could then be submitted as a terminal umbrella project.

- (d) Where there are significant numbers of small or informal enterprises remaining, the final project should be developed using the following new approach designed to address the remaining small enterprises:
- (i) Proposals should include: (a) institutional support through government policy directives or legislation; a timed action plan and expected results in terms of ODS phase-out; coordination and management by ozone offices and/or financial intermediaries; technology transfer, monitoring and supervision from industry associations and/or component suppliers and systems houses; and (b) the appropriate choice of technology, innovative methodologies for achieving technology transfer; achievement of economies of scale through geographical groupings or industrial rationalization; financial arrangements which could provide flexibility in the allocation of approved resources.
 - (ii) The requirements for capital equipment should be determined by establishing the typical equipment needed for an enterprise representative of those remaining in the sector (equipment requirements will be modest and will generally be similar), and the estimated number of enterprises involved, taking into account the possibility of industrial rationalization.
 - (iii) The technology transfer, trials and support activities will be costed on the basis of the activities being provided by local technical resources at local rates (where established as essential, with provision of international support on start-up to train the trainers, and on completion to verify phase-out).
 - (iv) Incremental operating costs or savings will not be included in project costs.
 - (v) Funding could include agreed support for some of the government activities outlined in (i) above.

(b) Retrofit of Commercial Refrigeration Equipment (UNEP/OzL.Pro/ExCom/25/58)

97. The Sub-Committee recommended that consideration of the above document be deferred until the 26th Meeting of the Executive Committee.

AGENDA ITEM 11: OTHER MATTERS

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

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17

Annex I Page 1

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
ALGERIA				
AEROSOL				
Filling plant				
Replacement of CFC-11 and CFC-12 with hydrocarbons in the aerosol sector at Ets Djadir	UNIDO	38.4	\$147,807	3.85
FOAM				
Flexible				
Phase out of CFC-11 in the manufacture of flexible polyurethane foam through the use of methylene chloride technology at Ets Matelas Djurdjura	UNIDO	28.0	\$82,608	2.95
REFRIGERATION				
Commercial				
Replacement of CFC-12 with HFC 134a for commercial refrigeration at Enapat	UNIDO	9.2	\$139,932	15.21
Total for Algeria		75.6	\$370,347	
ARGENTINA				
FOAM				
Flexible				
Conversion to low index/additive (LIA) technology in the manufacture of flexible boxfoam (FMF) at Rozen S.R.L.	UNDP	19.6	\$122,100	6.23
FUMIGANT				
Methyl bromide				
Project preparation for methyl bromide (citrus and cotton) demonstration project	IBRD		\$50,000	
REFRIGERATION				
Domestic				
Substituting CFCs by HCFC-141b and HFC-134a in manufacturing of domestic and commercial refrigerators at El Dorado, S.A.	IBRD	12.8	\$176,000	13.75
Total for Argentina		32.4	\$348,100	
BOTSWANA				
FUMIGANT				
Methyl bromide				
Demonstration project - three alternatives to the use of methyl bromide: non-soil cultivation techniques, bio-fumigation with solarization, and application of various mixtures of other chemicals in low doses in tomatoes and cucurbits	UNIDO		\$146,300	
Total for Botswana			\$146,300	

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17

Annex I Page 2

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	(US\$) Total	C.E. (US\$/kg)
BRAZIL					
FOAM					
Rigid					
Phaseout of CFC-11 by conversion to water and HCFC-141b technology in the manufacture of polyurethane foam at Delta Pack	UNDP	27.5	\$202,500		7.36
Phasing out CFC-11 with cyclopentane at Crios Industrial Ltda. (suppliers of Electrofrio Company)	UNIDO	46.0	\$357,270		7.76
Conversion to HCFC-141b in the manufacture of polyurethane foam at SSM Tecnologia	UNDP	13.6	\$106,500		7.83
Conversion to water based technology in the manufacture of polyurethane foam at Refratrios Isolamentos e Pinturas (RIP)	UNDP	12.0	\$94,000		7.83
Integral skin					
Conversion to HCFC-141b and water-blown technology in the manufacture of polyurethane foam at Gnatus	UNDP	29.7	\$207,225		6.98
Conversion to HCFC-141b and water-blown technology in the manufacture of polyurethane foam at Cougar	UNDP	18.2	\$154,375		8.46
Conversion to Hexane and LCD Technology in the Manufacture of Polyurethane Foam at Herval <i>UNDP may apply the eligible cost of the flexible slabstock foam project component to the cost of installation of the LCD system by the company, provided that this will not result in delay in the implementation of the entire project beyond the stipulated twenty-four months</i>	UNDP	64.5	\$637,335		10.94
Phaseout of CFC-11 by conversion to water technology in the manufacture of polyurethane foam at Injebank	UNDP	6.0	\$86,300		14.38
Phaseout of CFC-11 by conversion to water technology in the manufacture of polyurethane foam at Panther	UNDP	18.0	\$275,805		15.32
REFRIGERATION					
Commercial					
Phasing out of CFC-12 with HFC-134a and CFC-11 with cyclopentane in the production of commercial refrigeration equipment at Panamante Refrigeracao	UNIDO	34.3	\$377,202		10.99
Phaseout of CFC-11 and CFC-12 by conversion to HCFC-141b (foam) and HFC-134a (refrigerant) technology in the manufacture of commercial refrigerators and display cases at Termisa	UNDP	27.0	\$322,205		11.93
Total for Brazil		296.8	\$2,820,717		

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17
Annex I Page 3

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
CAMEROON				
FUMIGANT				
Methyl bromide				
Demonstration project - two alternatives to the use of methyl bromide: non-soil cultivation techniques and application of various mixtures of other chemicals in low doses in tobacco	UNIDO		\$160,600	
Total for Cameroon			\$160,600	
CHAD				
SEVERAL				
Institutional strengthening				
Establishment of a National Ozone Unit	UNEP		\$60,000	
<i>To request to UNEP to proceed with the disbursement of the first one-year tranche of the funds approved for institutional strengthening, but subsequent disbursements to be contingent on the submission of a report to the Executive Committee on the status of development of a refrigerant management plan (Decision 20/4).</i>				
Total for Chad			\$60,000	
CHILE				
FUMIGANT				
Methyl bromide				
Demonstration project for testing methyl bromide alternatives in soil treatment applications for tomatoes and peppers	IBRD		\$348,130	
SEVERAL				
Institutional strengthening				
Ozone protection and institutional strengthening project (renewal of institutional strengthening)	IBRD		\$143,500	
Preparation of project proposal				
Project preparation for the Phase II auction scheme	IBRD		\$80,000	
<i>The Executive Committee requested the World Bank to submit project completion reports on the projects approved at the 7th and 19th Meetings of the Executive Committee.</i>				
Total for Chile			\$571,630	
CHINA				
FOAM				
Flexible				
Conversion of PU slabstock manufacture to forced cooling and methylene chloride at Wuxi New Type Raw Material Plant	IBRD	231.0	\$488,150	2.11

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17

Annex I Page 4

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$)		C.E. (US\$/kg)
			Project	Support	
Conversion to LCD technology in the manufacture of flexible (slabstock) polyurethane foam at Jinling Petrochemical Co. Plastics Factory.	UNDP	81.0	\$504,630		6.23
Conversion from CFC-11 to methylene chloride and forced cooling system in the manufacture of flexible polyurethane foam (slabstock) at Cangzhou New-Type Foam Decoration Material Plant	UNDP	67.0	\$417,410		6.23
Rigid					
Conversion of rigid and spray polyurethane foam manufacture from CFC-11 to HCFC-141b foam blowing agent at Victory Petroleum Organization Bureau	UNDP	72.0	\$563,760		7.83
Polystyrene/polyethylene					
Elimination of CFC-12 in manufacturing of EPE foam packaging nets at 25 enterprises (Umbrella Project) <i>The Executive Committee requested UNIDO to prepare, in collaboration with the Government of China, a sectoral strategy plan for the polyethylene/polystyrene foam sub-sector, and that approval of future projects in the sub-sector be dependent on the preparation of such a plan</i>	UNIDO	1,146.0	\$4,488,516		3.92
REFRIGERATION					
Domestic					
Conversion to cyclopentane and isobutane in the manufacture of domestic refrigerators at Hangzhou Household Electrical Appliance Industrial Corporation (HHEAIC)	UNDP	247.8	\$2,238,580		5.87
Conversion of refrigerator manufacture in Changhe Group to HFC-134a as refrigerant and cyclopentane as foam blowing agent	IBRD	138.8	\$1,267,638		5.93
Phasing out ODS at the refrigerator plant of Hefei Hualing Electronic Co. Ltd., China	UNIDO	82.8	\$785,984		9.49
Total for China		2,066.4	\$10,754,668		
CROATIA					
FUMIGANT					
Methyl bromide					
Demonstration project: 3 alternatives to the use of methyl bromide in tobacco production; namely: solarization plus bio-fumigation, the use of low-dose chemicals, and non-soil cultivation, all in combination with an integrated pest management programme	UNIDO		\$288,200		
Total for Croatia			\$288,200		

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17

Annex I Page 5

Project Title	Agency	ODP Tonnes	Funds Recommended Project	Support	(US\$) Total	C.E. (US\$/kg)
CUBA						
REFRIGERATION						
Preparation of project proposal						
Project preparation for development of a refrigerant management plan	Canada		\$22,600			
Total for Cuba			\$22,600			
DOMINICAN REPUBLIC						
REFRIGERATION						
Commercial						
Elimination of CFC-11 and CFC-12 consumption in the manufacture of unitary commercial refrigeration equipment at Industria Continental, C.A. by replacement with HCFC-141b and HFC 134a respectively	UNDP	19.9	\$303,200			15.21
Recovery/recycling						
Implementation of the refrigerant management plan: Customs training	UNEP		\$38,000			
Implementation of the refrigerant management plan: Train the trainers programme in the refrigeration sector	UNEP		\$45,000			
Implementation of the refrigerant management plan: Monitoring of the activities included in the RMP	UNDP		\$15,000			
Implementation of the refrigerant management plan: Implementation of a national programme for recovery and recycling of refrigerants	UNDP	37.4	\$441,482			11.79
<i>To request UNDP not to proceed with the disbursement of funds approved for the recovery and recycling programme pending the establishment of relevant legislation or policies in Dominican Republic</i>						
Total for Dominican Republic		57.3	\$842,682			
EL SALVADOR						
REFRIGERATION						
Recovery/recycling						
Implementation of the refrigerant management plan: Customs training	UNEP		\$38,000			
Implementation of the refrigerant management plan: Monitoring of the activities included in the RMP	UNDP		\$10,500			
Implementation of the refrigerant management plan: Train the trainers programme in the refrigeration sector	UNEP		\$39,000			

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17

Annex I Page 6

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
Implementation of the refrigerant management plan: Implementation of a national programme for recovery and recycling of refrigerants <i>To request UNDP not to proceed with the disbursement of funds approved for the recovery and recycling programme pending the establishment of relevant legislation or policies in El Salvador</i>	UNDP	36.3	\$403,925	11.13
Total for El Salvador		36.3	\$491,425	
INDIA				
REFRIGERATION				
Domestic				
Elimination of CFC-11 and CFC-12 by converting to HCFC-141b and HFC-134a in the manufacture of domestic refrigerators at BPL Refrigeration Ltd.	IBRD	136.0	\$722,906	5.31
Commercial				
Elimination of CFCs in the manufacture of commercial refrigeration equipment at Sandeep Refrigeration	IBRD	9.9	\$107,684	10.83
Elimination of CFC-11 and CFC-12 converting to HCFC-141b and HFC-134a in the manufacture of commercial refrigeration equipment at Prashant Refrigeration Appliances	IBRD	8.8	\$104,058	11.89
SOLVENT				
Multiple solvents				
Conversion of precision cleaning and coating processes from ODS solvents to heat cleaning technologies and ODS free solvent coating at Malhotra Shaving Products Ltd.	UNIDO	13.6	\$255,112	18.76
Total for India		168.3	\$1,189,760	
INDONESIA				
FOAM				
Rigid				
Conversion to CFC-free technology in the manufacture of rigid polyurethane spray foam at Karya Sempati Sarana.	UNDP	8.8	\$45,550	5.18
Conversion to CFC-free technology in the manufacture of rigid polyurethane spray foam at Metal Tunggal Prakarsamandiri	UNDP	8.0	\$43,330	5.39
Conversion to HCFC-141b technology in the manufacture of rigid polyurethane foam (spray foam) at PT Sentras Varitima	UNDP	18.1	\$125,000	6.91

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17
Annex I Page 7

Project Title	Agency	ODP Tonnes	Funds Recommended Project Support	(US\$) Total	C.E. (US\$/kg)
REFRIGERATION					
Commercial					
Elimination of use of CFC-11 and CFC-12/R-502 conversion to HCFC-141b (foam) and HFC-134a/R404a (refrigerant) technology in the manufacture of commercial refrigerators and display cases at P.T. Intermas Pacific	UNDP	17.9	\$209,300		11.69
Conversion project to CFC-free technology in the manufacture of commercial refrigeration equipment at PT Aneka Froze Citratama	UNDP	13.1	\$174,255		13.35
Supply conversion project to CFC-free technology in the manufacture of commercial refrigeration equipment at PT Gaya Teknik	UNDP	10.5	\$147,880		14.71
Total for Indonesia		76.4	\$745,315		
JORDAN					
FUMIGANT					
Methyl bromide					
Demonstration project: three alternatives to the use of methyl bromide: steam pasteurization, non-soil cultivation and optimal use of soil fumigants in combination with an integrated pest management (IPM) in cucumbers and tomatoes	UNIDO		\$385,000		
Total for Jordan			\$385,000		
KENYA					
SEVERAL					
Institutional strengthening					
Renewal of institutional strengthening	UNDP		\$116,667		
Total for Kenya			\$116,667		
KOREA, DPR					
FUMIGANT					
Methyl bromide					
Non-investment project: promotion and information transfer of alternatives to the use of methyl bromide in the preparation of seedbeds for the cultivation of rice and maize	UNIDO		\$27,500		
Total for Korea, DPR			\$27,500		
MALAWI					
SEVERAL					
Institutional strengthening					
Request for renewal of institutional strengthening	UNEP		\$51,350		

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

UNEP/OzL.Pro/ExCom/25/17

Annex I Page 8

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
Total for Malawi			\$51,350	
MALAYSIA				
FOAM				
Integral skin				
Conversion to LCD technology in the manufacture of polyurethane foam at Tenaga	UNDP	23.0	\$308,800	13.43
Total for Malaysia		23.0	\$308,800	
MALI				
FOAM				
Preparation of project proposal				
Project preparation in the foam sector (FOFY) (Approved intersessionally)	France		\$15,000	
Total for Mali			\$15,000	
MEXICO				
FOAM				
Rigid				
Conversion to HCFC-141b technology in the manufacture of rigid foam for refrigeration systems at Refrigeracion Rodriguez	UNDP	34.9	\$132,650	3.80
Integral skin				
Conversion to water-based technology in the manufacture of integral skin foam at Moldecor	UNDP	9.0	\$86,500	9.61
FUMIGANT				
Methyl bromide				
Demonstration project: alternatives to the use of methyl bromide in the cultivation of tomatoes, strawberries, tobacco, melons, and cut flowers	UNIDO		\$790,350	
REFRIGERATION				
Commercial				
Phasing out of CFC-11 and CFC-12 with HCFC-141b and HFC 134a at Plasticos Tecnicos Mexicanos (PTM) in the manufacture of commercial refrigeration equipment	UNIDO	50.6	\$398,439	7.88
SEVERAL				
Institutional strengthening				
Renewal of institutional strengthening project	UNDP		\$190,000	
Total for Mexico		94.5	\$1,597,939	

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Annex I Page 9

Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
MOLDOVA				
REFRIGERATION				
Recovery/recycling				
Implementation of the refrigerant management plan: Train the trainers programme for good practices in the refrigeration sector	UNEP		\$66,000	
Implementation of the refrigerant management plan: Training on monitoring and control of CFC and CFC using equipment	UNEP		\$66,550	
Implementation of the refrigerant management plan: National programme for recovery and recycling of refrigerants <i>To request UNDP not to proceed with the disbursement of funds approved for the recovery and recycling programme until the regulatory and legislative requirements and fiscal steps proposed by the Government of Moldova are put into place.</i>	UNDP	21.9	\$254,150	11.62
SEVERAL				
Institutional strengthening				
Establishment of a National Ozone Unit	UNEP		\$80,000	
Total for Moldova		21.9	\$466,700	
MOROCCO				
FOAM				
Flexible				
Conversion to LCD technology in the manufacture of flexible foam (Slabstock) to replace CFC-11 at Bonbino Confort	UNDP	90.0	\$490,200	5.45
Rigid				
Conversion to HCFC-141b/ water technology in the manufacture of rigid polyurethane spray foam at Batcomar S.A.	UNDP	9.2	\$72,000	7.83
REFRIGERATION				
Commercial				
Replacement of CFC-12 with HFC-134a for commercial refrigeration at Batinox	UNIDO	4.5	\$32,920	7.31
Replacement of CFC-12 with HFC-134a for commercial refrigeration at Alom Du Nord	UNIDO	7.7	\$99,402	12.90
Total for Morocco		111.4	\$694,522	

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
NICARAGUA				
REFRIGERATION				
Commercial				
Phasing out of CFC-11 and CFC-12 with HCFC-141b and HFC-134a at Fogel S.A. in the manufacture of commercial refrigeration equipment	UNIDO	9.6	\$130,027	13.54
Recovery/recycling				
Implementation of the refrigerant management plan	Finland		\$225,430	
<i>To request the Government of Finland not to proceed with the disbursement of funds approved for the recovery and recycling programme until the regulatory and legislative requirements and fiscal steps proposed by the Government of Nicaragua are put into place.</i>				
Total for Nicaragua		9.6	\$355,457	
PAKISTAN				
FOAM				
Rigid				
Terminal Umbrella - conversion to HCFC-141b and water blown technology in the manufacture of rigid polyurethane foam (thermoware)	IBRD	105.7	\$718,900	6.80
REFRIGERATION				
Domestic				
Elimination of CFC-11 and CFC-12 converting to HCFC-141b and HFC-134a in the manufacture of refrigeration equipment at United Refrigeration Industries Ltd.	IBRD	88.8	\$457,815	5.15
Commercial				
Elimination of CFC-11 and CFC-12 by converting to HCFC-141b and HFC-134a in the manufacture of commercial refrigeration equipment at Dawlance P. Ltd.	IBRD	35.2	\$477,894	13.57
Elimination of CFC-11 and CFC-12 by converting to HCFC-141b and HFC134a in the manufacture of commercial refrigeration equipment at Shadman Electronic Industries P. Ltd.	IBRD	15.5	\$236,936	15.21
Total for Pakistan		245.2	\$1,891,545	
PHILIPPINES				
SOLVENT				
Multiple solvents				
Elimination of the use of CFC-113, 1,1,1 trichloroethane, (TCA) and CFC 12 at multiple corporations that manufacture special formulations for various industrial markets	UNDP	18.4	\$334,600	18.20
Total for Philippines		18.4	\$334,600	

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	(US\$) Total	C.E. (US\$/kg)
SAINT VINCENT AND THE GRENADINES					
REFRIGERATION					
Recovery/recycling					
Implementation of a refrigerator management plan: Training of trainers for good practices in refrigeration	UNEP		\$40,000		
Implementation of a refrigerator management plan: Monitoring and control of ODS and ODS based equipment	UNEP		\$25,000		
SEVERAL					
Institutional strengthening					
Creation of the National Ozone Unit	UNEP		\$30,300		
Total for Saint Vincent and the Grenadines			\$95,300		
SRI LANKA					
FUMIGANT					
Preparation of project proposal					
Project preparation assistance for the methyl bromide sector	UNDP		\$25,000		
Total for Sri Lanka			\$25,000		
SYRIA					
AEROSOL					
Filling plant					
Phasing out CFCs at Mariza Co.	UNIDO	90.0	\$207,652		2.30
Total for Syria		90.0	\$207,652		
THAILAND					
AEROSOL					
Contract filler					
Standard Manufacturing Co. Ltd. conversion	UNDP	41.0	\$138,380		3.37
Mary Manufacturing Co. Ltd. conversion	UNDP	40.0	\$136,400		3.41
FOAM					
Flexible					
Conversion to low index/additive (LIA) technology and methylene chloride in the manufacture of flexible PU boxfoam (FBF) at Cityfoam	UNDP	42.0	\$156,100		3.72

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
Rigid				
Conversion to CFC-free technology in the manufacture of cold store PU panels at Somerville	IBRD	18.1	\$141,957	7.83
Integral skin				
Phaseout of CFC-11 by conversion to LCD technology (FMP) and water based technology (ISF) in the manufacture of polyurethane foam at Duriflex	UNDP	21.2	\$278,800	13.20
FUMIGANT				
Methyl bromide				
Demonstration project: alternatives to the use of methyl bromide in grain storage (rice, maize, tapioca, feed grains and pulses)	UNIDO		\$280,500	
REFRIGERATION				
Commercial				
Building chiller replacement program to reduce the usage of CFC-11 and CFC-12 in chiller servicing at Electricity Generating Authority of Thailand (EGAT)	IBRD	59.9		
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.	IBRD	173.0	\$2,631,486	15.21
<i>The Executive Committee approved the project on the understanding: (a) that the amount be released in tranches; (b) that an initial distribution of a tranche of US \$750,000 be made to allow the project to move forward; (c) that it be understood that no further tranches would be forthcoming until specific data were provided to the Executive Committee; and (d) that if the specific data provided demonstrated that the project, through the non-service-related foam and refrigerant components, would achieve less than the 173 ODP-tonne reduction anticipated, the amount approved for the project would be reduced proportionally</i>				
SEVERAL				
Institutional strengthening				
Renewal of institutional strengthening project for the phaseout of ODS under the Montreal Protocol	UNDP		\$266,667	
Total for Thailand		395.2	\$4,030,290	
TRINIDAD AND TOBAGO				
AEROSOL				
Filling plant				
Project to phaseout use of CFCs in aerosol filling at Hand Arnold Industries Limited (HAIL)	UNDP	18.0	\$119,570	6.64
Total for Trinidad and Tobago		18.0	\$119,570	

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	(US\$) Total	C.E. (US\$/kg)
TUNISIA					
FOAM					
Flexible					
Conversion to LCD technology in the manufacture of PU flexible foam and HCFC-141b with water in PU rigid foam at Sotim	IBRD	95.3	\$553,400		5.81
SEVERAL					
Institutional strengthening					
Phase out of ozone depleting substances (renewal of institutional strengthening)	IBRD		\$186,700		
Total for Tunisia		95.3	\$740,100		
TURKEY					
FOAM					
Flexible					
Phasing out of CFC-II in manufacturing of flexible PU slabstock foam through the use of CO2 blowing technology at Serra Sunger	UNIDO	86.0	\$454,358		5.28
FUMIGANT					
Methyl bromide					
Demonstration project: alternatives to the use of methyl bromide as soil fumigant in protected horticulture (tomatoes and cucumbers) and ornamental (carnations) crops	UNIDO		\$314,600		
Preparation of project proposal					
Project preparation for methy bromide	IBRD		\$50,000		
REFRIGERATION					
Preparation of project proposal					
Project preparation for commercial refrigeration terminal umbrella project	IBRD		\$120,000		
SOLVENT					
CFC-113					
Conversion of an electronic defluxing process from ODS-solvent cleaning to hydrocarbon/surfactant (semi-aqueous) cleaning at Aselsan AS	IBRD	3.9	\$58,517		15.00
Umbrella project for 17 enterprises for phaseout of ODS used as solvents	IBRD	12.0	\$415,312		34.70
Total for Turkey		101.9	\$1,412,787		

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support	C.E. (US\$/kg)
URUGUAY				
FUMIGANT				
Methyl bromide				
Demonstration project: alternatives to the use of methyl bromide as a soil fumigant in protected horticultural crops (cucumbers and peppers), seedbeds, and nurseries (vegetables, tobacco and forestry)	UNIDO		\$299,200	
SEVERAL				
Institutional strengthening				
Renewal of institutional strengthening	UNDP		\$116,000	
Total for Uruguay			\$415,200	
VENEZUELA				
FOAM				
Rigid				
Phasing out CFC-11 with HCFC-141b at Tecnofrigo in the production of rigid PU panels.	UNIDO	9.0	\$71,946	7.74
REFRIGERATION				
Commercial				
Phasing out CFC-11 and CFC-12 with HCFC-141b and HFC-134a at Invitrel in the manufacture of commercial refrigeration equipment	UNIDO	46.4	\$419,094	9.03
SEVERAL				
Institutional strengthening				
Renewal of institutional strengthening	UNDP		\$219,600	
Total for Venezuela			\$710,640	
YEMEN				
SEVERAL				
Institutional strengthening				
Establishment of a National Ozone Unit	UNEP		\$120,000	
<i>To request to UNEP to proceed with the disbursement of the first one-year tranche of the funds approved for institutional strengthening, but subsequent disbursements to be contingent on the submission of a report to the Executive Committee on the status of development of a refrigerant management plan (Decision 20/4).</i>				
Total for Yemen			\$120,000	

Excluding agency's support costs where appropriate

LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR FUNDING

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Project Title	Agency	ODP Tonnes	Funds Recommended (US\$) Project Support Total	C.E. (US\$/kg)
YUGOSLAVIA				
SEVERAL				
Institutional strengthening				
Institutional strengthening	UNIDO		\$151,500	
Total for Yugoslavia			\$151,500	
GLOBAL				
FUMIGANT				
Training programme/workshop				
Travel and per diem expenses for Article 5 participants to attend a Regional workshop on methyl bromide alternatives for North African countries (Algeria, Egypt, Jordan, Lebanon, Morocco, Syria, Tunisia and Turkey)	Germany		\$33,000	
Total for Global			\$33,000	
TOTAL:		4,089.3	\$33,118,463	

Excluding agency's support costs where appropriate