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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-third Meeting
Paris, 9-13 November 2014

PROJECT PROPOSAL: LEBANON

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

Destruction

- Pilot demonstration project on ODS waste management and disposal

UNIDO

PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECT

LEBANON

PROJECT TITLE

IMPLEMENTING AGENCY

Pilot demonstration project on ODS waste management and disposal

UNIDO

NATIONAL COORDINATING AGENCY: National Ozone Unit of Lebanon

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES in 2013)

Annex I, CFC	0		

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2013)

ODS	Subsector/quantity	Subsector/quantity	Totals
CFC			0

CURRENT YEAR BUSINESS PLAN: Total funding US \$163,500. Total phase-out 14ODP tonnes

PROJECT TITLE

ODS use at enterprise			n/a
ODS to be phase-out			n/a
ODS phased in			n/a
Project in current business plan			Yes
Sector			ODS destruction
Sub-sector			Refrigeration and air-conditioning sub-sector
Project impact			12.7 tonnes
Project duration			18 months
Local ownership			100%
Export component			0%
Original requested amount			147,733
Requested MLF grant			
	UNIDO	US \$	123,475
	Total	US \$	123,475
Implementing agency support cost			
	UNIDO (9%)	US \$	11,113
	Total	US \$	11,113
Total cost of project to MLF		US \$	134,588
Cost-effectiveness		US \$/kg metric	9.69
Project monitoring milestones			Included

SECRETARIAT'S RECOMMENDATION:	Individual consideration
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PROJECT DESCRIPTION

1. At the 72nd meeting, on behalf of the Government of Lebanon, UNIDO submitted a proposal for a pilot demonstration project on ozone depleting substances (ODS) waste management and disposal at the amount of US \$173,353, plus agency support costs of US \$15,602 for UNIDO, as originally submitted¹. Prior to the 72nd meeting, UNIDO withdrew the submission at the request of the Secretariat as the proposal had not met some of the criteria in decision 58/19.

2. The Executive Committee agreed that the project could be re-submitted on an exceptional basis to the 73rd meeting, on the condition that it fully met the guidelines in decision 58/19, and that it would consider export for destruction as an option for the project (decision 72/21).

3. Subsequently UNIDO re-submitted the proposal at the amount of US \$147,733, plus agency support costs of US \$13,296. The project will address the destruction of 12.7 metric tonnes (mt) of ODS waste over an 18-month period. The project proposal is attached as Annex I to this document.

Project description

4. The pilot project seeks to develop a sustainable strategy to destroy stocks of unwanted ODS in Lebanon. The approaches considered for destruction of ODS included: (1) destruction at a designated ODS incineration plant; (2) destruction through co-incineration with other waste; (3) destruction in a retrofitted cement kiln; (4) destruction through plasma technologies; (5) destruction through non-incineration technologies; and (6) export for destruction.

5. During project preparation, the various strategies listed above were discussed and assessed. To ensure long-term sustainability of the project beyond implementation, retrofitting of a cement kiln in Lebanon to build its national capacity for ODS destruction was the option that was first considered. However, the lack of commitment from the cement kiln owner and the associated regulatory issues made this option difficult to implement. The other most feasible option assessed was to transport the unwanted ODS to a destruction facility in Europe.

6. The demonstration project will also seek to reinforce and connect the existing collection network with the destruction process to be established. The strategy of export of ODS wastes can thus be applied as a long-term method for the country to destroy future stocks of unwanted ODS.

Estimate of ODS waste to be disposed

7. This pilot project will address 12.7 mt of ODS waste for destruction, consisting of CFC stocks, collected by servicing workshops, training centres, end users and importers as shown in Table 1. These have been confirmed through a series of on-site data collection exercises carried out by a national consulting team. Some stock of halon (1.8 mt) has also been identified, but this will not be exported for destruction. A disposal strategy for halon will be prepared separately as part of the project.

Table 1: Total quantities of ODS waste available for disposal in Lebanon

Sector	CFC-12/kg	CFC-11/kg	R-502/kg	R-500/kg	Total/kg
Service workshops	2.57	1.25	0.04	0	3.86
Training centres	0.73	0	0	0	0.73
Hotels	0.23	0	0.03	0.01	0.27
Hospitals	0.30	0	0	0	0.30
Malls and supermarkets	0.01	0	0	0	0.01
Cold rooms	1.19	0	0	0	1.19

¹ At the 61st meeting, the Executive Committee provided funds for UNIDO to prepare a pilot ODS disposal demonstration project for Lebanon.

Importers	5.54	0.82	0	0	6.36
Lebanese Army*	0	0	0	0	0
TOTAL	10.57	2.07	0.07	0.01	12.72*

* plus 1.8 mt halon to be treated in the halon disposal strategy.

8. Lebanon currently lacks an institutional nation-wide collection system for ODS waste despite the existing law requiring recovery, recycling, reclamation and destruction of ODS waste. Collection activities are currently being undertaken by various stakeholders working in different sectors. Efforts are being made for such a system to be put in place as part of this project.

Project activities

9. The following activities will be implemented under the project: establishment of aggregation facilities in Tripoli and Beirut; aggregation of ODS waste and quality testing for export; identification of a destruction facility in Europe in line with a public bidding process required both by the Government and UNIDO; transportation of the ODS waste stocks to the selected destruction facility; destruction and verification of destroyed ODS stocks and reporting.

Sustainability of the project

10. The following have been identified as the elements that would contribute to the sustainability of the ODS disposal project:

- (a) Strengthening the enforcement of existing legislation related to ODS waste collection and disposal. Implementation of the project would create the adequate enabling environment to enforce mandatory collection and destruction of ODS wastes;
- (b) Stakeholder engagement to ensure a cooperative environment in setting up an ODS disposal infrastructure in the country; and
- (c) Encouraging the collection of old ODS waste for destruction through lessons learned from this project.

Financial management of the project

11. Funding from the Multilateral Fund (US \$147,733) will cover the project activities described in paragraph 10 above including the operation of the pilot project for two years as shown in Table 2. Co-financing (US \$37,200) will be provided in-kind.

Table 2: Proposed cost of the project

Item	Cost (US\$)		
	MLF	Co-financing	Total
Transportation of 12.7 mt of CFCs from different centers to aggregation points	11,000	21,450	32,450
Substance and impurity testing, oil removal where necessary, decanting of cylinders into ISO containers, labelling, documentation	28,100	15,750	43,850
Shipment and transportation of ISO tanks including insurance and tracking system (total transport at \$1.50/kg)	19,050	0	19,050
Destruction (purification and testing at destruction site at \$1.00/kg; destruction at \$5.00/kg)	63,500	0	63,500
Contingency (5%)	6,083	0	6,083

Policy support; project management unit (PMU)	15,000	0	15,000
Halon disposal strategy	5,000	0	5,000
TOTAL (US\$)	147,733	37,200	184,933

Monitoring and verification of the destruction

12. The process will be closely monitored and data will be recorded by the project management unit. Valid assurances and certification will be provided so that the 12.7 mt of ODS will actually be destroyed. UNIDO will issue a certification of destruction at the close of the project.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

13. The Secretariat reviewed the project based on the interim guidelines for the funding of demonstration projects for the disposal of ODS established in decision 58/19. It also took into account decision 72/21 in which the Executive Committee agreed that this project may be resubmitted for consideration, with specific conditions.

14. With regard to its compliance with decision 58/19, UNIDO reiterated that collection activities will not be part of the project, and that while an institutionalized system of collecting ODS waste is lacking, there is an existing system that has resulted in the accumulation of the ODS waste that is included in this project. UNIDO reiterated the Government's commitment to use lessons learnt from this project and formalize a collection system as part of the demonstration project.

15. In explaining how the collection system works, UNIDO clarified that the 12.7 mt of ODS waste have been identified based on a survey of various sources of ODS waste. There is as yet no institutional system for waste collection, and that the collection of these unwanted ODS is being undertaken by various stakeholders working in different sectors. While the country does have a policy to recover and recycle ODS, and that under the national phase-out plan (NPP) recovery and recycling centres were established, these are not fully operational at the present time. However, several service workshops do collect ODS waste from servicing operations which are being kept in cylinders for future disposal. A comprehensive collection system is expected to be established when the project is completed. The Secretariat noted that based on the additional information provided, the project met the guidelines contained in decision 58/19.

16. In addressing issues related to the selected option of export for destruction, UNIDO indicated that as a more cost-effective option, the preferred destination is Europe due to lower transportation costs from Lebanon as compared to transport costs to the United States of America. However, it was not possible to identify a specific destruction facility where the waste will be transported to as it intends to select this through an open bidding process, taking into account the requirements of UNEP Technology and Economic Assessment Panel (TEAP)² for ODS destruction and removal efficiency exceeding 99.99 per cent. UNIDO reported that the selection criteria will be based on whether the facility, is in compliance with the technologies approved by TEAP; meets the performance and emissions requirements set out by TEAP; and is a registered the European Union (EU)³ facility.

17. UNIDO also mentioned that the Government of Lebanon may, in future pursue the option of developing national capacity for ODS destruction as a long term sustainable option when regulatory

² TEAP - Report of the Task Force on Destruction Technologies: http://ozone.unep.org/teap/Reports/Other_Task_Force/index.shtml

³ As an EU registered facility, its destruction technologies have to be included in the Annex of Regulation (EC) No. 1005/2009 of the European Parliament and of the Council of 16 September 2009 on Substances that Deplete the Ozone Layer.

support is in place, and where private cement kilns would agree to cover co-financing costs for such a venture. This would be established privately and at no cost to the Multilateral Fund.

18. UNIDO further reported that the experience from the project may facilitate access to carbon markets when better opportunities for these markets arise. It did reiterate however, that the project will not engage in these transactions at the current time, but will include a stronger mechanism for monitoring and verification that would enable access to carbon markets in the future.

19. The Secretariat and UNIDO discussed the funding requested for the project, resulting in adjustments to the costs related to testing, policy support and the removal of the halon disposal strategy. The table below presents the revised budget for the project, as adjusted.

Table 3: Final agreed cost of the project

Item	Cost (USD)		
	MLF	Co-financing	Total
Transportation of 12.7 mt of CFCs from different centers to aggregation points	8,000	24,450	32,450
Substance and impurity testing, oil removal where necessary, decanting of cylinders into ISO containers. labelling, documentation)	21,925	21,925	43,850
Shipment of ISO tanks, including insurance and tracking system; (total transport at \$1.50/kg)	19,050	0	19,050
Destruction (purification and testing at destruction site at \$1.00/kg; Destruction at \$5.00/kg)	63,500	0	63,500
Contingency (5%)	3,500	0	3,500
Policy support; Project management unit (PMU)	7,500	7,500	15,000
Halon disposal strategy	0	5,000	5,000
TOTAL (US\$)	123,475	58,875	182,350

20. The final cost of the project was agreed at US \$123,475 (plus agency support costs of US \$11,113) calculated at US \$9.69/kg which is lower than the threshold (US\$13.2/kg).

RECOMMENDATION

21. The Executive Committee may wish to consider:

- (a) Noting the submission of the Government of Lebanon of a pilot ODS waste management and disposal project;
- (b) Approving the implementation of a pilot demonstration project for ODS waste management and disposal in Lebanon to destroy a total of 12.7 metric tonnes of ODS waste, at the amount of US \$123,475 plus agency support costs of US \$11,113 for UNIDO, on the understanding that:
 - (i) No further funds would be available for Lebanon for any ODS disposal projects in future;
 - (ii) Any marketing of greenhouse gas (GHG) emission reductions that may be generated by or associated with the project would be subject to a decision by the Executive Committee; and
- (c) Requesting the Government of Lebanon, through UNIDO, to establish a monitoring system for the operation of, and the activities associated with, the ODS waste management and disposal demonstration project; and

- (d) Requesting UNIDO to report thereon to the Executive Committee at the completion of the project in 2016, ensuring that no marketing of GHG emission reductions had taken place.
