

ANNEX-IV**SUB-PROJECT SUMMARY**

COUNTRY	:	Republic of Uzbekistan
SUB-PROJECT REFERENCE	:	Sub-project Number 1
SUB-PROJECT TITLE	:	Elimination of ODS in the manufacture of domestic refrigerators at SINO
SECTOR	:	Refrigeration and Air Conditioning
ODS USE IN SECTOR	:	260.3 MT ODP (1996)
SUB-PROJECT IMPACT	:	35 MT/y
SUB-PROJECT DURATION	:	2 years
SUB-PROJECT COSTS	:	US\$ 1,637,366
PROPOSED GEF FINANCING	:	US\$ 1,515,536 (includes US\$ 125,136 project support services)
COST-EFFECTIVENESS	:	US\$ 24.00/kg/y (no CE threshold for LVC)
IMPLEMENTING AGENCY	:	UNDP
EXECUTING AGENCY	:	UNOPS
CO-ORDINATING NATIONAL BODY	:	State Committee for Nature Protection
STAP REVIEW	:	Dr. L. J. M. Kuijpers (refrigeration) Dr. Mike Jeff's (foams)

SUMMARY

In this project, SINO a 100% Uzbekistan-owned company manufacturing domestic refrigerators, currently using CFC-11 as a blowing agent in the production of rigid polyurethane insulation foam for the refrigerator cabinets and doors, and CFC-12 as the refrigerant, will convert its manufacturing facilities to enable conversion to cyclopentane as the blowing agent and HFC-134a as the refrigerant. Selections have been made in accordance with relevant policies, which emphasise that the GEF will fund the conversion to the technology with the least impact on global warming (TEWI) that is technical feasible, environmentally sound, and economically acceptable. However, later conversions to HC refrigerants may be feasible as HC compressors may become available. This project will eliminate a total of 35 ODP tons/yr of CFCs 11 and CFC. The requested funding will be used to change the existing production lines, technology transfer, technical assistance, re-design, testing, pre-production trials and training. Incremental operational costs (6 months) are calculated for illustrative purposes, but they are not requested by the enterprise and will constitute the enterprise's contribution towards the project costs.

ANNEX-IV (Cont'd)**SUB-PROJECT SUMMARY**

COUNTRY	: Republic of Uzbekistan
SUB-PROJECT REFERENCE	: Sub-project Number 2
SUB-PROJECT TITLE Recovery	: Implementation of a National Programme for and Recycling of Refrigerants
SECTOR	: Refrigeration and Air Conditioning
ODS USE IN SECTOR	: 260.3 MT ODP (1996)
SUB-PROJECT IMPACT	: 91.48 MT/y ODP
SUB-PROJECT DURATION	: 2 years
SUB-PROJECT COSTS	: US\$ 1,327,980
PROPOSED GEF FINANCING	: US\$ 1,327,980 (includes US\$ 109,649 project support services)
COST-EFFECTIVENESS subsector)	: US\$ 13.32/kg/y (no CE threshold for this subsector)
IMPLEMENTING AGENCY	: UNDP
EXECUTING AGENCY	: UNOPS
CO-ORDINATING NATIONAL BODY	: State Committee for Nature Protection
STAP REVIEW	: Dr. L. J. M. Kuijpers

SUMMARY

In this project, a comprehensive National Programme for Recovery and Recycling of refrigerants will be implemented for the Refrigeration and Air Conditioning Sector, as part of the national Refrigerant Management Plan (RMP). The project will cover investments involved in provision of refrigerant recovery and recycling units to users. These recovery and recycling units will be installed in various centers, to be established for this purpose, where CFC-12 will be collected. The project will also provide for holding training seminars for technicians performing installation, repairs and maintenance of refrigeration equipment including practical demonstration with the equipment acquired under the project, of the good practice and safety involved. The seminars will also familiarize all involved in the Refrigerant Management Plan, with the different techniques and practices for Recovery and Recycling of refrigerants. A system for monitoring (with periodic evaluation) of the quantity and quality of the CFCs recovered and recycled under this project, to ensure its success.

ANNEX-IV (Cont'd)**SUB-PROJECT SUMMARY**

COUNTRY	:	Republic of Uzbekistan
SUB-PROJECT REFERENCE	:	Sub-project Number 3
SUB-PROJECT TITLE	:	Training of Trainers in Refrigeration
SECTOR	:	Refrigeration and Air Conditioning
ODS USE IN SECTOR	:	260.6 MT ODP (1996)
SUB-PROJECT IMPACT	:	15.5 MT ODP
SUB-PROJECT DURATION	:	1.5 year
SUB-PROJECT COSTS	:	US\$ 134,244
PROPOSED GEF FINANCING	:	US\$ 134,244 (includes US\$ 15,444 project support services)
COST-EFFECTIVENESS	:	Not applicable (no CE threshold for training project)
IMPLEMENTING AGENCY	:	UNEP
EXECUTING AGENCY	:	UNEP-IE
CO-ORDINATING NATIONAL BODY	:	State Committee for Nature Protection
STAP REVIEW	:	Not applicable

SUMMARY

This project will provide technical information and training to maintenance, service and repair personnel in the Refrigeration and Air Conditioning Sector, in order to reduce ODS consumption during service of refrigeration equipment. In order to achieve the objectives as identified in the Country Programme Action Plan and the Refrigerant Management Plan, professional training for hands-on service, maintenance and repair personnel is essential.

The servicing of refrigeration equipment is a large user sector in Uzbekistan, which accounts the bulk of the sectoral consumption. Thus this training project for refrigeration technicians is critical to the success of the ODS phase-out efforts in Uzbekistan.

ANNEX-IV (Cont'd)**SUB-PROJECT SUMMARY**

COUNTRY	:	Republic of Uzbekistan
SUB-PROJECT REFERENCE	:	Sub-project Number 4
SUB-PROJECT TITLE Building	:	Institutional Strengthening and Capacity
SECTOR	:	All Sectors
ODS USE IN SECTOR	:	274.5 MT ODP (1996)
SUB-PROJECT IMPACT	:	NA
SUB-PROJECT DURATION	:	3 year
SUB-PROJECT COSTS	:	US\$ 256,604
PROPOSED GEF FINANCING	:	US\$ 225,604 (includes US\$ 25,954 project support services)
COST-EFFECTIVENESS	:	Not applicable (no CE threshold)
IMPLEMENTING AGENCY	:	UNEP
EXECUTING AGENCY	:	UNEP-IE
CO-ORDINATING NATIONAL BODY	:	State Committee for Nature Protection
STAP REVIEW	:	Not applicable

SUMMARY

The State Committee for Nature Protection of Uzbekistan is responsible for matters pertaining to the Vienna Convention, the Montreal Protocol (and the London and Copenhagen Amendments thereof). Currently, the human and technological resources available to the Ministry to address Ozone issues are limited, which becomes a significant handicap for implementation of projects and strategies formulated as part of the Country Programme and the Refrigerant Management Plan, to phase-out ODS in Uzbekistan. The current staff is inadequate for effectively monitoring and reporting on the ODS consumption in the country. The limited institutional capacity therefore inhibits the Ministry's ability to enable the country to meet the obligations of the Montreal Protocol. This project will strengthen the national institutional capacity to effectively co-ordinate and administer the actions outlined in the Country Programme and the Refrigerant Management Plan. In addition this subproject will contain a component to train customs officers and provide them with ODS Detection kits.