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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-sixth Meeting  
Montreal, 4-8 July 2005

**PROJECT PROPOSAL: COTE D'IVOIRE**

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

Aerosol

- Phase-out of CFC-12 in the manufacture of cosmetic aerosols (deodorants) by conversion to hydrocarbon aerosol propellant (HAP) at COPACI

UNIDO

**PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECTS  
COTE D’IVOIRE**

PROJECT TITLES	BILATERAL/IMPLEMENTING AGENCY
(a) Phase-out of CFC-12 in the manufacture of cosmetic aerosols (deodorants) by conversion to hydrocarbon aerosol propellant (HAP) at COPACI	UNIDO

<b>NATIONAL COORDINATING AGENCY</b>	NOU, Ministry of Environment
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**LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**

**A: ARTICLE-7 DATA (ODP TONNES, 2003, AS OF MARCH 2005)**

Annex A, Group I	93.4		
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**B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2003, AS OF MAY 2005)**

ODS Name	Subsector/quantity	Subsector/quantity	Subsector/quantity	Subsector/quantity.
CFC-12	Aerosol: 42.6			

<b>CFC consumption remaining eligible for funding (ODP tonnes)</b>	
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CURRENT YEAR BUSINESS PLAN ALLOCATIONS		Funding US \$	Phase-out ODP tonnes
	(a)	202,000	42.0

<b>PROJECT TITLE:</b>	<b>(a)</b>
<b>ODS use at enterprise (ODP tonnes):</b>	43.43
<b>ODS to be phased out (ODP tonnes):</b>	43.43
<b>ODS to be phased in (ODP tonnes):</b>	n/a
<b>Project duration (months):</b>	26
<b>Initial amount requested (US \$):</b>	111,696
<b>Final project cost:</b>	
Incremental Capital Cost (US \$)	131,500
Contingency (10%) (US \$)	13,150
Incremental Operating Cost (US \$)	(34,222)
Total Project Cost (US \$)	110,428
<b>Local ownership (%):</b>	100
<b>Export component (%):</b>	50*
<b>Requested grant (US \$):</b>	110,428
<b>Cost-effectiveness (US \$/kg):</b>	2.54
<b>Implementing agency support cost (US \$):</b>	9,938
<b>Total cost of project to Multilateral Fund (US \$):</b>	120,366
<b>Status of counterpart funding (Y/N):</b>	Y
<b>Project monitoring milestones included (Y/N):</b>	Y

\* To Article 5 countries

<b>SECRETARIAT’S RECOMMENDATION</b>	Blanket approval at the costs indicated above
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## **PROJECT DESCRIPTION**

1. The Government of Cote d'Ivoire has submitted a project proposal for the phase-out of 43.4 ODP tonnes of CFC-12 used in the manufacture of cosmetic aerosols by conversion to hydrocarbon aerosol propellant (HAP) at Copaci, (terminal aerosol sector project) for consideration by the Executive Committee at its 46th Meeting. Implementation of this project proposal will result in the complete phase-out of CFCs in the aerosol sector in Cote d'Ivoire.
2. The total capital cost of the project, as submitted, is US \$144,650 and the incremental operating costs are US \$32,954 (net present value for 4 years). The cost-effectiveness value of the project is US \$2.57/kg.
3. At its 20th Meeting, the Executive Committee approved two investment projects for the phase-out of about 86.8 ODP tonnes of CFCs used in the manufacturing of aerosol products and has allocated about US \$165,232 for their implementation. The two projects were completed in December 1999.
4. The company produces aerosol deodorants with 125, 150 and 200 ml fill using tinplate and aluminium cans of three different diameters, with an average annual production of 868,700 cans. About 50 per cent of total aerosol production is exported to the neighbouring African countries.
5. The existing aerosol production line comprises three product fillers, one single head and two double head combined crimping/gassing units and three propellant delivery pumps. After product filling and manual valve insertion the cans are crimped and then gassed with CFC-12.
6. Conversion to HAP technology entails the installation of a three cylinder hydrocarbon storage rack, molecular sieve system for hydrocarbon deodorization, a propellant delivery pump, gas detection and monitoring system and the water test bath. The gassing unit will be located in a new open-air filling room which will be fitted with gas detection, and an extract ventilation system.
7. The company has provided a letter of commitment stating that the project proposal could be submitted by UNIDO to the Executive Committee. The company has accepted the project as proposed in the project document and has agreed to completely phase out the use of CFCs upon completion of the project, dispose of any equipment that has been replaced, and provide funds for items that are included in the project but are specifically excluded from funding by the Multilateral Fund. The company will also allow monitoring inspections by UNIDO during project implementation.

## **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

### **COMMENTS**

8. The project is to phase out 43.433 ODP tonnes of CFCs used in the manufacturing of aerosol cosmetics. The Secretariat pointed out, however, that according to the 2003 progress

report on the implementation of the country programme submitted by the Government of Cote d'Ivoire, CFC consumption in the aerosol sector was 29.4 ODP tonnes. An official communication was sent to UNIDO by the Ozone Unit of Cote d'Ivoire, stating that the current CFC consumption in the aerosol sector is 42.6 ODP tonnes (about the same as the consumption at Copaci) and that the previous consumption was an error. In addition to the letter, the Government of Cote d'Ivoire submitted a revised ODS consumption report to the Fund Secretariat.

9. The Secretariat and UNIDO discussed technical and cost issues regarding the formulations proposed for the manufacturing of HAP aerosols (i.e., the amounts of bactericide and fragrance used when switching from CFCs to HAP) and the methodology used to calculate the increased maintenance cost due to the use of a flammable propellant. Subsequently, UNIDO adjusted the operating costs of the project. The revised project cost is US \$110,428, with a cost-effectiveness value of US \$2.54/kg.

#### Redeployment of equipment from a cancelled project

10. In the context of decision 45/12(i) (concerning redeployment of equipment purchased for the aerosol project in Macedonia that was subsequently cancelled), the Secretariat proposed that UNIDO should consider whether or not it was technically and economically feasible to redeploy the equipment purchased for the aerosol project in Macedonia to Cote d'Ivoire. This issue has also been covered in the report on implementation of approved projects with specific reporting requirements, document UNEP/OzL.Pro/ExCom/46/19. UNIDO informed the Secretariat as follows:

- (a) The pieces of equipment that can be used at the aerosol plant in Cote d'Ivoire are: indexing LPG gassing unit; three 1,000 kg-cylinder storage rack (provided that the LPG cylinders to be used in Cote d'Ivoire fit in the rack); LPG transfer system (including a delivery pump with a set of pipe work and fittings); LPG molecular sieve purification system; LPG detection and management system; conveyor system; and fire-control equipment. However, the two LPG bulk storage tanks, the LPG off-load pump system and the HFC propellant delivery system could not be utilized;
- (b) Taking into account that the equipment for the Macedonia project was delivered in May 2003, it would be necessary to inspect the current state of the equipment prior to its shipment to Cote d'Ivoire;
- (c) The practical arrangements for redeployment of the aerosol equipment can be initiated only after approval by the Executive Committee of the aerosol project for Cote d'Ivoire. Once the project is approved, the Ozone Unit of Macedonia would need to arrange for the license required to export the equipment;
- (d) All costs associated with equipment delivery and technical assistance (preparation of drawings, equipment installation, commissioning and training) will have to be covered by the project for Copaci, since the balance of the cancelled project in Macedonia will be returned to the Multilateral Fund.

**RECOMMENDATION**

11. The Secretariat recommends blanket approval of the project proposal with associated support costs at the funding level shown in the table below, on the understanding that no additional funds will be requested from the Multilateral Fund for the phase-out of CFCs in the aerosol sector in Cote d'Ivoire:

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Costs (US\$)</b>	<b>Implementing Agency</b>
(a)	Phase-out of CFC-12 in the manufacture of cosmetic aerosols (deodorants) by conversion to hydrocarbon aerosol propellant (HAP) at COPACI, Abidjan (terminal aerosol sector project)	110,428	9,938	UNIDO

12. In recommending blanket approval the Executive Committee may wish to specify the following provisos concerning redeployment of existing equipment:

- (a) To request UNIDO to make all attempts to redeploy the equipment purchased for a cancelled aerosol project in Macedonia (MDN/ARS/32/INV/17) in a cost-effective manner in order to offset the need to purchase additional new equipment; and
- (b) To further, request UNIDO, in the event that some or all of the equipment from Macedonia cannot be redeployed to the Copaci aerosol project in Cote d'Ivoire, to continue to attempt to redeploy the equipment elsewhere and to report back to a future Meeting of the Executive Committee.

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