



**United Nations
Environment
Programme**

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/37/37
20 June 2002

ORIGINAL: ENGLISH



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

PROJECT PROPOSAL: GEORGIA

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

Fumigant

- Phase-out of methyl bromide for soil fumigation

UNIDO

**PROJECT EVALUATION SHEET
GEORGIA**

SECTOR: Fumigant ODS use in sector (2001): 10.8 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Titles:

- (a) Phase-out of methyl bromide for soil fumigation

Project Data	Methyl bromide
Enterprise consumption (ODP tonnes)	13.70
Project impact (ODP tonnes)	7.70
Project duration (months)	48
Initial amount requested (US \$)	413,833
Final project cost (US \$):	
Incremental capital cost (a)	376,212
Contingency cost (b)	37,621
Incremental operating cost (c)	
Total project cost (a+b+c)	413,833
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US \$)	413,833
Cost effectiveness (US \$/kg.)	53.74
Counterpart funding confirmed?	
National coordinating agency	National Ozone Unit
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 Georgia is submitting a project proposal to phase out 6 ODP tonnes of methyl bromide (MB) used in soil fumigation in 16 ha of heated greenhouses for production of tomatoes. This will represent the complete phase out of MB used as a soil fumigant. However, 6 ODP tonnes are also used for grain storage.
2. The alternatives selected for phasing out MB are: solarisation combined with alternative chemicals (metam sodium, dazomet, oxamyl), bio-fumigation and soiless cultivation. These technologies would be applied in combination with an integrated pest management (IPM) programme.
3. The application of metam sodium requires installation of polyethylene pipes, a storage tank and a pump to inject the pesticide into the irrigation flow. Soiless cultivation requires installation of an irrigation system including polyethylene pipes, pump, valves, manometers, and other accessories (at a cost of US \$868 for a 400 m² greenhouse). Biofumigation requires installation of polyethylene pipes, pressure regulators, valves and other accessories. The total capital cost of the project is US \$214,912.
4. The project includes a training programme in the use of the alternative technologies for 400 farmers and 4 extension agents (at a cost of US \$161,300). It will be organised in collaboration with the Ozone Unit within the Ministry of Environment, the Ministry of Agriculture and the Farmer's Union of Georgia.
5. The Government of Georgia has legislation that regulates the use of MB for quarantine applications and control of pests in agricultural productions and products. MB imports are controlled by registration at the point of entry; licenses are issued by the Ministry of Economy and Trade upon request through a permit issued by the Ministry of Agriculture and Food and Ministry of the Environment. Authorisation is only granted to companies meeting specific regulatory requirements. Also, the legislation that is in place regulates the application of MB by qualified technicians, the quality of the equipment used and the safety of the personnel. Once the project is fully implemented, the Government of Georgia has agreed to issue a regulation banning the use of MB as a soil fumigant.
6. The project will be implemented by UNIDO under national co-ordination by the Ozone Office, in close co-operation with the Farmer's Union.
7. The estimated time for the implementation of the project is 4 years.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

8. Aside from a minor technical assistance programme, the Government of Georgia has not received any direct assistance from the Multilateral Fund for MB phase out related activities.
9. The Secretariat noted that six different alternative technologies were proposed to be used over a surface area of 16 ha, which represents the total surface area currently treated with MB.

With such a small surface area and where only tomatoes are produced in soil, it would be more reasonable to apply one technology, either soilless culture (which has proven to be the best solution for tomatoes in greenhouses) or the use of metam sodium combined with solarisation (which has been used in a number of investment projects so far approved). UNIDO informed the Secretariat that the project proposed application of four technologies (bio fumigation, solarisation combined with low doses of chemicals, oxamyl and soilless culture). Based on the revised strategy and guidelines for projects in the MB sector, the selection of alternatives have been based on discussion with stakeholders. The adoption of one of the chemical alternatives and application rates will be adjusted during the pilot demonstration phase in the first year. Furthermore, only 16 ha are currently being treated with MB, while some years ago the treated area was over 400 ha. For this reasons, a variety of proven alternatives was proposed and the inherent technologies effectively transferred to the farmers were considered more adequate to achieve a lasting transition to MB-free agriculture in Georgia.

10. The Secretariat pointed out that the request for installation of irrigation systems in greenhouses is not all incremental, since these systems are required irrespective of the fumigant used. In this regard, UNIDO indicated that the project proposes the installation of chemigation/fertigation systems in greenhouses. This does not only imply a modification of the conventional irrigation systems, but also requires training to ensure an effective and safe application of chemicals and equipment. The installation of conventional irrigation systems is recommended to combine the use of those chemicals with soil solarisation, hence increasing the effectiveness of the techniques. The agricultural conditions in Georgia with small holdings of 400 m² greenhouses make the implementation of alternatives more costly than those of other projects, where larger areas are treated. Subsequently, UNIDO agreed to consider only the additional pipes needed for the application of chemical alternatives and bio-fumigation (covering 15.3 ha) and the minimum equipment for using the soilless media technology in the remaining surface area (0.6 ha).

11. The Secretariat and UNIDO discussed the size and the cost of the training programme taking into consideration the size of the project (16 ha) and the small number of farmers to be trained. Operating costs and savings have been calculated in the project (at \$40,566 over a 4-year period). However, these costs are not being claimed by the farmers.

12. The Secretariat and UNIDO are still discussing cost related issues. The outcome of the discussion will be communicated to the Executive Committee prior to the 37th Meeting.

13. In the meantime, UNIDO is assisting the Government of Georgia in drafting a proposal for a revised agreement between the Government and the Executive Committee with the commitments proposed and action plan for the phase out of MB in horticulture. The draft agreement will be finalised prior to the 37th Meeting of the Executive Committee.

RECOMMENDATION

14. Pending.
