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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Thirty-seventh Meeting  
Montreal, 17-19 July 2002

**PROJECT PROPOSAL: VIETNAM**

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

Aerosol

- Terminal umbrella project for the aerosol sector to phase-out ODS consumption in the manufacture of aerosols and perfumes by conversion to hydrocarbon propellant (Dong A and Thorakao Cosmetics Ltd.)

UNDP

**PROJECT EVALUATION SHEET  
VIETNAM**

SECTOR: Aerosol ODS use in sector (2000): 28.5 ODP tonnes

Sub-sector cost-effectiveness thresholds: US \$4.40/kg

**Project Titles:**

- (a) Terminal umbrella project for the aerosol sector to phase-out ODS consumption in the manufacture of aerosols and perfumes by conversion to hydrocarbon propellant (Dong A and Thorakao Cosmetics Ltd.)

Project Data	Filling plant
	Terminal umbrella
Enterprise consumption (ODP tonnes)	28.50
Project impact (ODP tonnes)	28.50
Project duration (months)	33
Initial amount requested (US \$)	145,500
Final project cost (US \$):	
Incremental capital cost (a)	161,500
Contingency cost (b)	16,150
Incremental operating cost (c)	-26,308
Total project cost (a+b+c)	151,342
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	<b>125,400</b>
Cost effectiveness (US \$/kg.)	4.40
Counterpart funding confirmed?	Yes
National coordinating agency	Hydro Meteorological Services
Implementing agency	UNDP

<b>Secretariat's Recommendations</b>	
Amount recommended (US \$)	125,400
Project impact (ODP tonnes)	28.50
Cost effectiveness (US \$/kg)	4.40
Implementing agency support cost (US \$)	16,302
Total cost to Multilateral Fund (US \$)	141,702

## PROJECT DESCRIPTION

1. The total consumption of CFCs in the aerosol sector in Vietnam was estimated at 200 tonnes in 1993, and 28.5 tonnes in 1998. So far, the Executive Committee has approved four investment projects for the phase out of about 203 tonnes of CFCs used in the manufacturing of aerosol products and has allocated about US \$685,000 for their implementation.
2. The Government of Vietnam is submitting a terminal umbrella project covering two aerosol filling enterprises, Đông À and Thorakao Cosmetics Ltd.; which would lead to the elimination of an additional 28.5 tonnes of CFC-12, representing the remaining CFC consumption in the aerosol sector in the country.
3. Đông À manufactures hair styling mousse and some perfume body sprays (195,000 cans/year) through two production lines made in Singapore. The enterprise uses both a propane-butane mixture and CFC-12 as propellants in the manufacture of, among others, hair and body spray products. The other company, Thorakao Cosmetics Ltd., uses CFC-12 in the manufacture of cosmetic products and perfume body sprays with six indigenous production lines.
4. The project is for the replacement of CFCs with hydrocarbon propellant (HAP). Conversion to HAP technology at Đông À, at a cost of US \$85,000, entails retrofit of the propellant storage system and the destenching column system; replacement of the transfer system to the gassing unit; construction of an open-air filling room and installation of a conveyor for connecting the existing product filler and crimper; replacement of the propellant filler with a two-gasser unit; a manual gas detector and manual water bath. Conversion at Thorakao Cosmetics Ltd., at a cost of US \$64,500, entails construction of an open-air filling room and installation of a conveyor for connecting the existing product filler and crimper; installation of a perfume filler and a propellant pump; enhanced ventilation; manual gas detector and manual water bath.
5. Additionally, costs associated with technical assistance (design, installation and commissioning), training and contingency are also requested (US \$41,350 for both plants).
6. The companies have provided letters of commitment stating that the two project proposals could be submitted by UNDP to the Executive Committee. Both companies have accepted the projects as proposed in the project documents and have agreed to completely phase out the use of CFCs upon completion of the projects, dispose of any equipment that has been replaced, and provide funds for items that are included in the projects but are specifically excluded from funding by the Multilateral Fund. The companies will allow monitoring inspections by UNDP during project implementation.

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

7. Upon a request by the Secretariat, UNDP confirmed that implementation of the two projects will phase out the remaining CFC consumption in the aerosol sector in Vietnam, and that no additional funding will be sought from the Government for CFC phase out in this sector.

8. The project proposal for Đông À states that “during the author’s visit the company was using propane-butane mixture as a propellant. However, they used CFC-12 as a propellant for hair and body spray products”. In this regard, the Secretariat sought clarification on whether or not the company was requesting funding retroactively. UNDP indicated that Đông À was established in 1994 and the baseline equipment (purchased also in 1994) has been used for gassing with a mixture of propane-butane and CFC-12. However, filling with hydrocarbons is only done in limited numbers and only for certain lower-cost products and applications.

9. The Secretariat also pointed out that the equipment installed at Đông À was relatively new and, therefore, it would be able to fill products safely using HAP. Therefore the eligibility of the equipment was in doubt. In this regard, UNDP agreed not to request the gassing unit, and adjusted the project cost accordingly.

10. The Secretariat requested an explanation for the request for a conveyor and a propellant filler at Đông À, when this equipment was not requested for Thorakao. UNDP indicated that Thorakao is filling only perfumes in glass bottles; therefore, it was foreseen that the whole filling, crimping and gassing process would be undertaken in the open air filling room. Therefore, there is no need for an additional conveyor and automatic gasser at this plant.

11. Operating savings were not calculated in the project proposal since it was submitted as a terminal umbrella project, and according to Decision 25/50, incremental operating costs/savings were not included. The Secretariat pointed out, however, that Decision 25/50 applies when there are significant numbers of small or informal enterprises remaining in a given sector, which was not the case of the project submitted to the 37<sup>th</sup> Meeting covering only two enterprises. Subsequently, UNDP agreed to consider operating savings for the two enterprises as follows: US \$11,985 at Đông À and US \$14,413 at Thorakao Cosmetics Ltd.

12. The total incremental costs of the projects are US \$81,605 for Đông À and US \$69,737 for Thorakao Cosmetics Ltd. However, based on the cost-effectiveness threshold value (US \$4.40/kg), the funding levels requested from the Multilateral Fund are US \$61,600 for Đông À and US \$63,800 for Thorakao Cosmetics Ltd.

**RECOMMENDATION**

13. The Fund Secretariat recommends blanket approval of the project at the funding level indicated in the table below.

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>	<b>Implementing Agency</b>
(a)	Terminal umbrella project for the aerosol sector to phase-out ODS consumption in the manufacture of aerosols and perfumes by conversion to hydrocarbon propellant (Dong A and Thorakao Cosmetics Ltd.)	125,400	16,302	UNDP

14. The Executive Committee may wish to note that this project addresses the remaining CFC consumption in the aerosol sector in Vietnam, and that no additional funding will be sought by the Government for CFC phase out in this sector.

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