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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Fifty-seventh Meeting
Montreal, 30 March-3 April 2009

2009 WORK PROGRAMME OF UNIDO

COMMENTS AND RECOMMENDATION OF THE FUND SECRETARIAT

1. UNIDO is requesting approval of the Executive Committee of its 2009 work programme, in the amount of US \$1,774,847, plus agency support costs of US \$134,614.
2. The activities proposed in UNIDO's 2009 work programme are presented in Table 1 below:

Table 1: UNIDO's Work Programme

Country	Activity/Project	Amount Requested (US \$)	Amount Recommended (US \$)
SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL			
A1. Renewal of institutional strengthening projects:			
Macedonia FYR	Institutional Strengthening (Phase VI)	132,347	132,347
Subtotal for A1:		132,347	132,347
A2. Additional Project preparation for HCFC phase-out management plans (HPMP):			
Albania	Additional funding for HCFC phase-out management plans	55,000	55,000
Subtotal for A2:		55,000	55,000
A3. Additional Preparation of HPMP (investment component):			
Argentina	Preparation for investment activities in AC manufacturing sector	80,000	80,000
Croatia	Preparation for investment activities in manufacturing foam sector	40,000	40,000
Subtotal for A3:		120,000	120,000
A4. Preparation of HCFC phase-out management plans (HPMP):			
Guatemala	Preparation for HPMP	75,000	75,000
Myanmar	Preparation for HPMP	42,500	42,500
Subtotal for A4:		117,500	117,500
A5. Project preparation for Methyl Bromide			
Chile	Project preparation for the phase-out of methyl bromide in soil fumigation	50,000	50,000
Subtotal for A5:		50,000	50,000
A6. Technical Assistance for the solvent sector:			
Cambodia	Technical assistance for the solvent sector	40,000	40,000
Kenya	Technical assistance for the solvent sector	40,000	40,000
Subtotal for A6:		80,000	80,000
A7. TPMP Verification:			
Oman	Verification audit of the TPMP	20,000	20,000
Subtotal for A7:		20,000	20,000
TOTAL for A:		574,847	574,847
SECTION B: ACTIVITIES RECOMMENDED FOR INDIVIDUAL CONSIDERATION			
B1. Institutional strengthening project (new):			
Armenia	Institutional Strengthening (Phase I)	120,000	*
Subtotal for B1:		120,000	*
B2. Project preparation for HCFC demonstration projects:			
China	Preparation for demonstration project in the room AC manufacturing sector	60,000	*
China	Preparation for demonstration project in the compressor manufacturing sector	30,000	*
Indonesia	Preparation for demonstration project in foam sector	60,000	*
Uruguay	Preparation for demonstration projects in commercial refrigeration manufacturing sector (demonstration for 2 enterprises)	60,000	*
Subtotal for B2:		210,000	

B3. Project preparation for ODS Disposal projects preparation			
Chile	Pilot project for ODS destruction	60,000	*
China	Pilot project for ODS destruction	100,000	*
Croatia	Pilot project for ODS destruction	30,000	*
DPRK	Pilot project for ODS destruction	40,000	*
Iran	Pilot project for ODS destruction	60,000	*
Macedonia	Pilot project for ODS destruction	30,000	*
Nicaragua	Pilot project for ODS destruction	40,000	*
Pakistan	Pilot project for ODS destruction	40,000	*
Serbia	Pilot project for ODS destruction	40,000	*
Turkey	Pilot project for ODS destruction	60,000	*
Venezuela	Pilot project for ODS destruction	70,000	*
Subtotal for B3:		570,000	
B4 . Technical assistance for Funds mobilization:			
Global	Resource mobilisation for HCFC phase-out and climate co-benefits	300,000	*
Subtotal for B4		300,000	
TOTAL for B:		1,200,000	
Subtotal for sections A and B:		1,774,847	574,847
Agency support costs (7.5 per cent for project preparation and institutional strengthening, and for other activities over US \$250,000, and 9 per cent for other activities under US \$250,000):		134,614	44,614
Total:		1,909,461	619,461

* Project under individual consideration or pending

SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL

A1. Renewal of institutional strengthening projects:

The Former Yugoslav Republic of Macedonia (Phase VI): US \$132,347

Project description

3. UNIDO submitted the request for the renewal of the institutional strengthening project for the Former Yugoslav Republic of Macedonia. The description of the request for this country is presented in Annex I to this document.

Secretariat's comments and recommendations

4. The Fund Secretariat recommends blanket approval of the institutional strengthening renewal request for the Former Yugoslav Republic of Macedonia at the level of funding shown in Table 1. The Executive Committee may wish to express to the Government of Former Yugoslav Republic of Macedonia the comments which appear below:

“The Executive Committee has reviewed the report presented with the institutional strengthening project renewal for the Former Yugoslav Republic Macedonia and notes with great appreciation that the country has now reported zero CFC consumption in 2007, putting it well in advance of the complete phase-out of CFCs scheduled for 2010. The Executive Committee also wishes to further extend its appreciation to the Government for playing an important leadership role in the network of ODS Officers for Eastern and Central Asian countries. The Executive Committee is therefore hopeful that, in the next two years, the Former Yugoslav Republic Macedonia will continue its efforts in the implementation of its ODS phase-out activities with outstanding success”.

A2. Additional Project preparation for HCFC phase-out management plans:

Albania: Additional funding for HCFC phase-out management plans: US \$55,000

Project description

5. UNIDO submitted a request for additional HCFC project preparation funds amounting to US \$55,000 for Albania. At the 55th Meeting, Albania received funds for HPMP preparation of US \$30,000 because it had reported zero consumption at that time, in line with decision 55/13. The request is being submitted since Albania has reported Article 7 data for 2007 that shows HCFC-22 consumption of 2.5 ODP tonnes.

Secretariat's comments

6. The Secretariat notes that this submission is in line with decision 55/13 where countries that had zero consumption may submit requests for additional funding for HPMP preparation if new data shows that there is HCFC consumption in the country. The Article 7 data for 2007 reported by Albania supports this request.

Secretariat's recommendation

7. The Fund Secretariat recommends blanket approval of the request for additional funding for the preparation of HCFC phase-out management plans for Albania at level of funding shown in Table 1 of this document.

A3. Additional Project preparation for HPMP investment component

Argentina: Preparation for investment activities in AC manufacturing sector: US \$80,000

Project description

8. UNIDO submitted a request for funds to prepare a sector plan for the air conditioning (AC) manufacturing sector for which they have been designated as the responsible agency by Argentina.

9. In support of its submission, UNIDO indicated that the costs being requested will cover the preparation for investment projects in ten AC manufacturing enterprises in the country, which account in total for a consumption of 1,138 MT (56.9 ODP tonnes) of HCFC-22. The document also indicated that phase-out in this sector will contribute substantially to meeting Argentina's HCFC commitments for 2013 and 2015.

Secretariat's comments

10. The Executive Committee, in decision 56/16, decided that countries with HCFC consumption up to 500 ODP tonnes in 2007 are eligible for a maximum of US \$250,000 for additional project preparation for investment projects as part of their HCFC phase-out management plan (HPMP). Argentina's HCFC consumption as reported under Article 7 is 342.5 ODP tonnes.

11. In reviewing this submission, the Secretariat notes that UNDP is the lead agency in Argentina for the preparation of the HPMP, and that UNIDO will need to work very closely with it to prepare a comprehensive HPMP that addresses all sectors and that will enable compliance with the 2013 and 2015 control measures for HCFCs. It also noted that UNIDO has provided information on the sector as requested by the Secretariat.

12. The Secretariat also notes that with this funding request, the remaining eligible funds for Argentina for the investment component of the HPMP are not more than US \$170,000. No other agency has requested additional HPMP preparation for investment projects for Argentina at this meeting.

Secretariat’s recommendation

13. The Fund Secretariat recommends blanket approval for the request of UNIDO for project preparation for investment projects as part of the HPMP in Argentina at the level of funding in Table 1 of this document, on the understanding that no further funding for project preparation to meet the 2013 and 2015 control measures for the air conditioning manufacturing sector would be approved by the Executive Committee.

Croatia: Preparation for investment activities in manufacturing foam sector: US \$40,000

Project description

14. UNIDO submitted a request for funds to prepare a sector plan for the foam sector in Croatia as part of its HPMP.

15. In support of its submission, UNIDO indicated that the costs being requested will cover the preparation of investment projects for the phase-out of approximately 40 metric tonnes of HCFC-141b in the production of PU foam in Croatia. The document also indicated that phase-out in this sector will contribute significantly to meeting Croatia’s HCFC commitments for 2013 and 2015.

Secretariat’s comments

16. The Executive Committee, in decision 56/16 decided that countries with HCFC consumption up to 100 ODP tonnes in 2007 are eligible for a maximum of US \$100,000 for additional project preparation for investment projects as part of their HCFC phase-out management plan (HPMP). Croatia’s HCFC consumption as reported under Article 7 is 7.7 ODP tonnes.

17. In reviewing this submission, the Secretariat notes that UNIDO has provided basic information on the sector as requested by the Secretariat. UNIDO also confirmed that this will fully address the first stage for the foam sector, and that the projects developed will be integrated into the final HPMP.

18. The Secretariat also notes that with this funding request, the remaining funds eligible for the country for the investment component of the HPMP is not more than US \$60,000. No other agency has requested for additional HPMP preparation for investment projects for Croatia at this meeting.

Secretariat’s recommendation

19. The Fund Secretariat recommends blanket approval for the request of UNIDO for project preparation for investment projects as part of the HPMP in Croatia at the level of funding in Table 1 of this document on the understanding that no further funding for project preparation to meet the 2013 and 2015 control measures for the foam sector would be approved by the Executive Committee.

A4. Preparation of HCFC phase-out management plan:

(a)	Guatemala	Preparation for HPMP	US \$75,000
(b)	Myanmar	Preparation for HPMP	US \$42,500

Project descriptions

20. UNIDO submitted two new requests for the preparation of HCFC phase-out management plans. These countries have reported HCFC consumption as listed in the table below:

Country	2007 HCFC consumption (ODP tonnes)		Amount recommended for approval (US \$)
	HCFC141-b	HCFC-22	
Guatemala	1.2320	4.6244	75,000
Myanmar	0	2.37	42,500

Secretariat's comments

21. The Secretariat note that these requests for HPMP preparation will be prepared in cooperation with UNEP, and these requests cover the remaining HPMP funds for these two countries as contained in the UNEP work programme in document UNEP/OzL.Pro/ExCom/57/19. The Secretariat notes that these requests are in line with decision 56/16.

Secretariat's recommendation

22. The Fund Secretariat recommends blanket approval of the requests for project preparation for the HCFC phase-out management plans for Guatemala and Myanmar as listed above at the level of funding indicated in Table 1 of this document.

A5. Project preparation for Methyl Bromide:

Chile: Project preparation for the phase-out of methyl bromide in soil fumigation: US \$50,000

Project description

23. On behalf of the Government of Chile, UNIDO submitted a request for project preparation for an investment project for methyl bromide phase-out in Chile. The project aims to phase out the remaining methyl bromide use in Chile in soil fumigation for strawberry production.

24. UNIDO indicated that these requested funds will constitute the complete phase-out of methyl bromide in the country, and no additional funds will be requested for this sector in the future.

Secretariat's comments

25. Chile has a baseline consumption of methyl bromide of 212.5 ODP tonnes. In 2007, its methyl bromide consumption was 168 ODP tonnes. The Secretariat notes that while a number of projects have been approved for Chile for the MB sector, none have targeted its use in soil fumigation for strawberry production. Chile is one of the main producers of strawberries in the region, and the phase-out of MB in this sector without the consideration of proper alternative technology and alternatives will be detrimental to its agriculture economy.

26. In discussing this project with UNIDO, the Secretariat was informed that in submitting this project, the Government of Chile agrees that this will be the final funding for methyl bromide phase-out for the country, and that it will not seek any future assistance for the same substance.

Secretariat's recommendations

27. The Fund Secretariat recommends blanket approval for this project at the level of funding indicated in Table 1 of this document on the condition that this constitutes the final funding for methyl bromide phase-out in Chile.

A6. Technical assistance for the solvent sector:

- (a) Cambodia: Technical assistance for the solvent sector: US \$40,000
- (b) Kenya: Technical assistance for the solvent sector: US \$40,000

Project description

28. UNIDO is requesting approval of US \$40,000 plus agency support costs each for Cambodia and Kenya, to provide technical assistance for the phase-out of low levels of reported consumption of CTC and to sustain the phase-out of other ODS solvents. UNIDO has indicated that this would be the only funding the countries would seek for the solvent sector.

Secretariat's comments

29. Cambodia and Kenya both reported CTC consumption levels of zero and 0.1 ODP tonnes respectively in 2007. Both countries also reported TCA consumption of 0.3 and 0.1 ODP tonnes in the same year. The CTC baselines of the two countries are nil and 65.9 ODP tonnes respectively while its TCA baselines are 0.5 and 1.1 ODP tonnes.

30. UNIDO's submission is consistent with recent efforts to establish a programme to address low levels of consumption in the solvent sector in Article 5 countries. The Secretariat notes, however that the UNEP Compliance Assistance Programme (CAP) provides special CAP assistance to countries with little or no remaining consumption in both methyl bromide and solvents. The Secretariat asked UNIDO whether these proposals were discussed with UNEP, and what type of assistance has been provided to these countries. UNIDO clarified that these countries have requested the technical assistance as they feel that, while they appreciate the CAP assistance, it is necessary to develop specific activities in the sector that can only be provided through this initiative.

31. UNIDO also indicated that the funds requested will be used for identifying exactly where these small remaining consumption are, as well as for technical workshops in the countries concerned.

Secretariat's recommendation

32. In view of the above, the Secretariat is recommending blanket approval of these requests at the level of funding shown in Table 1 of this document.

A7. TPMP verification:

Oman: Verification audit of the TPMP: US \$20,000

Project description

33. The Executive Committee in decision 45/54 called, *inter alia*, for verifying a randomly selected sample of 10 per cent of the ongoing TPMPs in LVC countries annually. The Secretariat randomly selected a number of approved TPMPs for this exercise and Oman was one of those on the list. UNIDO

as the implementing agency responsible for the TPMP in Oman, was invited to submit a request for funding to carry out the verification, for consideration at this meeting in the context of their 2009 work programme. UNIDO is requesting US \$20,000 for this verification exercise.

Secretariat's comments and recommendation

34. UNIDO informed the Secretariat that the proposed amount being requested is in line with the current costs and consistent with the funds approved by the Executive Committee for similar verifications in previous meetings.

35. The Secretariat is recommending blanket approval of this request at the level of funding shown in Table 1 of this document.

SECTION B: ACTIVITIES RECOMMENDED FOR INDIVIDUAL CONSIDERATION

B1. Institutional strengthening project (new):

Armenia: Institutional Strengthening Phase I : US \$120,000

Project description

36. On behalf of the Government of Armenia, UNIDO has requested funding for the institutional strengthening of Armenia. The request as submitted is for US \$120,000 plus support costs for an initial phase of two years.

37. The Republic of Armenia became a non-Article 5 party to the Vienna Convention and the Montreal Protocol in 1999. As part of the group of countries with economies in transition, Armenia received assistance from the Global Environment Facility (GEF) to prepare its country programme which was completed in 2001. At the Fourteenth Meeting of the Parties, Armenia's classification was changed to that as a developing country operating under Article 5 of the Montreal Protocol, taking into account its difficult economic situation. At present, Armenia has ratified all the amendments and adjustments to the Montreal Protocol.

38. Armenia has an operational national ozone unit (NOU) which was established with funds for institutional strengthening and capacity building from the GEF. According to UNIDO, this current project will be completed in March 2009, therefore Armenia as an Article 5 country is seeking assistance to continue funding the operations of its national ozone unit from the Multilateral Fund. The proposal submitted along with this request summarizes the main goals of the requested IS funds as follows:

- (a) To continue monitoring imports and consumption of ODS substances and their application and reporting;
- (b) To coordinate the current ODS phase-out projects as well as the work of the implementing agencies;
- (c) To represent the Government of Armenia in regional and international fora.

39. The proposal also includes a commitment from the Government of Armenia to provide an annual in-kind contribution to the NOU in the amount of US \$50,000, in addition to the IS funds being requested.

Secretariat's comments

40. The Government of Armenia is committed to continuing the work initiated by the NOU to meet its commitments under the Montreal Protocol. The Secretariat notes that their proposal includes detailed activities that will be undertaken during this requested phase. It also notes the number of activities that have been successfully implemented in Armenia, and that the country is in compliance with the Montreal Protocol control measures.

41. At the 51st Meeting, UNIDO included the request for preparation of a TPMP for Armenia in its business plan. In decision 51/5 on the agencies' consolidated business plans, the Committee decided to include both the request for the TPMP for Armenia as well of new institutional strengthening projects on a case-by-case basis as part of that triennium's business plan under the category "additional funding initiatives outside the budget". This was in reference to setting priorities for unallocated funds for those activities not related to compliance as per the compliance-oriented model.

42. The Secretariat also notes that, consistent with the Executive Committee's decision on Turkmenistan where the situation is similar to Armenia (i.e. former non-Article 5 country funded under the GEF and reclassified as Article 5), decision 46/21 approved funds for the institutional strengthening project in Turkmenistan. In the same light, Armenia may also be eligible for IS funding.

Secretariat's recommendation

43. In view of the above, the Executive Committee may wish to consider approving the request for Phase I of the IS project for Armenia for two years only at the amount of US \$120,000 plus agency support cost of US \$9,000.

B2. Project preparation for HCFC demonstration projects

- (a) China: Preparation for a demonstration project in room in the AC manufacturing sector: US \$60,000
- (b) China: Preparation for a demonstration project in the compressor manufacturing sector: US \$30,000

Project description

44. UNIDO submitted two requests for the preparation of demonstration projects in China for the AC and compressor manufacturing sectors. Information provided for the above proposals is summarized below:

- (a) China is the largest producer of room air conditioners worldwide. This sector consists of some 100 companies. Currently there are no final alternatives to replace HCFC-22 in the sector, and the most promising technologies are hydrocarbons (HCs), hydrofluorocarbons (HFCs) and carbon dioxide (CO₂). UNIDO will prepare two demonstration projects for the room AC manufacturing sector to study the technical and financial implications of the conversion to HFC-410A and HC-290 in two enterprises, Qingdao Haier and Guangzhou Midea. The total HCFC-22 consumption of these two companies for 2007 amounts to 12,000 metric tonnes (600 ODP tonnes).
- (b) UNIDO received a request from China to prepare a demonstration project for the conversion of a compressor manufacturing line to non-HCFC based technology in the room AC manufacturing sector. The project will study the technical and financial implications of the conversion. This project will be prepared for Shanghai Haili, a

compressor manufacturer that produced about 12,660,000 sets in 2007, ten percent of which was for exports. The project will demonstrate the feasibility of HC-290.

45. UNIDO indicated that the project preparation funds will be used to develop individual investment proposals that will examine the technical feasibility of the selected technology, technical assistance for the company, and calculation of operating costs/savings from the use of the proposed technology.

Secretariat's comments

46. The Secretariat notes that the information provided by UNIDO in support of the requests for project preparation for the above demonstration projects for China is partly consistent with the requirements of decision 56/16(i) which states, *inter alia*, that the request for preparation funds should include specification of country, sector, brief description of the project, approximate ODP tonnes phase-out to be achieved, the enterprise(s) to be addressed, if relevant, and the date when they began operation, and provide a compelling reason as to why the Executive Committee should choose this project. The submitted proposals do not include compelling reasons why these projects should be selected by the Executive Committee as demonstration projects consistent with the above decision. In addition, the request for the compressor manufacturing company does not specify the amount of HCFC that may be phased out by this project.

47. UNIDO explained that these requests are in response to decision 55/43 (f) where the Executive Committee, *inter alia*, invited the agencies to submit a limited number of demonstration projects for the conversion of HCFCs in the refrigeration and air conditioning sub-sectors to low-global warming potential (GWP) technologies to identify all the steps required and to assess their associated costs. These are also in response to requests from the Government of China on need for projects to showcase the technology described for each application, the results of which will assist the Government of China and the air conditioning industry to decide on the alternatives to use for the phase-out of HCFC use in these sectors.

48. The Secretariat also notes that the three companies started operations before July 1995, which is consistent with decision 17/7 on the eligibility of enterprises established after 25 July 1995.

Secretariat's recommendation

49. The Executive Committee may wish to consider the requests for project preparation for the following two demonstration projects in China in line with decisions 55/43 (f) and decision 56/16(i) and in the light of the information provided above:

- (a) Preparation for a demonstration project in two AC manufacturing companies in China at the amount of US \$60,000 plus agency support cost of US \$4,500.
- (b) Preparation for a demonstration project for one compressor manufacturing company in China at the amount of US \$30,000 plus agency support cost of US \$2,250.

Indonesia: Project Preparation for two demonstration projects in the Foam sector: US \$60,000**Project description**

50. UNIDO is submitting the above request for the preparation of two demonstration projects for the foam sector in Indonesia. The proposal is to develop two projects for different sub-sectors in the polyurethane foam sector: rigid polyurethane sandwich panel production and flexible moulded foam production, to two non-HCFC and low GWP based technologies.

51. One project will be prepared for PT Airtekindo Prima, a company established in 1993 for the production of rigid polyurethane sandwich panels. In 2008, the company used 60 metric tonnes of HCFC-141b. The demonstration project will examine the use of domestic cyclopentane, which includes the validation of new technology for the use of C-5 fractions which will be supplied by a local Indonesian petrochemical producer.

52. The second project will be prepared for PT Universal Furnitech Industry, a company producing chairs with steel and wooden structures that use foam for arm rests, seating and head rests established in 1996. The company's HCFC-141b consumption in 2008 is estimated at 12 metric tonnes. Currently, the company still uses the high pressure foam dispenser serving mould and continues to use the hand mixing technique normally for smaller moulds for armrests and head rests. Similar to the previous project, the alternative to be used for the demonstration is cyclopentane. These technologies are new in Indonesia.

53. UNIDO indicates that the requested funds for both projects are to cover the costs for experts and travel to develop the projects for the companies.

Fund Secretariat's comments

54. The Secretariat notes that the information provided by UNIDO in support of the requests for project preparation for the above demonstration projects is consistent with the requirements of decision 56/16(i) which states, *inter alia*, that the request for preparation funds should include specification of country, sector, brief description of the project, approximate ODP tonnes phase-out to be achieved, the enterprise(s) to be addressed, if relevant, and the date when they began operation, and provide a compelling reason as to why the Executive Committee should choose this project. However, the submitted proposals do not include compelling reasons why these projects should be selected by the Executive Committee as demonstration projects consistent with the above decision.

55. UNIDO explained that these requests are in response to decision 55/43 where the Executive Committee invited the agencies to submit a limited number of demonstration projects. The Secretariat notes however, that in the case of the foam sector, decision 55/43(e) explicitly calls for demonstration projects for systems houses and/or chemical suppliers for the development, optimization and validation of chemical systems for use with non-HCFC blowing agents. The submitted projects above do not fall in this specific category for the foam sector. The Secretariat notes, however, that UNIDO indicated that these demonstration projects will demonstrate alternatives with low GWP, and that the technology is new and needs to be further validated in the country before it can be used.

56. The Secretariat also notes that one of the two companies started operations after July 1995, and is not consistent with decision 17/7 on the eligibility of enterprises established after 25 July 1995.

Secretariat's recommendation

57. In view of the fact that the project is not clearly in line with decision 55/43(e), the Secretariat is unable to recommend approval of the requested funds. The Executive Committee may wish to consider these in light of the comments above.

Uruguay: Preparation for demonstration projects in commercial refrigeration manufacturing sector (demonstration for 2 enterprises): US \$60,000

Project description

58. UNIDO is submitting the above request for the preparation of two demonstration projects for the commercial refrigeration manufacturing sector in Uruguay. The proposal is to develop two projects for companies manufacturing refrigeration equipment located in Montevideo. The proposed demonstration projects may eliminate approximately 10 metric tonnes of HCFCs used in the refrigeration manufacturing sector in Uruguay. The submission indicates that two unnamed companies both established before July 1995 would be ready to adopt some alternatives.

59. The alternative technologies to be considered under the preparatory activities will be different refrigerants adapted to the conditions and systems of the companies. Test on efficiency and energy consumption will be carried out. UNIDO indicates that the requested funds for both projects are to cover the costs for an expert and travel to develop the projects for the companies.

Secretariat's comments

60. The Secretariat notes that the information provided by UNIDO in support of the requests for project preparation for the above demonstration projects is not consistent with the requirements of decision 56/16(i) as it does not provide the names of the companies, estimated ODS consumption of each, and the specific technology to be demonstrated. The submission does not contain the information required for the Secretariat to make a recommendation. UNIDO was requested to provide the required data consistent with decision 56/16, however such data as shown above is incomplete. In addition, the two projects also do not provide a compelling reason why the Executive Committee should select these as demonstration projects.

61. The Secretariat also notes that the submission indicates that these two unnamed companies started operations before July 1995, which is consistent with decision 17/7 on the eligibility of enterprises established after 25 July 1995.

Secretariat's recommendation

62. In view of the above, the Secretariat is unable to recommend approval of the requested funds. The Executive Committee may wish to consider these in light of the comments above.

B3. ODS Disposal project preparation

Chile: Pilot project for ODS destruction: US \$60,000

China: Pilot project for ODS destruction: US \$100,000

Croatia: Pilot project for ODS destruction: US \$30,000

Democratic Republic of Korea: Pilot project for ODS destruction: US \$40,000

Iran: Pilot project for ODS destruction: US \$60,000

Macedonia FYR: Pilot project for ODS destruction: US \$30,000

Nicaragua: Pilot project for ODS destruction: US \$40,000

Pakistan: Pilot project for ODS destruction: US \$40,000

Serbia: Pilot project for ODS destruction: US \$40,000

Turkey: Pilot project for ODS destruction: US \$60,000

Venezuela: Pilot project for ODS destruction: US \$70,000

Project description

63. UNIDO submitted requests for the preparation of eleven pilot ODS disposal projects. These pilot projects are being proposed for the countries listed above.

64. In its submission, UNIDO indicated that these pilot projects will address the total available known stocks for destruction, through the following activities:

- unwanted ODS inventory
- collection and transportation
- screening in technologies and selection of destruction methods
- up-date of national legislation and regulations to support destruction activities
- training needs and training programmes to develop the country's capacity in dealing with ODS destruction issues and unwanted future ODS stockpiling
- consideration of potential different funding sources (as CDM and voluntary markets, or other financial instruments)

65. Expected amounts of ODS to be disposed for each of the countries are summarised below:

Country	Total amount of ODS to be destroyed/disposed (in ODP tonnes)
Chile	60.0
China	100.0
Croatia	15.0
Iran	30.0
Korea, DPR	10.0
Macedonia, FYR	10.0
Nicaragua	10.0
Pakistan	50.0
Serbia	50.0
Turkey	14.0
Venezuela	200.0

Secretariat's comments

66. In paragraph 2 of decision XX/7, the Meeting of the Parties requested the Executive Committee of the Multilateral Fund, to consider as a matter of urgency commencing pilot projects that may cover the collection, transport, storage and destruction of ozone depleting substances. While the Executive Committee has agreed to include projects for ODS destruction in the business plans of the agencies from the 51st Meeting, the Committee had not yet formulated an approach for assessing their impact, and there are presently no guidelines for developing such projects. In addition, this meeting will be the first opportunity for the Committee to consider the implications of the paragraph 2 of decision XX/7 in relation to its funding operations.

67. Despite the lack of guidelines, the Secretariat sought clarification from UNIDO on the submissions presented above and inquired as to the type of activities the pilot projects will demonstrate, and what the funds requested will cover. UNIDO did not provide specific details for each of the requests being submitted, but rather provided an overall description of the activities that will be undertaken as part of the project preparation, and what the full project will examine. This is contained in paragraph 64 above. The Secretariat also notes that in addition to undertaking a national inventory, screening and

testing technologies for disposal and training, the proposal will also examine funding modalities and look at opportunities to leverage possible co-financing through CDM or other voluntary markets.

68. In reviewing the costs requested by UNIDO for each country, the Secretariat considers these to be well within historical levels of project preparation for these types of projects. UNIDO indicated that these costs will cover the usual expert and travel costs necessary for project preparation.

Secretariat's recommendation

69. The Executive Committee may wish to take into account the above information, including the lack of guidelines for ODS destruction/disposal projects, and consider, in light of the information above, whether to fund the project preparation requests for the eleven countries listed above as requested by UNIDO.

B4. Technical Assistance

Global: Resource mobilisation for HCFC phase-out and climate co-benefits: US \$300,000

Project description

70. UNIDO submitted a request for a technical assistance project for mobilising resources to maximise climate benefits of HCFC phase-out, at a funding level of US \$300,000. The request is accompanied by a concept note describing the objectives, activities, as well as expected results of this project.

71. According to the proposal, the project will develop concepts and methodologies to calculate the additional costs to be borne by the Multilateral Fund, which may correspond to the introduction of alternatives or practices that generate climate co-benefits. Such additional costs may be mostly related to the improvements in energy performance during manufacturing and subsequently bring about a higher energy efficiency of equipment during operation. The study will explore how these additional costs may be covered by, for instance, the Global Environment Facility (GEF) through a special facility within the Multilateral Fund to allow for more approvals of phase-out projects with climate co-benefits without jeopardizing the limited funds under the current replenishment.

72. The expected outputs from this technical assistance will include: (1) methodology to calculate the additional cost to be borne if climate benefits of a technology are fully taken into consideration in selection of alternatives to HCFCs, and (2) a methodology that will look into calculation of climate co-benefits resulting from proper management and destruction of unwanted ODS. UNIDO also plans to apply these methodologies in two of its pilot projects in Jordan and on one of the proposed demonstration project on ODS destruction.

73. The table below provides a breakdown of the US \$300,000 as requested by UNIDO:

International Consultants	72,000
National Consultants	48,000
Travel	30,000
Equipments	100,000
Management, monitoring and training	50,000
Total	300,000

Secretariat's comments

74. The Executive Committee at its 54th Meeting agreed on a set of guidelines for the preparation of HCFC phase-out management plans (HPMP), and at the 55th and 56th Meeting, approved funds for 115 countries for HPMP preparation.

75. The guidelines for HPMP preparation agreed in decision 54/39 included the provision for Article 5 countries to consider financial incentives and opportunities for co-financing in their final HPMPs, which could be relevant for ensuring that HCFC phase-out results in benefits in accordance with paragraph 11(b) of decision XIX/6 of the Parties.

76. The Secretariat notes that the results of the study proposed by UNIDO may assist countries in examining their options for co-financing at this time when HPMP preparation is taking place in more than a hundred Article 5 countries. In addition, it also notes that there is as yet no guidance from the Executive Committee on how climate benefits of HCFC phase-out are to be calculated, and whether these costs could be considered as incremental costs under the Multilateral Fund. The Secretariat also notes that UNIDO's proposal describes the development of methodologies for getting possible co-financing from the GEF.

77. In reviewing the costs proposed for the project, the Secretariat noted that UNIDO included US \$100,000 for equipment in their budget. In clarifying the addition of an equipment component, UNIDO informed the Secretariat that the proposal includes pilot implementation in one or two enterprises to demonstrate the methodologies that will be developed, and such equipment will be required during this pilot phase.

78. The Secretariat also remarks that this is the first time that a proposal of this nature is being submitted by the implementing agencies, and that there are neither precedents for such a submission, nor guidelines for their consideration. It also notes that this project may not clearly constitute an incremental cost as defined in the Indicative List of Categories of Incremental Costs as embodied under Article 10 and agreed at the Fourth Meeting of the Parties to the Montreal Protocol, and therefore is not eligible for funding. However, the Executive Committee may wish to examine the detailed proposal submitted by UNIDO and consider whether it merits discussion based on its possible positive contribution to the development of comprehensive HPMPs.

Secretariat's recommendation

79. The Executive Committee may wish to consider this proposal in light of the information presented above, and in the discussion of Agenda item 14, Facility for additional income from loans and other sources.

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

Armenia: Renewal of institutional strengthening

Summary of the project and country profile	
Implementing Agency:	UNIDO
Amounts previously approved for institutional strengthening (US \$):	0
Amount requested (Phase I) (US \$):	120,000
Amount recommended for approval for Phase I (US \$):	120,000
Agency support costs (US \$):	9,000
Total cost of institutional strengthening Phase I to the Multilateral Fund (US \$):	129,000
Equivalent amount of CFC phase-out due to institutional strengthening Phase I at US \$12.1/kg (ODP tonnes):	n/a
Date of approval of country programme:	n/a
ODS consumption reported in country programme (insert year) (ODP tonnes):	n/a
Baseline consumption of controlled substances (ODP tonnes):	
(a) Annex A Group I (CFCs) (Average 1995-1997)	196.5
(b) Annex A Group II (Halons) (Average 1995-1997)	0.0
(c) Annex B Group II (Carbon tetrachloride) (Average 1998-2000)	0.0
(d) Annex B Group III (Methyl chloroform) (Average 1998-2000)	0.0
(e) Annex E (Methyl bromide) (Average 1995-1998)	0.0
Latest reported ODS consumption (2007) (ODP tonnes) as per Article 7:	
(a) Annex A Group I (CFCs)	25.0
(b) Annex A Group II (Halons)	0.0
(c) Annex B Group II (Carbon tetrachloride)	0.0
(d) Annex B Group III (Methyl chloroform)	0.0
(e) Annex E (Methyl bromide)	0.0
(f) Annex C Group I (HCFCs)	4.4
Total	29.4
Year of reported country programme implementation data:	2007
Amount approved for projects (US \$):	97,000
Amount disbursed (as at insert month year) (US \$):	0
ODS to be phased out (ODP tonnes):	n/a
ODS phased out (as at insert month year) (ODP tonnes):	

1. Summary of activities and funds approved by the Executive Committee:

Summary of activities		Funds approved (US \$)
(a)	Investment projects:	0
(b)	Institutional strengthening:	0
(c)	Project preparation, technical assistance, training and other non-investment projects:	97,000
	Total:	97,000

Former Yugoslav Republic of Macedonia: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing Agency:		UNIDO
Amounts previously approved for institutional strengthening (US \$):		
	Phase I: oct-96	152,900
	Phase II: mar-00	101,950
	Phase III: dec-01	101,950
	Phase IV: apr-04	132,347
	Phase V: apr-06	132,347
	Total	621,494
Amount requested for renewal (Phase VI) (US \$):		132,347
Amount recommended for approval for Phase VI (US \$):		132,347
Agency support costs (US \$):		9,926
Total cost of institutional strengthening Phase VI to the Multilateral Fund (US \$):		142,273
Equivalent amount of CFC phase-out due to institutional strengthening Phase VI at US \$12.1/kg (ODP tonnes):		n/a
Date of approval of country programme:		1995
ODS consumption reported in country programme (1995) (ODP tonnes):		72.8
Baseline consumption of controlled substances (ODP tonnes):		
	(a) Annex A Group I (CFCs) (Average 1995-1997)	519.7
	(b) Annex A Group II (Halons) (Average 1995-1997)	32.1
	(c) Annex B Group II (Carbon tetrachloride) (Average 1998-2000)	0.1
	(d) Annex B Group III (Methyl chloroform) (Average 1998-2000)	0.0
	(e) Annex E (Methyl bromide) (Average 1995-1998)	12.2
Latest reported ODS consumption (2007) (ODP tonnes) as per Article 7:		
	(a) Annex A Group I (CFCs)	0.0
	(b) Annex A Group II (Halons)	0.0
	(c) Annex B Group II (Carbon tetrachloride)	0.0
	(d) Annex B Group III (Methyl chloroform)	0.0
	(e) Annex E (Methyl bromide)	0.0
	(f) Annex C Group I (HCFCs)	1.2
	Total	1.2
Year of reported country programme implementation data:		2007
Amount approved for projects (US \$):		4,755,247
Amount disbursed (February 2009) (US \$):		4,517,526
ODS to be phased out (ODP tonnes):		574.4
ODS phased out (February 2009) (ODP tonnes):		539.4

2. Summary of activities and funds approved by the Executive Committee:

Summary of activities		Funds approved (US \$)
(a)	Investment projects:	3,319,677
(b)	Institutional strengthening:	621,494
(c)	Project preparation, technical assistance, training and other non-investment projects:	814,076
	Total:	4,755,247

Progress report

3. The Former Yugoslav Republic of Macedonia reported on a number of important initiatives it has undertaken during this last phase of the institutional strengthening project. These include the completion of some investment projects that were delayed, implementation of the TPMP in the country through the completion of training courses for refrigeration service technicians, approval of code of practice,

provision of training materials and equipment for vocational schools. The NOU has also continued timely reporting of ODS consumption, and initiated a series of awareness raising activities covering the whole country. The NOU of Former Yugoslav Republic of Macedonia is also an active member of the network for ODS officers in the ECA region and has provided advice and assistance to the younger members of the network.

Plan of action

4. Over the next two years Former Yugoslav Republic of Macedonia's action plan intends to focus on the completion of the remaining activities in the TPMP to ensure that they meet the 2010 CFC and halons phase-out. It will also continue awareness raising activities in the country, as well as initiate actions for the phase-out of HCFCs. These include the preparation of the HPMP and review of ODS regulations to include HCFCs.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

57th Executive Committee of the
Multilateral Fund for the Implementation
of the Montreal Protocol

UNIDO Work Programme

57th ExCom

UNIDO

Work Programme - 57th ExCom Final (24 February 2009)

Introduction

This Work Programme for the year 2009 (57th ExCom) has been prepared based on ongoing and planned activities and following receipt of government requests. The Work Programme will support the implementation of UNIDO's three year Rolling Business Plan 2009-2011.

Priority was given to Article 5 countries needing immediate assistance to prepare the HCFC investments projects and management plans. The Business Plan is meant to provide an indication on where the UNIDO programme is moving in 2009, and to establish a financial resource estimate for implementing such a programme. Focus has been put on preparation of HCFC demonstration and investment projects.

The renewal of institutional strengthening support will be required for Macedonia.

Following the re-classification of Armenia as an Art.5 Country and completion of the previous IS components under the Country Programme implementation, the Government requested UNIDO to submit a new Project proposal to MLF, to cover the country needs for the compliance to Montreal Protocol and coordination of HCFCs phase-out related activities.

Furthermore, a number of project preparation activities for ODS disposal sector are foreseen.

The document comprises the following sections:

Section 1

Gives in a tabulated form by project types and country a consolidated list of activities foreseen for HCFC, MeBr, CTC/TCA and institutional strengthening.

Funding is requested as follows:

- Project preparation: US\$ 1,206,688 including 7.5% A.S.C.;
- Technical Assistance 9% A.S.C.: US \$109,000
- Funds mobilization proposal 7.5 %:US\$ 322,500 including
- Institutional strengthening: US\$ 271,273 including 7.5% A.S.C.;
- Total **US\$ 1,909,461** including A.S.C.

Section 2

Provides the corresponding project concepts indicating some details and funding requirements.

UNIDO

Work Programme - 57th ExCom
Final (24 February 2009)

Section 1

Consolidated table giving project
preparation and non-investment
projects in all countries and sectors

Country	Type	Substance	Title of Project	Requested amount USD	A.S.C USD	Total (incl ASC) USD	A.S .C. %	P. D.	Coop. with IAs
Institutional Strengthening									
Armenia	INS	SEV	Institutional Strengthening, NEW.	120,000	9,000	129,000	7.5	24	
Macedonia FYR	INS	CFC	Institutional Strengthening, Renewal.	132,347	9,926	142,273	7.5	24	
			Institutional Strengthening Total	252,347	18,926	271,273			
Technical assistance									
Cambodia	TAS	TCA	Technical assistance solvent sector	40,000	3,600	43,600	9	12	
Kenya	TAS	CTC/TCA	Technical assistance in the solvent sector	40,000	3,600	43,600	9	12	
Oman	TAS	SEV	Verification audit of the TPMP	20,000	1,800	21,800	9	12	
			Total	100,000	9,000	109,000			
MeBr project preparation									
Chile	PRP	MBR	Fumigants	50,000	3,750	53,750	7.5	12	
			MeBr Total	50,000	3,750	53,750			
Project preparation for Demonstration Projects									
Indonesia	PRP	HCFC-141b	Foam sector	60,000	4,500	64,500	7.5	12	
China	PRP	HCFC-22	Room AC Manufacturing (RAC) sector	60,000	4,500	64,500	7.5	12	
China	PRP	HCFC-22	Compressor manufacturing	30,000	2,250	32,250	7.5	12	
Uruguay	PRP	HCFC-22	Commercial refrigeration manufacturing sector (demonstration for 2 enterprises)	60,000	4,500	64,500	7.5	12	
			PRP Total	210,000	15,750	225,750			
Project preparation for Investment HPMP Projects									
Argentina	PRP	HCFC-22	AC Manufacturing (RAC) sector	80,000	6,000	86,000	7.5	12	
Croatia	PRP	HCFC-141b	Foam sector	40,000	3,000	43,000	7.5	12	
				120,000	9,000	129,000			
Additional funding for HPMP preparation (HPMP)									
Albania	PRP	HCFC	Additional funding HPMP preparation	55,000	4,125	59,125	7.5	12	
			Additional funding for HPMP - Total	55,000	4,125	59,125			

Country	Type	Substance	Title of Project	Requested amount USD	A.S.C USD	Total (incl ASC) USD	A.S.C. %	P.D.	Coop. with IAs
New req. for HPMP preparation (HPMP)									
Guatemala	PRP	HCFC	HPMP preparation	75,000	5,625	80,625	7.5	12	UNEP
Myanmar	PRP	HCFC	HPMP preparation	42,500	3,188	45,688	7.5	12	UNEP
			Funding for HPMP Plan Total	117,500	8,813	126,313			
ODS Disposal project preparation									
Chile	PRP	SEV	Pilot project for ODS destruction	60,000	4,500	64,500	7.5	12	
China	PRP	SEV	Pilot project for ODS destruction	100,000	7,500	107,500	7.5	12	
Croatia	PRP	SEV	Pilot project for ODS destruction	30,000	2,250	32,250	7.5	12	
DPRK	PRP	SEV	Pilot project for ODS destruction	40,000	3,000	43,000	7.5	12	
Iran	PRP	SEV	Pilot project for ODS destruction	60,000	4,500	64,500	7.5	12	
Macedonia	PRP	SEV	Pilot project for ODS destruction	30,000	2,250	32,250	7.5	12	
Nicaragua	PRP	SEV	Pilot project for ODS destruction	40,000	3,000	43,000	7.5	12	
Pakistan	PRP	SEV	Pilot project for ODS destruction	40,000	3,000	43,000	7.5	12	
Serbia	PRP	SEV	Pilot project for ODS destruction	40,000	3,000	43,000	7.5	12	
Turkey	PRP	SEV	Pilot project for ODS destruction	60,000	4,500	64,500	7.5	12	
Venezuela	PRP	SEV	Pilot project for ODS destruction	70,000	5,250	75,250	7.5	12	
			Funding for ODS disposal pilot projects	570,000	42,750	612,750			
Technical Assistance for Funds Mobilization									
Global	TAS	SEV	Funds mobilization	300,000	22,500	322,500	9	12	
			Total Funds Mobilization	300,000	22,500	322,500			
			GRAND TOTAL	1,774,847	134,614	1,909,461			

UNIDO

Work Programme - 57th ExCom
Final (24 February 2009)

Section 2

Project concepts

Project Concept

Country:	Armenia
Title:	Institutional Strengthening for the implementation of Montreal Protocol in Armenia
Project Duration:	24 months
Project Budget:	129,000 (including US\$ 9,000 representing 7.5% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Nature Protection of Armenia

Project Summary

The project aims at **institutional strengthening and capacity building of the Ministry of Nature Protection** and will ensure helping the Government meet its obligations under the Montreal Protocol on the substances that deplete the Ozone Layer.

In this context, the National Ozone Office will be assisted in monitoring and identification of Ozone-depleting substances consumption and up-dating the needed national policies and regulations.

The NOU will monitor all the project activities as per the Country Programme, including the collection of consumption data and reporting as required, with a specific view to HCFCs phase-out schedule for the Art. 5 countries.

Project Concept

Country: **Argentina**

Title: Preparation of investment projects for the conversion of ten air-conditioning manufacturing companies to non-HCFC based technologies

Project Duration: 12 months

Project Budget: 86,000 (including 7.5% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: OPROZ, Ministry of Environment

Project Summary

UNIDO received an official Government request from Argentina to prepare investment projects for the phase-out of HCFCs in the air-conditioning manufacturing sector at ten companies.

Manufacturer	Production start	Units produced 2008	R-22 consumption 2008 [kg]
Audivic	2005	120,000	156,000
BGH	1982	259,567	243,000
Digital Fueguina (Garbarino)	2007	74,570	70,840
Electrofuegina (Fravega)	2005	123,409	81,200
Foxman Fueguina	2004	8,000	6,200
Good Cold	1996	980	2,040
Interclima (Mirgor)	2004	325,190	292,000
Multicontrol	1983	5,546	12,500
New Scan*	1999	157,850	147,400
RVF-SOMTEC-MEGASAT	1984	169,253	128,000
Total		1,244,365	1,139,180

*: 55% local ownership (2008 production data based on local ownership only)

Potential technology selection: HFC-410A, and in some cases HFC-417 and HFC-404A. Final decision on alternative selection will be made during project preparation.

Project Concept

Country: Republic of Macedonia

Title: Extension of Institutional Strengthening Project - Phase VI

Project Duration: 24 months

Project Budget: 142,273 (including US\$ 9,926 representing 7.5% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: Ministry of Environment and Physical Planning - Republic of Macedonia

Project Summary

UNIDO received an official Government request from the Ministry of Environment and Physical Planning - Republic of Macedonia for the renewal of the institutional strengthening support for Macedonia, Phase VI.

The project objective aims improved capacity of government structures responsible for Ozone Depleting Substances Phase-out with a specific view to achieve compliance to HCFCs phase-out.

Project Concept

Country:	Cambodia
Title:	Technical Assistance for the total phase-out of CTC and TCA in solvent sector and compliance to Montreal Protocol targets
Project Duration:	12 months
Project Budget:	43,600 US\$ ((including US\$ 3,600 representing 9% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	NOU - Ministry of Environment

Project Summary

The CTC and TCA consumption in the last 3 years is less than 2MT, and the solvent sector has not been covered by already approved TPMPs

The TA project will ensure support for monitoring activities and training to ensure the country compliance to the final elimination targets and in line with the Montreal Protocol commitments.

The Governments of Cambodia have specifically requested UNIDO's technical assistance to address the phase-out of the remaining CTC/TCA consumption. Both TAS requests are in line with ExCom Decision 45/14. In addition to possible CAP activities, UNIDO is planning to make a survey of the remaining CTC/TCA uses in the countries, will hold awareness raising workshops and provide tailor-made assistance to the end-users, and identify critical laboratory uses for which alternatives may not be available, for an effective and sustainable phase-out and for preparation of EUN in case required. This concept has already been successfully implemented by UNIDO in several countries in similar situation.

Project Concept

Country: Kenya

Title: Technical Assistance for the total phase-out of CTC and TCA in solvent sector and compliance to Montreal Protocol targets

Project Duration: 12 months

Project Budget: 43,600 US\$ ((including US\$ 3,600 representing 9% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: NOU - Ministry of Environment

Project Summary

The CTC and TCA consumption in the last 3 years is less than 2MT, and the solvent sector has not been covered by already approved TPMPs

The TA project will ensure support for monitoring activities and training to ensure the country compliance to the final elimination targets and in line with the Montreal Protocol commitments.

The Governments of Kenya have specifically requested UNIDO's technical assistance to address the phase-out of the remaining CTC/TCA consumption. Both TAS requests are in line with ExCom Decision 45/14. In addition to possible CAP activities, UNIDO is planning to make a survey of the remaining CTC/TCA uses in the countries, will hold awareness raising workshops and provide tailor-made assistance to the end-users, and identify critical laboratory uses for which alternatives may not be available, for an effective and sustainable phase-out and for preparation of EUN in case required. This concept has already been successfully implemented by UNIDO in several countries in similar situation.

Project Concept

Country: Chile

Title: Elimination of MeBr in soil fumigation (horticulture, mainly strawberry sector)

Project Duration: 12 months

Project Budget: 53,750 US\$ (including 7.5% Agency Support Cost)

Implementing Agency: UNIDO

Coordinating Agency: Ministry of Environment (CONAMA)

Project Summary

Project preparation to submit an investment project to eliminate the 175 ODP tones before 2015, which still consuming by the country in soil fumigation, mainly in the strawberry production.

Project Concept

Country:	China
Title:	Preparation of two demonstration projects for the conversion of two manufacturing lines to two non-HCFC based technologies in the room air-conditioning sector
Project Duration:	12 months
Project Budget:	64,500 (including 7.5% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Environmental Protection

Project Summary

China is the largest producer of room air conditioners worldwide. The sector consists of some 100 companies. Due to the climatic conditions of the country the use of room air conditioners is wide-spread in offices, medical and educational institutions, households etc. Currently there are no final alternatives to replace HCFC-22 in the sector. The most promising technologies are hydrocarbons (HCs), hydrofluorocarbons (HFCs) and carbon dioxide (CO₂). The selection of the most appropriate alternatives has to be matched with the availability of the new refrigerant in China, its price, cost of conversion, cost of new components required, safety and environmental considerations, and market acceptance.

UNIDO received a government request from China to prepare two demonstration projects for the room air-conditioning manufacturing sector to study the technical and financial implications of the conversion to:

- a) HFC-410A and
- b) HC290 alternatives.

Company information:

1) Qingdao Haier

- Established in 1984
- Start-up of production of room air-conditioners in 1992
- Total number of production lines: 16;

- Number of room air-conditioners produced in 2007: approximately 8,940,000 units, of which about 2,560,000 sets were exported;
- Total consumption of HCFC-22 in 2007: approximately 10,000 metric tons;
- Annual production level of the targeted demonstration production line: about 300,000 units;
- The annual consumption of this line is about 300 metric tons;
- Proposed alternative: HC-290.

2) Guangzhou Midea

- Established in 1968
- Start-up of production of room air-conditioners in 1981
- Total number of production lines: 90;
- Total number of room air-conditioners produced in 2008: about 15,000,000 units;
- Total consumption of HCFC-22 in 2008: about 12,000 metric tons;
- Annual production level of the targeted demonstration production line is about 500,000 units;
- Annual consumption of this line is about 400 metric tons;
- Proposed alternative: HFC-410A.

The above demonstration projects will provide sufficient information required for the preparation for the sector plan including selection of medium-term alternative(s), technical and technological requirements, detailed costing of conversion (incl. ICC and IOC).

The project has also global implications in two sense:

- A) Since China is the biggest supplier of air-conditioners worldwide, early phase-out of the use of R-22 in the manufacturing of room ACs in China will benefit the phase-out efforts of other A5 countries.
- B) Lessons learned in the conversion can be utilized in other A5 countries manufacturing room ACs with R-22.

The alternative technology for each demonstration project will be finalized in the preparation stage.

Project Concept

Country:	China
Title:	Preparation of a demonstration project for the conversion of a compressor manufacturing line to non-HCFC based technology in the room air-condition sector
Project Duration:	12 months
Project Budget:	32,250 (including 7.5% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Environmental Protection

Project Summary

China is the largest producer of room air conditioners worldwide. The selection of the most appropriate alternatives has to be matched with the availability of the new refrigerant in China, its price, cost of conversion, cost of new components required, safety and environmental considerations, and market acceptance.

UNIDO received a government request from China to prepare a demonstration project for the conversion of a compressor manufacturing line to non-HCFC based technology in the room air-conditioning manufacturing sector to study the technical and financial implications of the conversion.

Company information:

3) Shanghai Haili - compressor manufacturer

- Established in 1954
- Start-up of production of room air-conditioners in 1986
- Total number of compressors produced in 2007: about 12,660,000 sets, of which about 1,660,000 sets were exported;
- Annual production at the targeted demonstration production line: about 100,000 compressors;
- The annual indirect consumption of this line is about 130 metric tons;
- Proposed alternative: HC-290.

Project Concept

Country:	Indonesia
Title:	Preparation of demonstration projects for the conversion technology at two different sub-sectors of the polyurethane foam; rigid polyurethane sandwich panel production and flexible moulded foam production, to two non-HCFC and low GWP based technologies.
Project Duration:	12 months
Project Budget:	64,500 (including 7.5% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Environment

Project Summary

Located at the cross-road of the Asian Pacific, between two oceans and two continents of Australia and Asia, Indonesia is the largest archipelago in the world consisting of about 17,000 islands with total area of 9.8 million square kilometers (7.9 million km² sea and 1.9 million km² land).

With an economic growth of 6.3 per cent in 2007 and a Gross Domestic Product (GDP) per capita of US \$1,858, Indonesia is emerging as one of the world's Middle Income Countries.

Almost 90% of global greenhouse gas (GHG) emissions come from five sources: energy (25.9%), industry (19.4%), forestry (17.4%), agriculture (13.5%) and transport (13.1%). Extensive use of fossil fuel, deforestation, agricultural practices, waste and other energy sources are responsible for much of global warming.

Indonesia is an Article 5 country with a large foam sector which includes all sub-sectors, flexible box foam, flexible slabstock, flexible moulded and integral skin, extruded polystyrene and polyethylene, phenolic foams and rigid polyurethane foam, being the largest in terms of foam produced and ODS consumed. Due to the climatic conditions of the country and energy saving efforts insulating materials play very important role for new designs in civil construction and

refrigeration sectors. Currently there are no final alternatives to replace HCFC-141b in the sector. The most promising technologies are hydrocarbons (HCs), methyl formate and carbon dioxide (CO₂). The selection of the most appropriate alternatives has to be matched with the availability of the new blowing agents in Indonesia, its price, cost of conversion, capital investments and cost of new components required, safety and environmental considerations, and market acceptance.

UNIDO received a government request from Indonesia to carry out stand alone demonstration projects of HCFC phase-out in the foam industry.

Company information:

1) PT Airtekindo Prima

- Established in 1993
- The company has two continuous lines for the production of rigid PU sandwich panels. Two sides Al-sheet laminated panels are used mainly for the fabrication and installation of the ductworks.
- In 2008 the company produced almost 700 tonnes of sandwich panels and consumed more than 60 tonnes of HCFC 141b.
- Company opted for the conversion to low operational cost cyclopentane blowing. The company has its own premixing facility to prepare 10-component batches which should be replaced with accurate direct metering and dosing to multi component mixing head, to ensure economy in the use of components explosion safety and quality of end products.
- The company is ready to establish their converted technology on the use of domestic cyclopentane, thus validation of new technology for the use of C-5 fractions to be supplied by Indonesian petrochemical producer, Pertamina will be also subject of the demonstration project.
- The proposed technology is new to Indonesia.

2) PT Universal Furnitech Industry

- Established in 1996
- The company is producing seats and chairs made of steel and wooden structures.
- More than 15,000 chairs per month are normally produced.
- The company is currently using HP foam dispenser serving 11 mould and still also hand mix technique normally

serving four smaller moulds for armrests and other smaller components like head rests.

- Foam density varies from 40 - 55 kg/m³ depending on the type of product (seat, back seat, armrest). Total consumption of HCFC-141b in 2008: about 12 metric tons;
- Proposed alternative technology liquid CO₂ blowing dosed directly to mixing head, complemented with minimal portion of CO₂ generated through water-isocyanate reaction to ensure optimal cell creation and thus homogenous flexible PU foam. The technology is new to Indonesia.

The above demonstration projects will provide sufficient information required for the preparation for the sector plan including selection of long term sustainable and energy saving alternatives with all climate concerns including no- (very low) global warming potential.

The technologies are new to Indonesia and therefore adaptability to local conditions as well as the use of locally made blowing agents will be also validated.

Lessons learned in the conversion can be utilized:

- in other sectors like domestic and commercial refrigeration,
- in other A5 countries to produce high quality insulating materials and high comfort durable sitting furniture.

The alternative technology for each demonstration project will be finalized in the preparation stage.

Project Concept

Country: Croatia

Title: Project preparation for the phase-out of HCFC-141b in the PU Foam Production

Project Duration: 18 months

Project Budget: 43,000 (including 7.5% Agency Support Costs of US\$ 3,000)

Implementing Agency: UNIDO

Coordinating Agency: Ministry of Environment (MEPPPC)

Project Summary

UNIDO received an official Government request for preparation of an investment project for the phase-out of approximately 40 MT of HCFC-141b in the PU Foam production in Croatia

Name of the companies:

- Pavusin established in 1997
- Poli-Mix established in 1998

HCFCs consumption:

Approximately 40 MT HCFC -141b

Products:

- Sandwich panels hard PU Foam blocks, integral skin

Project Concept

Country: Uruguay

Title: Project preparation for a demonstration to eliminate HCFC use in the refrigeration manufacturing sector

Project Duration: 12 months

Project Budget: 64,500 (including 7,5% Agency Support Cost)

Implementing Agency: UNIDO

Coordinating Agency: Direccion Nacional de Medio Ambiente, Ministry of Environment

Project Summary

UNIDO received an official Government request for preparation of a demonstration project for the elimination of approximately 10 MT of HCFC use in the refrigeration manufacturing sector in Uruguay

Two manufacturing refrigerator chamber companies located in Montevideo would be ready to adopt some alternatives. Both companies have been established before July 1995.

Alternative technology to be considered under preparatory activities will be different refrigerants adapted to the condition and system of the companies. Test on efficiency, energy consumption will be carried out

Company information:

1) Company One

- Established in 1978
- Start-up of production of commercial refrigeration chambers in 1978
- Number of tailor made chambers produced in 2007: approximately 400 units for the local per unit about 15 kgs average.
- Total consumption of HCFC-22 in 2007: approximately metric tons;

- Annual production level of the targeted demonstration about 40 units;
- Proposed alternative: HFC Blend and Hydrocarbons blend including the necessary safety measures.
- Located in Montevideo

Company information:

1) Company Two

- Established in 1984
- Start-up of production of commercial refrigeration chambers 1984
- Number of tailor made chambers produced in 2007: approximately 300 units for the local average of 13 Kg
- Total consumption of HCFC-22 in 2007: approximately 4 metric tons;
- Annual production level of the targeted demonstration about 30 units;
- Proposed alternative: HFC Blend and Hydrocarbons blend including the necessary safety measures.
- Located in Montevideo

Results of the demonstration will be disseminated through workshops, conferences and network meeting to interested Article 5 countries with emphasis to the region.

Project Concept
Additional funding for HPMPs preparation

Country: Albania, Guatemala and Myanmar

Title: Preparation HPMP

Project Duration: 12 months

Project Budget: as per the summary table above

Implementing Agency: UNIDO

Coordinating Agency: National Ozone Unit

Project Summary

In response to Decision 56/16 UNIDO is submitting three funding requests for HPMP preparation.

Guatemala and Myanmar have not yet received HPMP preparation funding. These projects will be implemented in cooperation with UNEP as decided by the Governments concerned.

Albania received US\$ 30,000 for HPMP preparation at the 55th ExCom Meeting based on the zero HCFC consumption reported at that time. Since Albania has reported HCFC consumption in its 2007 data reporting, Albania is eligible for US\$ 85,000 for HPMP preparation funding in line with ExCom Decision 56/16. In light of the above US\$ 55,000 plus support cost is requested as additional HPMP preparation funding for Albania.

Project Concept

Country:	Several (Chile, China, Croatia, DPR Korea, Iran, Macedonia, Nicaragua, Pakistan, Serbia, Turkey, Venezuela)
Title:	Preparation ODS disposal pilot projects
Project Duration:	12 months
Project Budget:	as per the table above
Implementing Agency:	UNIDO
Coordinating Agency:	National Ozone Unit

Project Summary

Following the Decision XX/7 of the Meeting of the Parties to Montreal Protocol, related to the Environmentally sound management of banks of ozone-depleting substances, is requesting both IAs and MLF to consider as a matter of urgency commencing pilot projects that may cover the collection, transport, storage and destruction of ozone-depleting substances, UNIDO included in the work plan related preparatory related activities.

The future pilot projects for ODSs destruction will address the total available know stocks for destruction, by addressing the include the following activities:

- unwanted ODS inventory
- collection and transportation
- screening in technologies and selection of destruction methods
- up-date of national legislation and regulations to support destruction activities
- training needs and training programmes to develop the country capacity in dealing with ODS destruction issues and unwanted future ODS stockpiling
- consideration of potential different funding sources (as CDM and voluntary markets, or other financial instruments)

Expected amount of ODSs to be destroyed:

Country	Sector / Sub-Sector	Total ODP tonnes
Chile	Pilot project for the destruction of ODSs	60.0
China	Pilot project for the destruction of ODSs	100.0
Croatia	Pilot project for the destruction of ODSs	15.0
Iran	Pilot project for the destruction of ODSs	30.0
Korea, DPR	Pilot project for the destruction of ODSs	10.0
Macedonia, FYR	Pilot project for the destruction of ODSs	10.0
Nicaragua	Pilot project for the destruction of ODSs	10.0
Pakistan	Pilot project for the destruction of ODSs	50.0
Serbia	Pilot project for the destruction of ODSs	50.0
Turkey	Pilot project for the destruction of ODSs	14.0
Venezuela	Pilot project for the destruction of ODSs	200.0

Project Concept

Country: Global

Title: Mobilizing additional funds through the special facility under the MLF to count for the climate co benefits of the HCFCs phase out projects

Project Duration: 12 months

Project Budget: 322,500 (including 7.5% Agency Support Costs)

Implementing Agency: UNIDO

Project Summary

Reference: the MLF facility for resource mobilization funding

This proposal has reference to the resource mobilization funding that UNIDO included in its business plan.

The proposal takes into account the discussions about the issue held in Montreal during the coordination meeting on 26-27 Jan. 09. Furthermore, the below considerations have been taken into account in developing this proposal:

- GEF provides funding for projects in the thematic areas of interest, such as those relating to the UNFCCC, UNBDC and UNDCC. Projects aiming at energy saving and increase the energy efficiency are usually funded.
- GEF operates through national Focal Points (NFP) within governments and in most cases the projects proponents or counterparts are governmental entities (Energy Ministry, Agricultural Ministry, transportation Ministry, etc).
- GEF has limited access/experience in working with individual companies in the private sector especially if they are SMEs.
- GEF confounding requirements made more complex for developing countries to fully benefit from the GEF. And this is more apparent when SMEs were concerned.
- MLF has the mandate to provide funding and assistance for covering the incremental costs relating to the ODS phase out.
- MLF and IAs have a long history of successful cooperation with A5 countries conversion projects at national and

- enterprise level (over than 5000) projects have been implemented so far). MLF has been successful in building partnership with A5 countries and in developing a good system to deal with big number of national and individual projects in a very smooth and cost effective manner.
- MLF has been successful in achieving remarkable results in the reduction of GHG emissions as a by-product of ODSs phase out projects. However, the generation of climate benefits is not mandated by the MP and therefore associated costs are not covered by MLF.
 - Partnership between the GEF and MLF would serve the purposes of both bodies and make use of the strength of each other specifically in the HCFCs phase out era, taking into account the decisions of the MOP and ExCom to adopt alternatives that generate climate and environment co benefits where applicable.

Proposal:

To develop a concept and methodology to calculate the additional costs to be born by the MLF corresponding to the introduction of alternatives or practices that generate climate co benefits. Such additional costs are mostly related to the improvements of the energy performance during manufacturing and subsequently increased energy efficiency of equipments during operation. This is due to the fact that in the refrigeration and A/C equipment, the indirect emissions are dominant in most cases.

Such additional costs could be then covered by the GEF through a special facility at the MLF to allow for more approvals of phase out projects with co climate benefits without jeopardizing the limited funds under the current replenishment.

It is needless to mention that such additional costs will be definitely less compared to costs to be paid by GEF to achieve the same results through their current way of business to implement stand alone projects with the objective to increase the energy efficiency of production and equipments at a designated manufacturing facility (estimated at 15- 20% of the total project).

A conversion project funded by the MLF covers usually the remaining costs relating to activities that are required any way to enable manufacturing enterprises to improve their energy performance.

One should consider that in most developing countries, equipments manufacturers are not required to improve the energy efficiency of their products if it means additional costs to be born by them either due to modification of process or materials costs. As savings generated due to increased

energy efficiency would be usually beneficial to end-users and subsequently to developing countries governments due to reducing of required investments in power generation to meet the national growing demands.

UNIDO is therefore requesting 300,000 US\$ to workout the methodology and concept in collaboration with GEF and apply it to one of its pilot projects at PETRA Co. in Jordan.

The idea is to avoid the very complicated and lengthy procedure relating to the calculation of Co2 emission reductions and validating of CERs. The anticipated methodology should enable both UNIDO and GEF calculate the climate co benefits in an easy and straightforward manner and agree on the contribution to the special facility.

Similarly, UNIDO plans to use part of the above requested funds for developing a methodology for the calculation of climate co benefits (maybe in CERs form) resulted from the implementation of one of its pilot projects on proper environmental management and destruction of unwanted ODSs in A5 countries. The concept shall also streamline MLF funds with available funding from other institutions for similar activities (FAO funds for the proper management of unwanted chemicals: insecticides and pesticides).

The concepts and methodologies to be developed could be then used as model for replication with other similar activities and projects.

The application of the methodologies in two of UNIDO pilot projects is planned to apply in our HCFCs phase out project at Petra Co. in Jordan and on one of the management and destruction projects.

Cost breakdown (in US\$):

International Consultants	72,000
National Consultants	48,000
Travel	30,000
Equipment (for demonstration)	100,000
Management, monitoring and training	50,000
Total	300,000