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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 PROPOSAL: GHANA

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

Phase-out

- Terminal phase-out management plan (first tranche)

UNDP

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
GHANA**

PROJECT TITLE	BILATERAL/IMPLEMENTING AGENCY
Terminal phase-out management plan (first tranche)	UNDP

SUB-PROJECT TITLES

(a) Public awareness and information dissemination to stakeholders	UNDP
(b) Refrigeration training, certification and code of good practices	UNDP
(c) Training programme for customs officers	UNDP
(d) Mobile air-conditioning sector recovery & recycling	UNDP
(e) Retrofit of domestic & small commercial refrigerators to HC	UNDP
(f) Retrofit of car air-conditioning equipment	UNDP
(g) Financial incentive package for commercial sector end-users	UNDP
(h) Monitoring and management of national ODS phase-out plan	UNDP

NATIONAL CO-ORDINATING AGENCY:	National Ozone Unit, Environmental Protection Agency
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LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**A: ARTICLE-7 DATA (ODP TONNES, 2005, AS OF SEPTEMBER 2006)**

CFC-12	17.5		
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B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF SEPTEMBER 2006)

ODS	Aerosol	Foam	Ref. Servicing	ODS	Solvents	Process agent	Fumigant
CFC-12			17.5				

CFC consumption remaining eligible for funding (ODP tonnes)	
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CURRENT YEAR BUSINESS PLAN: Total funding US \$185,000: total phase-out 5.0 ODP tonnes.

PROJECT DATA		2006	2007	2008	2009	2010	Total
CFC (ODP tonnes)	Montreal Protocol limits	17.8	5.34	5.34	5.34	0	
	Annual consumption limit	17.5	5.34	5.34	5.34	0	
	Annual phase-out from ongoing projects						
	Annual phase-out newly addressed						
	Annual unfunded phase-out						
TOTAL ODS CONSUMPTION TO BE PHASED OUT							
Total ODS consumption to be phased-in (HCFCs)							
Project cost as originally submitted (US \$)							
Final project costs (US \$):							
	Funding for UNDP	204,394	140,500	0	0	0	344,894
	Total project funding	204,394	140,500	0	0	0	344,894
Final support costs (US \$):							
	Support cost for UNDP	15,330	10,538	0	0	0	25,868
	Total support costs	15,330	10,538	0	0	0	25,868
TOTAL COST TO MULTILATERAL FUND (US \$)		219,724	151,038	0	0	0	370,762
Final project cost effectiveness (US \$/kg)							

FUNDING REQUEST: Approval of funding for the first tranche (2006) as indicated above.

SECRETARIAT'S RECOMMENDATION	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Ghana, UNDP has submitted a terminal phase-out management plan (TPMP) for consideration by the Executive Committee at its 50th Meeting. The total cost of the Ghana TPMP is US \$344,894, plus agency support costs of US \$25,868. The project proposes the complete phase-out of CFCs by the end of 2009. The CFC baseline for compliance is 35.6 ODP tonnes.

Background

2. Prior to the approval of the refrigerant management plan (RMP) for Ghana by the Executive Committee at its 32nd Meeting, the Government of Ghana had implemented three projects in the refrigeration sector, amounting to a sum of US \$458,500. While these projects were successfully implemented, they were not sufficient to assist all refrigeration service technicians in the country, especially those in the informal sector. Therefore, at its 32nd Meeting, the Executive Committee approved the RMP project for Ghana (UNEP/OzL.Pro/ExCom/32/30/Ghana) and allocated US \$375,163 (excluding agency support costs) for its implementation.

Policy and legislation

3. An ODS import permit has been in place since 1994, but no strict import quotas were applied. In June 2005, the Government enacted specific ODS regulations which included, *inter alia*, controls on import/export, sales and purchases of ODS and mandatory reporting on imports, exports and/or sales of ODS; a ban on CFC-based refrigeration equipment; tax incentive/disincentives on ODS and non-ODS refrigerants; and prosecution of offenders.

Refrigeration servicing sector

4. Current ODS consumption in Ghana is mainly CFC-12 used for servicing domestic refrigerators, commercial/industrial refrigeration systems, MAC units and refrigerated vehicles, and marine and fishing vessels. Refrigeration systems are repaired by approximately 7,000 technicians. The current prices of refrigerants per kg are: US \$10.00 for CFC-12, US \$3.60 for HCFC-22, US \$46.00 for HFC-134a, US \$22.40 for R-404a (a zero ODP replacement for R-502 refrigerant) and R-407c (a replacement of HCFC-22), US \$21.60 for R-507 (a long term replacement for R-502 or CFC-502 refrigerants) and US \$4.00 for R406a.

5. An ODS licensing system has been operational in Ghana since March 2006. A Ministerial Order issued by the Government prohibits the importation of ODS-based equipment and introduces a quota system for imports of CFCs. The Government is also drafting an Act to give effect to Ghana's obligations under the Vienna Convention and the Montreal Protocol.

Results achieved so far

6. At its 41st Meeting, the Executive Committee considered a synthesis report on the evaluation of RMPs in several LVC countries (UNEP/OzL.Pro/ExcCom/41/7), which included a case study for the RMP for Ghana. In summary, through the implementation of the RMP:

- (a) CFC consumption has been reduced from 35.57 ODP tonnes in 2001 to 17.50 ODP tonnes in 2005;

- (b) Fourteen CFC-based cold storage facilities have been converted to non-CFC refrigerants with a phase-out of 3.1 ODP tonnes of CFCs; three additional facilities will be completely converted by the end of 2006 with an additional phase-out of 0.64 OPDP tonnes of CFCs;
- (c) A MAC training workshop was held for selected technicians undertaking repairs, maintenance and installation of MAC systems and a network of 16 MAC recovery/recycling units was established. So far, 8.8 tonnes of CFC 12 has been recovered and recycled; and
- (d) A two-phase training programme was organised for the customs officers and a total of 188 officials were trained in control and monitoring of ODS and CFC-based refrigeration equipment. Eleven ODS identification kits were distributed to customs officers.

Activities proposed in the TPMP

7. The Ghana TPMP includes sub-projects that involve: an additional training and certification programme for 6,000 refrigeration technicians and development of a code of good practices; an additional training programme for customs officers; retrofit of refrigeration systems and provision of additional MAC recovery and recycling units; public awareness and information dissemination to stakeholders; and establishing the monitoring and evaluation unit. A detailed work plan for 2007 has been submitted with the TPMP proposal.

8. The Government of Ghana plans the complete phase-out of CFCs by 1 January 2010, in accordance with the provisions of the Montreal Protocol.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

9. In 2005, the Government of Ghana reported a total CFC consumption of 17.5 ODP tonnes of CFCs under Article 7 of the Montreal Protocol, which was 0.405 ODP tonnes below the allowable level of consumption for that year (i.e., 17.905 ODP tonnes). Further to a request from the Secretariat, UNDP indicated that the Government of Ghana will meet the allowable level of CFC consumption in 2007 due to the successful implementation of the CFC quota system and monitoring mechanisms put in place.

10. During the review of the TPMP for Ghana, the Secretariat was informed that any procurement of recovery and recycling equipment or of service tools for refrigeration technicians, as well as any retrofitting of refrigeration systems, will be based on the recommendations arising from assessments done as part of the monitoring and evaluation exercises for inclusion in subsequent annual work programmes.

11. The Secretariat raised its concern that most of the funding available will be used for additional recovery/recycling and retrofit activities, with very limited amounts of CFCs to be phased-out. In light of the requirements of decisions 41/100 and 49/6, the Secretariat suggested that UNDP examine the merits of using most of the resources available under the TPMP to provide basic service tools to refrigeration technicians; design a procedure that favours the

importation of non-CFC drop-ins; procure a very limited number of multi-refrigerant recovery and recycling units on an annual basis, and assess retrofitting of CFC-based refrigeration systems to alternative refrigerants on a case-by-case basis.

12. UNDP pointed out that the Government of Ghana is proposing to implement a programme to retrofit domestic refrigerators to hydrocarbon refrigerants and CFC-based MAC systems to HFC-134a, which can be recovered and recycled when the units are serviced. Considering that the import quota for CFC-12 for 2007 will be about 5 tonnes, there is an urgent need to procure and put into operation all of the multi-refrigerant recovery equipment as soon as possible. Under these circumstances, UNDP is of the opinion that the activities proposed in the TPMP should remain as submitted.

Agreement

13. The Government of Ghana submitted a draft agreement between the Government and the Executive Committee with the conditions for the complete phase-out of CFCs in Ghana, which is contained in the annex to the present document.

RECOMMENDATION

14. The Secretariat recommends blanket approval of the TPMP for Ghana. The Executive Committee may wish to:

- (a) Approve, in principle, the terminal phase-out management plan for Ghana, at the amount of US \$344,894 plus agency support costs of US \$25,868 for UNDP;
- (b) Approve the draft agreement between the Government of Ghana and the Executive Committee for the implementation of the national phase-out plan as contained in Annex I to the present document;
- (c) Urge UNDP to take full account of the requirements of decisions 41/100 and 49/6 during the implementation of the terminal phase-out management plan; and
- (d) Approve the first tranche of the plan at the funding levels shown in the table below:

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Terminal phase-out management plan (first tranche)	204,394	15,330	UNDP

Annex I**AGREEMENT BETWEEN GHANA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE TERMINAL PHASE-OUT MANAGEMENT PLAN**

1. This Agreement represents the understanding Ghana (the “Country”) and the Executive Committee with respect to the complete phase-out of controlled use of the ozone-depleting substances set out in Appendix 1-A (the “Substances”) prior to 1 January 2010 in compliance with Protocol schedules.
2. The Country agrees to meet the annual consumption limits of the Substances in Annex A (Group I) of the Montreal Protocol as set out in row 2 of Appendix 2-A (the “Targets, and Funding”) in this Agreement. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to the Substances as described in the TPMP document.
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees in principle to provide the funding set out in row 3 of Appendix 2-A (the “Funding”) to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (the “Funding Approval Schedule”).
4. The Country will meet the consumption limits for each of the Substances as indicated in Appendix 2-A. It will also accept independent verification by the relevant implementing agency of achievement of these consumption limits as described in paragraph 9 of this Agreement.
5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least 30 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets for the applicable year;
 - (b) That the meeting of these Targets will be independently verified if requested by the Executive Committee consistent with paragraph (d) of decision 45/54;
 - (c) That the Country has substantially completed all actions set out in the last annual implementation programme; and
 - (d) That the Country has submitted and received endorsement from the Executive Committee for an annual implementation programme in the form of Appendix 4-A (the “Annual Implementation Programmes”) in respect of the year for which funding is being requested.
6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (the “Monitoring”) will monitor and report on that monitoring in accordance with the roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 9.
7. While the Funding was determined on the basis of estimates of the needs of the country to carry out its obligations under this agreement, the Executive Committee agrees that the

country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the goals prescribed under this agreement. Reallocations categorized as major changes must be documented in advance in the next annual implementation programme and endorsed by the Executive Committee as described in sub-paragraph 5(d). Reallocations not categorized as major changes may be incorporated in the approved annual implementation programme, under implementation at the time, and reported to the Executive Committee in the report on implementation of the annual programme.

8. Specific attention will be paid to the execution of the activities in the servicing sector, in particular:

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation;
- (b) The technical assistance programme will be implemented in stages so that remaining resources can be diverted to other activities such as, additional training or procurement of service tools, in cases where the proposed results are not achieved, and will be closely monitored in accordance with Appendix 5-A of this Agreement; and
- (c) The Country and the implementing agencies will take full account of the requirements of decisions 41/100 and 49/6 during the implementation of the terminal phase-out management plan.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNDP has agreed to be the lead implementing agency (the "Lead IA") in respect of the Country's activities under this Agreement. The Lead IA will be responsible for carrying out the activities listed in Appendix 6-A, including but not limited to verification. The Country also agrees to periodic evaluations, which will be carried out under the monitoring and evaluation work programs of the Multilateral Fund. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 4 of Appendix 2-A.

10. Should the Country, for any reason, not meet the Targets for the elimination of the Substances in Appendix 1-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised funding approval schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next instalment of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amounts set out in Appendix 7-A in respect of each ODP tonne of reductions in consumption not achieved in any one year.

11. The funding components of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

12. The Country will comply with any reasonable request of the Executive Committee and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to information necessary to verify compliance with this Agreement.

13. All of the agreements set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Protocol unless otherwise defined herein.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Annex A:	Group I	CFC-11, CFC-12, CFC-115
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APPENDIX 2-A: THE TARGETS, AND FUNDING

	2006	2007	2008	2009	2010	Total
1. Montreal Protocol consumption limits of Annex A, Group I substances (ODP tonnes)	17.8	5.34	5.34	5.34	0	
2. Max allowable total consumption of Annex A Group I substances (ODP tonnes)	17.5	5.34	5.34	5.34	0	
3. Lead IA (UNDP) agreed funding (US \$)	204,394	140,500	0	0	0	344,894
4. Lead IA (UNDP) support costs (US \$)	15,330	10,538	0	0	0	25,868
5. Total agreed costs (US \$)	219,724	151,038	0	0	0	370,762

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding will be considered for approval at the last meeting of the year.

APPENDIX 4-A: FORMAT OF ANNUAL IMPLEMENTATION PROGRAMME

1. Data

Country
Year of plan
of years completed
of years remaining under the plan
Target ODS consumption of the preceding year
Target ODS consumption of the year of plan
Level of funding requested
Lead implementing agency
Co-operating agency(ies)

2. Targets

Indicators		Preceding year	Year of plan	
Supply of ODS	Import			
	Total (1)			
Demand of ODS	Manufacturing			
	Servicing			
	Stockpiling			
	Total (2)			

3. Industry Action

Sector	Consumption preceding year (1)	Consumption year of plan (2)	Reduction within year of plan (1)-(2)	Number of projects completed	Number of servicing related activities	ODS phase-out (in ODP tonnes)
Manufacturing						
Total						
Refrigeration						
Total						
Grand total						

4. Technical Assistance

Proposed Activity:

Objective:

Target Group:

Impact:

5. Government Action

Policy/Activity Planned	Schedule of Implementation
Type of policy control on ODS import: servicing, etc	
Public awareness	
Others	

6. Annual Budget:

Activity	Planned Expenditures until approval of next tranche (US \$)
Total	

7. Administrative Fees**APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES**

1. All the monitoring activities will be coordinated and managed through the project "Monitoring and Management Unit", which is included within this TPMP.

2. The Lead IA will have a particularly prominent role in the monitoring arrangements because of its mandate to monitor ODS imports, whose records will be used as a crosschecking reference in all the monitoring programmes for the different projects within the TPMP. This organization will also undertake the challenging task of monitoring illegal ODS imports and exports with advisements made to the appropriate national agencies through the National Ozone Office.

Verification and reporting

3. In accordance to decision 45/54 (d), the Executive Committee reserves the right for independent verification in case the Executive Committee selects Ghana for related auditing. Based on discussion with the Lead IA, Ghana should select the independent organization (auditing) to carry out the verification of the TPMP results and this independent monitoring programme.
4. The monitoring reports will be produced and verified each year, previous to the third meeting of the Executive Committee. These reports will produce the input for the yearly implementation reports required by the Executive Committee.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities specified in the project document as follows:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's phase-out plan;
 - (b) Assisting the Country in preparation of the Annual Implementation Programme;
 - (c) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the Annual Implementation Programme consistent with Appendix 5A. In case the Executive Committee selects Ghana consistent with paragraph (d) of decision 45/54 separate funding will be provided by the Executive committee to the Lead IA for this undertaking;
 - (d) Ensuring that the achievements in previous annual implementation programmes are reflected in the future annual implementation programme;
 - (e) Reporting on the implementation of the Annual Implementation Programme of the preceding year and preparing for annual implementation programme for the year of submission for submission to the Executive Committee, commencing with the 2007 annual implementation programme combined with the report on the 2006 annual implementation programme;
 - (f) Ensuring that appropriate independent technical experts carry out the technical reviews undertaken by the Lead IA;
 - (g) Carrying out required supervision missions;
 - (h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Annual Implementation Programme and accurate data reporting;
 - (i) Providing verification that consumption of the Substances has been eliminated in accordance with the Targets, if requested by the Executive Committee;

- (j) Ensuring that disbursements made to the Country are based on the use of the indicators; and
- (k) Providing assistance with policy, management and technical support when required.

APPENDIX 6-B: ROLE OF COOPERATING IMPLEMENTING AGENCY

Not relevant

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 7 of the Agreement, the amount of funding provided may be reduced by US \$15,000 per ODP tonne of reductions in consumption not achieved in the year.
