



**United Nations
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Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol
Twenty-sixth Meeting
Cairo, 11-13 November 1998

PROJECT PROPOSAL: MACEDONIA

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

Fumigant

- Demonstration project of alternative to methyl bromide for soil fumigation (greenhouse)

UNIDO

PROJECT EVALUATION SHEET MACEDONIA

SECTOR: FUMIGANT ODS use in sector (1997): 12 ODP tonnes

Sub-sector cost-effectiveness thresholds: N/A

Project Titles:

Three alternatives to the use of methyl bromide: non-soil cultivation, bio-fumigation and low dose chemicals in tobacco and horticulture

Project Data	Methyl Bromide
	Ministry of Urbanism, Civil Engineering and Environment
ODS phase-out (ODP tonnes)	-
Proposed project duration (months)	24
Incremental capital cost (US \$)	259,600
- including contingency (%)	10
Incremental operational cost (US \$)	
Total project cost (US \$)	
Local ownership (%)	100
Export component (%)	-
Amount requested (US \$) {Original}	275,000
{Revised}	259,600
Cost effectiveness (US \$/kg)	-
National Coordinating Agency	Ozone Unit, Ministry of Urbanism, Civil Engineering and Environment
Implementing Agency	UNIDO
Technical review completed?	Yes

<i>Secretariat's Recommendations:</i>	
Amount recommended (US \$)	259,600
Project impact (ODP tonnes)	N/A
Cost effectiveness (US \$/kg)	N/A
Implementing Agency support cost (US \$)	33,748
Total cost to Multilateral Fund (US \$)	293,348

PROJECT DESCRIPTION

Three alternatives to the use of methyl bromide: non-soil cultivation, bio-fumigation and low dose chemicals in tobacco and horticulture

1. During project preparation, a total of twenty-one farms were identified using methyl bromide as soil fumigant in tobacco (90%), and in horticultural production, tomatoes, cucumber, peppers, cabbages, and melons.
2. Other chemicals (herbicides and insecticides) and some physical processes such as steam, are currently being used for horticultural production.
3. The objective of the project is to demonstrate the technical and economic feasibility of alternatives to methyl bromide for production of tobacco, horticultural seedlings, and vegetable crop production (tomatoes and cucumbers). The alternatives include low-dose chemicals, solarization plus bio-fumigation, and non-soil cultivation, all in combination with an Integrated Pest Management Programme.
4. The demonstration field-tests for horticultural and tobacco production will be in the South and southeastern areas of the country. Trials with proposed alternatives would be performed simultaneously with trials using methyl bromide and with blank trials (as a control). At each site, a field agronomist will supervise the process daily and will file a report to be sent to the National Project Coordinator. Soil samples will be analyzed before and after soil treatment and three days after seeding has taken place (pathogen levels will be indicators of effectiveness). The project will be under the local coordination of the Institute of Agriculture.
5. The expected results from project implementation are: (i) a technical and economic analysis of utilization of proposed alternatives to methyl bromide, (ii) training for at least four local specialists in the alternative technologies used, and (iii) dissemination of results of the demonstration project.
6. The project will be coordinated by the Ozone Unit of the Ministry of Urbanism, Civil Engineering and Environment in close cooperation with the "Faculty of Agronomy, the Institute of Agriculture and the Agency for Agricultural Development."
7. One project director and two specialists will be recruited for managing and supervising the demonstration projects, including designing the tests, collecting, and analyzing the data, supervising field activities, and coordinating the services of project personnel.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The project concept follows the Executive Committee's guidelines. The Government of Macedonia has not yet ratified the Copenhagen Amendment. However, based on an official communication by the Government indicating its intent to complete the ratification within a

period of 9 months, the Committee approved at its 25th Meeting a request for preparation of this demonstration project by UNIDO.

2. Regarding the implementation of Decision 24/18, UNIDO indicated that it has made every effort to reduce the cost and number of international consultants (as it was agreed during the review of the projects submitted to the 25th Meeting of the Executive Committee).

3. The Secretariat and UNIDO discussed issues regarding the cost of biological and chemical analyses of soil samples. Subsequently, UNIDO agreed to adjust the costs according to similar requests approved so far.

RECOMMENDATION

Taking into consideration the above comments, the Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below:

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
Three alternatives to the use of methyl bromide: non-soil cultivation, bio-fumigation and low dose chemicals in tobacco and horticulture	259,600	43,186	UNIDO