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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Fiftieth Meeting
New Delhi, 6-10 November 2006

PROJECT PROPOSALS: EGYPT

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposals:

Aerosol

- Phase-out of CFC consumption in the manufacture of aerosol metered dose inhalers (MDIs) — UNIDO

Phase-out

- National CFC phase-out plan (second tranche) — UNIDO

PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECTS
EGYPT

PROJECT TITLES	BILATERAL/IMPLEMENTING AGENCY
(a) Phase-out of CFC consumption in the manufacture of aerosol metered dose inhalers (MDIs)	UNIDO

NATIONAL CO-ORDINATING AGENCY	EEAA, Ozone Unit

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2005, AS OF OCTOBER 2006)

Annex A Group I, CFCs	821.20		

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF OCTOBER 2006)

ODS Name	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity.
CFC-11	Data not yet received			
CFC-12				
CFC-113				

CFC consumption remaining eligible for funding (ODP tonnes)	

CURRENT YEAR BUSINESS PLAN ALLOCATIONS		Funding US $ million	Phase-out ODP tonnes
	(a)		

PROJECT TITLE*:	**(a)**
ODS use at enterprise (ODP tonnes) 2003-2005:	163.1
ODS to be phased out (ODP tonnes):	163.1
ODS to be phased in (ODP tonnes):	n/a
Project duration (months):	38
Initial amount requested (US $):	
Project cost (as submitted):	
Incremental Capital Cost (US $)	1,788,416
Contingency (10%) (US $)	178,842
Technology Transfer fee	4,280,000
Incremental Operating Cost (US $) – 2 years	2,522,012
National MDI Transitional Strategy	199,400
Total Project Cost (US $)	8,968,670
Local ownership (%):	
Export component (%):	
Requested grant (US $):	8,968,670
Cost-effectiveness (US $/kg):	54.98
Implementing agency support cost (US $):	672,650
Total cost of project to Multilateral Fund (US $):	9,641,320
Status of counterpart funding (Y/N):	Yes
Project monitoring milestones included (Y/N):	Yes

*Project data as originally submitted

SECRETARIAT'S RECOMMENDATION	Pending

PROJECT DESCRIPTION

1. On behalf of the Government of Egypt, UNIDO has submitted the national strategy for the phase-out of CFCs in metered dose inhalers (MDIs) in Egypt, together with an investment project proposal for the phase-out of 163.1 ODP tonnes of CFC-11 and CFC-12 used in the manufacture of MDIs at a total cost of US $8,968,670 plus agency costs of US $672,650 for consideration by the Executive Committee at its 50th Meeting.

Sector background

2. Production of MDIs in Egypt began in 1984. According to data from the Ministry of Health and Population, between 5 and 7 per cent of the population is affected by asthma, 2 per cent by allergic respiratory diseases and between 1 and 2 per cent by chronic obstructive pulmonary disease (COPD). There are two established domestic manufacturers of CFC-based MDIs in Egypt: the Arab Drug Company (ADCO) and the Egyptian International Pharmaceutical Industries Co., (EIPICO). Additionally, a number of multinational corporations offer several medications for asthma and CODP, including CFC-based salbuatmol MDIs, salbuatmol and fluticasone both as HFC-134a-based MDIs and as dry powder inhalers (DPI), and budesonide DPIs.

Types of MDIs produced by national companies

3. In 1991, ADCO began manufacturing two CFC-based MDIs under license from Chiesi Farmaceutici. Currently, these MDIs continue to be manufactured under the same brand name, although there is no longer a commercial license or limitation in place. ADCO has also introduced its own branded MDIs for: salbutamol; salbutamol with beclamethasone dipropionate (produced from individual actives); beclamethasone dipropionate; and, since 2002 salmeterol xinofoate. Between 1991 and 1999, MDI production increased from about 294,000 MDIs to 2.1 million MDIs. In 1999, the company started to export MDIs to other Article 5 countries (some 590,000 MDIs). Since then, MDI production has increased continuously, reaching 6.6 million MDIs in 2005. The total current CFC consumption used for the production of MDIs is 145.9 ODP tonnes.

4. ADCO also manufactures a CFC-based throat spray and a CFC-based topical aerosol (both products, with a total CFC consumption of 18 tonnes, will be converted to non-CFC technology without assistance from the Multilateral Fund). These products have been produced with the same equipment used for the manufacture of the MDIs.

5. EIPICO began the production of CFC-based MDIs in 1984 as a licensee of 3M Riker (who is still the license holder for Aerolin salbutamol in Egypt). Between 1995 and 2005, the production of salbutamol CFC-MDIs increased from 600,000 to 1.05 million units. This MDI is offered in a 200 and a 400 dose package (using the same canister and the same valve in both packages). The total current CFC consumption used for the production of MDIs is 17.2 ODP tonnes.

6. The two companies have decided to convert their CFC-based MDIs to HFC-134a technology, which will require technology transfer from an established enterprise that has experience in MDI manufacture using these technologies, and who owns the right to transfer such technology without infringement of any intellectual property rights.

National strategy for the phase-out of CFC-based MDIs

7. The Government of Egypt has prepared a national strategy for the phase-out of CFC-based MDIs, aimed at meeting a timetable and criteria that has been agreed by all stakeholders. The strategy is based on patients' health as the first priority, ensuring that access to appropriate treatment is not interrupted, and on the development and implementation of an education programme with participation from major stakeholders, (i.e., patients, health professionals, representatives from relevant ministries and Government authorities, pharmaceutical companies, and the public in general). CFC-based MDIs will be phased out following the introduction and full acceptance by health professionals and patients of non-CFC-based MDIs and/or other medications (i.e., DPIs).

8. The cost of implementing the transition strategy, excluding the costs associated with the investment project and the technology transferred, is US $199,400, with the following breakdown:

Activity	Cost (US $)
Legal/medical advisors	23,600
Information/education campaign	43,000
Follow-up and control	32,800
Monitoring and supervision	100,000
Total	**199,400**

9. The Government of Egypt is proposing to launch a first batch of non-CFC-based MDIs 28 months after the national transition strategy and the MDI phase-out investment project have been approved by the Executive Committee. The final reformulated product would be launched three to four months after the first product is launched.

Investment project proposal for ADCO

10. For the production of MDIs, ADCO has three manufacturing lines in two different locations with a total annual capacity of over 10 million units. The company has already decided to consolidate all the MDI manufacturing process at one plant (the construction of the plant sites and related services will be funded directly by ADCO). ADCO is requesting the installation of two new production lines with a total annual capacity of 8 to 9 million units. The company uses the industry standard pressure filling process, and the proposed filling equipment will be capable of both single- and two-stage filling, allowing both types of formulations to be used. The total capital cost associated with the installation of the two production lines has been estimated at US $1,764,759.

11. The proposed modifications for the new HFC-134a-based MDIs, by active ingredient, are shown in the table below, with associated technology transfer costs:

Active Ingredient	Proposed Modifications	Technology Transfer Cost (US $)
Salbutamol sulphate	Pressure filled, HFA/ethanol formulation with surfactant. Standard container.	870,000
Beclamethasone dipropionate	Pressure filled, HFA/ethanol formulation with active dissolved in ethanol. Standard container.	870,000

Active Ingredient	Proposed Modifications	Technology Transfer Cost (US $)
Salbutamol sulphate and beclamethasone dipropionate	Pressure filled, HFA formulation with no surfactant. Container internally coated. This product has not been re-launched internationally due to formulation difficulties and newer products being available.	1,050,000
Salmeterol xinafoate	Pressure filled, HFA formulation with no surfactant. Container internally coated.	870,000
Total cost		**3,660,000**

12. Incremental operating costs, calculated on the basis of the difference in prices between CFCs and HFC-134a, and the increased costs of canister, metering valve and actuator, have been estimated at US $2,331,612 for a two-year period.

Investment project proposal for EIPICO

13. EIPICO has one MDI manufacturing line based on a manual process using the cold filling process, which is relatively specialized and is not used by the majority of companies producing non-CFC based MDIs. For the production of HFC-134a MDIs, EIPICO will continue to use the cold filling approach, but intends to upgrade from a manual process to an automatic process (all the costs associated with the facility upgrade will be paid by the enterprise). The total capital cost associated with the modification of the production line has been estimated at US $202,499.

14. The costs associated with technology transfer for the salbutamol MDI currently manufactured by EIPICO have been estimated at US $620,000. Incremental operating costs have been estimated at US $190,400 for a two-year period.

Total cost of the conversion

15. The total cost of the phase-out of CFCs used in the manufacture of MDIs in Egypt, including the cost of the national phase-out strategy, amounts to US $8,868,670 with the following breakdown:

Description	Total Costs (US $)		
	ADCO	EIPICO	Total
Technology transfer			199,400
Capital costs	1,764,759	202,499	1,967,258
Technology transfer	3,660,000	620,000	4,280,000
Operating costs	2,331,612	190,400	2,522,012
Total	**7,756,371**	**1,012,899**	**8,968,670**

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

16. The Secretariat reviewed the national strategy for the phase-out of CFCs in MDIs in Egypt and the investment phase-out project in light of: the two MDI policy papers considered by the Executive Committee at its 37th Meeting (UNEP/OzL.Pro/ExCom/37/58) and at its 49th Meeting (UNEP/OzL.Pro/ExCom/49/39); the MDI phase-out project in Cuba that was approved at the 41st Meeting, the subsequent request by the Government of Cuba for the change

of technology provider discussed at the 46th Meeting; and the MDI phase-out project in Uruguay approved at the 43rd Meeting.

17. The following are the main issues that the Secretariat raised and discussed with UNIDO:

(a) CFC consumption in the MDI sector;

(b) Scope and cost of the national strategy for the phase-out of CFC-based MDIs;

(c) Issues related to salmeterol MDIs;

(d) Technical and cost issues related to the two production facilities;

(e) Technology transfer; and

(f) Incremental operating costs.

CFC consumption in the MDI sector

18. The Secretariat pointed out to UNIDO that three different figures for CFC consumption in the MDI and pharmaceutical aerosol sector in Egypt were given in the documentation provided to the 50th Meeting, namely: the project proposal (163.1 ODP tonnes), the national CFC phase-out plan for the MDI sector in Egypt (189.05 ODP tonnes) and the verification report accompanying the NPP (120 metric tonnes). UNIDO responded that it believed the figure provided by the verification report to be incorrect for a number of reasons, and went on to explain that the figure of 163.1 ODP tonnes was based on average consumption over the last three years, but that consumption by the two MDI manufacturing enterprises covered by the project proposal was in fact 159.5 ODP tonnes of CFCs in 2005. The consumption figure in the national strategy included some 18 tonnes of CFCs used at ADCO for the manufacturing of pharmaceutical aerosols for which the company was not requesting funding. UNIDO revised the project proposal accordingly.

Scope and cost of the national strategy

19. Taking into consideration that several HFC-134a-based MDIs and DPIs have already been introduced and are currently being used in Egypt and that the two locally-owned MDI manufacturing enterprises have already selected the HFC-134a technology and detailed project proposals have been fully developed and submitted for approval by the Executive Committee, the cost of the national strategy was agreed at US $99,400 instead of US $199,400 originally requested, which will allow for the implementation of the main activities proposed.

Issues related to salmeterol MDIs

20. In reviewing published literature on the different active ingredients in MDIs currently manufactured in Egypt, the Secretariat found references to a study on the risks associated with the use of long-acting beta-antagonists (including salmeterol which is currently manufactured by ADCO). The study (published in the Annals of Internal Medicine on 5 June 2006 and cited in several other medical publications) states that, “long-acting beta-agonist use increases the risk for hospitalizations due to asthma, life-threatening asthma exacerbations, and asthma-related

deaths. Similar risks are found with salmeterol and formoterol…" The study goes on to say that, "this information could be used to reassess whether these agents should be withdrawn from the market", but also notes that, "the small number of deaths limited the reliability in assessing this risk, and 28 studies did not report information on the outcomes of interest."

21. This issue was raised with UNIDO which is now in the process of contacting the Government of Egypt. The country's response will be communicated to the members of the Executive Committee as soon as it is received.

Technical and cost issues related to the two production facilities

22. In regard to the phase-out of CFCs at EIPICO, the Secretariat queried UNIDO as to the potential cost benefits of establishing a new production line (of an equal capacity with its current production line) based on the pressure filling process, rather than upgrading the cold filling line. That way, there would be no need to request technology transfer costs twice for the production of salbutamol, since both companies would be using the same production process. Furthermore, by switching from the cold filling to the pressure filling process, EIPICO could use the level of funding that it was planning to spend on upgrading its facility to address the issue of technological upgrade (as a company contribution to the Fund).

23. UNIDO responded that while EIPICO would have preferred to switch its production to the pressure filling process, the contribution to compensate for the costs associated with upgrading the production line would be uneconomical from the perspective of the enterprise. More detailed analysis revealed that the equipment cost for establishing a production line based on the pressure filling process would be US $400,000 and that the technology provider that had submitted quotations for the development of the HFC-134a MDIs in Egypt had advised UNIDO that the development of salbutamol MDIs could be considered as one package (covering the two companies) for a total cost of US $985,000 instead of US $1,490,000.

24. The Secretariat noted that this approach would represent a total of US $305,000 in savings for the Multilateral Fund (based on the technology transfer costs as presented in the original proposal). On this basis, UNIDO agreed to redesign relevant sections of the project proposal.

25. The Secretariat and UNIDO also discussed technical issues related to the feasibility of utilizing and/or retrofitting some baseline equipment items when replacing CFCs by HFC-134a, and whether or not the technological upgrade and increased capacity of the replacement equipment for ADCO had been taken into account. UNIDO informed the Secretariat that the equipment proposed for ADCO was based on the consolidation of its three production lines (with a total annual capacity of some 12 million MDIs) into two lines (at a reduced annual production of 9 million MDIs). This design enables ADCO to maximize production without resorting to the next production model, which would cost over US $1 million. UNIDO also indicated that retrofitting the baseline equipment was not feasible, since some equipment components, such as gaskets and hoses are not compatible with HFC-134a, the existing fillers cannot be used for suspension with HFC-134a, vacuum crimping is not possible with the current crimper, and manual valve placing is not accepted as good manufacturing practice.

26. The Secretariat also pointed out that some pieces of equipment (i.e., can sorter, valve inserters, valve sorting system, valve transporter and propellant pumps) being requested did not

qualify as incremental costs, since they were not related to the replacement of CFCs by HFC-134a. UNIDO is further considering the overall issue of incrementally, the outcome of which will be communicated to the Executive Committee prior to its Meeting.

Technology transfer

27. The costs associated with the technology transfer have been estimated at US $870,000 for each of the active ingredients salbutamol, beclomethasone, and salmeterol, US $1,050,000 for the combined salbutamol/beclomethasone MDI manufactured by ADCO, and US $620,000 for salbutamol manufactured by EIPICO.

28. In this regard, the Secretariat noted that valuable experience had been gained from the review of the MDI phase-out projects approved by the Executive Committee for Cuba and Uruguay. In the case of Uruguay, the project proposed to reformulate several MDIs to HFC-134a technology (i.e., salbutamol, salmeterol with fluticasone, fenoterol, ipratropium and fluticasone), using the technical staff of the enterprise, at a total cost of US $139,143. In the case of Cuba, the total cost of technology transfer was approved at US $1,040,000 and included the development of two HFC-134a-based MDIs (salbutamol and beclomethasone). These two products are also manufactured in Egypt. Therefore, on the basis of the MDI project for Cuba, the level of funding requested for salbutamol and beclomethasone manufactured by ADCO (US $870,000 for each active ingredient) and for salbutamol manufactured by EIPICO (US $620,000) would appear not to be justified.

29. Addressing this issue, UNIDO informed the Secretariat that the level of technical capabilities of the local staff at ADCO and its laboratory are not adequate to develop the new HFC-134a based MDIs. Furthermore, the request for technology transfer in the project proposal is based on the offer received by UNIDO from the same technology provider for the MDI phase-out project in Cuba. UNIDO had approached several multinational corporations requesting offers for technology transfer, without any success so far.

30. The Secretariat also asked UNIDO to give additional technical and economic consideration to the conversion of the salmeterol and the combined salbutamol/beclomethasone CFC-based MDIs manufactured by ADCO. Specifically, production of salmeterol had commenced only in 2005 with a very limited output, representing only 0.073 per cent of the company's total MDI production. The Secretariat further noted that in Uruguay, the manufacturing enterprise had recognized that some small-volume MDIs should not be reformulated and agreed to convert only five of its eleven different CFC-based MDI products to HFC-134a technology.

31. In response, UNIDO indicated that, in order to reduce the costs associated with the technology transfer UNIDO discussed with ADCO the possibility of reducing the number of products to be re-formulated to three, including salbutamol; a steroid (such as budesonide) and a combined product of a long acting beta-agonist (i.e., salmeterol, formoterol); and a steroid with low side effects (i.e., fluticasone, budesonide or ciclesonide). However, ADCO pointed out that it is the Government's strategy to increase the production of the MDIs currently manufactured by ADCO. Furthermore, UNIDO and the technology provider had also discussed the possibility of reducing the testing requirements for the new HFC-134a MDIs with the Egyptian Regulatory Agency. However, the Agency had stated that this was not an option and it would not consider reducing the requirements for registration of the HFC-134a MDIs

32. The Secretariat and UNIDO are still discussing issues related to the technology transfer, and UNIDO is also continuing to contact other potential providers of technology transfer. Outcomes of the discussions will be communicated to the Executive Committee.

Incremental operating costs

33. In regard to the total operating costs, the Secretariat observed that a number of factors made it preferable to calculate the incremental operating costs closer to the project's completion date. According to the tentative project schedule, the first HFC-134a-based MDI will be launched 28 months after implementation of the project had commenced (i.e., May 2009) and the final reformulated product would be launched potentially 3 or 4 months after (i.e., September 2009). By that time, limited CFC production would affect the overall supply situation for pharmaceutical-grade CFCs and have an impact on the prices of pharmaceutical-grade CFCs. Similarly, prices of other items used in the calculation of the incremental operating costs, such as canisters, metering valves and actuators, would also be different from the current prices.

34. The Secretariat also pointed out that the Executive Committee had approved the phase-out project in the MDI sector in Cuba on the understanding that it should not be construed as a precedent for a two-year duration for incremental operating costs in the MDI sector. Furthermore, according to the Indicative List of Categories of Incremental Costs: "…savings or benefits that will be gained at both the strategic and project levels during the transition process should be taken into account on a case-by-case basis, according to criteria decided by the Parties and as elaborated in the guidelines of the Executive Committee." In this respect the Executive Committee shall agree which time scales for payment of costs are appropriate in each sector." (Appendix I of decision II/8)

35. Based on the above observations and taking into consideration that operating costs or savings would only be realized upon project completion in early 2009, the Secretariat pointed out to UNIDO that it would advise the Executive Committee to consider the CFC phase-out project in the MDI sector in Egypt in two phases: Phase I would include all of the cost items required for conversion to non-CFC technology, including equipment, technology transfer, and the national strategy. Once the project is fully implemented (in 2009 or 2010), a request for operating costs or savings could be submitted as a phase II of the project, calculated on the basis of the MDI production levels prior to preparation of the project (i.e., some 7.5 million MDIs) as specified in the project proposal and the actual costs in 2009 or 2010 (when the project has been completed) of the items used to calculate incremental costs (i.e., CFCs, HFC-134a, ethanol, monobloc can, metering valve and actuator). The Executive Committee might also wish to consider the appropriate time scale for payment of operating costs/savings for the MDI sector.

36. Subsequently, UNIDO agreed to the approach proposed by the Secretariat.

RECOMMENDATION

37. Pending.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
EGYPT

PROJECT TITLE	BILATERAL/IMPLEMENTING AGENCY
National CFC phase-out plan (second tranche)	UNIDO

NATIONAL CO-ORDINATING AGENCY:	EEAA

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2005, AS OF OCTOBER 2006)

Annex A, Group I, CFCs	821.20		

B: PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF OCTOBER 2006)

ODS	Foam	Ref.	MDI	ODS	Solvents	Process agent*	Total
CFC-11	Data not yet received						
CFC-12							
CFC-113							
CFC-115							

CFC consumption remaining eligible for funding (ODP tonnes)	

CURRENT YEAR BUSINESS PLAN: Total funding US $:1,290 million: Total phase-out 207.9 ODP tonnes

PROJECT DATA		2004	2005	2006	2007	2008	2009	2010	Total
CFCs	Montreal Protocol limits	1,668	834	**834**	250	250	250	0	n.a.
	Annual consumption limit	1047	822	**595**	240	113	49	0	n.a.
(ODP	Annual phase-out from ongoing projects	-	35	**19**	27	23	25	0	129
tonnes)	Annual phase-out newly addressed	40	150	**182**	100	41	24	0	537
	Annual reduction through institutional measures	185	42	**0**	0	0	0	0	227
	Annual unfunded phase-out (MDI)	0	0	**154**	0	0	0	0	154
TOTAL ODS CONSUMPTION TO BE PHASED-OUT		**225**	**227**	**355**	**127**	**64**	**49**	**0**	**1,047**
Total ODS consumption to be phased in (HCFCs)									
Project cost as originally submitted (US $)									
Final project costs (US$):									
	Funding for UNIDO		1,000,000	**1,200,000**	600,000	200,000	100,000	0	3,100,000
	Total project funding		**1,000,000**	**1,200,000**	**600,000**	**200,000**	**100,000**	**0**	**3,100,000**
Final support costs (US$):									
	Support cost for UNIDO		75,000	**90,000**	45,000	15,000	7,500	0	232,500
	Total support costs		**75,000**	**90,000**	**45,000**	**15,000**	**7,500**	**0**	**232,500**
TOTAL COST TO MULTILATERAL FUND (US$)			**1,075,000**	**1,290,000**	**645,000**	**215,000**	**107,500**	**0**	**3,332,500**
Final project cost effectiveness (US$/kg)									5.16

FUNDING REQUEST: Approval for the second tranche (2006) as indicated above.

SECRETARIAT'S RECOMMENDATION	Blanket approval

PROJECT DESCRIPTION

38. On behalf of the Government of Egypt, UNIDO has submitted a request amounting to US $1,200,000 plus agency support cost of US $90,000 for the second tranche of the national CFC phase-out plan (NPP). UNIDO has also submitted a verification report on reported 2005 CFC consumption, prepared by an international consulting company, the 2005 progress report and the 2006 annual implementation programme.

Background

39. The NPP for Egypt was approved at the 46th Meeting of the Executive Committee at a total cost of US $3,100,000 to completely phase out CFC consumption by the end of 2009, in accordance with an agreement between the Government of Egypt and the Executive Committee. To achieve this target, a series of investment, non-investment, technical assistance, and capacity building activities will have to be carried out. Refrigeration management plan activities were approved and funded by the Multilateral Fund in Egypt at the 29th Meeting of the Executive Committee.

40. On behalf of the Government of Egypt, UNIDO has also submitted to the 50th Meeting of the Executive Committee the national strategy on CFC phase-out in the MDI sector, including two investment projects on conversion of MDI manufacturers to non-CFC technologies.

Verification report

41. The audit was consistent with the guidelines for the verification of national consumption targets of multi-year agreements approved by the 46th Meeting of the Executive Committee. The auditor identified that Egypt implemented an import licensing and quota system in 2000, supported by a number of legal instruments and Ministerial decrees. In summary, these decrees require any company or individual wishing to import ODS into the country to obtain an import permit. ODS import permits are issued and authorized solely by the National Ozone Unit (NOU). Customs officials will only permit goods into the country if a valid permit authorized by the NOU is provided by the importer. The schedule of authorized importers and distributors is maintained by the NOU and each importer is allocated an annual quota which cannot be exceeded.

42. The auditor verified the list of importers and distributors by auditing papers held in the NOU. The auditor confirmed that the appropriate process for issuing licenses and permits has been established together with the actions to be taken by customs in the case of suspicious shipment and in the case of non-compliance. In 2005, import quotas had been issued to 14 CFC-authorized importers for import of 722,700 kg of CFCs and to MDI manufacturers to import 111,300 kg of CFCs. The total 2005 quota amounted to 834 metric tonnes. The actual quantity imported in 2005 was 830 metric tonnes. The verification report provides the breakdown by sector and substance of the 2005 CFC consumption equal to 830 metric tonnes. The auditor concluded that Egypt is in compliance with the 2005 phase-out target of 834 metric tonnes of CFCs.

43. The verification report provides comparative information on import of non-CFC alternatives in Egypt as follows (in metric tonnes):

2004		2005		2006 (up to August)	
CFCs	Non-CFCs	CFCs	Non-CFCs	CFCs	Non-CFCs
903	315	714	586	714	585

2005 progress report

9. The progress report presents major achievements in the implementation of phase-out activities for the January 2005 – August 2006 period. Total 2005 CFC consumption is shown to be 822 ODP tonnes, which is equal to the 2005 maximum CFC allowable consumption established in the Agreement. The following activities have been accomplished:

(a) Establishment of operational mechanism for management and monitoring of the NPP activities;

(b) Procurement of 290 recovery and recycling (R&R) machines for domestic and commercial refrigeration servicing sector (250 machines), and for MAC servicing workshops (40 machines), at the total cost of US $501,000 representing the total cost for this type of equipment approved in the NPP;

(c) Selection of three local companies to implement the training programme of refrigeration servicing technicians;

(d) About 5,000 copies of a booklet about Egypt's commitments to preserve the ozone layer have been printed and disseminated under the public awareness programme.

44. The progress report contains information on prices of refrigerants in Egypt for 2004 as follows.

Refrigerant	Price/kg (US $)
CFC-11	7.2
CFC-12	8.0
HCFC-22	5.0
R-502	28.0
HFC-134a	10.0
R-404A	35.0
R407C	45.0
R-410A	60.0
R-507	25.0

45. Out of the first tranche of US $1,000,000 total expenditures, including disbursements and funds obligated, amounted to US $862,628 as of 1 September 2006.

2006 annual implementation programme (AIP)

46. The total reduction target of the 2006 AIP is set at 235 ODP tonnes, including the reduction of consumption by 64 ODP tonnes in the MDI sector, in order to achieve the 2006 maximum allowable consumption target of 595 ODP tonnes. The following activities are included in the 2006 AIP:

(a) A feasibility study in the commercial manufacturing refrigeration sector and Partial conversion of enterprises with a phase-out of 67 ODP tonnes of CFCs by the end of 2007;

(b) A study on retrofits in the refrigeration industrial sector, including selection of the appropriate technology, and determining the development of the incentive mechanism. Adoption of drop-in refrigerants in 2007 will result in phase-out of 58 ODP tonnes of CFCs;

(c) Strengthening of the ODS import system through further training of customs officials and by providing sufficient refrigerant identifiers, and also strengthening the awareness programme;

(d) Further training of refrigeration technicians, including recovery/recycling operations, that will result in a reduction of 58 ODP tonnes of CFCs; and

(e) Developing a robust and accurate monitoring system in support of recovery and recycling operations.

47. The annual budget for the next tranche (2006/2007) is provided in the following table:

Activity	**(US $)**
Retrofit incentive programme for industrial refrigeration, including chillers	500,000
Training of technicians	50,000
Introduction of non-CFC drop-in refrigerants	100,000
Commercial Refrigeration manufacturing	500,000
Awareness Programs	25,000
Project management	25,000
Total	**1,200,000**

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

48. The 2005 CFC consumption of 821.2 ODP tonnes reported by the Government of Egypt under Article 7 of the Montreal Protocol was slightly below the maximum allowable consumption for that year as agreed with the Executive Committee (i.e., 822.0 ODP tonnes). The Secretariat noted that the verification report also reported a total CFC consumption of 821.2 ODP tonnes in Egypt. However, the sectoral distribution of the consumption was not correct, since it reported consumption in sectors (process agent and solvent sectors) where CFCs were already completely phased-out. The issue could have been clarified if the 2005 progress report on the implementation of the country programme in Egypt (due by 1 May 2006) had been

submitted by the Government of Egypt. As the lead agency under the NPP, and the agency responsible for the institutional strengthening project, UNIDO was requested to contact the relevant authorities in Egypt to request submission of the report. UNIDO clarified that communication with the Egypt National Ozone Office is difficult since a new NOU officer has been designated just recently. As of the preparation of this document, the progress report has not yet been submitted to the Secretariat.

49. In regard to the recovery and recycling (R&R) equipment, the Secretariat drew the attention of UNIDO to decisions 41/100 and 49/6 (which urge Article 5 countries and implementing agencies to give consideration to becoming more selective in providing new R&R machines), and noted with concern that:

(a) The procurement of all of the R&R machines included in the NPP was done in one stage, notwithstanding that the agreement specifically states that the R&R programme will be implemented in stages so that remaining resources can be diverted to other phase-out activities in cases where the proposed results have not been achieved, and will be closely monitored;

(b) Only in January 2006, the Government of Germany delivered 250 recovery machines and 44 R&R machines under the RMP project approved by the Executive Committee at its 29th Meeting; and

(c) The R&R equipment provided by the Government of Germany is from a different supplier than that selected by UNIDO in the NPP. Due to lack of compatibility, there might be major problems in the future with the operation and maintenance of these units.

50. UNIDO clarified that on the basis of decisions 41/100 and 49/6, great attention had been given to the selection of proper equipment and sites for distributing the new R&R equipment. A large number of servicing workshops would require a significant amount of R&R equipment. The consolidated procurement of R&R equipment in bulk is more economical, than the purchase of the same number of machines in several small batches. The distribution process will start in stages after sufficient training, certification of the servicing technicians, the retrofitting incentive programme, the procurement of tools and other activities planned have been implemented. UNIDO purchased the equipment through an international bidding process in accordance with rules and regulations of UNIDO. A limitation to one supplier or suppliers from one particular country was not possible.

51. The 2006 annual implementation programme proposes the phase-out of 355 ODP tonnes to achieve the 2007 CFC consumption target. The proposed activities to achieve this phase-out would be completed by the end of 2007 and the end of 2008. It appears that the planned activities and the timing of their implementation would not be adequate to ensure compliance with the 2007 CFC consumption target established at 240 ODP tonnes by the Agreement. UNIDO agreed to revise the 2006-2007 annual work programme incorporating additional activities and to adjust the timetable for their implementation, facilitating the achievement of the required compliance limits.

52. The Secretariat noted that a former staff member of UNIDO is closely associated with the firm that conducted the verification. The Agreement requires that an independent verification be

conducted. The Secretariat expressed its concerns regarding the need to ensure not only that the verification is indeed independent, but that it will be seen to be independent by readers of the report. In view of this, it was communicated to UNIDO that its perspective on the extent of involvement of a former staff member in the verification process would be appreciated, so that the Executive Committee could be fully informed. UNIDO informed the Secretariat that the reliable and professional services of the consulting company which conducted the verification have been always appreciated by UNIDO. The fact that the General Manager of the company had been an employee of UNIDO for a short time almost 10 years ago, did not affect the independent status of the evaluation for Egypt. The consulting company has not been involved in the implementation of the NPP and the verification has been undertaken within the guidelines set out by the Multilateral Fund.

RECOMMENDATION

53. The Fund Secretariat recommends blanket approval of the second tranche of the national CFC phase-out plan for Egypt at the level of funding indicated in the table below on the understanding that UNIDO will not release funding for the tranche until the 2005 progress report on the implementation of the country programme for Egypt has been submitted to the Secretariat, and the Secretariat confirms that the 2005 CFC consumption reported is in compliance with the agreement between the Government of Egypt and the Executive Committee.

	Project Title	Project Funding (US $)	Support Cost (US $)	Implementing Agency
(a)	National CFC phase-out plan (second tranche)	1,200,000	90,000	UNIDO

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