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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Fiftieth Meeting
New Delhi, 6-10 November 2006

PROJECT PROPOSAL: ISLAMIC REPUBLIC OF IRAN

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

Solvent

- Terminal solvent sector umbrella project

UNIDO

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**PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECTS
ISLAMIC REPUBLIC OF IRAN**

PROJECT TITLES	BILATERAL/IMPLEMENTING AGENCY
Terminal solvent sector umbrella project	UNIDO

NATIONAL CO-ORDINATING AGENCY	National Ozone Unit (NOU)
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LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**A: ARTICLE-7 DATA (ODP TONNES, 2005, AS OF SEPTEMBER 2006)**

CTC	13.64		
TCA	4.29		

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF SEPTEMBER 2006)

ODS Name	Sub-sector /quantity	Sub-sector /quantity	Sub-sector /quantity	Sub-sector /quantity.
CTC	Cleaning solvent / 11			
TCA	Cleaning solvent / 4.16			

CFC consumption remaining eligible for funding (ODP tonnes)	
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CURRENT YEAR BUSINESS PLAN ALLOCATIONS		Funding US \$ million	Phase-out ODP tonnes
		(a)	CTC / 860,000 TCA / 215,000

PROJECT TITLE:	(a)
ODS use at enterprise (ODP tonnes):	CTC / 44.07 TCA / 8.63
ODS to be phased out (ODP tonnes):	
ODS to be phased in (ODP tonnes):	
Project duration (months):	15
Initial amount requested (US \$):	
Final project cost:	
Incremental Capital Cost (US \$)	936,212
Contingency (10%) (US \$)	83,621
Incremental Operating Cost (US \$)	-163,355
Total Project Cost (US \$)	856,478
Local ownership (%):	100%
Export component (%):	<10%
Requested grant (US \$):	856,478
Cost-effectiveness (US \$/kg) for CTC:	13.58
Cost-effectiveness (US \$/kg) for TCA:	29.9
Implementing agency support cost (US \$):	64,236
Total cost of project to Multilateral Fund (US \$):	920,714
Status of counterpart funding (Y/N):	Y
Project monitoring milestones included (Y/N):	Y

SECRETARIAT'S RECOMMENDATION	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of the Islamic Republic of Iran, UNIDO has submitted to the 50th Meeting a terminal umbrella project to phase out the use of CTC and TCA in the solvent sector. The amount being requested is US \$856,478 plus support costs of US\$64,236 for UNIDO. The objective of the project is to achieve complete phase-out of CTC and TCA by 31 December 2007.

ODS consumption in the solvent sector

2. A survey conducted by UNIDO in 2003 with Fund resources identified apparent CTC consumption at that time of 1,413 ODP tonnes of CTC and 256 ODP tonnes of TCA. In connection with a request to revise its CTC and TCA baselines, Iran was asked by the Implementation Committee to validate these consumption figures but was not at that stage in a position to do so. The request for revisions to baselines was subsequently withdrawn and Iran has decided to complete its solvent sector phase-out on the basis of the consumption more recently confirmed by UNIDO as indicated below.

3. UNIDO has advised that a very substantial reduction in ODS consumption in the solvent sector has already taken place in Iran. In July 2006, UNIDO visited the remaining major ODS users as identified by a local consultant and prepared project documents for those deemed eligible. The resulting six project documents form the substantive part of this overall umbrella project together with activities to address small and medium-sized enterprises (SMEs). The average consumption in the six enterprises, plus SMEs, for the last three years (on which basis the projects were prepared) amounts to 44.07 ODP tonnes of CTC and 8.63 ODP tonnes of TCA. The consumption for 2005 only totalled 11.0 ODP tonnes of CTC and 4.29 ODP tonnes of TCA.

4. Under Article 7 of the Protocol, Iran has reported a 2005 CTC consumption of 13.64 ODP tonnes. Iran thus appears not to have met the 2005 control limit for CTC, which for Iran is 11.55 ODP tonnes. Iran has been invited to clarify its position to the Implementation Committee at its forthcoming meeting from 25 to 27 October 2005. Article 7 data for TCA consumption in 2005 (4.29 ODP tonnes) is consistent with 30 per cent reduction limit of 6.09 ODP tonnes. Since the project will result in the phase-out of the remaining CTC and TCA consumption, and is planned for completion by the end of 2007, it will facilitate Iran's compliance with the Protocol's CTC control requirements.

The project

5. The proposed incremental costs of the project, including investment costs, a technical support component to address remaining consumption in SMEs and a policy and management support component are indicated in a summary table reproduced below:

Table 1 – Summary

Activity	Cost (US\$)
Investment component	919,833
Policy and management support component	40,000
Technical support component	60,000
Total	1,019,833

6. The technical support component for the SMEs will take the form of two technical training workshops in the two main centres of industrial activity in the north and south of the country. Each workshop will have 75 participants. The workshops will be conducted in coordination with local technical institutions, industry associations and dealers and distributors.

7. The policy and management support component will consist of a dedicated management team under a co-ordinator from the National Ozone Unit (NOU). The activities to be undertaken are as follows:

- (a) Management and co-ordination of the implementation with the various Government policy actions pertaining to the sub-sector;
- (b) Establishment of a policy development and enforcement program covering various legislative, regulatory, incentive, disincentive and punitive actions to enable the Government to acquire and exercise the required mandates in order to ensure compliance by the industry with the phase-out obligations;
- (c) Development and implementation of training, awareness and capacity-building activities for key government departments, legislators, decision-makers and other institutional stakeholders, to ensure a high-level commitment to the terminal solvent sector umbrella project objectives and obligations;
- (d) Preparation of the implementation plan including determining the sequence of enterprise participation in the planned projects;
- (e) Verification and certification of CTC phase-out in completed projects within the terminal solvent sector umbrella project through plant visits and performance auditing;
- (f) Establishment and operation of a reporting system on the use of substitutes by enterprises;

8. The breakdown of investment costs for each of the six enterprises and the enterprise consumption appear in tables 2 and 3 respectively below:

Table 2 – Investment costs

Enterprise	ODS	Investment Cost (US \$)	Contingency (US \$)	Operating Cost/Savings Four Years (US \$)	Beneficiary Contribution (US \$)	Grant (US \$)
Iran Essence	TCA	354,167	26,772	-65,972	-86,450	228,517
Iran Regulator	CTC	89,600	8,960	2,054	0	100,614
Amen Sanat	CTC	211,300	21,130	-19,435	0	212,995
Ghoflkar	CTC	89,600	8,960	12,420	0	110,980
Pars Electric	TCA	96,475	9,648	-56,900	0	49,223
Pourangan	CTC	192,680	19,268	-35,522	-55,426	121,000
Total		1,033,822	94,738	-163,355	-141,876	823,329

Table 3 – Consumption of CTC and TCA, 2003-2005

Enterprise	Substance	2003 ODP Tonnes	2004 ODP Tonnes	2005 ODP Tonnes
Iran Regulator	CTC	7.4	8.6	1.03
Amen Sanat	CTC	17.93	15.07	2.95
Ghoflkar	CTC	6.93	4.95	0.99
Pourangan	CTC	6.93	6.60	1.98
SMEs and other users	CTC	23.71	23.08	4.05
Total CTC		62.90	58.30	11.00
Iran Essence	TCA	8.6	8.7	2.0
Pars Electric	TCA	2.2	1.8	2.0
SMEs and other users	TCA	0.1	0.2	0.29
Total TCA		10.9	10.7	4.29
Total CTC and TCA		73.80	69.0	15.29

9. Three of the enterprises will phase out through conversion to the use of perchloroethylene (PER) which is not an ODS, and two of the three through retrofit of existing machinery. The cleaning processes and machinery used are standard in the metal cleaning industry. The two retrofits will incur small incremental operating costs which have been added to the proposed grant on the basis of net present value (NPV) for four years, the established requirement for the solvent sector. The enterprise that receives new equipment will realise incremental operating savings which have been deducted from the proposed grant, also in the form of the NPV for four years.

10. The other three enterprises will move to aqueous technologies. Two of these enterprises, Iran Essence Industries and Pourangan Company have unusual requirements. The first for cleaning equipment used in the production of food flavouring and colouring and fragrances, the second for cleaning woollen yarn used in the production of carpets. Cleaning equipment of a specific design to meet these individual requirements has been identified. The net investment costs, after taking account of incremental operating savings, are included in table 5 above.

11. The cost effectiveness of the CTC components of the project is US \$13.58 per kg. The cost effectiveness of the TCA components is US \$29.9 per kg. Implementation of the investment sub-projects is planned to be completed in 2007 after which CTC and TCA consumption will be zero.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

12. The Secretariat discussed with UNIDO the overall level of consumption of ODS solvents in Iran in view of Iran's recent decision to withdraw a request to the Parties for revision of its baseline consumption of CTC and TCA. UNIDO indicated in the project document that it was apparent that a very substantial reduction in ODS consumption had already occurred, with many users converting to alternative technologies at their own cost. Therefore, in view of the uncertainties surrounding the results of the 2003 survey, which could be neither verified nor disproved, the Government of Iran has chosen to retain the declared baseline of 1998-2000 and to apply for funding to cover the phase-out of remaining eligible quantities. UNIDO had confirmed that the current proposal represented the final assistance that would be sought from the Fund to complete the phase-out of CTC and TCA in the solvent sector. In this regard, it was indicated in the project document that Iran had established quotas for the import of CTC and TCA effective from 21 March 2006. The Secretariat reviewed the project on this basis.

13. The main emphasis of the review was to establish and achieve agreement with UNIDO on the eligible incremental costs of the six sub-projects. No issues arose from the proposal for technical assistance for SMEs or from the component for management and monitoring which comprises only around four per cent of the total project cost.

14. In relation to the four sub-projects that utilised standard metal cleaning equipment, namely Iran Regulator, Pars Electric, Amen Sanat and Ghoflkar, the Secretariat questioned a number of technical aspects such as the request for funding for material compatibility and technical documentation, the need for ultrasonics in a vapour phase degreaser, and engineering installation costs for retrofitted degreasers. In each case the issues were resolved and the incremental costs were adjusted accordingly.

15. In relation to the sub-project for Iran Essence Industries, the Secretariat questioned the basis for requesting a total of US \$172,000 for development of alternative food flavouring and colouring formulations. UNIDO clarified that re-formulation of the products was an integral part of the phase-out strategy for the enterprise to eliminate the resinous residues that were previously removed with TCA. The residues from the reformulate products could be removed by aqueous cleaning in conjunction with iso-propyl alcohol. The re-formulation costs were based on a quotation received from specialist firms in the United Kingdom and Italy. Noting that the beneficiary would be called on to provide a contribution to the cost of the project in view of the limits imposed by the cost effectiveness threshold (US \$38/kg for TCA projects) it was agreed that the beneficiary would contribute to the re-formulation costs of the food flavourings amounting to US \$104,310. Installation and commissioning costs were also adjusted after more detailed discussions. There are annual incremental operating savings of US \$20,812. Final incremental costs for this sub-project were agreed at US \$208,871, representing a cost-effectiveness of US \$34.81/kg. In this regard it should be noted that since the ODP of TCA is 0.1, this cost effectiveness represents funding of only US \$3.481 per metric kilogramme of TCA consumed.

16. The final sub-project was the conversion of equipment for cleaning wool used in the manufacture of carpets at Pourangan Co. Ltd. to phase-out the use of CTC as the solvent. The conversion is to be achieved by replacing the current equipment with a proprietary aqueous cleaning machine, examples of which can be obtained from Denmark and Germany. The Secretariat questioned whether there was any upgrade, either on the basis of technology improvement or through the replacement of old equipment with new machines. UNIDO advised that although the existing equipment was constructed in the mid 1980's, it was well designed and well maintained and was far from the end of its useful life. UNIDO also confirmed that there was no increase in capacity with the new machine. Adjustments were made to the capital costs in regard to site preparation and the need for technical documentation, and to incremental operating costs to account for slightly greater manpower savings. The incremental costs of the sub-project were agreed with UNIDO at US \$110,426 representing a cost-effectiveness of US \$18.25/kg. This figure is at the high end of the range for CTC but is justified on the basis of a careful examination of the proposed costs, and in light of the unusual nature of the process.

RECOMMENDATION

17. The Fund Secretariat recommends blanket approval of the project at the costs indicated in the table below, with the provision that this is the final funding available for the phase-out of ODS in the solvent sector in Iran.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Terminal solvent sector umbrella project	856,478	64,236	UNIDO