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

Nineteenth Meeting
Montreal, 8-10 May 1996

REPORT OF THE SEVENTH MEETING OF THE SUB-COMMITTEE ON PROJECT REVIEW

INTRODUCTION

1. The Sub-Committee on Project Review of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol met in Montreal on 6 and 7 May 1996.
2. The meeting was opened by the Chairman of the Sub-Committee, Mr. Jose Alvaro Rodriguez (Colombia).

I. ADOPTION OF THE AGENDA

3. The Sub-Committee adopted the following agenda:
 1. Adoption of the agenda.
 2. Report by the Chief Officer on submissions to the Nineteenth Meeting of the Executive Committee (e.g. total number of projects, sector and agency breakdown) and resource availability.
 3. List of projects and activities recommended for blanket approval by the Nineteenth Meeting of the Executive Committee.

4. Overview of policy issues including issues identified during project review (UNEP/OzL.Pro/ExCom/19/6/Rev.1 and Add.1).
 - (a) Programme-level issues:
 - work programme preparation
 - project preparation funding
 - 35 per cent over-programming
 - sectoral distribution;
 - (b) Other policy issues;
 - (c) Project-level issues.
5. Resource allocation to projects recommended for approval by the Executive Committee at the Nineteenth Meeting.
6. Other matters.
7. Adoption of the report of the Sub-Committee.

II. REPORT BY THE CHIEF OFFICER ON SUBMISSIONS TO THE NINETEENTH MEETING OF THE EXECUTIVE COMMITTEE AND RESOURCE AVAILABILITY

4. The Chief Officer reported that the total value of the projects and activities to be considered for funding at the Nineteenth Meeting of the Executive Committee was US \$46,147,490, including 48 projects for a total value of US \$24,474,830, cleared for approval but not funded at the Eighteenth Meeting of the Executive Committee, and the balance available for commitment stood at US \$28,588,916. The shortfall would thus amount to around US \$17.6 million, not including the projects to be addressed by the Sub-Committee because they raised specific issues.

III. LIST OF PROJECTS AND ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL BY THE NINETEENTH MEETING OF THE EXECUTIVE COMMITTEE (UNEP/OzL.Pro/ExCom/SC/19/2) AND OVERVIEW OF POLICY ISSUES, INCLUDING ISSUES IDENTIFIED DURING PROJECT REVIEW (UNEP/OzL.Pro/ExCom/19/6/Rev.1 and Add.1).

5. Having considered the list of projects and activities recommended for blanket approval at the Nineteenth Meeting of the Executive Committee as prepared by the

Secretariat (UNEP/OzL.Pro/ExCom/SC/19/2), together with the project proposals, work programme amendments and the comments and recommendations of the Secretariat contained in documents UNEP/OzL.Pro/ExCom/19/7-38, as revised and corrected, the Sub-Committee decided to recommend that the Executive Committee should approve as eligible for funding in the amounts indicated the projects and activities listed in the annex to the present report. Except as otherwise noted below, all the projects and activities listed in the annex were recommended for approval by the Sub-Committee without comment or amendment.

Lebanon: Investment project for phasing out CFCs at Zeenni's Trading Agency

6. The Sub-Committee sought clarification as to whether the enterprise had already been fully converted to the use of hydrocarbon propellants.

7. Following an explanation by the Secretariat and UNIDO, the Sub-Committee agreed to recommend to the Executive Committee that it should approve the project as eligible for funding as submitted.

Kenya: Phase-out of CFCs at Aesthetics Ltd; phase-out of CFCs at Mirage Industries

8. The view was expressed that the proposed aerosol projects in Kenya should not be considered as eligible for funding since they did not concern phase-out of ODS (which had taken place as long ago as 1993) but only the related safety equipment for conversion to hydrocarbon.

9. Following a discussion of the issues, the Sub-Committee agreed to recommend that the Executive Committee approve a payment of approximately 50 per cent of the cost, the exact amount to be determined jointly by the Secretariat and UNIDO, and that it should be stated unequivocally that the decision did not set a precedent and that similar projects would not be considered as eligible for funding in the future.

Philippines: Elimination of CFC-12 in the manufacture of household refrigerators at Philacor, Concepcion, Sanyo and Trans-Union Corp.

10. The project proposal for the elimination of CFC-12 in the manufacture of household refrigerators at Philacor, Concepcion, Sanyo and Trans-Union Corp. in the Philippines, as contained in document UNEP/OzL.Pro/ExCom/28/Rev.1, was taken up by the Sub-Committee following its agreement to recommend to the Executive Committee the proposed eligibility criteria for umbrella projects set forth in paragraph 42 below.

11. Noting that the four enterprises accounted for 90 per cent of the country's original consumption in the subsector, which was well above the 30 per cent limit in the eligibility criteria being recommended for the Executive Committee's consideration (see paragraph 42 (b) below), the Sub-Committee decided to recommend to the Executive Committee that it:

- (a) Approve as eligible for funding the phase-out activities at Philacor and Concepcion at a total cost of US \$952,000 since, taken individually, the cost-effectiveness of those activities fell within the established threshold and they met all other criteria for funding;
- (b) Give the Government of the Philippines the discretion to allocate among the enterprises in the umbrella project, as it saw fit, the funding approved for the activities at Philacor and Concepcion.
- (c) Request the World Bank to prepare a report for the Twentieth Meeting on implementation of the project approved at the Ninth Meeting for conversion of the foam part of refrigerator manufacture by the same enterprises. The report should address the issues raised in paragraph 9 of document UNEP/OzL.Pro/ExCom/9/16/Add.1 and the conference room paper on issues identified by the Secretariat during the project review for the Philippines household refrigeration project, tabled at the meeting of the Sub-Committee on Project Review held prior to the Eighteenth Meeting of the Executive Committee. In particular, it should provide detailed information on the change of technology and consequent reallocation of major areas of expenditure so that the Executive Committee may be informed as to eligibility and the reasonableness of costs.

Projects involving conversion to HCFC-141b

12. The Sub-Committee also recommended that in future, in cases where conversion to HCFCs was recommended, the implementing agencies should be requested to provide a full explanation of the reasons why such conversion was recommended, together with

an assurance that the criteria laid down by the Executive Committee for transitional substances had been met, and should make it clear that the enterprises concerned had agreed to bear the cost of subsequent conversion to non-HCFC substances.

Work programme preparation and project preparation funding

13. The Sub-Committee considered the work programme amendments submitted by the implementing agencies and recommended that project preparation activities additional to the 1996 business plans should not be funded. However, activities related to country programme preparation and institutional-strengthening projects, even in the event that they were additional to the 1996 business plans, should continue to be approved.

14. The Sub-Committee also recommended that, commencing with the 1997 business plans, the implementing agencies be requested to set aside 10 to 15 per cent of their total project preparation funding to cover unforeseen project preparation activities.

35 per cent over-programming

15. The Sub-Committee discussed but could not reach agreement on whether or not to recommend, for the reasons set forth in paragraph 23 of document UNEP/OzL.Pro/ExCom/19/6/Rev.1, a reduction in the 35 per cent allowance for over-programming. It decided to transmit the matter to the Executive Committee for its consideration.

Sectoral distribution

16. The view was expressed that countries should be encouraged to concentrate on sectors that would allow them to achieve a high level of ODS phase-out in the short term so as to enable them to meet their obligations under the Montreal Protocol, with the understanding that projects should continue to be country-driven. It was recommended that the implementing agencies and countries be requested to include with each project a brief description of how the project would contribute to helping the country to achieve the 1999 freeze.

Methyl bromide

17. In view of the decisions on methyl bromide taken by the Seventh Meeting of the Parties, the Sub-Committee recommended that UNIDO take the lead in preparing, in collaboration with the other implementing agencies, a brief paper on the work currently in

progress on alternatives to methyl bromide, funded both on bilateral and multilateral bases through financial programmes other than the Multilateral Fund, and submit it to the Executive Committee for its consideration at its Twentieth Meeting.

18. The Sub-Committee noted the need to coordinate work on this subject and requested the Fund Secretariat to consult with other interested parties, such as agricultural departments at the national level and the Food and Agricultural Organization of the United Nations (FAO) at the international level, to ensure that all concerned were aware of and working towards the same goals.

19. The Sub-Committee accepted with appreciation an offer by the representative of the United States to prepare for the Executive Committee's consideration and approval, if possible at its present meeting, potential draft guidelines as to the nature, form and timing of proposals for projects in the methyl bromide sector.

Low-pressure versus high-pressure foaming machines

20. The Sub-Committee, noting that two projects submitted to the Nineteenth Meeting proposed the use of low-pressure machines, recommended that implementing agencies be requested to take this and related technological developments into account and, in consultation with the Fund Secretariat, to prepare a report for submission to the Twentieth Meeting.

Halon production closure projects

21. At its Thirteenth Meeting, the Executive Committee had approved a project on halon-1211 production closure (Tongxiang Chemical Fertilizer Factory), to be implemented by the World Bank. Approval was contingent on a permanent decrease in the total national halon production at a level of at least 400 tonnes below current levels as indicated in the project. The calculation of incremental costs was based on lost profit and labour compensation. Since the closure had now taken place, the Sub-Committee considered whether it should recommend approval for the release of the workers' compensation component of the project while endorsing the withholding by the World Bank of the lost profit component, until such time as the Committee was satisfied by explanations of how conditions of approval of the project had been met.

22. In the absence of a satisfactory explanation of how the projects met the terms of the agreement reached between China and the Executive Committee at the Eighteenth Meeting (decision 18/5), the Sub-Committee recommended the withholding of all compensation to China in respect of these projects.

Re-examination of halon fire extinguishing conversion project guidelines

23. The Sub-Committee recommended that the Executive Committee note that:

- (a) Halon fire extinguisher conversion projects in China be presented to the Executive Committee in the context of China's strategy for this subsector;
- (b) There was no need at present to amend any of the existing provisions of the guidelines for halon fire extinguisher conversion projects; and
- (c) The Fund Secretariat and the implementing agencies would develop a joint paper proposing an addition to the guidelines to address capital and operating costs.

Reporting on duration of incremental operating costs in project completion reports

24. Following consideration of the question of the duration of incremental operating costs, as set out in paragraph 29 of document UNEP/OzL.Pro/ExCom/19/6/Rev.1, the Sub-Committee requested the implementing agencies to provide information relating to incremental operating costs and their durations in project completion reports. It further decided that the implementing agencies be requested to consult with the Secretariat on a consistent format for project completion reports.

Renewal of institutional-strengthening

25. With regard to the request from four countries for extension of their institutional-strengthening projects, the Sub-Committee decided to recommend a temporary six-month extension, pending the outcome of the discussion by the Executive Committee of the guidelines for renewal of institutional-strengthening projects (UNEP/OzL.Pro/ExCom/19/52 and Corr.1).

Low-consuming countries

26. The Sub-Committee considered a paper prepared by UNEP on innovative approaches to phase-out in low-consuming countries (UNEP/OzL.Pro/ExCom/19/53), and decided that the issue should be considered directly by the Executive Committee as there were no implications for any particular project before the Sub-Committee.

Projects for partial conversion in domestic refrigeration

27. The Sub-Committee considered the advisability of approving funding for projects which proposed only a partial conversion. Recalling that past projects involving partial conversion had been submitted before the existence of cost-effectiveness guidelines, the Sub-Committee felt that it was important to have an overall picture of the cost-effectiveness of the project as a whole, even if it was intended to implement it in stages.

28. The Sub-Committee also requested the implementing agencies to present projects as a whole, which in the refrigeration sector would comprise both a foam component and a refrigerant component.

29. Following these statements of general principle, the Sub-Committee turned to the specific case of a partial-conversion project in India, referred to in paragraph 13 of document UNEP/OzL.Pro/ExCom/19/6/Rev.1 and described in documents UNEP/OzL.Pro/ExCom/19/19 and Corr.1. Following an assurance by the representative of India that the enterprise concerned would not seek any further funds if the cost-effectiveness threshold were to be exceeded for the complete conversion, the Sub-Committee decided not to withhold funding on the basis of the partial-conversion aspect of the project.

30. However, the Secretariat raised issues about the project not related to the question of partial conversion. The project proposed the complete replacement, rather than the retrofitting, of four domestic refrigerator production lines. No projects had yet been funded on such a basis, it being generally held that replacement was considerably more expensive than retrofitting. The information necessary for a detailed examination of the project had not yet been received, although analysis undertaken on the basis of the information available revealed that its cost-effectiveness was very poor. In consequence, the Secretariat was unable to make a recommendation on the cost aspect of the project.

31. The representative of the World Bank replied that all the experts consulted by the Bank had taken the view that the facility in question could not be retrofitted, but that if it was decided to go ahead with retrofitting anyway, the cost would be 20 per cent higher than replacement.

32. The Chairman suggested that the World Bank and the Secretariat should attempt to resolve their technical disagreement, and present their findings to the next meeting of the Sub-Committee.

33. As a general rule, it was decided that any technical matters of disagreement should be communicated to the members of the Sub-Committee at least two weeks

before a Sub-Committee meeting, so that they could come to the meeting prepared to discuss the issues.

Chile: Montreal Protocol implementation programme - Phase II

34. The Secretariat drew the meeting's attention to its comments on the project, contained in document UNEP/OzL.Pro/ExCom/19/15. Intended to attract large companies, the first phase had in fact attracted almost exclusively small companies, resulting in a cost-effectiveness of about US \$4/kg, as against the expected figure of approximately US \$2/kg. The Secretariat recommended that the Sub-Committee should take into consideration the state of implementation of the first phase when considering the second phase.

35. While recognizing that the innovative approach of the Chilean project had raised important issues requiring detailed examination, the Sub-Committee nevertheless felt that in order to enable Chile to move forward with at least some projects, funding at a lower level than the project's total cost of US \$5.1 million could be approved.

36. The representative of the World Bank said that a first installment of US \$2.3 million had been requested in order to allow for sufficient competition in the market-place. The structure of the programme guaranteed that the overall cost-effectiveness would be equal to or less than 90 per cent of the cost-effectiveness threshold.

37. The Sub-Committee decided to fund the Chilean project at an initial level of US \$1 million and further decided that no additional funding would be provided until there had been an evaluation of the project as funded to date.

Allocation of funding for the preparation an inventory and assessment of non-ODS technologies and the terms of their transfer under the 1996 UNEP work programme

38. Drawing attention to document UNEP/OzL.Pro/ExCom/19/6/Rev.1/Add.1, on the 1996 UNEP work programme, the Chief Officer said that the Fund Secretariat supported the programme as contained in UNEP/OzL.Pro/ExCom/19/9, with the exception of a proposal for US \$109,800 to prepare an inventory and assessment of environmentally sound and economically viable technologies and know-how conducive to phase-out of ozone-depleting substances (ODS). That activity had not been contained in the UNEP business plan approved by the Executive Committee at its Eighteenth Meeting but had been called for by the Seventh Meeting of the Parties by its decision VII/22. The Secretariat believed that the activity should be covered from within UNEP's global allocation for core activities, which included substantial funding for information collection and dissemination.

39. Following a clarification by the representative of UNEP, the Sub-Committee, bearing in mind that some elements of the activity went beyond UNEP's core clearing-house functions, decided to recommended that the Executive Committee should approve the sum of US \$50,000 for the inventory and assessment of environmentally sound and economically viable technologies and know-how conducive to phase-out of ozone-depleting substances within the 1996 UNEP work programme.

40. It also recommended that any further such activities undertaken by UNEP should be financed through a reprioritization of its core funding.

Umbrella projects

41. The Secretariat introduced a paper on the role of cost-effectiveness thresholds in sectoral phase-out proposals and guidelines for umbrella projects (UNEP/OzL.Pro/ExCom/19/55 and Corr.1), which it had prepared in collaboration with the implementing agencies in response to Executive Committee decision 18/7.

42. The Sub-Committee decided to recommend that the Executive Committee should, for a trial period of 18 months, consider an umbrella project as eligible for funding if it met all the following conditions:

- (a) The umbrella project included all the remaining enterprises in a sector or subsector for which cost-effectiveness thresholds had been established by the Executive Committee;

- (b) The enterprises within the umbrella project accounted for no more than 30 per cent of the country's original level of consumption for the sector or subsector;
- (c) The country concerned would submit no further requests for funding from the Multilateral Fund for any enterprise in that sector or subsector;
- (d) The overall cost-effectiveness of the umbrella project fell within the sectoral threshold established by the Executive Committee; and
- (e) No individual enterprise proposal had a cost-effectiveness threshold more than 100 per cent above the established threshold.

43. After careful consideration of this matter in the context of projects considered by the Sub-Committee, the Sub-Committee recommended that the Secretariat and the implementing agencies discuss this matter further with special attention being given to subparagraph 42 (b) above and make recommendations to the Sub-Committee.

Low-consuming enterprises

44. The representative of UNDP introduced the document on approaches to ODS phase-out in small and medium-sized enterprises prepared jointly by UNDP and UNEP (UNEP/OzL.Pro/ExCom/19/54), drawing attention to issues including:

- (a) Were small and medium-sized enterprises entitled to unavoidable and unintentional minimum technological upgrades where these are essential for the implementation their ODS phase-out programmes?
- (b) Were small and medium-sized enterprises entitled to the extra amount of training required because their base-line level of technology was low?
- (c) What approach should be adopted (sectoral or subsectoral; multiphase; or sectoral funding strategy) and should extended cost-effectiveness ranges by sector and subsector be considered?
- (d) The timing of actions to be undertaken.

The representative of UNDP also suggested that, if the principles outlined in the UNDP/UNEP document were acceptable, the implementing agencies could follow them on a trial basis for two years.

45. There was considerable discussion in the Sub-Committee of the complex issues raised in the paper. While the Sub-Committee did not succeed in resolving these issues, it was noted that the umbrella approach endorsed by the Sub-Committee in paragraph 42 above would help address the SME issue. The Sub-Committee also indicated that it would look forward to considering a fully developed project proposal, based on the brief proposal included in Annex III to UNEP/OzL.Pro/ExCom/19/6/Rev.1, as an example of another innovative approach to dealing with SMEs.

Malaysia: Umbrella project to phase out ODS at SMEs in the aerosol sector
(UNEP/OzL.Pro/ExCom/19/24 and Corr.2)

46. The Secretariat recommended that, due to the special features of the project (the logistical support provided by the Government of Malaysia; the result would be complete phase-out in the aerosol sector in Malaysia; no further funding would be sought by Government of Malaysia in the aerosol sector), the Sub-Committee might wish to recommend an amount of US \$1.48 million for the umbrella project.

47. The Sub-Committee decided to recommend that, since the project involved small and medium-sized enterprises, would eliminate all aerosol uses, the costs were less than double the cost-effectiveness threshold, national laws banning new uses had been adopted, the Government would not request further funding in the sector and every effort had been made to reduce costs through consolidation, it should be approved as eligible for funding. Such a decision did not, however, set a precedent.

Philippines: Umbrella project covering five companies for conversion from CFC-11 used as foam blowing agent into HCFC 141b, and CFC-12 and R-502 used as refrigerant into HFC 134a and HFC 404a (Gomeco, Chee Puck, Well Built, Low Temp Corporation, Allied Metals)

(UNEP/OzL.Pro/ExCom/19/28/Rev.1)

48. The view was expressed that, as a matter of principle for future operations, projects with low-and high cost effectiveness should not be combined in order to achieve a cost-effectiveness figure that would enable the project to be funded.

49. Following further consultation between the Secretariat and UNDP, it was determined from country programme estimates of subsector consumption that the project as submitted would not constitute phase-out of the subsector. UNDP, therefore, withdrew the two subprojects that did not meet individual cost-effectiveness thresholds (Low Temp Corporation, Allied Metals) and only the remaining three subprojects were submitted (Gomeco, Chee Puck, Well Built). The Sub-Committee recommended

approval of the project for the three enterprises in the amount of US \$156,475. The Sub-Committee noted that:

- (a) The overall cost-effectiveness of the project was below the threshold value and each of the three enterprises individually also met the cost-effectiveness threshold in the subsector;
- (b) The recovery/recycling component had been excluded from the project.

Sudan: Phasing out of ODS at three small domestic refrigerator factories in Sudan (Coldair Refrigerator Factory, Modern Refrigerator and Metal Furniture Co., Sheet Metal Industries Co. Refrigerator Factory)

(UNEP/OzL.Pro/ExCom/19/30)

50. Following a further review by the Secretariat and UNIDO, the Sub-Committee recommended approval of the project at a total project cost of US \$100,000. The Sub-Committee noted that the total incremental cost of the project was revised to US \$100,000. The overall cost-effectiveness of the project was thus within the threshold for the domestic refrigeration sector (US \$13.76/kg), the cost-effectiveness of the least cost-effective enterprise was less than 100 per cent above the threshold value and the project would achieve complete ODS phase-out in the domestic refrigeration subsector in Sudan. The Sub-Committee further noted that the Government of Sudan would not request any additional funding for conversion of manufacturing facilities in this subsector.

51. The Sub-Committee agreed that approval of the project should be without prejudice to any refinements that might be made to the guidelines adopted earlier, and should not constitute a decision of principle on the issue of whether or not to approve projects covering 100 per cent of a given sector rather than the residual element.

Philippines: Elimination of the use of CFC-13, trichloroethane (TCA), CFC-11 and CFC-12 at multiple corporations that manufacture special formulations for various industrial markets

(UNEP/OzL.Pro/ExCom/19/28/Rev.1)

52. The Sub-Committee recommended approval of the project in the amount of US \$642,800, subject to the following conditions:

- (a) The test chemicals were to be placed under the control of UNDP and the project consultant and provided to the enterprises for consultant-supported tests only. Duplication of testing for similar formulations was to be avoided. Any residual chemicals would be carried forward to the

second and final phase of the project;

- (b) The operational costs would not be made available by UNDP until the companies had demonstrated a complete ODS phase-out in their blending operations;
- (c) The Government of the Philippines would not seek funding from the Multilateral Fund for phase-out of ODS by the end-users.

India: Elimination of CFCs in the manufacture of rigid polyurethane foam in small and medium-sized enterprises

(UNEP/OzL.Pro/ExCom/19/6/Rev.1, Annex III, page 1)

53. The Sub-Committee noted that the project was presented for information only and would be submitted by UNDP for approval at the Twentieth Meeting.

Brazil: Elimination of CFC-11 and CFC-12 in the manufacture of domestic refrigerators and freezers at Multibras s.a.

(UNEP/OzL.Pro/ExCom/19/13 and Corr.1)

54. The Sub-Committee noted that this project, for which the technical review had been completed and the funding agreed between the Fund Secretariat and UNDP, would be resubmitted to the Twentieth Meeting, on the basis of an agreement that had been reached between UNDP and the Fund Secretariat.

V. RESOURCE ALLOCATION TO PROJECTS RECOMMENDED FOR APPROVAL BY THE EXECUTIVE COMMITTEE AT THE NINETEENTH MEETING

55. The Chief Officer stated that the projects carried over from the Eighteenth Meeting, the four institutional-strengthening extensions and the UNEP work programme together totalled around US \$28.6 million, giving a remaining balance of approximately US \$300,000.

56. However, the projects recommended by the Sub-Committee on Project Review as eligible for funding amounted to approximately US \$21.8 million. It was thus evident that no funds would be available for new investment projects at the Nineteenth Meeting.

57. Since it appeared likely that an amount of funds sufficient to cover the projects recommended as eligible for funding would be deposited relatively soon, the

Sub-Committee decided to recommend to the Executive Committee that, when sufficient funds had been received, the Treasurer, through the Fund Secretariat, should notify all members of the Executive Committee and should release the recommended levels of funding to the pertinent agencies, in order to fund simultaneously all of the projects recommended as eligible.

VI. OTHER MATTERS

58. There were no other matters.

VII. ADOPTION OF THE REPORT OF THE SUB-COMMITTEE

59. In accordance with past practice, the Chairman was entrusted with the finalization of the report of the Sub-Committee.

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(A) INVESTMENT PROJECT

Annex

1

Country	Project Title	Tonnes ODP	Agency	Funds Project	Approved Support	(US\$) Total	C.E. (US\$/kg)
Aerosol							
Hydrocarbon							
Kenya	Phase out CFCs at Acsthetics Ltd.	107.0	UNIDO	\$55,000	\$7,150	\$62,150	0.51
Kenya	Phasing out CFCs at Mirage Industries Ltd.	51.0	UNIDO	\$47,250	\$6,143	\$53,393	0.93
Lebanon	Investment project for phasing out CFCs at Zeeni's Trading Agency	212.0	UNIDO	\$361,900	\$47,047	\$408,947	1.71
Lebanon	Investment project for phasing out CFCs at Cosmaline Industries s.a.al.	87.7	UNIDO	\$212,500	\$27,625	\$240,125	2.42
Tunisia	Phasing out CFCs at Jasminal Laboratories	86.0	UNIDO	\$210,000	\$27,300	\$237,300	2.44
Syria	Phasing out CFCs at Gaston Banna & Sons Co.	104.0	UNIDO	\$299,500	\$38,935	\$338,435	2.88
Tunisia	Phasing out CFCs at Satem Parfums et Produits Cosmetiques	29.0	UNIDO	\$119,500	\$15,535	\$135,035	4.12
Malaysia	Umbrella project to phase out ODS at SMEs in the aerosol sector	250.0	UNDP	\$1,486,660	\$193,266	\$1,679,926	5.95
Foam							
Flexible polyurethane							
Cote D'Ivoire	Phasing out CFC-11 at F.I.M.A. flexible polyurethane foam plant	53.1	UNIDO	\$85,087	\$11,061	\$96,148	1.60
Malaysia	Conversion to CFC-free technology for the manufacture of flexible polyurethane foam at Nite Beauty Industries	10.0	UNDP	\$36,875	\$4,794	\$41,669	3.69
Sudan	Phasing out of CFC-11 at Patra Foam Co. flexible polyurethane foam plant	16.0	UNIDO	\$72,227	\$9,390	\$81,617	4.52
Syria	Phasing out CFC-11 at Dakkak Co. flexible polyurethane foam plant	17.0	UNIDO	\$96,553	\$12,552	\$109,105	5.68
General							
Malaysia	Conversion to CFC -free technology for the manufacture of flexible polyurethane foam at Far East Foam Industries	41.0	UNDP	\$209,000	\$27,170	\$236,170	5.10
Integral skin							
Tunisia	Phasing out CFC-11 at Meublatex	28.0	UNIDO	\$105,000	\$13,650	\$118,650	3.39
India	Phase out of CFCs in the manufacture of cold cured molded PUF products at Autofit P. Ltd.	20.0	UNDP	\$103,125	\$13,406	\$116,531	5.16

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

Annex

2

(A) INVESTMENT PROJECT

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$)			
				Project	Support	Total	C.E. (US\$/kg)
India	Phase out of CFCs in the manufacture of cold cured molded and integral skin PUF products at Kaygee Foams P. Ltd.	33.0	UNDP	\$217,250	\$28,243	\$245,493	6.59
Indonesia	Investment project for phasing out ODS at PT Naviri Kencana Perdana	47.8	UNIDO	\$377,382	\$49,060	\$426,442	7.90
India	Phase out of the CFCs in the manufacture of cold cured molded and integral skin PUF products at Preto Foams	11.5	UNDP	\$167,100	\$21,723	\$188,823	14.59
Brazil	Umbrella project covering 6 companies for the conversion to CFC-free technology in the manufacture of integral rigid skin and flexible molded polyurethane foam (Rorispuma, Indek, Flexfom, Walrod, Rigiline, Magalhaes)	51.8	UNDP	\$746,000	\$96,980	\$842,980	15.05
Rigid polyurethane							
Mexico	Conversion to CFC-free technology in the manufacture of insulated construction panels and doors at Multypanel	306.0	UNDP	\$428,000	\$55,640	\$483,640	1.40
India	Phase out of CFCs in the manufacture of rigid PUF insulated thermoware at Bharat Plastic Products	25.0	UNDP	\$96,000	\$12,480	\$108,480	3.84
India	Phase out of CFCs in the manufacture of rigid PUF products in Inalsa Ltd.	28.9	UNDP	\$123,000	\$15,990	\$138,990	4.26
India	Phase out of CFCs in the manufacture of rigid PUF insulated thermoware at Mahavir Enterprises	19.4	UNDP	\$94,500	\$12,285	\$106,785	4.87
India	Phase out of CFCs in the manufacture of rigid PUF products at Omkar PUF Insulation	10.6	UNDP	\$59,000	\$7,670	\$66,670	5.56
Malaysia	Elimination of CFC-11 in the manufacture of polyurethane cold-room insulation panels/truck container panels at Kcjuruteraan Transfreeze Sdn Bhd	11.4	IBRD	\$71,500	\$9,295	\$80,795	6.27
Malaysia	Elimination of CFC-11 in the manufacture of polyurethane refrigerator panels at Penang Trading Co.	10.5	IBRD	\$71,500	\$9,295	\$80,795	6.81

List of new projects recommended for approval

(A) INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom19/5

Annex

3

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$) Project	Support	Total	C.E. (US\$/kg)
Thailand	Phase out of the use of CFCs in the manufacture of rigid PUR foam for thermoware at Raengwa Standard Industry Co. Ltd.	25.0	UNDP	\$181,500	\$23,595	\$205,095	7.26
Multi-sector							
Chile	Montreal Protocol implementation programme - phase II	400.0	IBRD	\$1,000,000	\$130,000	\$1,130,000	2.50
Refrigeration							
Commercial							
Philippines	Umbrella project covering 5 companies for conversion from CFC-11 used as foam blowing agent into HCFC-141b, and CFC-12 and R-502 used as refrigerant into HFC-134a and HFC-404a (Gomeco, Chee Puck, Well Built, Low Temp Corporation, Allied Metals)	28.0	UNDP	\$156,475	\$20,342	\$176,817	5.59
Brazil	Elimination of CFC-11 and CFC-12 in the production of commercial refrigeration equipment at Reubli. S.A.	89.9	IBRD	\$901,270	\$117,165	\$1,018,435	10.02
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Rockwell Devices P., Ltd.	18.0	IBRD	\$181,004	\$23,531	\$204,535	10.60
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Rabi-Run Refrigeration P., Ltd.	14.0	IBRD	\$142,622	\$18,541	\$161,163	10.83
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Sethia Appliances P., Ltd.	16.0	IBRD	\$173,384	\$22,540	\$195,924	11.38
Turkey	Engineering assistance for the elimination of ODS used in the production of freezers, coolers, ice makers, and ice cream machines at UGUR Makinalari Sanayi ve Ticaret. A.S.	64.6	IBRD	\$1,116,455	\$145,139	\$1,261,594	11.73
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Seepra Refrigeration P., Ltd.	15.0	IBRD	\$171,910	\$22,348	\$194,258	12.12

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(A) INVESTMENT PROJECT

Annex

4

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$) Project	Funds Approved (US\$) Support	Funds Approved (US\$) Total	C.E. (US\$/kg)
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Shakti Fabricators	13.5	IBRD	\$159,230	\$20,700	\$179,930	12.43
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Chandra Frig Co. P.. Ltd.	9.9	IBRD	\$130,984	\$17,028	\$148,012	13.98
Venezuela	Elimination of CFC-11 and CFC-12 in the manufacture of bottle coolers, freezers and water coolers at Tecoven, C.A.	13.2	UNDP	\$190,000	\$24,700	\$214,700	14.44
Venezuela	Elimination of CFC-11 and CFC-12 in the manufacture of bottle coolers, freezers and water coolers at Hielomatic, C.A.	11.1	UNDP	\$162,375	\$21,109	\$183,484	14.60
Peru	Elimination of CFC-11 and CFC-12 in the manufacture of chest freezers at Master Service, S.A.	9.4	UNDP	\$140,000	\$18,200	\$158,200	14.83
Venezuela	Elimination of CFC-11 and CFC-12 in the manufacture of refrigerated display cases and bottle coolers at Neve Industrial, C.A.	7.5	UNDP	\$112,100	\$14,573	\$126,673	14.87
Peru	Elimination of CFC-11 and CFC-12 in the manufacture of chest freezers at Col-Frio	11.7	UNDP	\$175,000	\$22,750	\$197,750	14.96
Peru	Elimination of CFC-11 and CFC-12 in the manufacture of chest freezers at Compañía Peruana de Máquinas para Coser S.A. (Copemaco)	12.9	UNDP	\$193,834	\$25,198	\$219,032	15.03
Colombia	Elimination of CFC-11 and 12 in the manufacture of commercial refrigeration equipment at Refrigeracion Supernordico Ltda.	10.8	UNDP	\$162,500	\$21,125	\$183,625	15.09
Peru	Elimination of CFC-11 and CFC-12 in the manufacture of chest freezers and refrigerators at Formetal	7.8	UNDP	\$118,000	\$15,340	\$133,340	15.13
Romania	Conversion of commercial refrigeration equipment to phase out CFC-12, HCFC-502 and CFC-11 at Tehnofrig S.A.	20.0	UNIDO	\$297,768	\$38,710	\$336,478	15.20
Argentina	Elimination of the use of CFC's in the manufacture of display cabinet and walk-in freezers at Disthel	10.0	UNDP	\$196,000	\$25,480	\$221,480	15.21

Domestic

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(A) INVESTMENT PROJECT

Annex

5

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$)			C.E. (US\$/kg)
				Project	Support	Total	
China	Conversion of manufacturing facilities from CFC11 foaming agent to cyclopentane at Huayi	170.0	IBRD	\$972,490	\$126,424	\$1,098,914	8.88
Pakistan	Conversion of refrigerator manufacture from CFC-11 to cyclopentane foam blowing agent and CFC-12 to R-134a refrigerant at Domestic Appliances Ltd.	17.1	IBRD	\$257,650	\$33,495	\$291,145	9.00
Philippines	Elimination of CFC-12 in the manufacture of household refrigerators at Philacor, Concepcion, Sanyo and Trans-Union Corp.	80.0	IBRD	\$952,000	\$123,760	\$1,075,760	11.90
Argentina	Elimination of CFCs in the manufacturing plants of domestic refrigerators of Frimetal, Rosario	89.7	IBRD	\$1,855,000	\$241,150	\$2,096,150	13.44
Sudan	Phasing out of ODS at three small domestic refrigerator factories in Sudan (Coldair Refrigerator Factory, Modern refrigerator & Metal furniture Co., Sheet Metal Industries Co. Refrigerator Factory)	7.3	UNIDO	\$100,000	\$13,000	\$113,000	13.74

Solvent

Mixed

Philippines	Elimination of the use of CFC-113, 1,1,1 trichloroethane (TCA), CFC-11 and CFC-12 at multiple corporations that manufacture special formulations for various industrial markets	53.6	UNDP	\$642,800	\$83,564	\$726,364	11.99
India	Conversion of electronic cleaning processes from ODS solvents to semi-aqueous cleaning and no-clean soldering technologies at ITI, Bangalore	7.0	UNIDO	\$107,954	\$14,034	\$121,988	15.48
TOTAL:				2,900.6	\$16,901,714	\$2,197,223	\$19,098,937

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(B) LOW-ODS CONSUMING COUNTRY

Annex

6

Country	Project Title	Tonnes ODP	Agency	Funds Approved Project	Funds Approved Support	Funds Approved Total	C.E. (US\$/kg)
Foam							
Flexible polyurethane							
Central African Republic	Continuation of conversion to CFC-free technology in manufacturing of flexible polyurethane foam at Vitas-Centrafrlique	1.7	UNDP	\$62,000	\$8,060	\$70,060	36.50
Refrigeration							
Domestic							
Uruguay	Completing the elimination of CFC use in domestic refrigeration manufacturing - adoption of HCFC-141b as blowing agent and HFC-134a as refrigerant at Nevol S.A.	4.6	IBRD	\$141,512	\$18,397	\$159,909	30.60
TOTAL:		6.3		\$203,512	\$26,457	\$229,969	

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(C) MAC AND COMPRESSOR

Annex

7

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$) Project	Support	Total	C.E. (US\$/kg)
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Refrigeration**Compressor**

China	Phasing out ODS at the X'ian Yuan Dong Compressor Co., Xi'an		UNIDO	\$1,599,000	\$207,870	\$1,806,870	
		TOTAL:		\$1,599,000	\$207,870	\$1,806,870	

List of new projects recommended for approval

(D) CFC RECYCLING AND HALON BANKING

UNEP/OzL.Pro/ExCom19/5
Annex 8

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$) Project	Funds Approved (US\$) Support	Funds Approved (US\$) Total	C.E. (US\$/kg)
Refrigeration							
Malawi	Implementation of a national programme for recovery and recycling of refrigerant	7.2	UNDP	\$106,320	\$13,822	\$120,142	
Peru	Implementation of a national programme for recovery and recycling of refrigerant	28.6	UNDP	\$342,695	\$44,550	\$387,245	
Uganda	Implementation of a national programme for recovery and recycling of refrigerant	3.6	UNDP	\$56,000	\$7,280	\$63,280	
Zambia	Implementation of a national programme for recovery and recycling of refrigerant	7.2	UNDP	\$106,320	\$13,822	\$120,142	
	TOTAL:	46.6		\$611,335	\$79,474	\$690,809	

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(E) WORK PROGRAMME/AMENDMENT

Annex

9

Country	Project Title	Tonnes ODP	Agency	Funds Approved Project	Funds Approved Support	Funds Approved Total	C.E. (US\$/kg)
Aerosol							
Global	Produce sector-specific video for aerosol sector		UNEP	\$70,000	\$9,100	\$79,100	
Fumigant							
Global	Produce a video on methyl bromide alternatives		UNEP	\$70,000	\$9,100	\$79,100	
Global	Develop a technical brochure on methyl bromide		UNEP	\$25,000	\$3,250	\$28,250	
Halon							
Global	Provide halon bank management query response, information collection and dissemination		UNEP	\$29,000	\$3,770	\$32,770	
Refrigeration							
Global	Prepare guidance to assist hotel industry in LVCs to avoid, replace, or eliminate ODS		UNEP	\$50,000	\$6,500	\$56,500	
Global	Guidelines for the establishment of R&R systems and related legislation for low volume ODS consuming countries		UNEP	\$55,000	\$7,150	\$62,150	
Global	Training modules for national training courses on good practices in refrigeration		UNEP	\$40,000	\$5,200	\$45,200	
Several							
Global	Formulation of country programmes for five countries		UNEP	\$152,000	\$19,760	\$171,760	
Bahamas	Institutional strengthening for the phase-out of ODSs under the Montreal Protocol		UNEP	\$50,000	\$6,500	\$56,500	
Gambia	Institutional strengthening		UNEP	\$42,200	\$5,486	\$47,686	
Gambia	Training of customs officers		UNEP	\$9,500	\$1,235	\$10,735	

List of new projects recommended for approval

(E) WORK PROGRAMME/AMENDMENT

UNEP/OzL.Pro/ExCom19/5

Annex

10

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$)	C.E. (US\$/kg)	
				Project	Support	Total
Ghana	Extension of Ghana institutional strengthening project		UNDP	\$23,200	\$3,016	\$26,216
Global	Travel		UNEP	\$75,000	\$9,750	\$84,750
Global	Collect sectoral data from worldwide sources		UNEP	\$104,500	\$13,585	\$118,085
Global	Training modules on management of ODS phase out in SMEs		UNEP	\$40,000	\$5,200	\$45,200
Global	Support to national activities		UNEP	\$30,000	\$3,900	\$33,900
Global	Provide direct query-response service		UNEP	\$48,000	\$6,240	\$54,240
Global	Update the OAIC diskette version		UNEP	\$28,000	\$3,640	\$31,640
Global	Ad hoc Group meetings		UNEP	\$50,000	\$6,500	\$56,500
Global	Continue to maintain contact data base of experts and mailing list for OzonAction Programme publications		UNEP	\$30,000	\$3,900	\$33,900
Global	Training modules on policy design and setting up of legislation		UNEP	\$60,000	\$7,800	\$67,800
Global	Deliver OAIC-DV and other OzonAction Programme information through World Wide Web home page site on a one year trial basis		UNEP	\$14,500	\$1,885	\$16,385
Global	Disseminate information		UNEP	\$270,000	\$35,100	\$305,100
Global	Conduct outreach at conferences and workshops		UNEP	\$24,000	\$3,120	\$27,120
Global	Publish the OzonAction newsletter and special supplements		UNEP	\$245,000	\$31,850	\$276,850
Global	Prepare information papers and case studies		UNEP	\$46,000	\$5,980	\$51,980
Global	Prepare an inventory and assessment of environmentally sound and economically viable technologies and know-how conducive to phase out of ODS		UNEP	\$50,000	\$6,500	\$56,500
Global	Produce handbook on technology options especially for SMEs		UNEP	\$25,000	\$3,250	\$28,250
Lebanon	Creation of an Ozone Unit		UNEP	\$179,000	\$23,270	\$202,270
Mexico	Extension of institutional strengthening		UNDP	\$47,500	\$6,175	\$53,675
Morocco	Creation of Ozone Unit		UNEP	\$179,000	\$23,270	\$202,270
Papua New Guinea	Creation of an Ozone Unit		UNEP	\$45,800	\$5,954	\$51,754
Region: AFR	African Network		UNEP	\$299,400	\$38,922	\$338,322

List of new projects recommended for approval

(E) WORK PROGRAMME/AMENDMENT

UNEP/OzL.Pro/ExCom19/5

Annex

11

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$) Project	Support	Total	C.E. (US\$/kg)
Region: AFR	Regional workshop on monitoring and control of ODS consumption for english-speaking Africa		UNEP	\$85,000	\$11,050	\$96,050	
Region: ASP	West Asian Network		UNEP	\$169,200	\$21,996	\$191,196	
Region: ASP	Regional workshop on monitoring and control of ODS consumption for West Asia		UNEP	\$80,000	\$10,400	\$90,400	
Region: ASP	Networking and Training		UNEP	\$40,000	\$5,200	\$45,200	
Region: LAC	Networking and Training in Latin American Region Network (including English-speaking Caribbean		UNEP	\$299,000	\$38,870	\$337,870	
Region: LAC	Regional workshop on monitoring and control of ODS consumption for Latin America and Caribbean		UNEP	\$105,000	\$13,650	\$118,650	
Uruguay	Extension institutional strengthening		UNDP	\$29,000	\$3,770	\$32,770	
Venezuela	Extenson institutional strengthening		UNDP	\$54,900	\$7,137	\$62,037	
TOTAL:				\$3,368,700	\$437,931	\$3,806,631	

List of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5

(G) BILATERAL COOPERATION

Annex

I2

Country	Project Title	Tonnes ODP	Agency	Funds Approved (US\$) Project	Funds Approved (US\$) Support	Funds Approved (US\$) Total	C.E. (US\$/kg)
Refrigeration							
Argentina	Provision of technical assistance and training on safe designs of hydrocarbon based domestic and commercial refrigeration appliances		Switzerlan	\$242,600		\$242,600	
Morocco	Project preparation for the formulation of a project to implement a recycling network for CFC-11, CFC-12 and HCFC-22		France	\$20,000		\$20,000	
Senegal	Project preparation for projects in the hotel and fisheries industries and recycling		France	\$10,000		\$10,000	
	TOTAL:			\$272,600		\$272,600	

Summary of new projects recommended for approval

UNEP/OzL.Pro/ExCom19/5
Annex
Page 13

Sector	Tonnes ODP	Funds Approved (US\$)		
		Project	Support	Total
(A) INVESTMENT PROJECT				
Aerosol	926.7	\$2,792,310	\$363,000	\$3,155,310
Foam	765.9	\$3,340,599	\$434,278	\$3,774,877
Multi-sector	400.0	\$1,000,000	\$130,000	\$1,130,000
Refrigeration	747.4	\$9,018,051	\$1,172,347	\$10,190,398
Solvent	60.6	\$750,754	\$97,598	\$848,352
TOTAL:	2,900.6	\$16,901,714	\$2,197,223	\$19,098,937
(B) LOW-ODS CONSUMING COUNTRY				
Foam	1.7	\$62,000	\$8,060	\$70,060
Refrigeration	4.6	\$141,512	\$18,397	\$159,909
TOTAL:	6.3	\$203,512	\$26,457	\$229,969
(C) MAC AND COMPRESSOR				
Refrigeration		\$1,599,000	\$207,870	\$1,806,870
TOTAL:		\$1,599,000	\$207,870	\$1,806,870
(D) CFC RECYCLING AND HALON BANKING				
Refrigeration	46.6	\$611,335	\$79,474	\$690,809
TOTAL:	46.6	\$611,335	\$79,474	\$690,809
(E) WORK PROGRAMME/AMENDMENT				
Aerosol		\$70,000	\$9,100	\$79,100
Fumigant		\$95,000	\$12,350	\$107,350
Halon		\$29,000	\$3,770	\$32,770
Refrigeration		\$145,000	\$18,850	\$163,850
Several		\$3,029,700	\$393,861	\$3,423,561
TOTAL:		\$3,368,700	\$437,931	\$3,806,631
(G) BILATERAL COOPERATION				
Refrigeration		\$272,600		\$272,600
TOTAL:		\$272,600		\$272,600
GRAND TOTAL:	2,953.5	\$22,956,861	\$2,948,954	\$25,905,815