



**United Nations
Environment
Programme**



Distr.
GENERAL

UNEP/OzL.Pro/ExCom/22/15
29 May 1997

ORIGINAL: ENGLISH

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

Twenty-second Meeting
Nairobi, 28-30 May 1997

**REPORT 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 Nairobi from 26 to 29 May 1997.
2. The meeting was opened by the Chairman of the Sub-Committee, Mr. Blaise Horisberger (Switzerland). In his opening remarks, he stressed the need to ensure that projects were effective, bearing in mind the alarming report that two thirds of Article 5 Parties seemed unlikely to be able to meet the 1999 freeze. He called on countries and Implementing Agencies to complete approved projects, some of which had been approved a number of years ago and had not yet been implemented. He also suggested that a much more strategic approach be adopted, which would take better account of the needs of the Parties.

I. ADOPTION OF THE AGENDA

3. The Sub-Committee adopted the following agenda:

1. Adoption of the agenda.
2. Organization of work.
3. Introductory remarks by the Chief Officer on the Sub-Committee's programme of work, on submissions to the Twenty-second Meeting of the Executive Committee, and on resource availability.
4. Projects and activities recommended for blanket approval by the Twenty-second Meeting of the Executive Committee.
5. Overview of issues identified during project review.
 - (a) Meeting the 1999 freeze;
 - (b) Baseline equipment;
 - (c) Recycling projects in CFC-producing countries;
 - (d) Price of chemicals.
6. Other policy issues which affect projects submitted to the Twenty-second Meeting.
7. Projects for individual consideration.
8. Work programme amendments.
9. Sector plan for halon phase-out in China.
10. Other matters.

II. INTRODUCTORY REMARKS BY THE CHIEF OFFICER ON THE SUB-COMMITTEE'S PROGRAMME OF WORK, ON SUBMISSIONS TO THE TWENTY-SECOND MEETING OF THE EXECUTIVE COMMITTEE, AND ON RESOURCE AVAILABILITY

4. The Chief Officer reported that, on the basis of financial guidance for 1997 provided by the Executive Committee at its Twenty-first Meeting, bilateral partners and Implementing Agencies had submitted projects and activities with a total value of some \$86 million for consideration at the Twenty-second Meeting. The majority of these were recommended for blanket approval under agenda item 3.

5. Policy issues arising from projects included eligible costs for the replacement of local equipment with overseas equipment; difficulties in determining incremental operating costs based on the price of chemicals; and consideration of methyl bromide demonstration projects, on which the Fund Secretariat was working closely with the implementing agency, the United Nations Industrial Development Organization (UNIDO). These were among the first projects to be received in a new and very significant sector and it was hoped to submit them for approval during the Twenty-second Meeting of the Executive Committee.

6. In addition to the issues covered in the document on the overview of issues identified during project review (UNEP/OzL.Pro/ExCom/22/16), there was also the matter of safety costs in projects involving the use of flammable substances, for which complex technical issues were involved in the assessment of eligible incremental costs. A further issue was the database of capital equipment, which would be very useful in further removing uncertainties associated with the estimation of equipment costs in project proposals. Development of the database was well under way, however, a key component would be information on actual equipment costs from completed projects and the Fund Secretariat looked forward to receiving the information from all the Implementing Agencies.

III. PROJECTS AND ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL BY THE TWENTY-SECOND MEETING OF THE EXECUTIVE COMMITTEE

7. The Sub-Committee recommended that the projects and activities listed in the annex to the present report should be approved for funding by the Executive Committee at its Twenty-second Meeting, subject to the following conditions for specific projects:

- (a) Brazil: Conversion to CFC-free technology in the manufacture of polyurethane foam at Trambusti, Giroflex, Polipex, Metallurgica Barra, Tekcor, Isolenge, Cumulus, Facchini, and Dalla Rosa E Cia (UNDP). In recommending these nine projects, the Sub-Committee requested the Implementing Agencies and the Secretariat to provide additional information on the status of project implementation in Brazil and on the problems behind the slow rate of implementation of specific projects;

- (b) China: Elimination of ODS (CFC-113) used in the production line at Shanghai Railway Communication Equipment Factory and at Shanghai Computer Factory (UNDP). In recommending these two projects for approval, the Sub-Committee noted its concern over their relatively poor cost-effectiveness, given the limited resources of the Multilateral Fund and the problems China could face in meeting the 1999 freeze;
- (c) The projects for the implementation of a national programme for recovery and recycling of refrigerant in Bahrain, Lesotho, Mozambique and the United Republic of Tanzania (UNDP) were recommended for approval taking into account the statement by the Implementing Agency that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the projects had been prepared on the basis of in-depth discussions with the national authorities and trade associations;
- (d) The projects for refrigerant recovery and recycling schemes in Benin, Burkina Faso, Gambia, Guinea and the Philippines (UNIDO) were recommended for approval taking into account the statement by the Implementing Agency that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the projects had been prepared on the basis of in-depth discussions with the national authorities and trade associations;
- (e) Uruguay: Technical Assistance Project (World Bank). It was agreed that the market survey conducted under this project would strive to identify the maximum possible number of consumers of ODS;
- (f) Malaysia: No-clean process improvement training for electronic assemblers who have phased out the use of CFC-113 (France). The project was recommended for approval on the understanding that it would eliminate the residual use of ODS in the enterprises under the project.

8. The Sub-Committee recommended for approval the project preparation requests in the list of projects for blanket approval, on the understanding that the Implementing Agencies would be left with sufficient funds to comply with any future project preparation requests from any of the 40-plus countries that had not yet benefited from the Multilateral Fund.

9. The Sub-Committee recommended:

- (a) That the Executive Committee should urge the Secretariat and the Implementing Agencies to finalize their discussions on guidelines for liquid carbon dioxide projects and submit recommendations on the subject to the Executive Committee at its Twenty-third Meeting;

- (b) That liquid carbon dioxide projects could be submitted to the Executive Committee at its Twenty-third Meeting and approved for funding on the basis of the guidelines agreed at that Meeting, on the understanding that, if no guidelines were approved, consideration of the projects would be deferred until such time as they were.

10. In addition to its consideration of projects submitted for approval at the current meeting, the Sub-Committee agreed to recommend to the Executive Committee:

- (a) That the Implementing Agencies be requested in their project completion reports to provide information on the actions taken to ensure that specific equipment or components replaced had in fact been destroyed or rendered unusable. The reports should also cover the fate of old equipment in those cases where funds had been approved for retrofitting and the enterprise concerned had subsequently decided to replace the equipment rather than to retrofit. The Secretariat could then transmit this information to a future meeting of the Executive Committee;
- (b) That the Implementing Agencies should also be requested to explain in their project completion reports how they ensured that funds allocated for safety-related costs were actually used for this purpose.

11. The Sub-Committee discussed briefly the issue of delays in implementation and requested the Sub-Committee on Monitoring, Evaluation and Finance to review the matter.

IV. OVERVIEW OF ISSUES IDENTIFIED DURING PROJECT REVIEW

A. Meeting the 1999 freeze

12. The Secretariat drew attention to paragraphs 4-6 of the overview paper (UNEP/OzL.Pro/ExCom/22/16), which concerned the information submitted by Implementing Agencies pursuant to Decision 19/4, requesting the agencies to include with each project a brief description of how the project would contribute to helping the country concerned to achieve the 1999 freeze. The Secretariat sought the guidance from the Sub-Committee as to whether the information provided for the projects submitted to the current meeting met the requirements of Decision 19/4 and the action that it wished to take in relation to those projects for which no information had been provided.

13. The Sub-Committee:

- (a) Took note of a statement by the representative of UNDP clarifying the situation regarding information from those countries in which UNDP was operating and whose projects, according to the overview paper, contained no information that directly addressed the requirements of Decision 19/4;

- (b) Recommended that the Executive Committee reaffirm the importance of Decisions 19/4 and 20/3 in including a brief description of how the project would contribute to helping the country achieve the 1999 freeze;
- (c) Further recommended that, for the approval of the Executive Committee, the requirement of these Decisions could be effected by providing that the sector background be included in the "project description" being circulated to members of the Executive Committee;
- (d) Expressed its support, subject to the views of the Monitoring Evaluation and Finance Sub-Committee, for the preparation of "country summary sheets" by the Secretariat and the Implementing Agencies annually for consideration of the Monitoring, Evaluation and Finance Sub-Committee along with business plans of Implementing Agencies.

B. Baseline equipment

14. The Secretariat drew attention to paragraphs 7-10 of the overview paper (UNEP/OzL.Pro/ExCom/22/16), pointing to the difficulties in assessing the eligible incremental costs for the replacement of baseline equipment of local manufacture, either in cases where relevant equipment was available from local sources at lower cost or where the local equipment was similar in design to overseas equipment and therefore, in principle, capable of being retrofitted, although there were practical difficulties in doing so.

15. Some members expressed the view that the key issue was the quality of the end product and not the quality of the equipment that went into the manufacturing of such products.

16. Other members suggested that it was important to take into account the admonition in the indicative list of incremental costs that the most cost-effective and efficient option should be selected.

17. In a joint presentation, UNDP, UNIDO and the World Bank noted that the distinction between "local" and "international" equipment was not relevant to agency standard equipment procurement processes which relied on technical specifications and under which the lowest cost equipment which was technically feasible for the conversion process at specific enterprises was selected. For enterprises having existing high pressure foam equipment and wishing to convert to hydrocarbon technology, practical difficulties in retrofitting such equipment, especially when it was locally manufactured, included the lack of retrofit capability on the part of local equipment suppliers, the refusal of international suppliers to retrofit locally manufactured equipment, and safety issues due to design differences. There were additional issues concerning liability for retrofitted machines and the difficulty in determining a priori the cost for retrofitting locally made machines.

18. The Sub-Committee:

- (a) Noted that the issues involved were highly complex and could not be resolved at the present meeting;
- (b) Recommended that the representatives of the Secretariat and the Implementing Agencies should form a group to examine and discuss the issue and come up with concrete proposals for the consideration of the next meeting of the Sub-Committee on Project Review.

C. Recycling projects in CFC-producing countries

19. The Secretariat drew attention to paragraph 11 of the overview paper, which concerned a project proposal for a refrigerant recovery and reclamation facility in Venezuela and the general question of the priority to be accorded to the funding of refrigerant recovery and reclamation facilities in CFC-producing countries in view of the timing, the availability of CFCs and other issues.

20. The Sub-Committee decided to recommend that the Venezuelan refrigerant recovery and reclamation project should be approved for funding by the Executive Committee, taking into account the following considerations:

- (a) The significant use of ODS for refrigeration in Venezuela;
- (b) The assurance, based on the success of past recycling projects in Venezuela, that the project could be successfully implemented;
- (c) The indication from the additional data provided that, at least for the first few years, the operational costs would exceed the benefits;
- (d) The understanding that the project was intended to provide regional capacity for refrigerant reclamation.

21. The Sub-Committee also recommended that the Executive Committee should note:

- (a) The potential usefulness of demonstration projects for refrigeration recovery and recycling in other ODS-producing countries;
- (b) That, while in many cases there may be financial benefits in recycling projects, there could be cases in which the operational costs of refrigerant recovery and reclamation projects could exceed their benefits;

- (c) That measures needed to support recovery and recycling projects needed to be appropriate to local circumstances and could involve, for example, incentives affecting the operational level or regulatory measures.

22. On the general question of refrigerant recovery and recycling projects, the Sub-Committee recommended that the Executive Committee should:

- (a) Reiterate that future refrigerant recovery and recycling projects should be prepared within context of the refrigerant management plan/strategy of the country concerned;
- (b) Urge the Implementing Agencies to work with the countries concerned to ensure that the prerequisites for success were put in place before refrigerant recovery and recycling projects were implemented;
- (c) Request the Implementing Agencies to make available to the consultants responsible for implementation of the proposed Multilateral Fund monitoring and evaluation exercise information on, *inter alia*, the extent to which refrigerant recovery and recycling projects had succeeded in reducing consumption of ODS and on the lessons learned from their implementation, bearing in mind that the majority of consumption was the result of poor servicing practices;
- (d) Request UNDP to make available to the Executive Committee, when completed, some of the evaluations that were being carried out by the United Nations Office for Project Services (UNOPS) on ongoing refrigerant recovery and recycling projects. Other Implementing Agencies that had completed recycling projects should also be requested to submit information on the results of those projects;
- (e) Take note of the view that it was necessary to take account of the costs involved in undertaking the necessary support measures for refrigerant recovery and recycling projects, such as training and efforts to reduce CFC emissions resulting from leakages;
- (f) Urge the Implementing Agencies to take time at the forthcoming meeting of the Open-ended Working Group of the Parties to the Montreal Protocol to reach out to and develop appropriate assistance requests for all Parties that had not yet received Fund assistance and might be in danger of not meeting the freeze;
- (g) Request the Secretariat, the Implementing Agencies, Parties involved in bilateral cooperation activities and other interested members of the Executive Committee to meet before the next meeting of the Committee to elaborate draft guidelines for refrigerant management plan projects for the consideration of the Sub-Committee on Project Review and the Executive Committee at its Twenty-third Meeting.

D. Price of chemicals

23. The Secretariat drew attention to paragraphs 12-13 of the overview paper, stressing that the continuing, often extreme, variations in prices of ODS and other chemicals within regions and within countries, and used by the Implementing Agencies themselves, made it very difficult to accurately assess the incremental operating costs for the projects submitted for the approval of the Executive Committee.

24. The Sub-Committee:

- (a) Noted that more information was needed on the process of setting prices of ODS and other chemicals, to which the calculation of incremental operating costs was highly sensitive;
- (b) Recommended that the Executive Committee request the Secretariat and the Implementing Agencies to hold discussions on and review the process of setting the prices of ODS and other chemicals for the purpose of calculating incremental operating costs, taking fully into account the earlier decision of the Executive Committee on limiting the variation in prices to 20 per cent of the regional border price, and to prepare, by the next meeting of the Executive Committee, a paper outlining the process proposed to be followed.

V. OTHER POLICY ISSUES WHICH AFFECT PROJECTS SUBMITTED TO THE TWENTY-SECOND MEETING - INCREMENTAL OPERATING COSTS FOR COMPRESSORS

25. The Sub-Committee considered this subject on the basis of document UNEP/OzL.Pro/ExCom/22/73, with the recommendations contained therein introduced by the Secretariat.

26. The Sub-Committee recommended that the Executive Committee should decide that:

- (a) In countries that do not have compressor manufacturers, or have undertaken not to seek funding for conversion of any compressor manufacturers, incremental operating costs for loaded non-CFC compressors would continue to be eligible for compensation unless such compressors are being procured from firms that the Fund is paying to convert;
- (b) For countries that are seeking funding for conversion of a compressor manufacturer in order to be eligible for incremental operational costs, they must first submit information on their 1995 production of compressors and downstream user products. If that data shows that compressor production was equal to or

greater than the production of the down stream equipment producers, no funds shall be provided for incremental operational costs associated with the compressors;

- (c) For countries that are seeking funding for conversion of compressor manufacturers that produced less than the number of units produced by the downstream users, the eligible incremental operational costs associated with compressors for downstream users shall be reduced in accordance with the following example: if a country produced 100 refrigerators, but is seeking compensation for the production of 90 compressors, the eligible incremental costs for the downstream users would be 10% of the level otherwise eligible for funding in a distributive manner;
- (d) If a country has received compensation for the conversion of some of its compressor manufacturers, but for the remainder of its firms would like instead to receive compensation for its downstream users, such compensation for the downstream users for the cost of loaded compressors would be eligible - however, the level of compensation would have to be adjusted using, at the choice of the country, either the example used above, or in a manner (to be proposed by the Secretariat and the Implementing Agencies for the consideration of the Executive Committee) which would offset funds spent on the earlier conversion projects in a distributive manner;
- (e) To adopt the above guidelines with the following understandings:
 - (i) IOCs will no longer be considered for compressor manufacturers;
 - (ii) The guidelines will independently apply to domestic and commercial refrigeration projects;
 - (iii) Further work may need to be done to accurately define domestic and commercial refrigeration;
 - (iv) The agencies and the Secretariat need to agree to a specific methodology for determining what incremental cost will be used for defining the eligible costs;
 - (v) Further work needs to be done in relation to combined compressor and refrigerator manufacturers;
 - (vi) In considering the availability of domestic compressor production within article 5 countries, one factor which may be considered by the Secretariat and the implementing agencies could be the source of supply used by the downstream users in the baseline;

- (vii) Given the apparent ambiguity that existed prior to this meeting regarding the eligibility of incremental operational costs for domestic refrigerator compressors, projects submitted to the Twentieth and Twenty-first Meeting will be approved with operational costs as agreed between the Implementing Agencies and the Secretariat;
- (viii) Domestic refrigeration compressor projects first submitted to this meeting, one meeting after the issue was originally raised, shall be agreed consistent with the above guidelines;
- (ix) Projects submitted to the present Meeting in the commercial refrigeration sector (where this issue was first raised) shall be decided consistent with the manner in which previous projects were approved;
- (x) After the present Meeting, all compressor projects shall be considered in accordance with the above guidelines.

VI. PROJECTS FOR INDIVIDUAL CONSIDERATION

27. The Sub-Committee took up the projects for individual consideration listed in Annex I to document UNEP/OzL.Pro/ExCom/22/16.

China: Phasing out ODS at the Hualing refrigerator plant, the Hefei Meiling Co. Ltd refrigerator plant, the Zerowatt Electric Appliances Group refrigerator plant, and the Zel Tianjin Compressor Co. Ltd. (UNEP/OzL.Pro/ExCom/22/28)

28. The Sub-Committee decided to consider together the above four projects, which had been removed from the list of projects for blanket approval originally contained in the annex to document UNEP/OzL.Pro/ExCom/22/SC-PR/1.

29. Following advice that the agreement that had been reached between the Secretariat and UNIDO had been endorsed by the Government of China, the Sub-Committee recommended that the projects should be approved for funding in the amounts indicated in the annex to the present report.

China: Conversion of CFC-12 small open-type refrigerating compressor to HCFC-22 refrigerating compressor at Subei Refrigeration Machinery Factory, conversion of CFC-12 small open-type and semi-hermetic refrigerating compressor to HCFC-22 refrigerating compressor at Zhenjiang Refrigerating Equipment Factory (ZREF), conversion of CFC-12 small and medium open-type refrigerating compressor production at Zhejiang Chunhui Company (Group)(ZCC), conversion of CFC-12 small open-type refrigerating compressor production at Ningbo Refrigerating Machinery Factory, conversion of CFC-12 medium open-type refrigerating compressor at Wuhan New World Refrigeration Industrial Co. Ltd., conversion of CFC-12

medium open-type refrigerating compressor at Chongzing Bingyang Refrigeration Machine Co., and conversion of CFC-12 medium open-type refrigerating compressor to HCFC-22 compressor at Guangzhou Refrigerating Machinery Factory (UNEP/OzL.Pro/ExCom/22/28)

30. The Sub-Committee recommended that the Executive Committee should adopt the following decision:

The seven projects submitted by the World Bank are approved for funding, together with support costs, at the levels indicated in the table below. The funding is approved on the basis of the newly estimated level of eligible incremental costs arising from a technical analysis carried out jointly by the World Bank and the Fund Secretariat, subject to a further discount of 12 per cent for the technical upgrade also determined in the technical analysis. The Executive Committee decided not to apply the estimated 8 per cent discount arising from excess capacity identified by the Secretariat in the project proposals.

	<u>Project title</u>	<u>Project cost (US\$)</u>	<u>Support cost (US\$)</u>
a.	Conversion of CFC-12 medium open-type refrigerating compressor at Chongzing Bingyang Refrigeration Machine Co.	1,805,370	234,698
b.	Conversion of CFC-12 medium open-type refrigerating compressor to HCFC-22 compressor at Guangzhou Refrigerating Machinery Factory	1,904,769	247,620
c.	Conversion of CFC-12 small open-type refrigerating compressor production at Ningbo Refrigerating Machinery Factory	1,786,949	232,303
d.	Conversion of CFC-12 small open-type refrigerating compressor to HCFC-22 refrigerating compressor at Subei Refrigeration Machinery Factory	1,806,908	234,898
e.	Conversion of CFC-12 medium open-type refrigerating compressor at Wuhan New World Refrigeration Industrial Co. Ltd.	2,433,119	316,305
f.	Conversion of CFC-12 small and medium open-type refrigerating compressor production at Zhejiang Chunhui Company (Group)(ZCC)	3,200,394	416,051
g.	Conversion of CFC-12 small open-type and semi-hermetic refrigerating compressor to HCFC-22 refrigerating compressor at Zhenjiang Refrigerating Equipment Factory (ZREF)	1,048,286	136,277

China: Conversion of manufacturing facilities from CFC-11 foaming agent to cyclopentane and CFC-12 refrigerant to HFC-134a at Gansu Changfeng Baoan Industry Co. Ltd (UNEP/OzL.Pro/ExCom/22/28)

31. Within the context of the policy paper on incremental operating costs for compressors, the Sub-Committee recommended that the above project should be approved for funding in the amount indicated in the annex to the present report.

China: Elimination of CFCs 11 and 12 in the manufacture of domestic freezers at Jilin Jinuoer Electric Appliances Group Co. and at Hongxiang Group - Laizhou Freezer Plant (UNEP/OzL.Pro/ExCom/22/28)

32. The Sub-Committee recommended that the above two projects should not be approved for funding at present in view of the number of issues still outstanding, and should be resubmitted at a later date once those issues had been resolved.

India: Elimination of CFCs in the manufacture of domestic refrigeration equipment at Videocon and at Maharaja (UNEP/OzL.Pro/ExCom/22/35)

33. Within the context of the recommendations on the policy paper on incremental operating costs for compressors, the Sub-Committee recommended that the above project should be approved for funding in the amount indicated in the annex to the present report.

India: Elimination of CFCs in the manufacture of commercial refrigeration equipment at Hindustan Refrigeration Industries, Standard Refrigeration Appliances, Refrigerators and Home Appliances, Polar Enterprises, Refrigeration Components and Accessories, and Sheetal Engineering Works P. Ltd (UNEP/OzL.Pro/ExCom/22/35)

34. Within the context of the recommendations on the policy paper on incremental operating costs for compressors, the Sub-Committee recommended that the above six projects should be approved for funding in the amount indicated in the annex to the present report.

Thailand: Conversion of compressor manufacture from CFC-12 to HFC-134a designs at Sanyo Universal Electric Co. Ltd and conversion of compressor manufacture from CFC-12 to HFC-134a and at Kulthora Kirby Public Company Limited (Phase II)(UNEP/OzL.Pro/ExCom/22/53)

35. Within the context of the recommendations on the policy paper on incremental operating costs for compressors, the Sub-Committee recommended that the above two projects should be approved for funding in the amount indicated in the annex to the present report.

Turkey: Conversion from CFC-11 and CFC-12 into HCFC-141b and HFC-134a at Kulahcioglu and at Gumaskan (UNEP/OzL.Pro/ExCom/22/55)

36. Within the context of recommendations on the policy paper on incremental operating costs for compressors, the Sub-Committee recommended that the above two projects should be approved for funding in the amount indicated in the annex to the present report.

Venezuela: Implementation of a centralized reclamation plant for recovered refrigerants in the commercial refrigeration and air conditioning sector (UNEP/OzL.Pro/ExCom/22/56)

37. A recommendation on the above project was made under agenda item 4 (see para. 20 above).

Demonstration projects on the phase-out of methyl bromide in four Article 5 countries: Brazil, China, Guatemala and Morocco (UNEP/OzL.Pro/ExCom/22/78)

38. The Sub-Committee:

- (a) Recommended that the above projects be approved;
- (b) Recommended, with reference to the project in Brazil, that UNIDO should try to optimize the dissemination of the latest technology used by multilateral tobacco to small-scale growers and obtain information on its application.

VII. WORK PROGRAMME AMENDMENTS

39. Except as reflected below, the work programme amendments submitted by UNDP (UNEP/OzL.Pro/ExCom/22/18), UNEP (UNEP/OzL.Pro/ExCom/22/19), UNIDO (UNEP/OzL.Pro/ExCom/22/20) and the World Bank (UNEP/OzL.Pro/ExCom/22/21) were recommended for approval by the Sub-Committee. The work programme amendments as recommended for approval by the Sub-Committee are contained in the annex to the present report.

- UNDP

China: project preparation in the foam, refrigeration and solvents sector

40. The Secretariat drew attention to its comments on the above activity as contained in paragraph 21 of the overview paper.

41. The Sub-Committee, while noting that \$40,000 of the project preparation request for China was for the preparation of projects in the solvents sector and that the preparation of a sectoral financing plan for the solvents sector in China had been approved by the Executive

Committee at its Twenty-first Meeting, decided to recommend for approval by the Executive Committee the request as submitted, on the understanding that UNDP would pre-screen all project proposals in China's solvents sector to ensure that they concerned cost-effective projects for the phase out of CFCs.

Mexico: Technical assistance project: market survey of ODS use in SMEs and approaches to ODS elimination

42. The Secretariat drew attention to its comments on the above activity as contained in paragraph 20 of the overview paper.

43. The Sub-Committee agreed that this activity would entail only a market survey of ODS use in SMEs, costed at \$60,000. The results of the survey would provide input into a future, separately costed, country programme update. It was approved on the understanding that, while it was impossible to identify all ODS users in Mexico, UNDP and the Government of Mexico would endeavour to identify the maximum possible number of such users and that no further surveys on ODS use in SMEs in the country would be submitted to the Executive Committee with a request for funding. The Sub-Committee recommended that the Executive Committee may wish to approve the project accordingly.

- UNEP

Cyprus: institutional strengthening

44. The Secretariat drew attention to its comments on the above activity as contained in paragraphs 22-24 of the overview paper.

45. The Sub-Committee:

- (a) Recalled decision VI/5, paragraph (e), of the Sixth Meeting of the Parties, whereby, inter alia, countries initially classified as non-Article 5 but subsequently reclassified as operating under that Article were urged not to request financial assistance from the Multilateral Fund;
- (b) Noted that Cyprus had been reclassified as operating under Article 5 in 1994;
- (c) Noted also that Cyprus had a relatively high level of per capita gross domestic product and that the Executive Committee was endeavoring to channel funds to those countries most in need of assistance in order to meet their requirements under the Protocol;

- (d) Recommended that the Executive Committee should urge Cyprus, consistent with decision VI/5, paragraph (e), of the Sixth Meeting of the Parties to the Montreal Protocol, not to seek support from the Multilateral Fund.

- World Bank

China: Preparation of investment projects in the production sector for 1998 submission

46. The Sub-Committee recommended that the condition imposed on the above project be amended to enable the release of funds so that the World Bank could initiate preparatory activities, on the understanding that no project proposals would actually be submitted for project review until the guidelines in question were submitted.

- UNIDO

China: Strategy for the refrigeration sector

47. The representative of the Secretariat drew attention to its comments on the above activity as contained in paragraph 25 of the overview paper.

48. The Sub-Committee, considering that it was premature to recommend this project for implementation at the current stage, recommended that it be withdrawn.

VIII: SECTOR PLAN FOR HALON PHASE-OUT IN CHINA

49. The representative of the World Bank introduced the Sector Plan for Halon Phase-out in China, prepared by the World Bank and contained in document UNEP/OzL.Pro/ExCom/22/77 and Add.1.

50. After a brief discussion, and in view of the shortage of time available and the importance and complexity of the issues that needed to be considered, the Sub-Committee noted the belief of one of its members that there was a need for in-depth inter-sessional discussions to enable the World Bank to further develop the proposal for consideration at the Twenty-third Meeting of the Executive Committee.

IX: OTHER MATTERS

India aerosol projects

51. The representative of the Secretariat, recalled that, at the Seventeenth Meeting of the Executive Committee, the Government of India was not in a position to agree to the conditions attached to the approval of its aerosol projects submitted to that meeting. He drew the attention

of the Sub-Committee to document UNEP/OzL.Pro/ExCom/SC-PR/CRP.1, which outlined the decision of the Seventeenth Meeting of the Executive Committee, as well as the new policy measures introduced by India to deal with the aerosol sector in the country.

52. On the basis of India's new policy measures, the Sub-Committee recommended that the projects referred to in Executive Committee Decision 17/38 be approved for implementation.

53. The Sub-Committee further recommended that, among those projects, those with a project cost exceeding US\$100,000 (excluding agency support costs) be implemented in cooperation with the World Bank, and those with project costs below US\$100,000 (excluding agency support costs) be implemented in cooperation with UNDP.

54. It also recommended, at the suggestion of the representative of UNIDO, that the US\$ 20,000 previously approved for project preparation activities by UNIDO in the Indian aerosol sector should be returned to the Fund.

INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 1

Country	Project Title	Agency	Funds Recommended (US\$)		C.E.
			Project	Support	Total (US\$/kg)
Aerosol					
Filling plant					
India	My Fair Lady aerosol conversion, Delhi	IBRD	\$113,975	\$14,817	\$128,792 1.91
Syria	Phasing out CFCs at Taki Eddin & Co.	UNIDO	\$244,203	\$31,746	\$275,949 2.06
India	Aerol Formulations aerosol conversion	UNDP	\$69,450	\$9,029	\$78,479 2.24
India	Texas Enterprises aerosol conversion, Bombay	UNDP	\$70,000	\$9,100	\$79,100 2.24
India	Ultra Tech Specialty Chemicals Pvt. Ltd. aerosol conversion	UNDP	\$70,000	\$9,100	\$79,100 2.27
India	Accra Pack India Pvt. Ltd. aerosol conversion	IBRD	\$129,690	\$16,860	\$146,550 2.4
Indonesia	Conversion and aerosol filling center at PT Candi Swadaya Sentosa	IBRD	\$1,175,340	\$152,794	\$1,328,134 2.55
India	Stella Industries aerosol conversion	IBRD	\$269,175	\$34,993	\$304,168 2.56
Syria	Phasing out CFCs at Al Yaman Co.	UNIDO	\$216,128	\$28,097	\$244,225 2.88
India	Aeropres aerosol conversion, Vapi	IBRD	\$146,860	\$19,092	\$165,952 2.94
Tunisia	Phasing out CFCs at Codifa	UNIDO	\$179,986	\$23,398	\$203,384 2.99
India	Aero Pack Products aerosol conversion	UNDP	\$69,450	\$9,029	\$78,479 3.40
India	Asian Aerosols Pvt. Ltd. aerosol conversion	UNDP	\$90,890	\$11,816	\$102,706 3.6
Tunisia	Phasing out CFCs at Alki S.A.	UNIDO	\$74,565	\$9,693	\$84,258 3.73
Tunisia	Phasing out CFCs at Sogepar	UNIDO	\$68,833	\$8,948	\$77,781 3.79
India	Aerosols D'Asia Pvt. Ltd. aerosol conversion	UNDP	\$69,450	\$9,029	\$78,479 3.86
Syria	Phasing out CFCs at Ahmed Ali Harsho Sons Co.	UNIDO	\$175,328	\$22,793	\$198,121 3.90
India	Attarwala and Co. Pvt. Ltd. aerosol conversion, Bombay	IBRD	\$134,250	\$17,453	\$151,703 4.37
India	Aero Industries aerosol conversion, Vapi	IBRD	\$121,735	\$15,826	\$137,561 4.39
India	Meenakshi aerosol and cosmetics conversion, Delhi	UNDP	\$98,940	\$12,862	\$111,802 4.40

INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 2

Country	Project Title	Agency	Funds Recommended (US\$)			C.E. (US\$/kg)
			Project	Support	Total	
Foam						
Flexible						
Macedonia	Phasing out of CFC-11 from flexible slabstock foam manufacturing at Sileks Ad Co.	UNIDO	\$520,125	\$67,616	\$587,741	1.86
Indonesia	Phasing out CFC-11 at PT Panca Duta Foam Industry	UNIDO	\$86,955	\$11,304	\$98,259	1.93
Indonesia	Phasing out CFC-11 at PT Winnerfoam Abadi <i>UNIDO should clarify the identity of Winnerfoam Abadi during implementation of the project in order to avoid overlap of activities with the other implementing agencies.</i>	UNIDO	\$79,472	\$10,331	\$89,803	1.99
Algeria	Phasing out CFC-11 at Ets Leulmi Essaid flexible polyurethane foam plant	UNIDO	\$61,880	\$8,044	\$69,924	2.21
Algeria	Phasing out CFC-11 at Snam flexible polyurethane foam plant	UNIDO	\$88,360	\$11,487	\$99,847	2.76
Morocco	Phase out of CFC in the manufacture of flexible foam (slabstock) at Dolidol	UNDP	\$475,822	\$61,857	\$537,679	2.97
Morocco	Phase out of CFC in the manufacture of flexible foam (slabstock) at Richbond S.A.	UNDP	\$470,625	\$61,181	\$531,806	3.14
Jordan	Conversion to CFC-free technology in the manufacture of flexible slabstock PUF (box foam) at Baybars	IBRD	\$112,500	\$14,625	\$127,125	3.75
Iran	Phasing out of CFC-11 from flexible slabstock foam manufacturing at Shizar Co.	UNIDO	\$487,125	\$63,326	\$550,451	4.06
Iran	Phasing out of CFC-11 from flexible slabstock foam manufacturing at Safoam Co.	UNIDO	\$487,125	\$63,326	\$550,451	4.06
Algeria	Phasing out CFC-11 at Sammo flexible polyurethane foam plant	UNIDO	\$98,770	\$12,840	\$111,610	4.11
Indonesia	Phasing out CFC-11 at PT Elastino Satyajaya flexible polyurethane foam plant	UNIDO	\$75,943	\$9,873	\$85,816	4.22
Croatia	Phasing out CFC-11 at Oriolik Co. flexible polyurethane foam plant	UNIDO	\$110,780	\$14,401	\$125,181	4.43
Iran	Phasing out of CFC-11 from flexible slabstock foam manufacturing at Urethane Systems Company (USC)	UNIDO	\$487,125	\$63,326	\$550,451	4.43
Argentina	Conversion to non CFC technology in the manufacture of flexible foam (slabstocks) at FPV S.A.	UNDP	\$118,000	\$15,340	\$133,340	6.21
Integral skin						
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Giroflex	UNDP	\$177,500	\$23,075	\$200,575	7.58
Turkey	Conversion from CFC-11 into carbon dioxide and water for flexible molded foam at Suntas Foam and Mattress Industry and Commerce, Inc.	IBRD	\$148,613	\$19,320	\$167,933	10.70

INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom/22/15
Annex 1 Page 3

Country	Project Title	Agency	Funds Recommended (US\$) Project	Support	Total	C.E. (US\$/kg)
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Trambusti	UNDP	\$763,600	\$99,268	\$862,868	15.27
Indonesia	Conversion to CFC free technology in the manufacture of integral skin molded polyurethane foam at Plysindo Inter Mouldi (PIM)	UNDP	\$75,870	\$9,863	\$85,733	16.86
Mexico	Conversion to CFC-free technology in the manufacture of polyurethane shoe soles at Industrias Pol-Rym S.A. de C.V. (IPR)	UNDP	\$421,500	\$54,795	\$476,295	16.86

Multiple-subsectors

Egypt	Phaseout of the remaining ODS consumption in the foam sector (11 enterprises) <i>The Government of Egypt in collaboration with UNDP may determine its own criteria for the disbursement of the approved funds to the enterprises. However, UNDP should indicate in its progress and project completion reports the criteria or the procedures used for the disbursement of the approved funds and ensure phaseout by all the enterprises covered under this umbrella project.</i>	UNDP	\$1,672,000	\$217,360	\$1,889,360	5.28
Thailand	Conversion to CFC-free technology in the manufacture of rigid and integral skin polyurethane foam at Bangkok Foam Group	UNDP	\$480,500	\$62,465	\$542,965	5.30

Polystyrene/polyethylene

China	Elimination of CFC-12 in the manufacture of EPS foam sheet at Zhejiang Wanpeng Clique Co., Ltd.	UNDP	\$412,666	\$53,647	\$466,313	3.44
China	Elimination of CFC-12 in the manufacture of EPS foam sheet at Zhoushan Fuchuan Plastic Products Factory	UNDP	\$403,711	\$52,482	\$456,193	6.62
Brazil	Conversion to CFC-free technology in the manufacture of polyethylene foam tubing at Polipex	UNDP	\$191,000	\$24,830	\$215,830	6.7
Jordan	Conversion to CFC-free technology in the manufacture of extruded polystyrene at Al Hussam	IBRD	\$347,855	\$45,221	\$393,076	6.95
Jamaica	Elimination of CFCs in the manufacture of extruded polystyrene foam sheet at West Indies Synthetics Company, Ltd (Wisynco)	UNDP	\$596,000	\$77,480	\$673,480	7.30
Panama	Elimination of CFCs in the manufacture of extruded polystyrene foam sheet at Productos Moldeados America S.R. Ltda. (Plasticos Modernos)	UNDP	\$339,296	\$44,108	\$383,404	8.07

Rigid

India	Elimination of CFCs in the manufacture of rigid polyurethane foam chemical systems at Polymermann (Asia) P.Ltd.	UNDP	\$385,000	\$50,050	\$435,050	
-------	---	------	-----------	----------	-----------	--

INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 4

Country	Project Title	Agency	Funds Recommended Project	(US\$) Support	Total	C.E. (US\$/kg)
Thailand	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam at Ocean Plastics	UNDP	\$287,000	\$37,310	\$324,310	3.50
Thailand	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam at Siriphan	UNDP	\$215,000	\$27,950	\$242,950	4.30
Thailand	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam at Asia Container	UNDP	\$199,000	\$25,870	\$224,870	4.42
Macedonia	Phasing out of CFC-11 from manufacturing of rigid PU sandwich panels at Sileks Ad Co.	UNIDO	\$313,386	\$40,740	\$354,126	4.63
India	Elimination of CFCs in the manufacture of rigid polyurethane foam in small and medium-sized enterprises (SMEs) <i>UNDP should be mindful of the need to make the supply of equipment open to all interested equipment suppliers capable of supplying suitable foam equipment during project implementation to ensure cost-effectiveness.</i>	UNDP	\$1,404,000	\$182,520	\$1,586,520	4.84
Venezuela	Phasing out ODS at Daniven C.A.	UNIDO	\$104,030	\$13,524	\$117,554	5.78
Mexico	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam (spray) at Acsa	UNDP	\$597,000	\$77,610	\$674,610	6.32
Argentina	Eliminations of the use of CFCs in the manufacture of sandwich polyurethane panels and spray foams at Rheem S.A.	UNDP	\$76,650	\$9,965	\$86,615	6.39
Mexico	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam (spray) at Tecnopolimeros	UNDP	\$359,000	\$46,670	\$405,670	6.60
Malaysia	Conversion to CFC-free technology in the manufacture of polyurethane foam at RCA Group	UNDP	\$284,500	\$36,985	\$321,485	6.79
Malaysia	Conversion to CFC-free technology in the manufacture of polyurethane foam at Rollbond	UNDP	\$155,500	\$20,215	\$175,715	7.00
Malaysia	Conversion to CFC-free technology in the manufacture of polyurethane foam at Anchor Profit Sdn Bhd	UNDP	\$131,000	\$17,030	\$148,030	7.08
India	Elimination of CFCs in the manufacture of rigid PU foam insulation at Super Urethane Products P. Ltd.	UNDP	\$284,000	\$36,920	\$320,920	7.26
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Metallurgica Barra	UNDP	\$270,000	\$35,100	\$305,100	7.43
India	Elimination of CFCs in the manufacture of rigid PU foam insulation at Blowkings	UNDP	\$132,000	\$17,160	\$149,160	7.51
Venezuela	Phasing out ODS at Veniber C.A.	UNIDO	\$164,592	\$21,397	\$185,989	7.62

INVESTMENT PROJECT

UNEP/OzL Pro/ExCom/22/15

Annex 1

Page 5

Country	Project Title	Agency	Funds Recommended Project	(US\$) Support	Total	C.E. (US\$/kg)
India	Elimination of CFCs in the manufacture of rigid PU foam insulation at Delta Foams Engineering Co.	UNDP	\$85,000	\$11,050	\$96,050	7.64
Venezuela	Phasing out ODS at Decocar C.A.	UNIDO	\$126,614	\$16,460	\$143,074	7.81
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Tekcor	UNDP	\$71,600	\$9,308	\$80,908	7.82
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Dalla Rosa E Cia	UNDP	\$71,600	\$9,308	\$80,908	7.82
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Isolenge	UNDP	\$516,000	\$67,080	\$583,080	7.82
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Cumulus	UNDP	\$86,000	\$11,180	\$97,180	7.82
Argentina	Elimination of the use of CFCs in the manufacture of sandwich polyurethane panels and spray foams at Calofrig Asilaciones Jacobi S.A.I.C.	UNDP	\$563,750	\$73,288	\$637,038	7.85
Brazil	Conversion to CFC-free technology in the manufacture of polyurethane foam at Facchini	UNDP	\$258,000	\$33,540	\$291,540	7.83
Malaysia	Conversion to CFC-free technology in the manufacture of polyurethane foam at Amstrad	UNDP	\$108,000	\$14,040	\$122,040	7.83
Mexico	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam at Termopuertos	UNDP	\$78,300	\$10,179	\$88,479	7.83
Philippines	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam at MBA Urethane Products Contractor	UNDP	\$113,574	\$14,765	\$128,339	7.83
Philippines	Conversion to CFC-free technology in the manufacture of rigid polyurethane foam at P.U. Rigid Insulation Contractor	UNDP	\$189,290	\$24,608	\$213,898	7.83

Fumigant

Methyl bromide

Brazil	Demonstration project: three alternatives to the use of methyl bromide: non-soil cultivation, solarization, and low-dose chemicals	UNIDO	\$393,800	\$51,194	\$444,994	
China	Demonstration project on alternatives to the use of methyl bromide in soil fumigation	UNIDO	\$443,300	\$57,629	\$500,929	
Guatemala	Demonstration project: four alternatives to the use of methyl bromide: steam pasteurization, non-soil cultivation, solarization, and low-dose chemicals, in combination with an Integrated Pest Management system	UNIDO	\$440,000	\$57,200	\$497,200	
Morocco	Demonstration project: four alternatives to the use of methyl bromide: steam pasteurization, non-soil cultivation, solarization, and low-dose chemicals, in combination with an Integrated Pest Management system	UNIDO	\$487,300	\$63,349	\$550,649	

INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 6

Country	Project Title	Agency	Funds Recommended Project	(US\$) Support	(US\$) Total	C.E. (US\$/kg)
Refrigeration						
Commercial						
Indonesia	Phasing out ODS at P.T. Jalur Sejuk	UNIDO	\$171,470	\$22,291	\$193,761	5.56
Turkey	Conversion from CFC-11 into HCFC-141b at Teba	IBRD	\$27,468	\$3,571	\$31,039	7.83
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Standard Refrigeration Appliances <i>The World Bank should develop a group approach for the transfer of technology in the project, in similar projects in India already approved but not yet implemented, and in future projects prepared in the commercial refrigeration sub-sector in India, with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the current project.</i>	IBRD	\$170,180	\$22,123	\$192,303	9.06
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Polar Enterprises <i>The World Bank should develop a group approach for the transfer of technology in the project, in similar projects in India already approved but not yet implemented, and in future projects prepared in the commercial refrigeration sub-sector in India, with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the current project.</i>	IBRD	\$138,190	\$17,965	\$156,155	12.75
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Refrigerators and Home Appliances P. Ltd. <i>The World Bank should develop a group approach for the transfer of technology in the project, in similar projects in India already approved but not yet implemented, and in future projects prepared in the commercial refrigeration sub-sector in India, with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the current project.</i>	IBRD	\$147,300	\$19,149	\$166,449	12.98
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Hindustan Refrigeration Industries <i>The World Bank should develop a group approach for the transfer of technology in the project, in similar projects in India already approved but not yet implemented, and in future projects prepared in the commercial refrigeration sub-sector in India, with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the current project.</i>	IBRD	\$132,320	\$17,202	\$149,522	13.04

INVESTMENT PROJECT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 7

Country	Project Title	Agency	Funds Recommended (US\$)			C.E. (US\$/kg)
			Project	Support	Total	
Dominican Republic	Elimination of CFCs 11 and 12 in the manufacture of unitary commercial refrigeration equipment at Fabrica de Refrigeradores Comerciales, C.A. (Farco)	UNDP	\$423,209	\$55,017	\$478,226	13.32
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Refrigeration Components and Accessories <i>The World Bank should develop a group approach for the transfer of technology in the project, in similar projects in India already approved but not yet implemented, and in future projects prepared in the commercial refrigeration sub-sector in India, with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the current project.</i>	IBRD	\$125,370	\$16,298	\$141,668	13.92
India	Elimination of CFCs in the manufacture of commercial refrigeration equipment at Sheetal Engineering Works P. Ltd. <i>The World Bank should develop a group approach for the transfer of technology in the project, in similar projects in India already approved but not yet implemented, and in future projects prepared in the commercial refrigeration sub-sector in India, with the objective of providing effective technology transfer and trials at 50% of the cost allocated in the current project.</i>	IBRD	\$127,630	\$16,592	\$144,222	14.64
Turkey	Conversion from CFC-11 and CFC-12 into HCFC-141b and HFC-134a at Gumaksan	IBRD	\$35,195	\$4,575	\$39,770	15.21
Turkey	Conversion from CFC-11, CFC-12 into cyclopentane and HFC-134a for commercial refrigeration at S.F.A. Sogutma Urunleri Sanayi Ve Tekstil Pazariama Ltd. Sti.	IBRD	\$389,832	\$50,678	\$440,510	15.21
Turkey	Conversion from CFC-11 and CFC-12 into HCFC-141b and HFC-134a at Kulahcioglu	IBRD	\$60,840	\$7,909	\$68,749	15.21
Domestic						
China	Conversion of manufacturing facilities from CFC-11 foaming agent to cyclopentane and CFC-12 refrigerant to HFC-134a at Gansu Changfeng Baoan Industry Co. Ltd.	IBRD	\$260,000	\$33,800	\$293,800	
China	Phasing out ODS at the Hualing refrigerator plant	UNIDO	\$879,788	\$114,372	\$994,160	3.14
China	Phasing out ODS at the refrigerator plant of Hefei Meiling Co. Ltd.	UNIDO	\$3,247,877	\$422,224	\$3,670,101	3.83

INVESTMENT PROJECT

UNEP/OzL Pro/ExCom/22/15
Annex 1
Page 8

Country	Project Title	Agency	Funds Recommended (US\$)			C.E. (US\$/kg)
			Project	Support	Total	
India	Conversion of refrigerator manufacture to cyclopentane foam blowing agent and to HCF-134a refrigerant at Videocon Appliances Ltd. <i>The implementing agency may resubmit the request for incremental operating costs associated with non-CFC compressors when the requirements of the policy for compensation for replacement compressors have been met.</i>	IBRD	\$1,835,115	\$238,565	\$2,073,680	5.11
China	Phasing out ODS at the refrigerator plant of Zerowatt Electric Appliances Group	UNIDO	\$2,394,178	\$311,243	\$2,705,421	5.66
India	Conversion of domestic refrigerator manufacture to cyclopentane blowing agent and either R-600a or HCF-134a refrigerant at Voltas Ltd.	IBRD	\$2,724,378	\$354,169	\$3,078,547	7.73
India	Elimination of CFCs in the manufacture of domestic refrigerators at Maharaja International Ltd. <i>The implementing agency may resubmit the request for incremental operating costs associated with non-CFC compressors when the requirements of the policy for compensation for replacement compressors have been met.</i>	IBRD	\$510,000	\$66,300	\$576,300	8.52
Lebanon	Phasing out of CFCs at Lebanese Modern Industrial and Trading Co.	UNIDO	\$1,313,121	\$170,706	\$1,483,827	9.73
El Salvador	Elimination of CFCs 11 and 12 in the manufacture of domestic refrigerators and freezers at Prado S.A. de C.V.	UNDP	\$306,229	\$39,810	\$346,039	13.70
Argentina	Phasing out of CFCs in the manufacturing plant of domestic refrigerators of Radio Victoria Catamarca S.A.	UNIDO	\$599,896	\$77,986	\$677,882	15.07
Recovery/recycling						
Venezuela	Implementation of a recovery and reclamation of refrigerants	UNDP	\$931,622	\$121,111	\$1,052,733	8.29
Solvent						
CFC-113						
China	Conversion of ODS precision cleaning processes from CFC-113 to aqueous cleaning at Jiaxipera Compressor Factory	UNIDO	\$308,604	\$40,119	\$348,723	4.06
China	Conversion of ODS precision cleaning processes from CFC-113 to aqueous cleaning at Huangshi Dongbei Refrigeration Co.	UNIDO	\$236,242	\$30,711	\$266,953	6.28
China	Conversion of ODS cleaning processes from CFC-113 to trichloroethylene at Hangli Refrigeration Ltd.	UNIDO	\$217,762	\$28,309	\$246,071	7.56
Pakistan	Conversion of ODS cleaning and coating processes from CFC-113 to trichloroethylene and IPA at Treet Corporation Ltd., Lahore	UNIDO	\$510,162	\$66,321	\$576,483	12.54

INVESTMENT PROJECT

UNEP/OzL Pro/ExCom/22/15

Annex 1

Page 9

Country	Project Title	Agency	Funds Recommended (US\$)			C.E.
			Project	Support	Total	(US\$/kg)
Pakistan	Conversion of ODS coating processes from CFC-113 to trichloroethylene and IPA at Treet Corporation Ltd., Hyderabad	UNIDO	\$321,172	\$41,752	\$362,924	17.00
China	Elimination of ODS (CFC-113) used in the production line at Shanghai Computer Factory	UNDP	\$116,767	\$15,180	\$131,947	18.44
China	Elimination of ODS (CFC-113) used in the production line at Shanghai Railway Communication Equipment Factory	UNDP	\$276,287	\$35,917	\$312,204	19.18
TCA						
India	Elimination of 1,1,1 TCA from the precision cleaning processes at Modi Xerox	IBRD	\$130,819	\$17,006	\$147,825	21.55
TOTAL:			\$41,841,775	\$5,439,431	\$47,281,206	

LOW-ODS CONSUMING COUNTRY

UNEP/OzL Pro/ExCom/22/15

Annex 1

Page 10

Country	Project Title	Agency	Funds Recommended (US\$)			C.E.
			Project	Support	Total	(US\$/kg)
Aerosol						
Filling plant						
Croatia	Phasing out CFCs at Pliva d.d.	UNIDO	\$89,779	\$11,671	\$101,450	8.47
Foam						
Flexible						
Gambia	Phase out of CFC in the manufacture of flexible foam (slabstock) at .Karan Foam Manufacturing Ltd.	UNDP	\$63,500	\$8,255	\$71,755	5.77
TOTAL:			\$153,279	\$19,926	\$173,205	

MAC AND COMPRESSOR

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 11

Country	Project Title	Agency	Funds Recommended (US\$)		(US\$)	C.E.
			Project	Support	Total	(US\$/kg)
Refrigeration						
Compressor						
China	Phasing out ODS at the Zel Tianjin Compressor Co., Ltd.	UNIDO	\$962,175	\$125,083	\$1,087,258	
Thailand	Conversion of compressor manufacture from CFC-12 to HFC-134a, Phase 2 at Kulthorn Kirby Public Company Limited	IBRD	\$106,856	\$13,891	\$120,747	
Thailand	Conversion of compressor manufacture from CFC-12 to HFC-134a designs at Sanyo Universal Electric Co. Ltd.	IBRD	\$288,600	\$37,518	\$326,118	
China	Conversion of CFC-12 small open-type and semi-hermetic refrigerating compressor to HCFC-22 refrigerating compressor at Zhenjiang Refrigerating Equipment Factory (ZREF)	IBRD	\$1,048,286	\$136,277	\$1,184,563	5.63
China	Conversion of CFC-12 small and medium open type refrigerating compressor production at Zhejiang Chunhui Company (Group) (ZCC)	IBRD	\$3,200,394	\$416,051	\$3,616,445	8.86
China	Conversion of CFC-12 medium open type refrigerating compressor at Chongqing Bingyang Refrigerating Machine Co.	IBRD	\$1,805,370	\$234,698	\$2,040,068	9.50
China	Conversion of CFC-12 medium open-type refrigerating compressor to HCFC-22 compressor at Guangzhou Refrigerating Machinery Factory	IBRD	\$1,904,769	\$247,620	\$2,152,389	10.02
China	Conversion of CFC-12 small open type refrigerating compressor production at Ningbo Refrigerating Machinery Factory	IBRD	\$1,786,949	\$232,303	\$2,019,252	10.45
China	Conversion of CFC-12 small open-type refrigerating compressor to HCFC-22 refrigerating compressor at Subei Refrigeration Machinery Factory	IBRD	\$1,806,908	\$234,898	\$2,041,806	10.57
China	Conversion of CFC-12 medium open type refrigerating compressor at Wuhan New World Refrigeration Industrial Co. Ltd.	IBRD	\$2,433,119	\$316,305	\$2,749,424	11.64
MAC						
India	Conversion to non-CFC technology in the production of MAC systems at Sanden Vikas India Ltd.	IBRD	\$490,820	\$63,807	\$554,627	
India	Conversion to non-CFC technology in the production of MAC systems at Pranav Vikas India Ltd.	IBRD	\$944,914	\$122,839	\$1,067,753	
TOTAL:			\$16,779,160	\$2,181,291	\$18,960,451	

Country	Project Title	Agency	Funds Recommended (US\$)			C.E.
			Project	Support	Total	(US\$/kg)
Refrigeration						
Recovery/recycling						
Senegal	Refrigerant recovery and reclaim scheme	UNIDO	\$136,250	\$17,713	\$153,963	3.64
Burkina Faso	Refrigerant recovery and recycling scheme <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNIDO	\$96,000	\$12,480	\$108,480	6.20
Guinea	Refrigerant recovery and recycling scheme <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNIDO	\$80,780	\$10,501	\$91,281	6.26
Gambia	Refrigerant recovery and recycling scheme <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNIDO	\$68,000	\$8,840	\$76,840	8.77
Benin	Refrigerant recovery and recycling scheme <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNIDO	\$114,000	\$14,820	\$128,820	8.84
Philippines	National CFC recovery and recycling scheme <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNIDO	\$557,500	\$72,475	\$629,975	9.29

CFC RECYCLING AND HALON BANKING

UNEP/OzL Pro/ExCom/22/15
Annex 1
Page 13

Country	Project Title	Agency	Funds Recommended (US\$)		C.E. (US\$/kg)
			Project	Support	
Bahrain	Implementation of a national programme for recovery and recycling of refrigerant <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNDP	\$242,000	\$31,460	\$273,460 11.80
Tanzania	Implementation of a national programme for recovery and recycling of refrigerant <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNDP	\$161,554	\$21,002	\$182,556 15.11
Lesotho	Implementation of a national programme for recovery and recycling of refrigerant <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNDP	\$56,095	\$7,292	\$63,387 15.67
Mozambique	Implementation of a national programme for recovery and recycling of refrigerant <i>The project was approved on the understanding that the accompanying measures necessary for successful implementation were already or would be in place before implementation began and that the project had been prepared on the basis of in-depth discussions with the national authorities and trade associations.</i>	UNDP	\$115,809	\$15,055	\$130,864 16.73
TOTAL:			\$1,627,988	\$211,638	\$1,839,626

WORK PROGRAMME/AMENDMENT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 14

Country	Project Title	Agency	Funds Recommended Project	(US\$) Support	Total	C.E. (US\$/kg)
Aerosol						
Non-investment						
Cuba	Project preparation in the aerosol sector	UNDP	\$15,000	\$1,950	\$16,950	
Foam						
Non-investment						
Brazil	Project preparation in the foam sector	IBRD	\$75,000	\$9,750	\$84,750	
Malawi	Project preparation in the foam sector	UNDP	\$5,000	\$650	\$5,650	
Paraguay	Project preparation in the foam sector	UNDP	\$30,000	\$3,900	\$33,900	
Fumigant						
Non-investment						
Algeria	Project formulation in the methyl bromide sector	UNIDO	\$8,000	\$1,040	\$9,040	
Mexico	Project formulation of an investment project in the methyl bromide sector	UNIDO	\$20,000	\$2,600	\$22,600	
Thailand	Project formulation in the methyl bromide sector	UNIDO	\$8,000	\$1,040	\$9,040	
Vietnam	Project formulation in the methyl bromide sector	UNIDO	\$8,000	\$1,040	\$9,040	
Zimbabwe	Project formulation in the methyl bromide sector	UNIDO	\$8,000	\$1,040	\$9,040	
Multi-sector						
Non-investment						
Jordan	Project preparation to phase out CFC consumption that is not accounted for in the original country programme	IBRD	\$30,000	\$3,900	\$33,900	
Production						
Non-investment						
China	Preparation of investment projects in the production sector for 1998 submission	IBRD	\$350,000	\$45,500	\$395,500	
Refrigeration						
Non-investment						
Dominican Republic	Project preparation in the commercial refrigeration sub-sector	UNDP	\$10,000	\$1,300	\$11,300	
India	Preparation of investment projects for submission in 1997 and 1998	IBRD	\$80,000	\$10,400	\$90,400	

WORK PROGRAMME/AMENDMENT

UNEP/OzL.Pro/Ex.Com/22/15

Annex 1

Page 15

Country	Project Title	Agency	Funds Recommended (US\$)			C.E. (US\$/kg)
			Project	Support	Total	
Vietnam	Project preparation in the domestic refrigeration sub-sector	UNDP	\$25,000	\$3,250	\$28,250	

Several

Institutional strengthening

Burkina Faso	Institutional strengthening renewal	UNEP	\$55,700	\$7,241	\$62,941	
Cameroon	Institutional strengthening renewal	UNEP	\$107,000	\$13,910	\$120,910	
El Salvador	Area of Policies for the Protection of the Ozone Layer (institutional strengthening) <i>UNEP could proceed with the disbursement of the first one-year tranche of the funds approved for institutional strengthening, but subsequent disbursements would 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>	UNEP	\$66,900	\$8,697	\$75,597	
Gabon	Creation of a National Ozone Technical Group <i>UNEP could proceed with the disbursement of the first one-year tranche of the funds approved for institutional strengthening, but subsequent disbursements would 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>	UNEP	\$45,600	\$5,928	\$51,528	
Guatemala	Renewal of institutional strengthening	UNEP	\$96,000	\$12,480	\$108,480	
Jordan	Renewal of institutional strengthening <i>Funds should not be released until a report of progress and an articulated plan of future actions as required under decision 19/29 are submitted to the Secretariat.</i>	IBRD	\$113,333	\$14,733	\$128,066	
Nicaragua	Establishment of the Technical Ozone Office <i>UNEP could proceed with the disbursement of the first one-year tranche of the funds approved for institutional strengthening, but subsequent disbursements would 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>	UNEP	\$66,000	\$8,580	\$74,580	
Western Samoa	Establishment of the National Ozone Committee <i>UNEP could proceed with the disbursement of the first one-year tranche of the funds approved for institutional strengthening, but subsequent disbursements would 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>	UNEP	\$30,000	\$3,900	\$33,900	

WORK PROGRAMME/AMENDMENT

UNEP/OzL.Pro/ExCom/22/15

Annex 1

Page 16

Country	Project Title	Agency	Funds Recommended (US\$) Project	Support	Total	C.E. (US\$/kg)
Non-investment						
Mexico	Survey of ODS use in SMEs and approaches to ODS elimination <i>UNDP and the the Government of Mexico would endeavour to identify the maximum possible number of such users and that no further surveys on ODS use in SMEs in the country would be undertaken.</i>	UNDP	\$60,000	\$7,800	\$67,800	
Uruguay	Market survey to develop a country-wide scheme to phase out remaining ODS <i>The market survey conducted under this project would strive to identify the maximum possible number of consumers of ODS.</i>	IBRD	\$23,000	\$2,990	\$25,990	
Project preparation						
Argentina	Project preparation	UNDP	\$15,000	\$1,950	\$16,950	
Brazil	Project preparation	UNDP	\$45,000	\$5,850	\$50,850	
China	Project preparation in the foam, refrigeration and solvent sectors <i>UNDP would pre-screen all project proposals in China's solvents sector to ensure that they concerned cost-effective projects for the phase out of CFCs.</i>	UNDP	\$150,000	\$19,500	\$169,500	
India	Project preparation	UNDP	\$50,000	\$6,500	\$56,500	
Mexico	Project preparation	UNDP	\$10,000	\$1,300	\$11,300	
Morocco	Project preparation	UNDP	\$20,000	\$2,600	\$22,600	
TOTAL:			\$1,625,533	\$211,319	\$1,836,852	

BILATERAL COOPERATION

UNEP/OzL.Pro/ExCom/22/15
Annex 1 Page 17

Country	Project Title	Agency	Funds Recommended (US\$)			C.E.
			Project	Support	Total	(US\$/kg)
Fumigant						
Methyl bromide						
China	Methyl bromide replacement demonstration program	Canada	\$145,000		\$145,000	
Refrigeration						
Recovery/recycling						
Venezuela	Implementation of a centralized reclamation plant for recovered refrigerants in the commercial refrigeration and air-conditioning sector	Canada	\$495,285		\$495,285	
Solvent						
Non-investment						
Malaysia	No clean process improvement training for electronic assemblers who phased out the use of CFC-113 <i>The project was approved on the understanding that it would eliminate the residual use of ODS in the enterprises under the project.</i>	France	\$192,423		\$192,423	
TOTAL:			\$832,708		\$832,708	