

PROJECT BRIEF

1. Identifiers

Project Number: .
Project Name: Uzbekistan : Programme for phasing out Ozone Depleting Substances
Duration: 3 years
Implementing Agency: UNDP/UNEP
Executing Agency: UNOPS/UNEP
Requesting Country: Republic of Uzbekistan
Eligibility: Ratified Vienna Convention, Montreal Protocol in May 1993 and the London and Copenhagen Amendments thereof in May 1998. Is classified as an Art.5 non recipient country under the Montreal Protocol. Has recipient country status with UNDP
GEF Focal Area: Ozone Depletion
GEF Programming Framework: ODS phase-out in consumption

2. Summary

The objective of this project is to assist the Republic of Uzbekistan in the rapid phase-out of ODS consistent with the international efforts in this direction. The project will assist the Republic of Uzbekistan in meeting its phase-out obligations under the Montreal Protocol within a realistic time frame and ensure availability of technical assistance to expedite the implementation of the country programme. The project targets priority ODS phase-out activities in the refrigeration sector and also proposes modest technical assistance at the institutional and enterprise levels to facilitate implementation of the country programme. The project is formulated as a framework project, comprising of one enterprise-specific technology conversion sub-project in Refrigeration, one Recovery and Recycling sub-project for Refrigerants and four technical assistance and training components. The project is designed in full conformity with relevant GEF policies on cost-effectiveness, exports, ownership, retro-active financing, operational costs and financial viability as per requirements of the GEF Operational Strategy

3. Costs and Financing (Million US\$):

GEF:	-Project	:	USD\$ 3.2 m
	-PDF B	:	USD\$ 0.116 m (see note 1)
	-Subtotal GEF	:	USD\$ 3.32 m

Co-financing:	-IA	:	USD\$ 0
	-Other International	:	USD\$ 0
	-Government (in kind)	:	USD\$ 0.031 m
	-Private	:	USD\$ 0.122 m
Total Project Cost		:	USD\$ 3.472

4. Associated Financing : None

Note 1: The PDF B indicated corresponds to 1/3 of the amount approved for Uzbekistan, Turkmenistan and Cyprus.

5. Operational Focal Point Endorsement

Name : Mr. A. Sh. Khabibullaev, Chairman
: Attn: Ms. Nadejda Dotsenko
Organization : State Committee for Nature Protection
Date : 10 August 1998

6. IA Contacts**FOR UNDP**

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List of abbreviations:

CE:	Cost Effectiveness
CEIT:	Countries with Economies in Transition
CIS:	Commonwealth of Independent States
CFC:	Chloro-fluoro-carbons
CTC:	Carbon-tetrachloride
GEF:	Global Environmental Facility
HC:	Hydrocarbons
HCFC:	Hydro-chloro-fluorocarbons
HFC:	Hydro-fluorocarbons
IA:	Implementing Agency
MCF:	Methyl chloroform
MLF:	Multilateral Fund for the Implementation of the Montreal Protocol
MP:	Montreal Protocol
MT:	Metric tonnes
NA:	Not Applicable
NGO:	Non-Governmental Organization
ODP:	Ozone Depleting Potential
ODS:	Ozone Depleting Substances
PDF:	Project Development Facility
RAC:	Refrigeration and Air Conditioning
STAP:	Science and Technical Advisory Panel
TEWI:	Total Equivalent Warming Impact
UNDP:	United Nations Development Programme
UNEP:	United Nations Environmental Programme
UNOPS:	United Nations Office for Projects Services
WTO:	World Trade Organization

BACKGROUND AND CONTEXT (BASELINE COURSE OF ACTION)

1. The recognition of the phenomenon of depletion of the stratospheric ozone layer, has led to a substantial international effort to phase out Ozone Depleting Substances (ODS). The emission of ODS into the earth's atmosphere causes damage to the stratospheric ozone layer which acts as a barrier to ultra-violet radiation from the Sun. Increased radiation has been traced as contributing to a higher incidence of skin cancer, eye diseases and immunological disorders while adversely affecting ecological food chains and bio-diversity. In the mid-1980s it was found that ozone depleting substances are responsible for the destruction of the ozone layer :

- Chloro-fluoro-carbons (CFCs): Used extensively in refrigeration and air-conditioning (as refrigerants), in foams (as blowing agents), in aerosols (as propellants), and also as solvents and cleaning agents.
- Halons: Used in fire-extinguishers and in fire fighting systems
- Methyl Bromide: Used as a fumigants

2. The basis of phasing out of the ozone depleting substances including CFCs, Halons, several halogenated solvents, agricultural fumigants such as Methyl Bromide and a class of transitional chemicals known as Hydrochlorofluorocarbons (HCFCs), is the Montreal Protocol (1987) ratified by all developed countries and most developing countries. Further recognition that ozone depletion is in fact occurring more rapidly than anticipated, has led to two amendments to the Montreal Protocol which added controlled substances and accelerated phase-out schedules. The first amendment in June 1990 (London Amendment) added methyl chloroform (MCF) and carbon tetrachloride (CTC) and tightened the phase-out schedule. The second amendment in November 1992 (Copenhagen Amendment), added HCFCs and methyl bromide as controlled substances and further accelerated phase-out schedules. For developed countries, the phase-out dates are :

- Halons : January 1994
- CFCs, MCF and CTC : January 1996
- Methyl Bromide : Year 2010 (except critical agricultural uses)
- HCFCs : Year 2030

3. Uzbekistan declared independence from the former Soviet Union in August 1991. The Republic of Uzbekistan ratified the Vienna Convention, the Montreal Protocol in May 1993 (and the London and Copenhagen amendments thereof in May 1998). Uzbekistan has reported data for 1996 to the Ozone Secretariat as required under the Montreal Protocol requirements. The Implementation Committee of the Montreal Protocol has not discussed the status of Uzbekistan regarding compliance with the Protocol.

4. The State Committee for Nature Protection is the national co-ordinating body, which is in the process of creating the necessary administrative and legal framework to control the trade and usage of ODS, to enable Uzbekistan to fulfil its obligations under the Montreal Protocol. Governmental supervision in the sphere of environmental protection in the Republic of Uzbekistan is carried out by the Cabinet of Ministers of the Republic

of Uzbekistan, the State Committee for Nature Protection and by its the local representative offices. The State Committee for Nature Protection and its units are empowered to provide the necessary and sufficient supervision of the implementation of the Country Programme and Action Plan for ozone depleting substances phaseout, by coordinating the activities of the various ministries, agencies, enterprises and organisations involved in the process. In order to organise and coordinate that, an Interdepartmental Commission is going to be formed, with high ranking officials and representatives of the State Committee for Nature Protection, Ministry for Foreign Economic Relations, State Customs Committee, Ministry of Macro-economics and Statistics, Ministry of Interior Affairs, Ministry of Finance, State Committee on Science and Technology, other ministries and agencies.

An Ozone Unit would be formed in the State Committee for Nature Protection, which would be responsible for the overall implementation of the Country Programme and the projects included in the Action Plan, as well as for any further data collection, project management, preparation of public awareness materials and reports to the Interdepartmental Commission, the UNEP Ozone Secretariat and the Global Environmental Facility. The initial country programme for the phase-out of ODS was compiled in 1997 at the initiative of the UNEP/IE, based on the exhaustive data survey of ODS consumption in various sectors, conducted by the National Ozone Team.

5. The Government of Uzbekistan clearly understands the country's responsibility as a member of the global community, to protect the ozone layer and the Republic of Uzbekistan must share the economic and social burden caused by the international efforts to phase out ODS. As a party to the Montreal Protocol classified under Article-2 of the Protocol, Uzbekistan is required to contribute to the Multilateral Fund. However, being an economy in transition, the Republic of Uzbekistan relies on technical and financial support in its efforts to meet its obligations, by the Global Environmental Facility and other international cooperating partners.

6. The stated priorities and the strategic goals of the Government, for implementing the compliance with the Montreal Protocol are outlined Uzbekistan's ODS phase out Country Programme, which is available upon request. Key country programme goals are:

- Phase out of the consumption of ODS by the year 2002,
- Phase-out of the consumption of Halons by the year 2000.
- Comply with the phase-out schedules for HCFCs and Methyl Bromide as applicable to countries operating under Article-2 of the Montreal Protocol.
- Support the industry in Uzbekistan to convert to ODS-free technologies with support from GEF and other international funds and multilateral agencies (UNDP, UNEP, World Bank, WTO, etc.)
- Develop and establish appropriate legal and regulatory framework to ensure effective and efficient phase-out process
- Develop and establish the necessary monitoring and licensing systems to control the imports and exports of ODS
- Support further scientific research on ozone layer depletion and thus contribute to its protection

7. Uzbekistan does not produce or export any substances controlled under the Montreal Protocol. The bulk of ODS is imported from the Russian Federation. Minor and unidentified quantities are imported from other countries. The ODS producers in the Russian Federation are scheduled to discontinue production by the year 2000. The proposed GEF assistance to Uzbekistan would assist the country to make the transition to non-ODS materials in a planned and gradual manner, thereby avoiding a crisis, when the supplies from the Russian Federation are discontinued. Early reduction in ODS consumption will also reduce demand for ODS from unauthorized sources.

8. In 1996, the total consumption of ODS in Uzbekistan was 315.4 MT of ODS (equivalent to 274.5 MT ODP). The dominant sectors of ODS use are Refrigeration (260.3 MT ODP - 95.7%). Solvents (4.34%) and Fumigants (0.003%) constitute the balance ODS consumption. The above figures are based on the survey conducted by the National Ozone Team and UNEP in 1997. From 1986 to 1991, Uzbekistan has registered an increase of its output, especially in chemical, machine-building industries and electronics which in its turn led to a sharp increase in ODS consumption (1.6 times compared to the base consumption). However, since 1992, because of the economic transition and because of the accession of Uzbekistan to the Vienna Convention and Montreal Protocol, a trend of decrease of ODS consumption has been registered. Compared to 1986 and 1990, the consumption of controlled substances in 1996 went down by 85.6% and 90.1 % respectively, and compared to 1991 by 90.9 % (or 11 times).

9. It is foreseen that the ODS consumption would fall, due to the worldwide transition to ODS-free technologies and resulting market pressures. It is expected that with the assistance of GEF, by the year 2000 the consumption of ODS would be negligible and nil by the year 2005.

RATIONALE AND OBJECTIVES

10. The main objective of this project is to assist Uzbekistan in the rapid phase-out of ODS consistent with international efforts in this direction. Other CEIT countries were asked by the Implementation Committee to phase out CFC's by the year 2002, and it is likely that this will also apply for Uzbekistan. The GEF proposal presented herewith would allow Uzbekistan to comply with such a requirement.

11. Assistance to enterprises representing the bulk of the consumption of ODS, would enable them to make the transition to non-ODS materials before legal supplies of ODS are discontinued. The project will also enable Uzbekistan to meet its phase-out obligations under the Montreal Protocol within a realistic time frame, and also ensure availability of technical assistance to expedite the Country Programme implementation.

12. The project targets priority ODS phase-out activities in the Refrigeration sector. It also provides modest technical assistance at the institutional and enterprise levels to facilitate the implementation of the Country Programme and one demonstration project

for training of trainers for transferring the knowledge of ODS-free refrigeration service.

13. The formulation of this project through the PDF grant has been a result of several missions of UNDP/UNEP consultants and assistance from national consultants who carried out the data survey. The full-fledged Country Programme and the Refrigerant Management Plan have been prepared in accordance with the guidelines of the Multilateral Fund for the Montreal Protocol. The project components listed in the ensuing paras are a direct consequence of the strategies formulated in the Country Programme and the Refrigerant Management Plan.

14. The project is formulated as a framework project comprising of one enterprise-specific technology conversion sub-project in Refrigeration, one recovery and recycling sub-project for Refrigerants and four technical assistance and training components. The project has been designed in full conformity with relevant GEF policies, particularly those on cost-effectiveness, exports, ownership, retroactive financing, operational costs and financial viability as included in Chapter 5 of the GEF Operational Strategy. The summary of the overall project and the sub-projects cost data is provided in Annex-1. Resources provided through a PDF-B grant have been utilized in preparation of the project to a level acceptable for GEF review. The preparation includes detailed technology conversion and related cost analyses. Each sub-project was examined by a STAP reviewer, whose comments were either incorporated or taken into account; the STAP reviews recommended approval of all sub-projects. Both the sub-project documents and the STAP reviews are available at the UNDP's Montreal Protocol Unit in New York.

PROJECT ACTIVITIES/COMPONENTS AND EXPECTED RESULTS

15. In order to achieve the above-mentioned objective, the project contains two components :

- a technology conversion component
- a technical assistance and training component.

16. The technology conversion component comprises of two sub-projects in the Refrigeration sector to be implemented by the UNDP. A brief description of these sub-projects is as below :

- Refrigeration (US\$ 1,515,536) : Under this sub-project, SINO, a 100% Uzbekistan-owned enterprise, producing domestic refrigerators based on CFC-12 technology, will convert its manufacturing facilities to make them suitable for cyclopentane and HFC-134a technology, thus eliminating 35 ODP MT annually. 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. Later conversions to HC refrigerants would be feasible as HC compressors may become available in future.

- Refrigeration (US\$ 1,327,980) : Under this project a comprehensive national programme for Recovery and Recycling of refrigerants in the Refrigeration and Air-conditioning sector would be implemented, as a part of a national Refrigerant Management Plan. This would be achieved through provision of recovery and recycling equipment to be used in major repair shops in the country, leading to an elimination of about 91.48 ODP MT annually.

17. The technical assistance and training component comprises of 4 sub-components : assistance for training of trainers for refrigeration service, maintenance and development of an institutional framework within Uzbekistan for implementing the country programme, to be implemented by the UNEP. The brief descriptions for the technical assistance and training components are as follows :

- Training the Trainers in Refrigeration (US\$ 134,244) : This sub-component will provide training to training personnel for service, maintenance and repair in the refrigeration sector, to ensure reduction in ODS emissions during service. This training project is crucial for the successful implementation of the Refrigerant Management Plan (which was prepared simultaneously with the Country Programme) due to the significant contribution of the Refrigeration sector to the overall ODS consumption in the country.
- Assistance for Co-ordinating the Implementation of the Country Programme (US\$ 225,604): This sub-component will provide resources to the State Committee for Nature Protection for strengthening the national institutional structure and monitoring the ODS phase-out activities for a period of three years. An Ozone unit will be established for the Committee to assist in administering the project and co-ordinating the implementation of the Country Programme as per the National Action Plan. This support would include computing and communications equipment, operating costs including telecommunications and office supplies, staff support for a national project co-ordinator, funding for essential public awareness and project support services. The project will ensure proper monitoring of the implementation of the refrigeration management plan. This project will also provide the Customs Department with ODS detection equipment to enable identification of ODS imported in bulk quantities and in equipment and would provide hands-on training for selected customs officials from the various checkpoints in the country. This component will be implemented by UNEP in co-operation with the UNDP country office.

Detailed documentation for the above subprojects is available at UNDP/UNEP and can be obtained from the contacts indicated on the project cover page.

18. Implementation of this project will contribute to the global ODS phase-out efforts by directly eliminating the use of 142 ODP MT of ODS annually. In addition the GEF grant funding will allow Uzbekistan to substantially meet its national obligations under the Montreal Protocol within a three-year period. This will serve to enhance the credibility of the country in the international community. In the longer term, it allows the country to avoid economic and social disruption that would occur when imported ODS would

no longer be available for industrial, commercial and consumer applications. The technology conversion under the project will allow key industries to maintain domestic and export markets. The institutional capacity for monitoring and regulatory enforcement of ODS phase-out will also be strengthened under the project.

19. In addition to the above, a regional project is being proposed by the UNEP for providing training for Customs Officials. Since this would be a regional training activity, this is not being elaborated in this project.

RISKS AND SUSTAINABILITY

20. The project will help the Government of Uzbekistan in fulfilling its commitment for phasing out ODS through compensation to enterprises for the incremental costs incurred during the process of technology conversion. This will allow the beneficiary enterprises to be competitive both in the domestic and export markets. Sustainability of specific sub-projects has been assured through the evaluation of proposed technologies and their cost-effectiveness in relation to other alternatives ensuring the project preparation work and its review by STAP. Assistance under the project for the ozone office will enable the Government to provide a sound institutional and policy framework for the ODS phase-out programme. The Government will aim at meeting its ODS phase-out commitments by ensuring that the enterprises will eliminate their ODS consumption through a smooth project implementation.

21. UNDP will ensure the accompanying measures stipulated in the Refrigerant Management Plan such as training activities to be carried out by the UNEP will have taken place prior to the Refrigerant Recovery and recycling Project. There are no significant issues that need to be addressed or actions to be taken, prior to implementation of the project. However, if any issues or actions need to be addressed to conform to the GEF Operational Strategy, these will be appropriately addressed

STAKEHOLDER PARTICIPATION & IMPLEMENTATION ARRANGEMENTS

22. As a part of the Country Programme development, the State Committee for Nature Protection of Uzbekistan undertook consultations with a broad spectrum of enterprises and interested parties such as other ministries, NGOs, industry associations, etc. The enterprises were provided adequate opportunities to participate in the project and to provide data necessary for the project staff to evaluate the financial viability, technological capability and eligibility. The project will be implemented by the UNDP and/or UNEP in co-ordination with the State Committee, as mentioned in each such sub-project.

23. The subprojects designated for UNEP will be implemented from the UNEP-IE suboffice in Paris, which has extensive experience for this kind of activities under the Multilateral Fund. UNDP's subprojects will be executed by UNDP's Montreal Protocol Unit in close coordination with UNDP's GEF unit, and in conjunction with the United

Nations Office for Project Services (UNOPS), as is the case for most of its Multilateral Fund activities.

INCREMENTAL COSTS AND PROJECT FINANCING

24. The estimated total cost of the project is US\$ 3,448,596 which includes equipment, services, technical assistance, training, physical and price contingencies and net present value of incremental operating costs wherever applicable. The project will be financed by a GEF grant of US\$ 3,295,766 and contributions from the beneficiaries amounting to US\$ 152,830.

25. All the costs are incremental in nature and calculated in accordance with the "Indicative List of Eligible Incremental Costs" adopted by the Parties to the Montreal Protocol and accepted under the GEF Operational Strategy. Consistent with GEF guidelines, the grant amount limits eligible assistance for enterprises with export markets to OECD countries. Cost-effectiveness of sub-projects are at or below the threshold levels stipulated for projects under the Multilateral Fund.

No	Component	GEF	Co-financing	Total
1	Refrigeration - SINO Conversion	1,515,536	121,830	1,637,366
2	Refrigeration –Recovery and Recycling	1,327,980	0	1,327,980
3	Tech. Assistance - Training of Trainers	165,000	0	165,000
4	Tech. Assistance –Institutional Strengthening	225,604	31,000	256,604
TOTALS		3,203,364	152,830	3,356,194

Annex 1 provides a more detailed summary of the sub-project incremental cost.

MONITORING, EVALUATION AND DISSEMINATION

26. Project monitoring will be performed by UNEP/UNDP and the cost for it is included in the budgets that are indicated in Annex-1.

27. Standard evaluation will be performed, except in the case that an in-depth evaluation is required by the GEF whereby independent consultants would have to be hired and fielded to the country concerned. If such would be the case, consultancy fees and travel costs would have to be obtained in addition to the amounts requested herewith to cover these costs.

28. As implementing agencies for the Multilateral Fund of the Montreal Protocol, UNDP and UNEP are presently implementing ODS phase-out projects in over 60 countries. Several lessons have been learnt from experience with these projects :

- The importance of a national phase-out policy as a basis for assuring commitment and ownership by the recipient country.
- The value of strong linkages between the industry and the government to achieve phase-out objective.

- The need for strengthening the institutional framework and training of the local implementation units.
- Identifying a consistent and committed counterpart team with adequate authority and experience.
- Strong co-ordination among key interested parties at the national, regional and enterprise levels.
- Early and detailed attention to procurement and other execution issues.
- Involvement of national experts with thorough local knowledge.
- Involvement of qualified international technical specialists

29. The above lessons have been duly considered in the formulation of this project.

Annexes:

- I. Incremental Cost Annex
 - II. Logframe Matrix
 - III. STAP Roster Technical Reviews
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- IV. Subproject Descriptions for
 - SINO Refrigerator Plant
 - Recovery/Recycling of Refrigerants
 - Training of Trainers in Refrigeration
 - Institutional Strengthening
 - V. Transmittal letter from the Government

ANNEX-I

INCREMENTAL COSTS

Sub-Project/ Enterprise	Sector	Brief Description	I.A.	ODP (MT/y)	C. E. (US\$ per kg/y)	Incremental Investment Costs (US\$)	Incremental Operating Costs (US\$)	Total Project Costs (US\$)	Enterprise or Gov. Financing (US\$)	Proposed GEF Financing (US\$)
SINO	RAC	Phase-out of CFCs in the production of domestic refrigerators	UNDP	35.00	24.00	1,515,536	121,830	1,637,366	121,830	1,515,536
Refrigerant Management Plan	RAC	Refrigerant recovery and recycling – demonstration of equipment	UNDP	91.48	13.32	1,327,980	NA	1,327,980	0.00	1,327,980
Refrigerant Management Plan	Technical Assistance	Training of trainers for use of ODS-free refrigerants in maintenance and service	UNEP	15.5	NA	134,244	NA	134,244	0.00	134,244
State Committee for Nature Protection	Technical Assistance	Institutional Strengthening and Capacity Building	UNEP	NA	NA	256,604	NA	256,604	31,000	225,604
TOTAL				141.98		3,234,364	NA	3,356,194	152,830	3,203,364

KEY : C.E. - Cost Effectiveness, I.A. - Implementing Agency

ANNEX-II

PROJECT PLANNING MATRIX

PROJECT PLANNING MATRIX			
Summary	Objectively verifiable indicators	Means of Verification (monitoring focus)	Critical Assumptions and Risks
<u>Objective</u> To assist the Republic of Uzbekistan, for complying with the Montreal Protocol	1. ODS consuming sectors identified by the National Ozone Team. 2. Production of ODS based equipment and processes 3. Presently the country has limitations in complying with the Montreal Protocol.	1. Survey of ODS users carried out by the National Ozone Team 2. Data on imports of ODS, reported by the Uzbekistan Government	Accuracy of reported data on ODS imports and consumption
<u>Outcome</u> Phase-out of Ozone Depleting Substances by the various users	1. Availability of suitable technologies for the substitution of ODS. 2. Appropriate regulatory framework to confirm compliance.	1. International industry and market data on technology 2. Domestic industry and market data on ODS consumption	Non-availability of ODS through imports by 2000, from the Russian Federation and other sources and availability of non-ODS substitutes
<u>Results</u> Elimination of 260.6 ODP MT annually of ODS within 3 years	Information on pre-project and post-project ODS consumption	Data on imports of ODS through the relevant Government departments	Accuracy of data and adherence to project schedules
<u>Project Components to be implemented to obtain desired results</u> Two technology conversion sub-project and four technical assistance and training sub-projects	Installation of the necessary equipment, processes and introduction of practices envisaged in the sub-projects	1. Reports of vendors of equipment and processes 2. Reports of users 3. Reports of inspection and confirmation of completion by IA experts 4. Project management and evaluation reports	1. Adequacy of the project budgets. 2. Adequacy of financing of the project

ANNEX-III**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-III (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-III (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-III (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.