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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-second Meeting
Montreal, 29 March - 2 April 2004

PROJECT PROPOSAL: COTE D'IVOIRE

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

Fumigant

• Phase-out the use of methyl bromide (MB) commodities and storage fumigation	UNIDO

PROJECT EVALUATION SHEET
COTE D'IVOIRE

SECTOR: Fumigant ODS use in sector (2003): 18.84 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Title:

(a) Phase-out the use of methyl bromide (MB) commodities and storage fumigation

Project Data	**Fumigant**
Enterprise consumption (ODP tonnes)	
Project impact (ODP tonnes)	8.5
Project duration (months)	30
Initial amount requested (US $)	311,894
Final project cost (US $):	
Incremental capital cost (a)	255,875
Contingency cost (b)	25,587
Incremental operating saving (c)	(59,253)
Total project cost (a+b-c)	222,210
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	222,210
Cost effectiveness (US $/kg.)	26.14
Counterpart funding confirmed?	n/a
National coordinating agency	Ministère du logement du cadre de vie et de l'environnement
Implementing agency	UNIDO

Secretariat's Recommendations	
Amount recommended (US $)	
Project impact (ODP tonnes)	
Cost effectiveness (US $/kg)	
Implementing agency support cost (US $)	
Total cost to Multilateral Fund (US $)	

PROJECT DESCRIPTION

1. The Government of Cote d'Ivoire submitted for the consideration of the Executive Committee at its 42nd Meeting a project proposal to phase out 8.5 ODP tonnes of methyl bromide (MB) used for commodities and storage fumigation. The MB baseline for compliance is 8.1 ODP tonnes.

MB consumption

2. MB is only used for commodities fumigation; no MB consumption has been reported for soil fumigation. In 2003, 18.8 ODP tonnes of MB were used in the country for the fumigation of cocoa beans and coffee. Of this amount, 10.3 ODP tonnes were used in quarantine and preshipment applications (two cocoa bean importing countries had requested a mandatory fumigation with MB prior to export), and 8.5 ODP tonnes of MB were used for disinfestation against insects.

3. Prior to 2003, reports submitted by the Government of Cote d'Ivoire under Article 7 of the Montreal Protocol did not separate controlled uses of MB from quarantine and preshipment applications (non-controlled uses). However, it is not possible for the Government to revise the reported MB consumption from previous years. The exercise has been accurately carried out for the 2003 MB consumption.

4. Cote d'Ivoire is among the world's largest producers and exporters of cocoa beans (1.25 million tonnes) and coffee (190,000 tonnes). After cocoa beans have been processed, they are transported to the Abidjan port and stored before they are exported. For several years, phosphine has been used for fumigation of cocoa beans and coffee (not all harvested beans are fumigated). When fumigation with phosphine tablets is carried out, the storage area is closed for five days (minimum exposure time under the climatic conditions of Cote d'Ivoire). Only after the plastic sheets used for the fumigation are removed and the storage site is ventilated, workers are allowed to enter into the facility. Under circumstances where the time available for the fumigation is less than five days, MB is used since the required exposure time is less than 3 days.

5. In 2003, of the total harvested amount of cocoa beans and coffee (1.44 million tonnes), 330,000 tonnes were fumigated with MB (18.8 ODP tonnes). Of this amount, 180,000 tonnes were exported to Australia and Brazil which requested a mandatory fumigation with MB as a quarantine treatment (10.3 ODP tonnes of MB). Fumigation is carried out by seven licensed companies.

6. The project is to phase out all controlled uses of MB (8.5 ODP tonnes) fumigation of commodities by converting to phosphine in carbon dioxide (ecofume technology), applied through the same pipes currently used for MB. The main differences between MB and the use of phosphine in carbon dioxide is the exposition time (1.5 days for MB and 3 days for ecofume under climatic conditions in Cote d'Ivoire), and the need to permanently and accurately monitor phosphine levels during treatment. The only additional materials required for the ecofume technology are additional polythene cotton sheets to compensate for the longer exposure time required (43 sheets at US $193,500), phosphine detectors and masks for monitoring (US $34,650).

7. The project also includes a request for national project coordination (US $44,625) and national and international consultants (US $91,500). Contingency costs (at 10 per cent) are also requested. Operating savings (4 years NPV) have been estimated at US $88,809.

8. The project will be implemented by UNIDO in coordination with the Ozone Unit and the Ministry of Agriculture.

9. The estimated time for the implementation of the project is four years.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Non-compliance regarding MB consumption

10. The Secretariat noted that under Article 7 of the Montreal Protocol the Government of Cote d'Ivoire reported in 2002 a MB consumption of 12 ODP tonnes, which was above the MB baseline for compliance (it would appear that Cote d'Ivoire is not in compliance with the 2002 freeze). As indicated in the project proposal, due to a typographical error, the 1996 MB consumption was reported as 4.8 metric tonnes instead of 14.8 metric tonnes. Accordingly, the MB baseline for compliance was calculated at 8.1 ODP tonnes (instead of 9.6 ODP tonnes). Based on the reported MB consumption in Cote d'Ivoire for the period 1995-2003, it appears that a reporting error may have occurred. In this regard, the Secretariat suggested that UNIDO further consider assisting the Government of Cote d'Ivoire in correcting the MB consumption data using the methodology for submission of requests for revision of baseline data approved by the Parties at their 15th Meeting (Decision XV/19).

11. Subsequently, UNIDO indicated that the report on MB consumption had not been done properly in the past, as no distinction was made between QPS and non-QPS applications. This situation has been corrected for the 2003 consumption. UNIDO will assist the Government of Cote d'Ivoire with the process of correcting the error in the consumption data reported for 1996.

12. According to the phase-out schedule proposed in the project, about 2.2 ODP tonnes will be phased out by the end of 2004; therefore, the remaining consumption of MB would be 5.9 ODP tonnes, which is below the allowable level of MB consumption in 2005 (6.5 ODP tonnes), calculated on the basis of the existing baseline.

Proposed technology

13. Currently, phosphine in tablets is used all year round for the fumigation of most of the harvested cocoa beans and coffee (90 per cent of the total) to control insect mass development; the remaining harvested beans (10 per cent) are treated with MB. In this regard, the Secretariat sought an explanation from UNIDO as to why it was proposed to replace MB with the ecofume technology rather than the use of phosphine in tablets, a procedure which is well known in the country.

14. UNIDO reported that over the last nine years, MB consumption in Cote d'Ivoire has been very stable, notwithstanding that the price of MB is much higher than the price of phosphine in tablets. MB is used only in special situations. For example, when harvested beans arriving at the storage facilities are highly infested by insects, and fumigation with phosphine in tablets is not schedule soon, MB is used immediately to prevent loss of the cocoa beans and the risk of infesting other lots. Also, MB is used when a lot of bean has to be shipped and there is not sufficient time to use phosphine in tablets (e.g., less than 5 days). Under these situations, both bean storage managers and MB fumigators considered that the ecofume technology would be the only suitable alternative to MB. Issues related to costs, efficiency, exposure time, product availability and safety were carefully considered in the selection of the technology.

Implementation time

15. The Secretariat noted that the proposed timeframe for the implementation of the project (4 years) was too long. Taking into consideration that Cote d'Ivoire appears to be in non-compliance with the 2002 MB freeze and it will need to phase out 5.5 ODP tonnes of MB by the end of 2004 to be in compliance with the 2005 phase-out target, the total project proposal must be implemented in less than one year. Subsequently, UNIDO agreed to shorten the project implementation time to 2.5 years. If the project is approved in March 2004, the first application with the ecofume technology will take place in October 2004, with an estimated MB phase out of 2.2 ODP tonnes. The complete phase out of controlled uses of MB (8.5 ODP tonnes) would be achieved by the end of 2006.

Cost related issues

16. The Secretariat and UNIDO discussed cost issues related to the number of equipment items requested, taking into consideration the relatively small amount of cocoa beans treated with MB; the estimated labour time for application of ecofume used in the calculation of operating savings; and the request for national and international consultants, taking into consideration the number of high-level experts in the fumigation sector who have experience in using both MB and phosphine available in the country. Subsequently, UNIDO agreed to revise the project proposal. The total cost agreed is US $222,210, distributed as follows: US $183,450 for the minimum equipment required to implement the ecofume technology, US $72,425 for training, coordination and monitoring and contingency costs (US $25,587). Operating savings were calculated on the basis of the revised project implementation time (US $59,253).

17. A draft agreement between the Government of Cote d'Ivoire and the Executive Committee on the modalities for implementation of the MB phase-out project is included in this document as Annex I.

RECOMMENDATION

18. The Executive Committee may wish to consider approval of the project proposal in light of the Fund Secretariat's comments.

Annex I

AGREED CONDITIONS FOR PHASE-OUT OF METHYL BROMIDE IN COMMODITIES FUMIGATION IN COTE D'IVOIRE (DRAFT)

1. The Executive Committee agrees to approve in principle US $222,210 as the total funds that will be available to achieve commitments stipulated in this document for the phase-out of the use of methyl bromide in Cote d'Ivoire, subject to the following understandings and considerations.

2. As reported, to the Ozone Secretariat and consistent with information in the project document presented to the 42nd Executive Committee, the methyl bromide baseline for compliance for Cote d'Ivoire is 8.1 ODP tonnes and the methyl bromide consumption of controlled uses for 2003 is 8.5 ODP tonnes. Accordingly, Cote d'Ivoire must reduce its 2003 consumption of MB to 6.5 ODP tonnes to achieve compliance with the Montreal Protocol's 20 per cent reduction in 2005.

3. Methyl bromide reductions, in accordance with the terms of this project, will ensure that Cote d'Ivoire will meet the reduction target listed below. Specifically, Cote d'Ivoire commits, through the implementation of this project, to reduce its total national consumption of controlled uses of methyl bromide to no more than the following levels during the 12-month period for the following listed years:

Year	**(ODP tonnes)**	
	Amount to be phased out	**Remaining consumption***
2003		8.5
2004	2.2	6.3
2005	2.5	3.8
2006	3.8	0
Total	8.5	0

* Controlled uses of methyl bromide.

4. In addition Cote d'Ivoire, commits itself to sustain the phase out plan through the introduction of import restrictions and controlled use of methyl bromide for all non-exempted methyl bromide uses. The specific reductions in consumption noted above would be those achieved through this project. Reductions in accordance with the terms of this project, and the other commitments presented in the project document, will ensure that Cote d'Ivoire exceeds subsequent phase-out requirements of the Montreal Protocol.

5. The Government of Cote d'Ivoire has reviewed the consumption data identified in this project and is confident that it is correct. Accordingly, the Government is entering into this agreement with the Executive Committee on the understanding that, should further MB consumption in addition to that indicated in paragraph 2 above (8.5 ODP tonnes) be identified at a later date, the responsibility to ensure its phase-out will lie solely with the Government.

6. The Government of Cote d'Ivoire will have flexibility in implementing the project components which it deems more important in order to meet its phase-out commitment noted above.

7. UNIDO shall report back to the Executive Committee annually on the progress in meeting the reductions required by this project, as well as on annual costs related to the use of the alternative selected and the inputs purchased with the project funds. UNIDO agrees to manage the funding for this project in a manner designed to ensure that the specific annual reductions agreed are met.

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