



United Nations Environment Programme

Distr. LIMITED

UNEP/OzL.Pro/ExCom/41/29 22 November 2003

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL Forty first Meeting Montreal, 17 -19 December 2003

PROJECT PROPOSALS: COLOMBIA

This document consists of the comments and recommendation of the Fund Secretariat on the following project proposal:

Phase out:

• National phase-out plan for Annex A (Group I and II) substances: first annual implementation programme

UNDP

PROJECT EVALUATION SHEET COLOMBIA

SECTOR: Phase out ODS use in sector (2002): 805.8 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Title:

(a) National phase-out plan for Annex A (Group I and II) substances: first annual implementation programme

Project Data	National phase-out plan		
Enterprise consumption (ODP tonnes)			
Project impact (ODP tonnes)	805.8*		
Project duration (months)	12		
Initial amount requested (US \$)	6,921,120		
Final project cost (US \$):			
Incremental capital cost (a)			
Contingency cost (b)			
Incremental operating cost (c)			
Total project cost (a+b+c)	4,500,000		
Local ownership (%)	100%		
Export component (%)	0%		
Amount requested for first tranche (US \$)	2,146,820		
Cost effectiveness (US \$/kg.)	5.58		
Counterpart funding confirmed?			
National coordinating agency	Technical Ozone Unit		
Implementing agency	UNDP		

Secretariat's Recommendations	
Amount recommended (US \$)	2,146,820
Project impact (ODP tonnes)	385
Cost effectiveness (US \$/kg)	5.58
Implementing agency support cost (US \$)	161,011
Total cost to Multilateral Fund (US \$)	2,307,831

^{*} The total impact of the plan is 805.8 ODP tonnes. The impact of the first tranche is 385 ODP tonnes.

PROJECT DESCRIPTION

Sector background

CFC (Annex A Group I) consumption and phase-out profile

According to Decision 35/57 Colombia has selected Option 1 as a starting point:	1,456.9 ODP tonnes
- Remaining consumption of CFCs eligible for funding as at 41 st Meeting (per Decision 35/57, proviso B)	1,295.5 ODP tonnes
- Impact of all CFC projects submitted for funding at the 41 st Meeting	801.5 ODP tonnes
- Maximum remaining consumption of CFCs eligible for funding following approval of projects submitted to 41 st Meeting	494.0 ODP tonnes

Introduction

- 1. In 2002, the reported consumption of Annex A and Annex B controlled substances by the Government of Colombia to the Ozone Secretariat was 1,042.36 ODP tonnes distributed as follows: 1,037.04 ODP tonnes of CFCs, 4.4 ODP tonnes of halons and 0.92 ODP tonnes of CTC. CFC consumption is distributed among the foam sector (142.4 ODP tonnes), the refrigeration sector (883.4 ODP tonnes), and the solvents sector (11.3 ODP tonnes). There is no consumption of methyl bromide (MB), since it has been phased out without assistance from the Multilateral Fund.
- 2. The Government of Colombia opted for Option 1 (1,456.9 ODP tonnes) as the starting point to determine the remaining CFC consumption eligible for funding, as adopted by the Executive Committee under Decision 35/57. Since then, the Executive Committee has approved for funding 161.4 ODP tonnes of CFCs, resulting in an unfunded CFC consumption of 1,295.5 ODP tonnes. The Government of Colombia wishes to distribute the unfunded consumption as follows:

Refrigeration manufacturing sector	45.0 ODP tonnes		
Refrigeration servicing sector	619.5 ODP tonnes		
Technical assistance	137.0 ODP tonnes		

3. The Government of Colombia has submitted to the 41st Meeting a national phase-out plan (NPP) for Annex A (Groups I and II), to phase out a total consumption of 801.5 ODP tonnes of CFCs and 4.4 ODP tonnes of halons.

Compliance strategy and action plan

4. The Government of Colombia has developed an ODS compliance strategy and action plan based on:

- (a) Direct assistance to the industry using ODS to facilitate its technological change;
- (b) Awareness raising to promote changes in ODS consumption patterns;
- (c) Regulation of import, distribution, commercialization and use of ODSs to promote and sustain the technological change; and
- (d) Promotion of retrofit equipment and recovery and recycling of refrigerants.

ODS regulations

- 5. So far, the following legal instruments have been developed:
 - (a) Resolution 526 (March 1989), by the Superintendence of Industry and Commerce, establishing the technical norm for aerosol packaging. This resolution (Article 4) banned the use of CFCs in aerosols;
 - (b) Law 30 (1990) through which the Vienna Convention was adopted;
 - (c) Law 29 (1992) through which the Montreal Protocol and the London amendment were ratified:
 - (d) Resolution 2152 (1996) by the Ministry of Health, banning the import, production and distribution of methyl bromide (MB), allowing its use only for quarantine applications;
 - (e) Resolution 528 (1997) by the Ministry of Environment banning the production of domestic refrigeration equipment that contain CFCs, and the requisites for import of these equipment;
 - (f) Resolution 3526 (1997) by the Ministry of Foreign Trade, establishing customs codes for import of domestic refrigeration equipment;
 - (g) Law 488 (1998), issued by Congress establishing tax exemptions for equipment funded from the Multilateral Fund, establishing tax exemptions on occasional profit generated by the transfer of ownership of equipment to enterprises converted to non-CFC technology and beneficiaries of Multilateral Fund assisted projects;
 - (h) Resolution 304 (2000) by the Ministry of Foreign Affairs establishing annual quotas for CFC imports, an import licensing system, and sanctions for non-compliance;
 - (i) Resolution 1776 (2000), by the Ministry of Foreign Trade assigning separate customs codes for ODSs; and
 - (j) Decree 1753 (1994) and Decree 1180 (2003) regulating the environmental licensing for the different productive sectors in the country. For ODSs, license to

produce or import ODSs is required only for importers that started activities after 1993

Foam sector

6. In November 2002, the Executive Committee approved a terminal umbrella project for the phase out of CFC-11 in the manufacture of polyurethane foam. Based on the survey conducted for the preparation of the project, it was found that in 2001 about 165 ODP tonnes of CFCs were used in the production of foam (mainly rigid foam). Of the total number of enterprises identified using CFCs as foam blowing agent (585), only 42 enterprises, with a total consumption of 33.2 ODP tonnes of CFCs, were eligible for support from the Fund. The remaining CFC consumption is being addressed through the technical assistance component within the umbrella project.

Refrigeration manufacturing sector

- 7. The refrigeration manufacturing sector in Colombia is comprised of five major manufacturers of household refrigerators and freezers, nine manufacturers of commercial refrigeration equipment, one manufacturer of MAC systems and one manufacturer of compressors. These enterprises have received assistance from the Multilateral Fund for their conversion to non-CFC technologies; as of December 2002, over 474 ODP tonnes have already been phased out.
- 8. The remaining commercial refrigeration manufacturing activities in Colombia are performed by 27 small equipment manufacturers, mainly located in Bogotá and Medellín, with a total consumption of 45 ODP tonnes of CFCs (15 tonnes of CFC-12 and 30 tonnes of CFC-11). There are also 28 enterprises under the sub-sector of assembly, installation and charging; these enterprises purchase fully-assembled refrigeration units (do not manufacture their own cooling units). The servicing-related activities will be covered for these 28 enterprises under the general technician-licensing programme.

Phase-out strategy in the refrigeration manufacturing sector

- 9. All the identified companies will replace CFC-11 foam blowing agent with HCFC-141b-based technology and CFC-12 with HFC-134a in their refrigerant charging operations.
- 10. The equipment required for the conversion includes a small high-pressure dispenser to replace the existing hand mix operation at each enterprise, a combination of vacuum pump replacement or retrofits, leak detectors suitable for use with HFC-134a and gauge manifold sets, technical assistance, trials and training. The total cost of the sub-project is US \$815,000, with a cost-effectiveness of US \$19.40/kg. No incremental operating costs are requested in the proposal.

Refrigeration servicing sector

- 11. The refrigeration servicing sector consumes the majority of CFCs in Colombia. The servicing sector consists of general service workshops servicing domestic, commercial and transportation refrigeration systems and, to some extent, prefabricated equipment and industrial units; manufacturers of prefabricated equipment (for truck refrigeration, truck/bus air conditioning) who have their own authorized dealers; MAC service provided through vehicle dealers/auto repair service shops and by specialized MAC workshops; and manufacturers of centrifugal chillers having their own authorized dealers
- 12. In addition, there is a rather large number of informal ("free-lance") technicians who are difficult to identify and quantify. These technicians are not affiliated with an authorized service workshop; usually they work independently, often travelling by bus or bicycle, and thus they cannot carry extensive equipment.
- 13. According to the survey conducted for the preparation of the NPP, there are approximately 650 formal refrigeration service workshops, employing approximately 2,300 technicians. Based on industry estimates, there are about 2,500 technicians not associated with formal service.
- 14. The distribution of service provided by registered technicians by type of equipment is 27 per cent of domestic refrigerators, with a total CFC consumption of 115.0 ODP tonnes; 46 per cent of commercial refrigerators and 23 per cent of industrial systems, with a total CFC consumption of 737.7 ODP tonnes for both sub-sectors; and 4 per cent of MAC units with a total CFC consumption of 16.5 ODP tonnes.
- 15. The most common reasons for servicing of refrigeration equipment are: damage in electric components due to energy fluctuations, malfunctions due to external lack of maintenance of the refrigeration circuitry (domestic refrigeration, air conditioning units and MACs); leaks due to loose joints and vibrations (commercial refrigeration and chillers); and compressor burnouts and failure of the refrigeration circuit with total loss of refrigerant (all sub-sectors but to a minor extent).
- 16. The majority of the technicians servicing domestic refrigeration equipment are not certified (vocationally trained) while 30 per cent of service technicians in the commercial and industrial sub-sectors have a vocational certificate or university degree.
- 17. The current prices of refrigerants per kg are: US \$2.98 for CFC-11, US \$3.16 for CFC-12 and US \$5.16 for HFC-134a.

Projects approved in the refrigeration servicing sector

18. The following activities have been approved in the refrigeration servicing sector in Colombia: a demonstration project for MAC emissions reduction (approved at the 15th Meeting of the Executive Committee as a bilateral cooperation by the United States), a training programme for refrigeration technicians and a national recovery and recycling programme (approved at the 17th Meeting of the Executive Committee).

- 19. A demonstration project for MAC emissions reduction was completed in June 1999. The project included collection and analysis of information, a demonstration recycling workshop for 10 to 15 service repair shops and procurement of recovery/recycling machines and leak detectors. The Ozone Unit planned to collect US \$350 from each participating workshop to purchase additional recovery/recycling equipment. As a result, 22 recovery/recycling machines were distributed and over 3.6 ODP tonnes of CFC-12 were recovered.
- 20. The training programme in good practices in refrigeration (approved in July 1995) is still under implementation. So far, approximately 2,076 technicians have received training in good practices in refrigeration. Phase IV of the project, under current implementation, consists in providing basic training tools to the training centres. Among the lessons learned from this project are that the training programme did not have a technician-licensing requirement that would have acted as an incentive or added value, and there were no regulatory requirements that would support the training programme.
- 21. Under the national programme for recovery and recycling of refrigerant (approved in July 1995 and completed in July 1999). Three hundred and thirty recovery machines were distributed to the leading refrigeration service companies located throughout the country and 20 to the leading institute in charge of technician training (SENA). Thirteen regional refrigerant recycling centres were established. Based on assessments undertaken by the Ozone Unit, about 28 ODP tonnes of CFC-12 were recovered and 2.4 ODP tonnes were recycled.
- 22. Some of the lessons learned during implementation of the project are: the CFC price was very low and therefore there was no economic incentive to recycle refrigerants; the recovery machine selected was not appropriate for the different types of refrigeration equipment being serviced and it was inadequate for servicing domestic refrigerators; the programme did not include the operating costs of recycling centres, thus making recovery/recycling even less economically attractive; the programme was based on centralized recycling and, therefore, too complicated (the programme should have been based on on-site recovery and recycling); the costs of storage, transportation and distribution of the recovery and recycling machines were not taken into account, and therefore, delayed implementation of the project since the assistance of numerous organizations had to be secured.

Phase-out plan in the refrigeration servicing sector

- 23. The following activities are being proposed for the implementation of the phase out in the refrigeration servicing sector:
 - (a) Technician-licensing programme for the refrigeration and air conditioning service sector (US \$3,152,300), to implement a legal framework that makes intentional release of refrigerants during service activities illegal; establish a technician licensing system restricting refrigeration service operations to trained technicians and implement codes of good practice; provide tools to reduce refrigerant release during service operations; and phase out the use of CFCs for flushing operations. Through this programme, it is estimated that 40 to 60 per cent of the CFC use in this sub-sector can be phased out;

- (b) Programme for the centrifugal chillers end-user sector (US \$500,000), to provide an incentive to equipment owners to replace or retrofit the CFC-based chillers with new non-CFC refrigerant. The incentive is based on the level of CFC consumption (between US \$25,000 and US \$60,000);
- (c) Incentive programme for commercial refrigeration end-users (US \$1,310,000), to provide an incentive to owner of the equipment to replace it or retrofit it with non CFC-based refrigerant. Prior to the commencement of the programme, the Government will put in place relevant regulations;
- (d) Technical assistance for strengthening of the legal framework (US \$142,000), to improve control of ODS imports and exports, and reduce the dependency on ODSs. It will be implemented by local legal experts with cooperation of the Ministry of Environment, the Customs Department, and the Ministry of Trade and Commerce;
- (e) Technical assistance for information and awareness (US \$320,000), to support the sub-projects proposed under the NPP; and
- (f) Technical assistance for implementation and monitoring (US \$800,000), to assist in verification of results, analysis of problems encountered, and application of corrective measures.

Halon sector

- 24. In 2002, 4.4 ODP tonnes of halon 1301 were used in Colombia (halon-1211 is no longer used). The main halon importers are Proveer Suramericana and Industrias Pirotec S.A.; the main users (refill of fixed systems) are Ecopetrol (national oil company), Interconexión Eléctrica (national distribution of electricity) and Isagen. The national commercial airline (Avianca) refills its portable fire extinguishers with a local provider, but the amounts are negligible. Some halon-1301 users have their own stocks of halon (18.45 ODP tonnes). There are no remaining uses of portable ODS-based extinguishers in the country (this fact was ascertained through the exhaustive survey and field-work carried out within the preparation of the NPP).
- 25. At present, the ODS import licensing system does not allow the import of halons for new installations but only for maintenance of old installations, and does not control the export of these substances. The proposed modification of the ODS import licensing system envisages, among others, the inclusion of allowance for recycled halon; this will permit the entrance of recycled halons only, as it is not foreseen to allow the import of halons that have not been treated for reuse.

Phase-out plan in the halon sector

26. The NPP proposes the establishment of a halon bank management programme (US \$58,000) to reduce dependency on virgin halons through facilitation of procurement of recycled halons, promote the transition to alternatives where installed capacity is for

non-essential uses, and facilitate incorporation into the Caribbean regional halon bank management.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

27. During the review of the Colombia NPP, the Secretariat noted the thorough analysis of the remaining consumption of ODSs undertaken by the Government of Colombia with the assistance of UNDP.

Remaining CFC consumption eligible for funding

28. The remaining consumption of CFCs eligible for funding (as at the 41st Meeting of the Executive Committee) is 1,295.5 ODP tonnes. However, based on the survey conducted for the preparation of the NPP, the Government of Colombia estimated that the CFC consumption currently used in the country and that has not been funded for phase out is 801.5 ODP tonnes. On the basis of this consumption, the Government of Colombia prepared the NPP.

Issues related to CFC consumption

- 29. The Secretariat discussed with UNDP issues related to calculation of the level of CFC consumption in Colombia. Specifically, the NPP reported that CFC consumption in the servicing sector increased by 33 per cent between 2000 and 2002 in spite of: the conversion of domestic and MAC manufacturing plants and the majority of the commercial refrigeration manufacturers to non-CFC technologies in 1997-1999; the 1997 ban on the production and import of domestic refrigerators; the establishment of a national recovery/recycling programme; and the training programme for refrigeration technicians implemented where more than 2,000 technicians received training in good practices. In this regard, UNDP pointed out that the implemented technician training programme did not include any regulatory requirements compelling the technicians to employ the recovery and recycling techniques that were introduced; also the CFC-12 price remained low compared to the alternatives and its supplies were not limited. Therefore, there was no incentive for these technicians to implement the good practices they learned through the training. Similarly, there were neither economic incentives nor regulatory enforcement for recycling. Furthermore the economic recession in Colombia in 1998 and 1999, and the slow economic recovery in subsequent years slowed down the process for the replacement of CFC-based refrigeration.
- 30. The demand for CFC-12 in servicing of commercial refrigeration equipment was determined on the basis of a 58 per cent recharge rate. This high consumption rate is due to the lack of proper training provided to service technicians and the limited tools available in the workshops. The Secretariat pointed out that the recharge rate in non-Article 5 countries is between 20 to 30 per cent and that more than 50 per cent of the service technicians in Colombia had received training in good practices. On this issue, UNDP indicated that the recharge rate used in the calculation of CFC consumption was based on information provided by the equipment manufacturers and by service technicians.

- 31. Regarding the approved recovery and recycling programme, the Secretariat noted that UNDP has not yet submitted the completion report notwithstanding that the project was completed in 1999. In the UNDP progress report, it was indicated that a total of 111 ODP tonnes are being recovered and recycled on an annual basis. However, in the NPP, it was reported that only 28 ODP tonnes of CFC-12 have been recovered per year and only 2.4 ODP tonnes have been recycled. Subsequently, UNDP informed the Secretariat that the preliminary report on the completion of the recovery and recycling programme contained estimated figures for refrigerant recovered and recycled, pending the final figures from the field. The project took a long time to be closed at the country's level due to problems arising from local regulations concerning the transfer of ownership of the equipment, which were finally solved. The required project completion report will be submitted shortly.
- 32. Regarding the MAC recovery and recycling demonstration project, the Secretariat noted that only in 22 per cent of the total number of MAC units CFC-12 could be recovered. UNDP indicated that the relatively low rate of services performed during the year may be due to the fact that only those MAC units need to be serviced. The monitoring of the project would have benefited from a second visit after compilation of the results, to better explain, for example, the low rate of recovery/recycling services performed by certain workshops, and the low average amount of refrigerant recovered per operation, which might be due to a higher rate of total refrigerant loss in the MAC unit.

Refrigeration manufacturing sector

- 33. The commercial refrigeration manufacturing component of the NPP covers 27 enterprises manufacturing commercial refrigerators and cold rooms, 21 of which produce 10 units or less per year. The Secretariat noted that the information provided in relation to these 27 enterprises was very limited (e.g., only names of enterprises and annual production was provided). In order to determine the eligibility of the enterprises and the level of funding, additional documentation should be provided (invoices of purchase of CFC refrigerants, blowing agents, compressors and other materials and parts). CFC consumption was deduced on the basis of previously approved projects (0.6 tonnes of CFC-12 and 1.2 tonnes of CFC-11 per enterprise respectively). The extremely low volume of production indicates that it is highly unlikely that the enterprises are using in-house foaming (in similar situations, small enterprises typically apply prefabricated polyurethane or polystyrene insulated panels). The Secretariat considered that the phase out of CFC used by the 27 enterprises might be treated similarly to the enterprises installing refrigeration equipment and covered under the technician licensing programme.
- 34. In this regard, UNDP indicated that the commercial refrigeration umbrella project approved for Colombia at the 38th Meeting omitted a request for foaming equipment and this is presenting complications in the implementation as all enterprises are based on hand mix operations; this omission should not be repeated. Only those enterprises that were registered in Colombia Chamber of Commerce prior to 1995 and have demonstrated in their registration that the line of business was refrigeration equipment manufacturing (before 1995 and currently) are eligible for funding. Furthermore, the information provided by supplier/distributor on CFC sold to refrigeration companies was crossed checked with data received by the Government from the companies.

35. These 27 enterprises have been identified as manufacturers of commercial refrigeration equipment, not servicing centres (and thus different from the 28 enterprises that are simply installing refrigeration units) and, therefore, can not be addressed under the technician licensing programme. The cost estimates used were based on previous experience for this type of enterprise.

Incentive programme for centrifugal chillers

36. The NPP includes an incentive programme for centrifugal chillers at a total cost of US \$2,240,000. The requested grant is US \$500,000. The Secretariat drew to the attention of UNDP that the Parties to the Montreal Protocol at their 14th Meeting considered the issue of development of policies governing the refrigeration and air-conditioning servicing and end-user sector, including chillers and requested TEAP to prepare a report to, among others, identify incentives and impediments to the transition to non-CFC (Decision XIV/9). Also, the Executive Committee while approving a chiller project in Cote d'Ivoire decided that no further chiller demonstration projects would be forthcoming (Decision 37/27); and, at the same meeting, requested the Secretariat to report on a possible update on policy guidance, and other issues related to the sector (Decision 37/21). Under these circumstances, the Secretariat was unable to review this project component and advised UNDP to remove the funding requested from the total cost of the NPP, noting that Columbia would have flexibility in the application of approved funds. Subsequently, UNDP withdrew the request for this project component.

Incentive programme for commercial refrigeration end-user sector

- 37. The Secretariat pointed out that since the early 1990s most new commercial refrigeration equipment for larger cold storage and supermarkets have been designed and manufactured using HCFC-22 and R404a refrigerants. Considering that the lifetime of this equipment is about 15 years, then it would be expected that by 2005-2007 most of the remaining CFC-12 based equipment would be at the end of their lifetime. Therefore, the eligibility of the proposed approach is questionable. UNDP reported that the survey conducted identified almost 1.8 million CFC-12 based commercial refrigeration systems, with charges ranging from a few hundred grams up to about 30 kg. In 1997-1998, about 70 per cent of the equipment was converted to non-CFC technology. Therefore, equipment produced in 1996-1997 will not reach the end of its useful life until after 2010. Furthermore, it has been estimated that in 2010 there will still be 0.5 million CFC-based units in operation (0.8 million to one million in 2005-2007).
- 38. The Secretariat also indicated that once a CFC-12 charge is replaced with ternary drop-in blends and good service practices are applied, the required quantity of new CFC refrigerant will be reduced. Given the shortage in supply and higher price for CFC-12 in the future such an approach will become economically feasible for end-users without any outside financial assistance. Furthermore, drop-in ternary blends not requiring change of lubricant are now available, which makes the retrofit simple and not expensive. UNDP indicated that the situation of higher CFC prices was taken into account in the sub-project. This sub-project is scheduled for introduction only in 2007; it is recognized that the situation may change between now and then, specially taking into account the price projections carried out within the study. If the economic and supply factors have transpired to encourage these end users to use drop-in replacements prior to 2006, then they will not meet the eligibility criteria and will not receive funding. The

programme will be locally administrated in Colombia and will require documentation by the enterprise to prove that they are still using CFC-12-based equipment with a reasonable useful lifetime. Ideally, the economics and the regulatory policies could minimize the number of eligible enterprises by 2006, and the funding level will not be very high, in which case, excess funds will be returned to the Fund, as per existing policies. However, if the CFC-12 prices do not increase to the level necessary to promote self-conversion, then this assistance will be necessary to assure successful phase out.

Incremental costs associated with the servicing sector

39. The Secretariat and UNDP discussed cost issues related to the implementation of training programmes for service technicians and refrigerant recovery/recycling operations (national and international consultants, number of sets and costs of recovery/recycling machines and service tools), taking into consideration similar projects so far approved for Colombia.

Halon sector

- 40. The Fund Secretariat sought a clarification on whether or not the proposed halon banking programme includes reclamation equipment. UNDP indicated that the programme for Colombia only included recycling equipment; when the need for reclamation arises, other countries that have this facility, such as Venezuela, will be contacted. The programme includes training workshops for all halon users on halon alternatives and on how the halon users can benefit from the bank.
- 41. The Secretariat also indicated that the proposal was not in compliance with the requirements of Decision 18/22 (a ban on the import of halons should be in place six months before the installation of the equipment), and sought a clarification from UNDP on how the recommendations from the halon evaluation (UNEP/OzL.Pro/ExCom/40/8, para. 88) were addressed in the halon bank proposal for Colombia. UNDP indicated that the detailed design of the halon bank will identify a suitable organization to run the halon bank, will identify the economic conditions that will make the project viable and sustainable, and will include a monitoring mechanism and the degree of the Government's involvement that will ensure the operation of the bank.

Conclusion

- 42. Subsequently, UNDP submitted a revised project proposal, addressing the issues raised by the Secretariat. The revised proposal consists of the following activities:
 - (a) Terminal phase out of CFCs in the commercial refrigeration manufacturing sector (US \$450,000);
 - (b) Technician-licensing programme for the refrigeration and air conditioning service sector (US \$2,730,000);
 - (c) Halon bank management programme (US \$58,000);

- (d) Technical assistance for: legal framework (US \$142,000); information and awareness (US \$320,000); and implementation and monitoring (US \$800,000).
- 43. The Secretariat proposed that UNDP should have flexibility in utilizing the resources available under the technician-licensing programme for the refrigeration and air conditioning service sector (US \$2.7 million) when specific needs arise during project implementation (e.g., to provide more recycling machines in the event of a steep rise in the price of CFCs, or to purchase basic service tools should technicians experience difficulties in implementing good practices). Thus, the objective would be to continuously monitor and survey the needs of technicians and adapt the project accordingly.

Agreement

44. UNDP is assisting the Government of Colombia in drafting an agreement between the Government of Colombia and the Executive Committee for the complete phase out of Annex A (Group I and II) substances. The agreement will be finalized prior to the 41st Meeting of the Executive Committee.

RECOMMENDATION

- 45. The Fund Secretariat recommends approval of the projects at the funding level indicated below, on the understanding that, under the draft agreement:
 - (a) The Government of Colombia would have flexibility in utilizing the resources available under the technician-licensing programme for the refrigeration and air conditioning service sector, to address specific needs that might arise during project implementation;
 - (b) The technician-licensing programme for the refrigeration and air conditioning service sector would be implemented in stages so that resources can be diverted to other activities, such as additional training or procurement of service tools, if the proposed results are not achieved; and
 - (c) UNDP would provide appropriate monitoring through out project implementation.

	Project Title	Project	Support Cost	Implementing
		Funding (US\$)	(US\$)	Agency
(a)	National phase-out plan for Annex A (Group I and II	2,146,820	161,011	UNDP
	substances: first annual implementation programme			
