



COVER PAGE

Country: Republic of Rwanda

UNDAF Outcome(s)/Indicator(s): Capacity at national, district and community levels to restore and protect ecosystems of national and global importance against potential degradation strengthened

Expected Outcome(s)/Indicator(s): Technical and operational capacity of districts for the management of wastes and contaminants developed

Expected Output(s)/Annual Targets: Three Regional Service Centres set up for reduction of domestic refrigeration, etc., which are currently employing CFC refrigerants, and for recovery and reuse of CFC-12

Implementing partner: Rwanda Environment Management Authority (REMA)


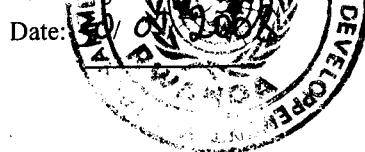
Responsible parties: United Nations Development Programme (UNDP)

This project covers Component 3 of the total four components under the Terminal Phase-out Management Plan (TPMP) project in Rwanda. The project will set up 3 Regional Service Centres (Western, Eastern and Southern Provinces). Each Centre will conduct permanent retrofitting of CFC domestic refrigeration following the instruction given in TPMP Component 2 and supply technical advice and financial incentives to refrigeration end-users with commercial and industrial CFC installations to permanently retrofit or convert these installations to use very low ODS (Ozone Depleting Substances) or non-ODS refrigerants. End-users such as food processing plants, hotels, hospitals and ice factories will be the principal target of the project. This component contributes to the total phase-out of CFC refrigerant consumption in the commercial and industrial refrigeration by 2010. The remaining target gas in Rwanda is estimated as 4.56 ODS Tons.

UNEP is the leading agency for this TPMP, while UNDP (cooperating agency) is involved into the implementation part of the three Regional Service Centres of the TPMP project document.

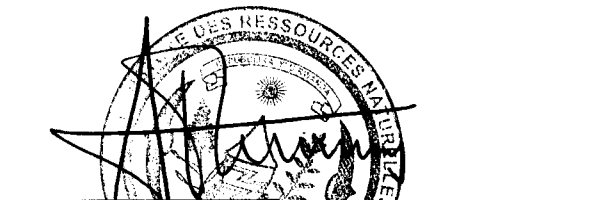
Programme Period: from 2008
 Programme Component: No. 3
 Project Title: Technical Assistance and Equipment Programme for 3 Regional Retrofitting and Recovery/Recycling Centres
 Project ID:
 Project Duration: Two years
 Management Arrangement: NEX

Total Budget for Component 3: US\$168,000
 Allocated resources:
 - Government: In Kind
 - Regular: N/A
 - Other:
 - Donor: Montreal Protocol
 US\$124,500 – Tranche I
 Unfunded budget:

Approved by: 
 Anthony OSHENGIMANA
 Country Director
 Date: 

Approved by 

James MUSONI
 Minister of Finance and Economic Planning
 (MINECOFIN)
 Date: 09/15/2008


 Prof. Muryanganizi BIKO
 Minister of State in charge of Environment, Water and Mines
 Date: 19 MAY 2008



UNDP Project Document

UNDP-MLF

Government of Rwanda

United Nations Development Programme

RWA/PHA/53/INV/14 – Terminal Phase-out Management Plan for Rwanda

Rwanda intends to implement a Terminal Phase out Management Plan (TPMP) project. The TPMP is aimed at phasing out the consumption of the remaining chloroflourocarbons (CFCs) in the country and sustaining the phase out process of the CFCs regulated by the Montreal Protocol on substances that deplete the ozone-layer. The TPMP will utilise a combination of regulatory, capacity building, investment and awareness measures to assist Rwanda to meet its Ozone Depleting Substances (ODS) phase out obligations. Since the time of ratification of the Montreal Protocol, Rwanda has been actively involved in implementing activities to phase out the use of ODS in the country under the Montreal Protocol. Rwanda has been in compliance with its freeze requirements and is on course to meet the 85% reduction target set for 2007. The TPMP will result in the complete phase out of CFCs in Rwanda by 1st January 2010, as this obligation is taken by the Government of Rwanda under the Montreal Protocol on the Substances that Deplete the Ozone Layer.

Rwanda is requesting financial support from the Multilateral Fund to cover part of the cost of phasing out the remaining 4.56 MT ODP of CFC consumption in accordance with the TPMP. With these allocated funds Rwanda will undertake the phase out of all remaining CFC consumption. The requested funds will be allocated to Rwanda over a two-year period.

The TPMP project is annexed and it is the official document approved by the Multilateral Fund. It will be implemented in two phases, with funding for the second phase being requested after submission of the progress and financial report for the first phase. This TPMP will be jointly implemented by UNEP and UNDP. UNEP will implement the following sub-projects: (1) Review and enforcement of ODS Regulations and Customs Officers training; (2) Training of Refrigeration Technicians in good practices, retrofits and hydrocarbon technology; (3) Monitoring of TPMP and reporting. At the same time, UNDP will be responsible for the implementation of 1 sub-project containing two components: (1) Technical assistance and Equipment Programme for Regional Retrofit Centres, and (2) End-user Incentive Component. As the TPMP contains two agencies and two funding tranches, this UNDP document is produced which is limited to the UNDP-component and only for the first funding tranche.

The project is formulated in keeping with the decisions of the Executive committee meeting 45/54 that Rwanda will meet all the phase out targets by 2010 without requesting further assistance from the Multilateral Fund.

UNEP is the lead implementing agency for the implementation of this TPMP and UNDP is the partner implementing agency.

First tranche of funding approved by the ExCom for UNDP: US \$ 124,500

Executing Agency: Rwanda Environment Management Authority (REMA)

Starting date: January 2008

Country: Rwanda

UNDAF Outcome/Indicator:

Expected Outcome/Indicator:

Expected Output/Annual Targets:

Implementing partner: Rwanda Environment Management Authority

Responsible parties: a) National Ozone Unit of Rwanda

b) UNDP/Rwanda

<p>Programme Period: 2008-2010 Programme Component: Environment Project Title: RWA/PHA/53/INV/14 – Terminal Phase-out Management Plan for Rwanda Project ID: Project Duration: 2008-2009 Management Arrangement: NEX</p>
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<p>Budget: 124,500 USD Total budget: 124,500 USD Government: N/A Regular: N/A Donor-MLF: 124,500 USD In-kind: N/A</p>

Agreed by Implementing Partner: _____ REMA

Agreed by UNDP _____ UNDP-Rwanda

Signature: _____ Date: _____ Name/Title: _____

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ACRONYMS

<i>CFC</i>	<i>Chlorofluorocarbon</i>
<i>HCFC</i>	<i>Hydrochlorofluorocarbon</i>
<i>HFC</i>	<i>Hydro fluorocarbon</i>
<i>IA</i>	<i>Implementing Agency</i>
<i>MAC</i>	<i>Mobile Air Conditioning (Systems)</i>
<i>MLF</i>	<i>Multilateral Fund</i>
<i>ODP</i>	<i>Ozone Depleting Potential</i>
<i>ODS</i>	<i>Ozone Depleting Substances</i>
<i>TPMP</i>	<i>Terminal Phase-Out Management Plan</i>

SECTION I : Narrative

PART I: Situational analysis

Rwanda is a party to both the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer. The country acceded to both multilateral agreements in 2002 with all the amendments. Rwanda has set up the mandatory structures for the implementation of the Protocol in the country, which includes the preparation of the Country Programme for the phase out of Ozone Depleting Substances (ODS); setting up of the National Ozone Unit (NOU); and the National Ozone Steering Committee.

The ODS regulations for Rwanda have been in existence since 2006. The regulations are part of the Organic Act (2005) in the country. The regulations regulate imports and exports of ODS and ODS dependent equipment. The regulations further provide for a licensing system on importation of ODS and ODS dependent equipment. Rwanda has an operational licensing and quota system. Enforcement of the ODS regulation is undertaken by the National Ozone Office/REMA in close collaboration with the Customs Department, Rwanda Bureau of Standards and other security agents. This emphasizes the strong commitment of Rwanda to take necessary measures to protect the ozone layer.

The overall objective of this Terminal Phase-out Management Plan (TPMP) is to implement a plan of actions that will aid up in a gradual, systematic and sustainable phase out of ODS in Rwanda. This is to enable Rwanda meet its obligations to phase out the consumption of CFCs under the Montreal Protocol, achieve complete phase-out by the target date January 2010; consolidate the gains of the previous programmes and ensure that plans are in place to sustain not only the CFC phase out, but also sustain zero consumption of other ODS controlled by the Montreal Protocol after 2010 except for hydrochloroflourocarbons (HCFCs).

TPMP will ensure sustainable and cost-effective phase-out of CFC through implementation of a combination of interlinked measures including support to improve the technical infrastructure and training capacities, experience exchange, and provide financial incentives for commercial refrigeration sector to enable equipment conversions and retrofits.

A special approval condition of the TPMP is that UNDP was urged to take full account of the requirements of decisions 41/100 and 49/6 during the implementation of the TPMP. More information on these decisions can be obtained from the National Ozone Focal Point in Rwanda.

PART II: Strategy

The objectives of the Terminal Phase-out Management Plan (TPMP) are to ensure timely, sustainable and cost-effective CFC phase-out through an inter-linked combination of actions like regulations, training of technicians and custom officers, use of existing CFC stocks, provision of recovery and recycling equipment and encouragement of best practices, provision of financial incentives, targeted dissemination of information, stakeholder involvement and management support as well as to meet the phase-out targets for CFCs as stipulated by the Montreal Protocol and national regulations.

The rationale for the activities selected to be supported under the TPMP is based on consultations involving Rwanda's National Ozone office, national consultants, an international refrigeration expert, representatives from service workshops and end-users, involved government institutions. Through these consultations and analysis, it became evident that in order to facilitate the further phase-out of CFCs for Rwanda to be in compliance with the Montreal Protocol, a number of activities will need to be undertaken.

This TPMP will be jointly implemented by UNEP and UNDP. UNEP is the lead agency responsible for overall reporting to the MLF Fund.

TPMP project will be implemented in two phases, with funding for the second phase being requested after submission of progress and financial reports covering activities implemented during the first phase.

UNEP will implement the following sub-projects: (1) Review and enforcement of ODS Regulations and Customs Officers training; (2) Training of Refrigeration Technicians in good practices, retrofits and hydrocarbon technology; (3) Monitoring of TPMP and reporting.

UNDP will be responsible for the implementation of 1 sub-project containing two sub-components: (1) Technical assistance and Equipment Programme for Regional Retrofit Centres, and (2) End-user Incentive Programme.

In order to achieve the targets set out in the TPMP it is essential to adopt a flexible approach to adapt to unforeseen changes in the market.

The TPMP will provide required technical guidance, will seek funding and more globally speaking, will provide a favourable environment to the companies to strengthen the ongoing movement towards non-ODS technology and improved service practices in the industry.

The approved TPMP project document is attached to the present document (see Annex).

PART III: Management Arrangements

The project will be managed as nationally executed project (NEX) by the Government of Rwanda, REMA through its National Ozone Unit. However, the budget line for “international consultant” will be managed centrally by UNDP-HQ in order to save time and travel costs.

The TPMP programme will be implemented by a TPMP team coordinated by the National Ozone Unit. The monitoring, management and evaluation support component is available in Component 4 (page 32) of TPMP project document as it was approved by the MLF Fund.

The TPMP's objectives will be achieved in a partnership with UNEP which is the lead agency responsible for non-investment components and overall reporting to the Multilateral Fund for the Implementation of the Montreal Protocol (MLF). UNDP, as a cooperating agency, will provide reports to the lead agency covering progress in the implementation of the UNDP's part of TPMP in order to request the subsequent tranche of funds which may be approved by the MLF.

REMA will be an implementing partner for the project. It will designate a National Project Director (NPD) from the NOU-Rwanda who will be the liaising person between the Ministry and UNDP-Rwanda. The project will be implemented in close collaboration with the NPD, and a project manager will be recruited through a transparent and competitive process. He/She will be responsible for day-to-day management of UNDP project sub-components with assistance from a small project support group.

The project Executive Board will have a general oversight function, give guidance to the project and make key decisions for the project. It will meet at least once in a quarter.

The Project Manager will be responsible for day-to-day monitoring of UNDP project activities and experts work. She/he will provide brief monthly progress reports to the NPD and UNDP and more detailed quarterly and annual reports to the NPD, UNDP and Project Executive Board. The manager will organize and coordinate the final review of the UNDP project outcomes by the NPD and Project Executive Board and, in cooperation with UNDP Country Office, prepare a final project review report, including lessons learned.

UNDP will assign its staff to provide project assistance.

In accordance with standard UNDP procedures, all resources/ equipment gained through project support remains the property of UNDP until project closure when a decision will be taken as to how to dispose of these resources. It is standard practice to leave resources with the Designated Institution (DI) after project closure as a contribution to the development of national capacity.

SECTION II: STRATEGIC RESULTS FRAMEWORK

The activities to be implemented by UNDP under this TPMP are presented in Table 9 and Component 3 of TPMP project document (including 2 funding tranches), and the quarterly time plan is available in the general timetable provided on page 16 of TPMP project document.

SECTION III: TOTAL BUDGET AND WORKPLAN

The table below (page7) only covers the activities to be implemented by UNDP in 2008. In case of implementation delays, the concerned activities will automatically be transferred to 2009 (and future years if need be) and will incorporate funds of the second funding tranche if and when approved by the Executive Committee. This will be carried out through a budget revision of the same ATLAS project.

RWA/PHA/53/INV/14 -- Terminal Phase-out Management Plan for Rwanda

MLF Outcome/Atlas Activity	Responsible Party	Source of Funds	ERP/ATLAS Budget Description		Amount 2008 (USD)	Dept. ID	Oper. Unit	Funds	Implementing Agency	Donor ID
ACTIVITY 1: Technical assistance and equipment programme for 3 regional retrofitting centres and incentive programme for technology conversions	REMA	MLF	71200	International consultant – technical assistance	14,000	B0084*	t.b.d.	63080	t.b.d.	10009
			71300	National consultants	8,000	t.b.d.	t.b.d.	63080	t.b.d.	10009
			72100	Incentive grants for participating companies	33,000	t.b.d.	t.b.d.	63080	t.b.d.	10009
			72100	Transportation services, workshops	8,000	t.b.d.	t.b.d.	63080	t.b.d.	10009
			72200	Equipment, tools, materials	61,500	t.b.d.	t.b.d.	63080	t.b.d.	10009
					124,500					
				TOTAL UNDP 2008	124,500					

Note: the line for international consultant will be centrally managed by UNDP-HQ. This is why the dept ID should read “B0084” for this line only.

Annex 1:

Project Document for the whole TPMP Components

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER			
SUBMISSION TO 53RD MEETING OF EXECUTIVE COMMITTEE			
PROJECT COVER SHEET			
COUNTRY	RWANDA	IMPLEMENTING AGENCIES (LEAD AGENCY – UNEP)	UNEP/ UNDP
PROJECT TITLE	TERMINAL PHASE-OUT MANAGEMENT PLAN FOR CFCS IN RWANDA		
PROJECT IN CURRENT BUSINESS PLANS	Yes		
SECTOR	Refrigeration		
SUB-SECTOR	Servicing in all sub-sectors		
ODS USE IN SECTOR	Baseline	30.4	T ODP
	Current (2006)	12.01	T ODP
PROJECT IMPACT		4.56	T ODP
PROJECT DURATION	2 years		
PROJECT COSTS		US\$	345,000
REQUESTED GRANT		US\$	345,000
IMPLEMENTING AGENCIES SUPPORT COSTS		US\$	38,130
TOTAL COST OF PROJECT TO MULTILATERAL FUND		US\$	383,130
PROPOSED FINANCING (not including support costs for each agency)			
Tranche I (being requested at 53 rd Meeting of Executive Committee)		US\$	
UNEP		110,000	
UNDP		124,500	
Tranche II (to be requested in 2009):		US\$	
UNEP		67,000	
UNDP		43,500	
PROJECT MONITORING MILESTONES	Agreement Included		
NATIONAL COORDINATING BODY	Rwanda Environmental Management Authority		
PROJECT SUMMARY			
<p>Rwanda intends to implement a Terminal Phase out Management Plan (TPMP) project. The TPMP is aimed at phasing out the consumption of the remaining CFCs in the country and sustaining the phase out process of the CFCs and other ODS. The TPMP will utilise a combination of regulatory, capacity building, investment and awareness measures to assist Rwanda to meet its Ozone Depleting Substances (ODS) phase out obligations. Since the time of ratification of the Montreal Protocol, Rwanda has been actively involved in implementing activities to phase out the use of ODS in the country under the Montreal Protocol. Rwanda has been in compliance with its freeze requirements and is on course to meet the 85% reduction target set for 2007. The TPMP project will be implemented in two phases, with funding for the second phase being requested after submission of the progress and financial report for the first phase. The project will include components like, review of existing ODS regulations, training programmes for customs officers and refrigeration service technicians, promotion of the adoption of the alternatives, awareness campaigns, retrofit, recovery and recycling activities, assisting end-users and provision of tool kits. The project is formulated in keeping with the decisions of the Executive committee meeting 45/54 that Rwanda will meet all the phase out targets by 2010 without requesting further assistance from the Multilateral Fund.</p>			
PREPARED BY	National Ozone Unit (Rwanda)		Date 07/ 2007

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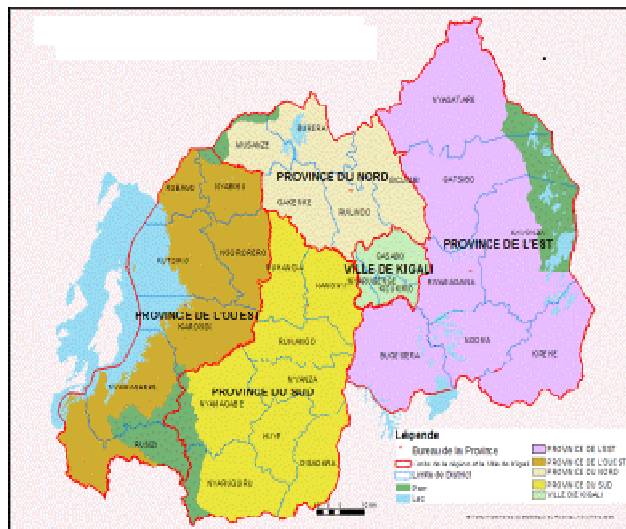
ABBREVIATIONS AND ACRONYMS

CFCs	Chloro-Floro Carbons
CP	Country Programme
NBS	National Bureau of Statistics
HCFC	Hydro Chloro-Floro Carbons
GDP	Gross Domestic Product
IA's	Implementing Agencies
IS	Institutional Strengthening
MACS	Mobile Air Conditioning System
MLF	Multi-Lateral Fund
MP	Montreal Protocol
NEA	National Environment Agency
NEMA	National Environment Management Act
NEMC	National Environment Management Council
NOU	National Ozone Unit
ODS	Ozone Depleting Substances
TPMP	Terminal Phase-Out Management Plan
RMP	Refrigeration Management Plan
UN	United Nations
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme

1.0 COUNTRY BACKGROUND

Rwanda a mountainous and overpopulated country is located in Central Africa between latitudes 10⁰s and 30⁰S, and longitudes 40⁰E and 50⁰E. It is also referred to as a country of a thousand hills. It is bordered by Uganda in the North, Tanzania in the East, DR Congo in the West, and Burundi in the South. Kigali, its capital city is located 7100 ft above sea level.

Figure 1: Map of Rwanda Showing the Administrative Regions



Rwanda's production of chemicals is very minimal if not negligible. However, it imports large quantity of chemicals ranging from agricultural, industrial to consumer chemicals to meet the challenges faced from uncontrolled population growth, negative trends in living conditions and the environment. Petroleum products are imported on a large scale, followed by other consumer chemicals and then agrochemicals.

The country depends mainly on organic farming but the Government policy is to increase use of chemicals to enhance productivity in agriculture In the Rwanda's Economic Development and Poverty Reduction Strategy (EDPS) as well as the country's vision 2020, environment management is regarded as one of the challenge which must be addressed in order to attain sustainable development. This challenge is a fundamental part of the Rwanda Environment Management Authority (REMA) to ensure the implementation of Conventions and International agreements relating to the Environment ratified by Rwanda, example the Vienna Convention and the Montreal Protocol.

She is a party to both the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer. She acceded to both in 2002 with all the amendments.

Rwanda has set up the mandatory structures for the implementation of the Protocol in the country, which includes the preparation of the Country Programme for the phase out of Ozone Depleting

Substances (ODS); setting up of the National Ozone Unit (NOU); and the National Ozone Steering Committee

1.1 Status of ratification

Ozone Depleting Substances (ODS) are gases or chemicals which when emitted into the atmosphere depletes the Ozone Layer in the Stratosphere. Given their harmful effects, the Government in pursuance of a healthy environment for the current generation and posterity has responded positively and has shown its firm commitments to phase-out the consumption of Ozone Depleting Substances (ODSs) by ratifying the relevant international conventions. These comprise notably of the Vienna Convention for the Protection of the Ozone Layer in August 2003 and the Montreal Protocol on Substances that deplete the ozone layer in August 2003 with all the amendments.

Table 1: Ratification of Ozone Depleting Substances (ODS) Treaties by Rwanda

Treaty	Date of ratification
Vienna convention	20 th August, 2003
Montreal Protocol	20 th August, 2003
London Amendment	20 th August, 2003
Copenhagen Amendment	20 th August, 2003
Beijing Amendment	20 th August, 2003
Montreal Amendment	20 th August, 2003

1.2 Institutional and Regulatory Framework

The Ministry of Lands, Environment, Forestry, Water and Mines has overall mandate formulation of laws and policies in line with management of the environment and the implementation of the laws and policies is coordinated by the Rwanda Environment Management Authority (REMA). The National Ozone Unit now operating in REMA was established in 2004. The Unit established a National Steering committee to control monitor and eliminate the use of ozone depleting substances in Rwanda. The group comprises key stakeholders whose involvement is crucial in the realization of goals of the National Ozone depleting substances phase-out Programme.

The ODS regulations for Rwanda have been in existence since 2006. The regulations are part of the Organic Act (2005) in the country. The regulations regulate imports and exports of ODS and ODS dependent equipment. The regulations further provide for a licensing system on importation of ODS and ODS dependent equipment. Rwanda has an operational licensing and quota system.

Enforcement of the ODS regulation is undertaken by the National Ozone Office/REMA in close collaboration with the Customs Department, Rwanda Bureau of Standards and other security agents. In order to facilitate enforcement sensitization of the general public has commenced through the mass media, community leaders and the Refrigeration Technician Associations.

2.0 OBJECTIVES OF THE TPMP PROJECT

The TPMP project has overall and specific objectives presented below.

Overall Objective of the TPMP Project

The overall objective of the TPMP Project is to develop a plan for the implementation of the specific activities in a gradual, systematic and sustainable phase out of ODS in Rwanda. This is to enable Rwanda meet its obligations to phase out the consumption of CFCs under the Montreal Protocol, achieve complete phase-out by the target date January 2010; consolidate the gains of the previous programmes and ensure that plans are in place to sustain not only the CFC phase out, but also sustain zero consumption of other ODS controlled by the Montreal Protocol after 2010 except HCFCs.

Specific Objectives of the TPMP Project

The project has the following specific objectives:

- To phase-out the remaining 15% of CFC consumption in-order to achieve the Montreal Protocol 2010 phase out target; and,
- To sustain the achievements of previous projects.

3.0 STATUS OF PROJECT INTERVENTIONS IMPLEMENTED UNDER THE MONTREAL PROTOCOL

3.1 Rwanda Country Programme for Phasing out ODSs

The National Phase out Strategy (NPS) for Rwanda was approved in March 2003. Following this the country established a National Ozone Unit (NOU) in the Rwanda Environmental management Authority. Since the establishment of the unit, a number of activities that were outlined in the action plan have been implemented.

Rwanda has been in compliance with the ODS phase out schedules set out under the Montreal Protocol since 2005 and initiatives are in place to ensure that the country is in compliance with the 2010 phase out schedule as prescribed under the Montreal Protocol.

Rwanda National Phase out Strategy formed the basis for the actions taken by the Government to phase out the consumption of the Ozone Depleting Substances controlled under the Protocol. The Strategy contained programmes, activities and project proposals that Rwanda undertook to phase out the consumption of the Ozone Depleting Substance (ODS).

Following the preparation and submission of the Strategy to the MLF, financial assistance was sought to sponsor the following programmes:

- Ozone policy strategy development and institutional strengthening by the creation of a National Ozone Unit.
- Training of refrigeration technicians, users and repairers on refrigerant handling, recovery recycling as well as retrofit techniques.
- Training of Custom officials to set up and enforce a system for the identification,

- monitoring and control of imported ODSs.
- Conversion of a block foaming machines to eliminate the consumption of CFCs

3.2 Current and Future Consumption of ODS

Although Rwanda neither produces nor exports ODSs, it imports all of the CFC 11, CFC-12, CFC-115 and HCFC-22 for servicing refrigeration and air conditioning equipment (domestic, mobile and commercial) as well as manufacture of foam. The CFC-115 is imported as part of a refrigerant mixture of R-502. It should be noted that, the principal source country for all ODS imported into Rwanda as bulk is United Arab Emirates, China, Belgium and France.

3.3 Refrigerant Management Plan (RMP)

The Refrigerant Management Plan (RMP) was developed in 2002 to assist Rwanda in meeting the phase-out schedule in accordance with the levels set by the Montreal Protocol. The RMP was approved in November 2003 and it consists of the following components:

- Training of Refrigeration Technicians in Good Refrigeration Management Practices.
- Training of 100 Customs Officials.
- Purchase of 5 refrigerant identifiers
- Development of Policy instruments
- Collaboration with UNDP on recycling and recovery of ODS refrigerants.

Status of the Refrigerant Management Activities

- Phase I training of trainers in Good Refrigeration Management Practices was conducted in January 2006.
- Phase II training i.e. remaining technicians was finalized in June 2007, with a total of 250 technicians /mechanics trained during all phases (in collaboration with UNEP).

Other activities under the RMP include:

- Monitoring of activities relating to refrigeration Association of Refrigeration Technicians throughout 2006 and 2007;
- Policy development and implementation of Ozone Depleting Substances Regulations throughout 2005, 2006 and 2007;
- Monitoring of ongoing recovery and recycling schemes throughout 2007 and beyond

3.4 Institutional Strengthening (IS)

The project aims at facilitating the phase out of the consumption of ODS in the country by building capacity of refrigeration service technicians, customs and other law enforcement officers. The project has assisted the country to comply with the ODS phase out schedule set out under the Montreal Protocol. The public and other stakeholders have been sensitized on various ozone issues under this project.

The development of the ODS regulations has also helped to meet the achievements made because they have been used on all the seizures that have taken place.

Rwanda as a party to the Montreal Protocol has been committed to take every possible action to ensure compliance and is prepared to phase-out controlled substances in accordance with the protocol. In this regard it has adopted a framework policy/ strategy for the protection of the Stratospheric Ozone layer and has accomplished the following achievements to date:

- Rwanda has forged viable partnerships with industry and other private enterprises to control and eventually eliminate ozone depleting substances;
- Refrigeration workshop owners have been provided with training on refrigerant handling, recovery and recycling;
- The Rwanda Environment Management Authority has established a partnership with the customs department to curb illegal importation of ODS

To further enhance environmental awareness on Ozone related issues, NOU has published articles for news media including radio and television panel programmes annually since the beginning of IS Project in 2003.

Achievements and Lessons Learnt

The Government of Rwanda has achieved significant progress in the implementation of the Montreal Protocol over the past years and this was made possible through an effective collaboration with all stakeholders in the sectors.

The realization of the above phase out is also dependent to a great extent on the timely and effective implementation of all the programmes, its refrigerant management plan and on the crucial financial and technical assistance from the MLF under the Montreal Protocol. The skills and knowledge being acquired by both Rwanda local experts and the general public in areas such as public awareness and training will enable Rwanda in successfully phasing out of Ozone Depleting Substance (ODS) within the target phase out of 2010.

4.0 SECTORAL CONSUMPTION PROFILE

4.1 Methodology for Data Collection

In the computation of the consumption profile, data is generally obtained from the Customs department, the National Bureau of Statistics, refrigeration repair workshops and importers countrywide through direct interviews and distribution of ODS questionnaires. Since the finalization of both phase 1 & II training of Customs officials in December 2006, a much more reliable enforcement system for identification, monitoring and control of imported ODS is now in place for conduct of the exercise.

Plans are also being set to further engage the Customs department and security agencies at various ports of entry to enhance their monitoring ability through a proposed incentive scheme to be worked out jointly by NOU and Customs Department based on the actual needs and the funds available.

Results

Data collected during the survey indicate that CFC use although declining in conformity with the Montreal Protocol still exist. With a baseline of 30.4 ODP Tonnes; data in Table 2 and Figure 2 show a declining trend during the period 2005 to 2006.

Summary of the survey data for equipments and corresponding consumption

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of refrigerator-freezer39133s	22231	22673	23660	24997	29721	34495	49438	49528	64971
Number of CFC 12 refrigerators and freezers	21010	21500	20414	13875	18510	12228	11228	730	433
Number of CFC 12 refrigerators freezers Repaired /year	20013	21100	19877	10354	14320	879	711	604	351
Number of air conditioners	108	654	2124	4148	6055	18165	34495	46502	50112
Number air conditioner using CFC12	0	0	0	0	0	0	0	0	0
Total number of vehicles with AC	2981	3031	3530	3,697,831	4,408,372	5,829,454	6539993	7250531	15211599
Total number of vehicles with AC using CFC 12	2521	2931	1029	997	984	920	903	885	605
Total number of vehicles with AC using CFC 12 repaired per year	259	238	231	224	203	193	179	161	140
Number of commercial units with R12	9114	9264	92104	9977	10037	40713	40320	39533	31681
Number of commercial units repaired per year with R12	8009	9214	92024	9882	9937	40513	39970	39133	39970
Number of Industrial units with R12	24	27	29	29	29	30	35	37	42
Number of Industrial units repaired per year with R12	19	21	16	20	22	16	26	17	15

Discussion

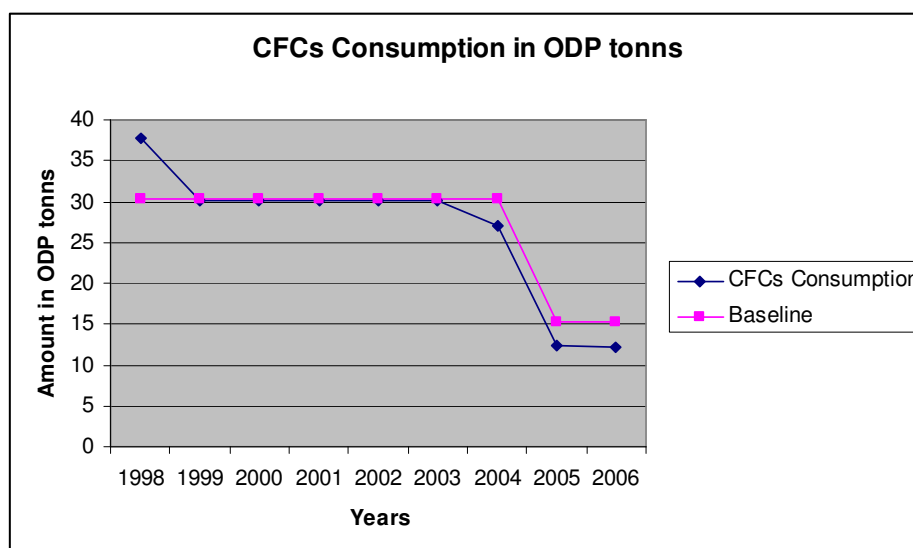
The survey revealed that the total consumption of Annex A Group 1 substances under the Montreal Protocol was 12.01ODP ton in 2006. The CFCs baseline consumption level was estimated at 30.4 ODP ton in 1999 and this shows that there was about 40% reduction in the consumption of CFCs in country over the period. CFCs are used exclusively for meeting the service and maintenance of existing refrigeration and air conditioning equipment in the country.

With the consumption of 12.01 ODP tons, Rwanda is in compliance with 50% reduction and in course for compliance with the 85% reduction target as set out under the Montreal Protocol. However, the country needs to completely phase out the remaining consumption of CFCs by 2010 as set by the Montreal Protocol. There has been a substantial reduction in consumption of CFCs as shown in the Table 2 and Figure 2.

Table 2: Summary of CFC Consumption (in ODP tones)

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	Base Line
Consumption	37.7	30.1	30.1	30.1	30.1	30.1	27.1	12.3	12.01	30.4

Figure 2: Consumption of CFCs in ODP tonnes in Rwanda from 1998 – 2006.



The CFC trend, depicted in figure 2, indicates that from 1998 to 2004 the country consumed more CFCs than subsequent years to 2006. This was before the implementation of Montreal Protocol Project activities and the start of the enforcement of the regulation which was put in place in 2006.

Soon after the enactment of the regulations on ODS, the country conducted intensive awareness campaigns that resulted in significant reduction in consumption of CFCs as shown in figure 2. However between the periods 1999 - 2004 there was a constant consumption of CFCs in the country. Partly this was due to high prices and unavailability of Ozone friendly alternatives used in the refrigeration industry.

From 2005 – 2006 there has been a constant reduction in the consumption of CFCs as a result of reduced importation of CFCs and increased availability of Ozone friendly refrigerants on the market as shown in table 3 and figures 3. The control on the importation of ODS and ODS dependent equipment also contributed to the down ward trend depicted in Table 3 .

Table 3: Consumption of refrigerants in ODP Tonnes from 2002 to 2006

Refrigerant	2002	2003	2004	2005	2006
R11	0.03	0.03	0.04	0.019	0.003
R12	28.47	29.9	27.00	12.3	11.66
R22	5.68	6.04	5.91	18.062	19.004
R502	0.12	0.13	0.525	0.631	0.35
R134a	1.36	1.58	1.92	1.000	1.51
R402A			0.005	0.005	0.0055
R404A			0.025	0.027	0.029
R407C			0.025	0.01	0.026

Figure 3: Aggregate consumption of Refrigerants in the year 2006

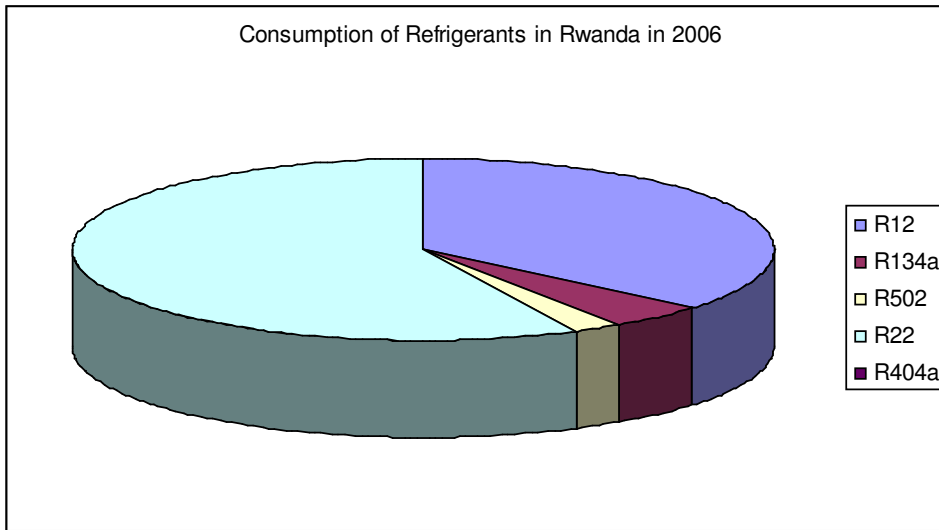
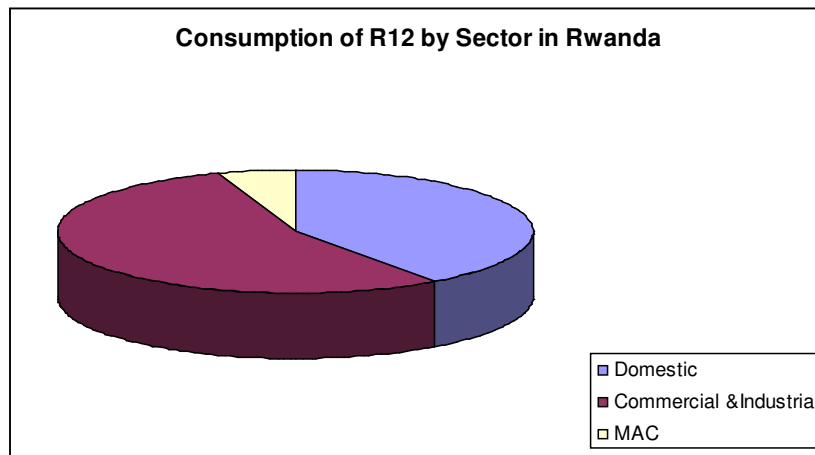


Table 4: Utilization by Sector in Metric Tonnes

Sector	Type of Refrigerant	Quantity (Kgs)	% of R12 use by sector
Domestic Refrigeration	R12	4.60	40
	R22	7.04	
	R134a	0.39	
Commercial / Industrial Refrigeration	R12	6.44	55
	R502	0.35	
	R22	10.11	
	R134a	0.85	
Mobile Air Conditioning (MAC)	R12	0.62	5
	R22	1.85	
	R134a	0.05	

Fig 4: Comparison of R12 use by sector in Rwanda



4.2 Domestic Refrigeration

In Rwanda domestic refrigeration facilities include refrigerators, Air conditioners, freezers, and water coolers. This sub - sector is growing fast due to increase in economic growth. This Sector is primarily concentrated in the urban centers where electricity is readily available

There is a growing number of units of domestic refrigerators and a significantly smaller number of domestic air conditioning equipment in the country. These domestic cooling units are serviced partly by technicians working for local service firms and largely by self employed technicians working in the informal sector.

This sub-sector is still responsible for an appreciable percentage of the consumption of R12 in the country as shown in Table 4. Most of the new imported equipments in this sub-sector are using R134a and R22. The significant change in the use of CFCs in this sector is attributed to the control of the importation of ODS and the ban on importation of ODS dependent equipment.

4.3 Commercial and Industrial Refrigeration

As shown in Figure 4, this sub-sector was responsible for the largest portion of R12 consumption in 2006. This is composed of equipment such as cold rooms, central air conditioning plants, and ice making plants and bottle coolers. Most of the commercial equipments originate from Germany, South Africa, Dubai, United Kingdom and China.

Commercial refrigeration equipment are most commonly used in the food processing enterprises such as fisheries, abattoirs, butcheries, supermarkets, and large kitchens run by the hotels and hospitals. Most of the refrigeration equipment surveyed in this sub - sector is approximately 10 – 15 years old. Cold rooms are the most common form of commercial refrigeration equipment used for the storage of meat, fish, fresh fruits, dairy and vegetables.

Central air conditioning systems are used in a few government institutions and companies. The majority of the air conditioning units in the country are of split and window type which mostly use R22 as a refrigerant.

Through the survey it was established that many of the industrial enterprises have one or two service technicians employed on full time basis to carry out maintenance of their equipments.

4.4 Mobile Air Conditioning System

Of all the R12 consumed in Rwanda, about 5% is attributed to Mobile air conditioning sub – sector as shown in Figure 4. Vehicles of 10 – 15 years old have their compressors running on R12 but new imported vehicles are running on R134a. The total CFC consumption in this sub- sector is less than 1 ODP tones per year.

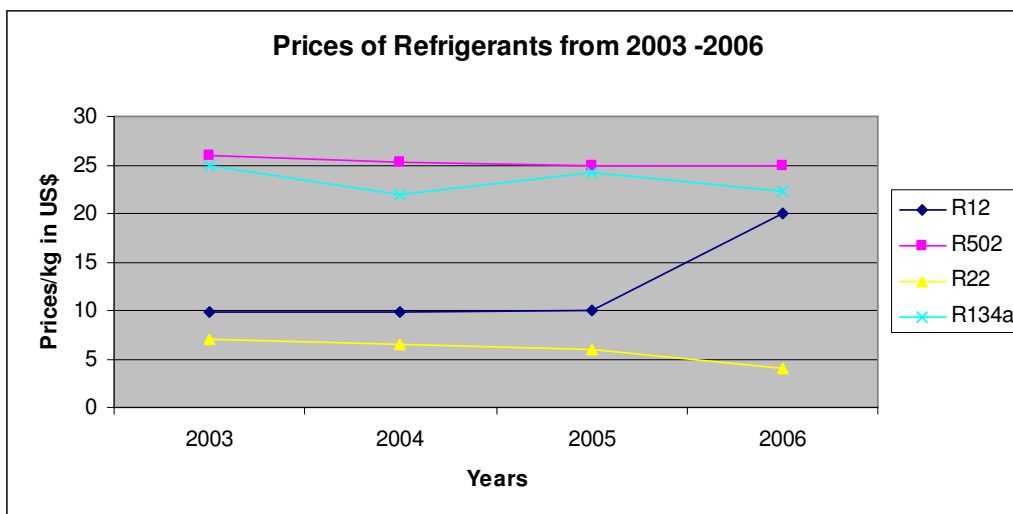
Refrigerated trucks were found to be running on HCFCs (R22) and HFCs (R134a). Those that were using CFCs have been already retrofitted with HFCs. The few refrigerated trucks in the country are mostly used by Fish, dairy, poultry, and canning industries.

4.5 Prices

Table 5: Prices of Refrigerants by Year 2003-2006 in US\$

Refrigerant	Price (US\$ /Kg) / Year			
	2003	2004	2005	2006
R12	9.8	9.8	10.0	20.0
R502	26.00	25.20	25.0	25.0
R22	7.0	6.5	6.0	4.0
R134a	25.0	22.0	24.20	22.20

Figure 5: Prices of Refrigerants in Rwanda from 2003 – 2006.



In terms of prices of refrigerants in Rwanda, the data shows that there has been an increasing trend of R12 and decreasing trend for the alternatives as shown in Table 5 and Figure 5. In 2003 the prices of R134a and R502 was higher compared to other refrigerants because at that time R134a and R502 was not readily available on the market and there were few suppliers of this refrigerant resulting in relatively high consumption of CFCs.

As depicted in figure 5, CFC consumption drastically dropped during the 2005 – 2006 period. During the same period the price of R12 started increasing as shown in Figure 5. This contributed to the increase in consumption of Ozone friendly refrigerants.

There is a general increase in price of R12 over the period 2005 – 2006 due to high demand for the refrigerant particularly in the servicing industry whose supply has gone down due to the control of its importation.

5. STRATEGIC PLAN TO PHASE OUT REMAINING CFCs CONSUMPTION

5.1 Strategic Plan

The strategic Plan to Phase-Out remaining CFC consumption is hinged on key interventions including: sensitization of stakeholders/and Rwandans at large to raise their awareness on the issue; strengthening regulation and enforcement, strengthening capacity of customs officers, refrigeration technicians and their associations, establishment of regional centres for training, information exchange and access to service, retrofit and recovery equipment and providing incentives for end-users to retrofit or convert CFC installations. These interventions are detailed in Table 6 specifying objectives, actions and target groups.

Table 6: Strategic Plan to Phase-Out Remaining CFC Consumption

	OBJECTIVES	ACTIONS PLAN	TARGETS
I	Sensitization of stakeholders	Awareness raising Training of stakeholders involved	Decision and policy makers Importers Distributors General public Custom officers Technical Training Institutes Technicians
II	Strengthening and enforcement of regulatory measures	Ban imports of CFC and CFC related equipment. Set up incentives for new refrigerants use	Decision / policy makers Importers Distributors General public Enforcement (Customs & other security agencies) Technical Training Institutes
III	Strengthening capacities of refrigeration technicians	-Train remaining technicians on good practices in refrigeration and maintenance -Review curricula of institutes to include good practices on ODS phase out. -Train technicians on retrofitting with hydrocarbon on technology in refrigeration sector Train technicians on retrofitting and hydrocarbon technology in refrigeration sector Promote local production of ODS recovering equipment	Refrigeration associations Technical Training institutes High learning institutions
IV	Set up regional Centres for retrofit, training and information exchange	-Equip the Centre with necessary tools and equipment -Develop information exchange system forums for technicians - Assist in strengthening refrigeration technicians associations at regional level.	Refrigeration associations Environmental NGOs Community based organizations (CBOs) Technical certifications institutions
V	Awarding incentives to end-users in the Commercial and	-Provide End-Users with adequate technical assistance and incentive funding in order to encourage the replacement or	Industrial and Commercial sectors relevant to the CFCs consumption

Industrial refrigeration sectors	retrofitting of CFC equipment and installations.	
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5.2 Role of Stakeholders and Implementing

For any significant progress to be achieved there should be a collective responsibility of all possible partners in that drive. Therefore, the government of Rwanda has fostered viable and cordial relationship with the industry and other private enterprises in this sector to control and eventually eliminate Ozone Depleting Substance (ODSs) in the country.

The cardinal aspect of any successful endeavor is collective responsibility and involvement and this is of no exception to ODS phasing out. In this regard, the involvement of all stakeholders will be very crucial in the phase-out process of ODS in Rwanda in order to meet target of 2010.

The special role of the Implementing Agencies (IAs) who are amongst the most important stakeholders is of utmost priority as they render both technical and financial support to various government agencies and institutions to meet the goal and objectives of the set out targets of the project. In view of this very important role, the sustainability and timely financial support is very essential in meeting the desired set agenda and aspirations of the TPMP Project.

5.3 Expected Outputs of the TPMP

The Terminal Phase out Plan will make it possible to eliminate in two years (2008-2010) all the remaining ODP refrigerant consumption. A large proportion of these substances should be phased out during 2008, one year before the cut off date (January 2010) if the current Programme is approved as presented. The TPMP will make it possible for the professionals in the refrigeration the sector to improve their capacities in handling and use of the cooling agents, and improving the effectiveness and the output of the refrigeration enterprises.

5.4 Funding Requested and Timetable

In line with funding limits set in Decision 45/54, the full amount of funding is \$US Three Hundred and Forty Five Thousand. The Project will be implemented in two phases both for logistical reasons, to enable flexibility in incorporating retrofit test results in technician training, and to allow the ExCom to review the progress undertaken in the first phase before releasing funding for the second phase. Funding will be requested in two trances corresponding to each phase.

Table 9: Project Funding by Activity and Phase.

Project Component	PHASE 1 UNEP	PHASE 1 UNDP	PHASE 2 UNEP	PHASE 2 UNDP	TOTAL
Review, strengthening and enforcement of ODS Regulations and additional training of customs officers and review	15,000	0	10,000	0	25,000

Project Component	PHASE 1 UNEP	PHASE 1 UNDP	PHASE 2 UNEP	PHASE 2 UNDP	TOTAL
of training curricular					
Additional Training of Refrigeration Technicians in Good Practices and Retrofit to New Refrigerants and Servicing of Hydrocarbon Technology, Toolkits and equipment for training demonstrations	55,000	0	30,000	0	85,000
Technical Assistance and Equipment Programme for 7 Regional Retrofitting Centres, and Incentive Programme for Access to Tool Kits, Spare Parts, Alternative Fluid and Conversion	0	124,500	0	43,500	168,000
Reporting and Monitoring of TPMP activities	40,000	0	27,000	0	67,000
Total Requested funding	110,000	124,500	67,000	43,500	345,000

Time Table

Activity	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1								
Training of customs officers and review of the training curricula.								
Refrigeration training implementation								
Technical Assistance and Equipment Programme for 3 Regional Recovery, Recycling and Retrofitting Centres								
Technical Assistance & Incentive Programme for Commercial and Industrial Refrigeration End-users								
Monitoring and reporting								
Stakeholder Awareness Campaign								
Report on Phase 1								
Phase 2								
Refrigeration training implementation								
Customs officers training implementation								
Technical Assistance and Equipment Programme for 3 Regional Recovery, Recycling and Retrofitting Centres								
Technical Assistance & Incentive Programme for Commercial and Industrial Refrigeration End-users								
Monitoring and reporting								
Stakeholder Awareness Campaign								
Project Final Report								

TPMP COMPONENT 1:

REVIEW, STRENGTHENING AND ENFORCEMENT OF ODS REGULATIONS AND FURTHER TRAINING FOR CUSTOMS OFFICERS AND REVIEW OF THE TRAINING CURRICULA

Project Cover Sheet

COUNTRY	Rwanda
SECTORS COVERED	Refrigeration and MACs servicing sector
PROJECT TITLE	Refresher Training for Customs and other Law enforcement officers
PROJECT IMPACT	The project will train about 100 customs and law other enforcement officers in Rwanda on ozone issues and regulations in place to control such chemicals
Remaining unfunded consumption	4.56 ODP tones
Project cost	US\$ 25, 000
Government Contribution	In kind
Amount requested from the MLF	US\$ 25,000
Implementing Agency Support Cost (13%)	US\$ 3,200
Total Cost of Project to the MLF	US\$ 28,250
Implementing Agency	UNEP
National Coordinating Agency	NOU, Rwanda Environmental Management Authority
PROJECT SUMMARY Training of customs officers and review of the training manual will ensure effective recording and the identification and detection of the ODS and the equipment containing them. This will enhance decision-making on the progress of reduction of ODS in The country. The training will target two-third of the 800 customs officers spread throughout the country. A consultant will review the current manual and make modifications where necessary. A customs trainer will conduct training of the staff during the implementation period of the project.	

Duration of the Project: Two years

Background

The Customs Department has been collaborating with the NOU culminating in the conduct and finalization of both Phase 1 & Phase II training for Customs officials in April 2006. This has resulted in a much more reliable enforcement system for identification, monitoring and control of imported ODS. This has contributed to the implementation of the exercise. Plans are also being set to further engage the Customs and other security agencies at entry ports to enhance their monitoring of ODS in this regard, the training of customs officers is very pertinent.

This is further necessitated by the fact that all the ODS and the refrigeration equipments used in Rwanda are imported. Consumption is largely dependent on the customs inspection systems at the ports of entry. This situation requires the need for the customs officers to be able to understand the provisions of the Montreal Protocol and the impact of the non controlled imports of ODS and ODS equipment. Currently 50 out 300 Custom officers have been trained. The officers are rotated frequently and there is high turn over of officers. Based on these reasons and for effective implementation of regulations, it is proposed that more training be carried out coupled with the provision of identifying gadgets so that enforcement of regulations is strengthened.. The training of the customs officers will allow a real application of the national legislation through a rigorous

system of identification and detection of the ODS and the equipment containing them.

Project Objectives

The objectives of the project will be to:

- Enable enforcement officers be acquainted with ozone issues under the Montreal protocol;
- Enable them to get acquainted with the ODS regulations and other legislation regarding ozone issues in the country;
- Provide them with necessary practical skills and knowledge in identifying different types of refrigerants; and
- Review the customs training curriculum to include Montreal Protocol issues in the syllabus.
- Review the ODS Regulations to include all ODS and make them more effective with stringent measures for violators

Results expected

Implementation of this project to allow:

- Increased awareness level of Customs Officials on Ozone Issues;
- Reliability of data on import of ODS and Equipments;
- Regulations fully enforced and illegal in ODS reduced
- Revised training curricula for customs officers
- Revised ODS Regulations that include all ODS and stringent penalties to deter violators

Project Activities:

- Legal consultant will be contracted to review ODS Regulations and make recommendation thereof.
- Consultant will be contracted to review Customs Officers Training Curricula and make recommendation thereof.
- Special training will be provided to the instructors of the customs training school on how to undertake the training using the new curricula that includes ozone modules
- Holding of National workshop and Policy Council meeting for approval of recommendations.
- Dissemination of information, and implementation and enforcement of approved regulations
- Dissemination of information, and implementation of the revised customs training curricula
- Training of about 100 customs officers and 50 other law enforcement officers.

Target audience

The training will target officers from Customs Department and other security officers from different parts of the country.

Approach

The training will include theory and practical hands-on sessions on the use of the refrigerant identifiers and it will be in a form of a workshop. The workshops will be carried out at a central

point where all enforcement officers will meet. Rwanda has trainers who will conduct the trainings and the NOU will facilitate the training. UNEP will provide technical support as and when required. The project will also raise awareness on the available alternative technologies; the ban of importation of ODS and ODS dependent equipment.

Five identifiers purchased during the RMP projects were distributed to the borders with Burundi, Uganda, Tanzania and D R Congo to assist in the spot checks of illegal ODS importations. These equipments have helped customs officers to identify different types of refrigerants imported into the country. And the customs department asked for more equipment to be purchased. Five (5) additional refrigerant identifiers will be procured and distributed to some more border posts as well as for patrols over the Lake Kivu and for internal spot-check in the city of Kigali. A national consultant will engaged to review the customs training curricula to incorporate ozone issues.

Partners and their role

The NOU will be the overall facilitator of the training workshops and will be monitoring and reporting on the progress made in the implementation of the project. The Customs Department of the Rwanda Revenue Authority will provide trainers for the training. Ozone issues have already been incorporated in customs curricula and are part of their training programmes but due to new development in the refrigeration sector, the curricula needs updating.

Time frame

The project will be implemented in two phases (each phase will take 12 months) with funding for the second phase being requested after submission of the progress report on the first phase.

Budget

<i>Description</i>	<i>Cost in USD</i>
Phase 1	
National expert to review the training curriculum and suggest revision to ODS regulation	4, 000
Training workshops	6, 000
5 Refrigerant Identifiers	5,000
Total for Phase 1	15, 000
Phase 2	
Training workshops	10, 000
Total for Phase 2	10, 000
Total Project costs	25 000

Time table

Activity	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1								
Review of ODS regulations and customs training curriculum including recruitment of consultant								
Purchase and supply of equipment.								
First phase customs and other law enforcement officers training								
Phase 2								
Second phase customs and other law enforcement officers training								

**TPMP COMPONENT 2:
TRAINING OF REFRIGERATION TECHNICIANS IN GOOD REFRIGERATION
PRACTICES AND AND RETROFIT TO NEW REFRIGERANTS AND SERVICING OF
HYDROCARBON TECHNOLOGY, EQUIPMENT FOR TRAINING
DEMONSTRATIONS AND REVIEW OF TRAINING CURRICULA
Project Cover Sheet**

COUNTRY	Rwanda
SECTORS COVERED	Refrigeration servicing sector and MAC
PROJECT TITLE	Additional Training for Refrigeration Technicians in good refrigeration practices and hydrocarbon technologies, review of training curricula and demonstration equipment
PROJECT IMPACT	This project will train about 250 technicians in refrigeration practices and retrofitting techniques.
Remaining unfunded consumption	4.56ODP tones
Project cost	US\$ 85, 000
Government Contribution	In kind
Amount requested from the MLF	US\$ 85 000
Implementing Agency Support Cost (13%)	US\$ 11,050
Total Cost of Project to the MLF	US\$ 96,050
Implementing Agency	UNEP
National Coordinating Agency	NOU, Rwanda Environmental Management Authority
<p>PROJECT SUMMARY</p> <p>This project will train approximately 300 refrigeration technicians drawn from refrigeration repair businesses across the country. The course will build on the success of the previous training courses in Good Refrigeration Practices and will focus on using hydrocarbon and HFC based retrofit techniques to replace ODS refrigerant. A parallel public awareness campaign will promote the idea that owners of refrigeration systems should have their equipment retrofitted to non-ODS refrigerants when they next break down. In this way it is anticipated that virtually all CFC refrigerant use will have been phased out by end of 2009</p> <p>Every refrigeration service workshop should have at least one technician trained on the course by the end of the Programme. A workshops licensing scheme will allow retrofit to be done only by workshops where at least one technician has passed the course.</p> <p>To ensure sustainability of this programme, the technician training curricula will be reviewed accordingly and support to strengthen the training school will be provided</p>	

Duration of the Project: Two years

Background

Rwanda has so far trained two hundred and fifty (250) service technicians on good refrigeration practices. These technicians were from the formal and informal servicing sector. The trainings mainly focused on refrigerant recycling and recovery and Good Practices in Refrigeration implemented under the RMP. The additional training Programme will target about two-third of the technicians to ensure the expertise in retrofit is found all over the country.

Retrofit to non-ODS fluids has been identified by local experts as the most effective mean to phase out CFC refrigerant. The remaining CFC-12 based systems are by definition old and most will require repair before 2010.

Objectives of the project

The objective of the project is to reduce the consumption of ODS in the refrigeration sector by training technicians in good practices in refrigeration and retrofitting techniques. The project has the following specific objectives:

- Equip technicians with skills and knowledge on good servicing practices and refrigerant management.
- Introduce and demonstrate procedures that will eliminate ODS emission during preventive and unscheduled maintenance including refrigerant containment.
- Disseminate information on CFC-free technologies and retrofitting of existing equipment.
- Demonstrate the conversion of existing refrigeration equipment to alternatives.
- Establish a network of technicians so as to enhance the exchange and flow of information.

This project will support the previous RMP project on recovery and recycling so as to ensure the sustainability of CFC phase-out

Approach

The training Programme will take a similar approach to the previous training programmes, although the contents will principally be on retrofitting, rather than Good Practices. An International expert will hold a week long Train-the-Trainers course for about 15 potential trainers who will then participate in a countrywide series of training workshops that disseminate retrofit technology to refrigeration technicians throughout Rwanda.

Rwanda Vocational Training Centre will be involved in the development of a national training manual to be used for the training of refrigeration expert and relevant tools and equipment will be purchased to allow practical demonstrations during the trainings and workshops and equipping the main workshops with sets of retrofit toolkits upon certification. The Training Centre will be the main centre that will be strengthened and supported to its operations in retrofitting and drop in technologies. The tools and equipment that will be supplied to the main workshops will include retrofit service kits, basic tools, refrigerant bags, vacuum pumps and other components to assemble a few locally-made recovery machines to address the commercial/industrial refrigeration sectors. The NOU received several requests from the technicians to be supplied with the basic tool kits and this project component will avail the opportunity to respond to the several requests already received by the NOU. The tooling for at least 70 workshops will serve as incentive to technicians to promote retrofitting or conversion of equipments. Workshops that will receive tooling will be monitored to record all equipments converted throughout the duration of the project.

Expected Results and Criteria for Success

The expected results from this training programme include:

- Training of 15 future trainers in retrofit techniques
- Training of 300 refrigeration technicians in retrofit techniques;
- Awareness of equipment owners and the public about the need to retrofit their equipments to the new refrigerant.

- Revised training curricula for training schools leading to new technicians graduating from the institute with adequate knowledge on new refrigerants.

The criteria used to measure the success of this programme will be:

- Number of technicians trained;
- Reduction of CFC used for servicing refrigeration equipment
- Integration of retrofit technology into the syllabi of refrigeration training establishments in the country
- Number of equipment taken to workshops for retrofitting
- Certificates issued to technicians and repair workshops.

Beneficiaries

- All refrigeration technicians throughout Rwanda.
- Equipment owners

Co-operating partners and their role

Organizing training will be the responsibility of the National Ozone Unit. The Refrigeration Association will play an advisory role and the Retrofit Centre provides technical support. All training and retrofit activities are supervised and monitored by the National Ozone Unit responsible for the successful implementation of the project.

Supporting and Follow-Up Actions

All registered workshops in Rwanda will provide monthly updates to the Retrofit Centre regarding the amount of ODS refrigerant phased out by retrofitting and amounts of refrigerant recovered through these and other activities as well as the number of Equipment retrofitted. The National Ozone Unit will responsible for organizing spot checks by competent bodies on workshops to ensure conformity with best retrofit practice as taught on the training programme.

Budget

Details	Cost in USD
Phase 1	
National Expert to review curricula and conduct training	5, 000
Training courses	15, 000
Equipment and hydrocarbons for retrofit training and 50 tools kits for repair workshops*	35, 000
Total Phase 1	55, 000
Phase 2	
National Experts to conduct	5, 000
Training courses	15, 000
Additional tools for 20 repair workshops*	10,000
Total Phase 2	30, 000
Total Project costs	85, 000

Time table

Activity	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1								
Review of training curricula								
Purchase and supply of equipment								
Training of refrigeration technicians								
Report on Phase 1								
Phase 2								
Training of refrigeration technicians								
Report on Phase 2								

TPMP COMPONENT 3
TECHNICAL ASSISTANCE AND EQUIPMENT PROGRAMME FOR 3 REGIONAL
RETROFITTING CENTRES AND INCENTIVE PROGRAMME FOR TOOL KITS,
SPARE PARTS, ALTERNATIVE FLUIDS AND CONVERSION
Project Cover Sheet

COUNTRY	Rwanda
SECTORS	Refrigeration Service Sector and Commercial and Industrial end users
PROJECT TITLE	Technical Assistance and Equipment Programme for 3 Regional Retrofitting and Recovery/Recycling Centres
PROJECT IMPACT	Reduction in the number of domestic refrigeration and MAC units currently employing CFC refrigerants and recovery and reuse of CFC-12.
REMAINING CONSUMPTION UNFUNDED	4.56 ODP Tons
PROJECT COST	US\$ 168,000
GOVERNMENT CONTRIBUTION	In Kind
AMOUNT REQUESTED FROM MLF	US\$ 168,000
IMPLEMENTING AGENCY SUPPORT COST (9%)	US\$ 15,120
TOTAL PROJECT COST TO MLF	US\$ 183,120
IMPLEMENTING AGENCY	UNDP
NATIONAL COORDINATING AGENCY	NOU, Rwanda Environnemental Management Authority
<p>PROJECT SUMMARY The Project will set up 3 Regional Service Centres (Central, Eastern and Southern Provinces). Each Centre will be supplied with 1 recovery machine and corresponding ancillary equipment and a sufficient quantity of correct tools and equipment to assist in the permanent retrofitting of CFC domestic refrigeration following the instruction given in TPMP Component 2 and to supply technical advice and financial incentives to refrigeration end users with commercial and industrial CFC installations to permanently retrofit or convert these installations to use very low ODP or non-ODP refrigerants. The incentive programme is intended to encourage the use of safe alternative to CFC refrigerants by the owners and end-users of commercial and industrial refrigeration installations and is complementary to a similar one implemented within the RMP-update. The surveys undertaken under the RMP-Update and in preparation for this TPMP show that there are still a small but significant number of vital commercial and industrial enterprises in Rwanda with refrigeration equipment using CFC 12 and R 502. Consequently these end-users, such as food processing plants, hotels, hospitals and ice factories, will be the principal target of the project.</p>	

Duration of the Project: Two years

Background

As indicated above, the total of all CFC refrigerant consumed in Rwanda is employed exclusively in the servicing of existing refrigeration equipment and installations. Of The Rwanda's total CFC consumption of 12.01 ODP tonnes in 2006, 4.8 ODP tonnes (40%) was consumed in the servicing of domestic refrigeration, 6.59 ODP tones (54.87) in Industrial and Commercial sector and 0.62 ODP tonnes (5.16%) in MAC units.

Under the RMP a recovery and recycling infrastructure, consisting of 1 CFC-12 recycling machine, 9 portable recovery machines and related ancillary equipment, has been set up in Kigali.

In 2006, 6.44 ODP tonnes of R12, (55 %) of Rwanda's total consumption, was used by the industrial and commercial refrigeration sector. Surveys have indicated that a considerable portion of this is employed by essential commercial and industrial infrastructure, during the servicing and maintenance of these enterprises' refrigeration installations. The provisions of retrofit know how and financial incentives for this category of stakeholders will ensure a reduction in the use of ODS and promote use of alternative refrigerants.

Objective of the Project

The objective of this project is to help achieve a total elimination of the remaining CFC refrigerant consumed in refrigeration servicing and maintenance, through the setting up of 3 regional retrofit and refrigerant recovery centres. The project will encourage and allow retrofit technology and the recovery and recycling of refrigerants to be successfully put into practice in Rwanda and will, indirectly, complement the technician training and the end-user retrofit programmes presented simultaneously with this project.

The emergent regional associations of refrigeration technicians and the technicians themselves lack the necessary means to undertake their daily servicing tasks according to the standards of good practice required to reduce CFC consumption and further depletion of the Ozone Layer. The project intends to strengthen the facilities of 3 of the regional refrigeration technician association.

The project will indirectly provide practical experience in retrofitting and refrigerant recovery and didactic tools to those being trained under Component2 and the regional associations. The regional associations will provide the human resources to manage the 3 Centres. It will allow revision of the refrigeration training curricula to ensure that from now on all students graduating are equipped in good practices and with practical know-how in refrigerant recovery and retrofitting to alternative refrigerants.

R22 and R134a conversion modules and extra recycling and storage cylinders will be purchase to supplement the R&R Centre's equipment and allow the recycling of R22 and R134a.

Each of the 3 Retrofit and Recovery Centres will be responsible for:

- housing and distributing the recovery bags and ancillary equipment to qualifying domestic refrigeration technicians within their region;
- housing a portable recovery machine and ancillary equipment and making this available to technicians servicing commercial and industrial refrigeration;
- assist and advise technicians in the retrofitting of CFC domestic refrigeration;
- assure that all CFC is recovered during the operations carried out during the retrofit or conversion by end-users under the component 6 and assure that this is correctly purified by the Recycling Centre before reuse;
- submit monthly reports to the national consultant as to the amounts recovered, sent for recycling or reused without prior purification during the previous month;
- assist any of the national or regional training programmes, by providing on-site demonstration.

With regard to Incentive Programme, the project is to provide technical assistance and financial incentives to enterprises present in Rwanda, with commercial and industrial refrigeration that use CFC refrigerant in their installations and that wish to replace or permanently retrofit their installations to use alternative refrigerants.

The project will allow revision of the curricula at the Rwanda Vocational Training Centre to ensure that from now on all students graduating are equipped in good practices and with the know-how in retrofitting to alternative refrigerants.

The project will allow revision of the curricula at the Works Training Centre to ensure that from now on all students graduating are equipped in good practices and with the know-how in retrofitting to alternative refrigerants.

The main Retrofit Centre will be established at the Rwanda Vocational Training Centre in Kigali and will be responsible for:

- acting as a resource and support centre to the service industry specifically for retrofit activity;
- carrying out evaluations of the suitability of different retrofit technologies and various type of equipments in Rwanda;
- conducting retrofits of CFC-12 based domestic refrigeration;
- Extend demonstration activity to other regional centres where repair workshops identified through the regional Refrigeration Associations will act as satellite reference centres.

The regional Retrofit Centres will be established in the Eastern and Southern Provinces and will be responsible for:

- conducting retrofits of CFC-12 based domestic refrigeration ;
- housing and loaning out or distributing , as necessary, the retrofit and ancillary equipment, including recovery bags, to qualifying domestic refrigeration technicians within their region;
- assist and advise technicians in the retrofitting of CFC domestic refrigeration;
- assure that all CFC is recovered during the retrofit or conversion operations by end-users under the Technical Assistance Project and assure that this is correctly purified before reuse;
- assist, by providing equipment or on-site demonstration, any of the national or regional training programmes.

Equipment Input

Each of the Regional Retrofit Centres will be equipped with an adequate amount of tools and equipment to permit the retrofitting of CFC domestic refrigeration, as well as 1 portable recovery machine or manual recovery pump with appropriate ancillary equipment and 30 lb refillable cylinders, 1 refrigerant identifier (found to be useful to technicians especially when buying large quantities of refrigerant to ascertain the quality) and 1 system flush kit. 5 sets of domestic

refrigeration service equipment, each consisting of a minimum of 3 recovery bags, 1 gauge manifolds, 2 piercing pliers and 1 refillable cylinder, will be held in deposit at each of the Centres, to be issued, when required, to those qualified technicians or registered workshops. The Main Centre will also be equipped with a multi-refrigerant recycling machine (redeployed from the past projects), appropriate ancillary equipment and 100lb refillable cylinders.

Expected Results

The expected results from this technical assistance programme include:

- provision of equipment, know-how and infrastructure regarding the retrofit, recycling and recovery technologies being promoted in Rwanda;
- the retrofit of CFC-12 based domestic refrigerators;
- correct recovery, purification and reuse of a significant proportion of the CFC, HCFC and HFC refrigerants presently within Rwanda's refrigeration equipment and installations;
- contribution to the phase-out of the remaining CFC consumption before 2010 in a way which minimizes the economic impact to the country;
- creation of a permanent technology and information resource that will support the refrigeration sectors in Rwanda on completion of the project.
- Existing CFC commercial and industrial refrigeration equipment and installations will be permanently retrofitted or converted to use alternative refrigerants.
- CFC refrigerant consumption in the commercial and industrial refrigeration will be totally phased-out by 2010.
- Technicians will be made aware of and encouraged to use retrofit and new replacement technologies.

Beneficiaries

- All refrigeration technicians
- Refrigeration equipment owners and end-users.
- Commercial and industrial refrigeration end-users
- The Vocational Training Centres and Technical Schools
- Commercial and industrial service sector

Target group

The Project will particularly target refrigeration service technicians and training institutions situated within the area of influence of the 3 centres. Indirectly, the project is intended to supply retrofit and recovery/recycling know-how to refrigeration technicians throughout Rwanda and when possible will supply equipment for work in other regions. The centres will accept to send for purification any CFC 12 refrigerant recovered, by whatever means, by any person, enterprise or institution within Rwanda.

Approach

This project will be implemented following the approach outlined below:

- Upgrading the operations of retrofit, recovery and recycling technology and know-how through capacity building;
- Provision and distribution of retrofit and recover equipment to 3 regional centres and additional equipment to the R&R Centre;
- Promotion of the advantages of retrofits and the recovery and reuse of refrigerants;
- Monitoring on use of the recovery equipment and implementation of retrofits.

The project will be implemented in two phases. During the First phase the project will procure the required equipment and distribute this to the retrofit/recycling centres and complete the training workshops.

The training in retrofitting and refrigerant recovery will be undertaken during 3 workshops, one at each centre. Each workshop will include technical instruction, practical demonstrations and hands-on training. The key components of the workshop will be a demonstration of the retrofit of CFC-12 based domestic refrigeration and MAC units to employ HFC-134a, the recovery of refrigerant from MAC units and commercial or industrial equipment with a portable recovery machine and the recovery of refrigerant using a recovery bag. The workshops will transfer the knowledge and experience to technicians needed to reduce the amount of CFC-12 presently being consumed unnecessarily. The equipment for conducting retrofitting and recovery will be handed over to each centres on completion of the workshop.

The Second phase will continue to support and monitor the on-going retrofit and recovery activities initiated in the First phase.

Approach for the Incentive Scheme will be as follows: The Rwanda Environmental Management Authority, and various other interested stakeholders will be involved in the implementation of the project. The incentive programme will offer technical advice and financial incentives to encourage end-users of CFC based refrigeration installations to permanently retrofit or convert their equipment to use alternative refrigerants.

Applications for the funding will be directed to the NOU, of the Rwanda Environmental Management Authority, and considered on a 'first come-first serve' basis. Incentive payments will be directly related to CFC consumption during servicing and the amount of CFC contained within the installations to be permanent retrofitted or converted and which would be permanently phased-out.

Only HCFC 22 or non-ODP replacement refrigerant will be considered. Potentially dangerous substances, such as HC or NH₃, will be considered only after all relevant permits have been obtained. 'Drop-in' substitutes for CFC-12 are not presently available in Rwanda, but they will also be considered if strict post-completion inspection conditions are accepted. Applications will be accepted throughout the duration of the project or until funds have been exhausted. Apart from the refrigeration end-users, those technicians trained in retrofitting will be indirectly beneficiaries of the incentive scheme.

Supporting and Follow-up Actions

All registered workshops in Rwanda will be requested to provide monthly reports on the

retrofitting of any equipment to the the NOU. The national consultant will include this information in his reports. The NOU will attempt to organize spot checks by competent bodies (Customs, REMA Inspectors, etc.) on service workshops to ensure conformity with best retrofit practices and on importers and retailers of equipment to ensure that CFC based equipment is not being offered for sale without first having it retrofitted.

The Refrigeration Associations and the NOU will co-operate in synthesizing the experience gained from the Project and contribute to the production of a Completion Report.

Time Table

Activity	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1								
Establish retrofit centres								
Purchase equipment								
Receipt of retrofit proposals and applications for funding from end-users								
Approval of funding and up-front payment								
Undertaking of proposal and completion of retrofit								
Distribution of Equipment								
Retrofit and recovery operations								
Report on Phase 1								
Phase 2								
Retrofit and recovery operations								
Receipt of retrofit proposals and applications for funding from end-users								
Approval of funding and up-front payment								
Undertaking of proposal and completion of retrofit								
Report on Phase 2 and PCR								

Project Budget

Description	Cost US Dollars
Phase 1	
Guidance from International Consultant	14,000
Tools and equipment for 3 Regional Centres and stock of alternative refrigerants for retrofit and drop-in of equipment.	71,500
Payment of Incentives	39,000
Total Phase 1	124,500
Phase 2	
Payment of additional Incentives	38,000
Additional Tools and equipment for 3 Regional Centres and stock of alternative refrigerants for retrofit and drop-in of equipment.	5,500
Total Phase 2	43,500
Total Project costs	168,000

Retrofit Service Tool Kit

Description	Quantity
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Thermometer	1
Electronic Weighing Scale	1
Electronic Leak Detector	1
Service Coupling	2
Service Hose (short)	1
Service Hose (standard)	1
Valve Core Remover (leak free)	1
Recovery bags	3
30 lb Cylinders without OFP	1
Gauge Manifolds (1 CFC/HCFC & 1 HFC)	2
Tube Piercing Pliers	2
Gloves & Goggles	2

**COMPONENT 4:
REPORTING AND MONITORING OF TPMP ACTIVITIES
Project Cover Sheet**

COUNTRY	Rwanda
SECTORS COVERED	Refrigeration and MACs servicing sector
PROJECT TITLE	Reporting and Monitoring
PROJECT IMPACT	This project will fund the monitoring activities of the NOU
Remaining unfunded consumption	4.56 ODP tons
Project cost	US\$ 67,000
Government Contribution	In kind
Amount requested from the MLF	US\$ 67,000
Implementing Agency Support Cost (13%)	US\$ 8,710
Total Cost of Project to the MLF	US\$ 75,710
Implementing Agency	UNEP
National Coordinating Agency	NOU, Rwanda Environmental Management Authority
PROJECT SUMMARY A Reporting and Monitoring of TPMP activity is aimed at ensuring effective and timely implementation of project activities. This will enable the quick identification of problems so that corrective measures can be adopted and performance enhanced. A local consultant will be recruited to design the monitoring frame specifying the indicators and the methodology of collection. Thereafter the staff of the Ozone Office will conduct the data collection and reporting	

Duration of the Project: Two years

Background

In order to ensure that all activities under the National ODS Phase-Out Plan are well executed, a monitoring mechanism must be in place. A project monitoring unit will be constituted to carry out the day-to-day monitoring of all sub-projects under the phase-out plan and report and advise the NOU and UNEP on corrective measures to be adopted when necessary.

Since the strategy is country-driven-approach Rwanda has the flexibility to re-allocate the approved funding if so required. Regular monitoring and evaluation will also assist the NOU and UNDP to decide whether re-allocation is required at any stage of the implementation strategy. The budget being requested for the monitoring unit is as shown below.

Project Objective

Ensure timely and effective monitoring of TPMP activities to ensure achievement of objectives.

Approach:

After the approval of the TPMP, a monitoring plan will be drawn up. The plan will include monitoring and implementation of each sub project component as well as collection of monthly returns in respect of numbers and types of systems retrofitted and amount of CFC refrigerant recovered.

A Project Management Unit (PMU) will be established within the Rwanda Environmental Management Authority,

The Project management Unit will be headed by a full time staff appointed by the Rwanda Environmental Management Authority, to oversee daily operation of the entire project in close collaboration with Ozone Officer, national part time consultant and the implementing agencies

Specific roles and responsibilities of the Project Management Unit will include the following:

- Preparation of the annual action programmes and adjustment of the TPMP project actions as appropriate in cooperation with and with support from CAP staff and UNDP consultant,
- Co-ordination of proposed phase out activities by major stakeholders
- Monitoring of the implementation of various activities in-order to identify problems and suggest remedial actions,
- Preparation of annual reports on the progress in the implementation of all activities approved in the TPMP project including reports expenditure reports

Specific role and responsibilities of the ozone unit will include the following:

The ozone Unit will play a key role in achieving overall ODS phase-out, by coordinating and implementing the country's phase-out program. This ranges from information gathering and dissemination, monitoring and reporting, and the setting of ODS import quotas and allocation of quotas to licensed importers on an annual basis. The ozone unit will also be responsible for carrying out national awareness-raising, providing annual reports on ODS consumption to the MLF and Ozone Secretariats, reviewing draft annual action program of TPMP and ensuring that those are in line with the others phase-out efforts by the country. In general, the ozone unit's role is to keep all element of the phase out efforts of the country well coordinated with a focus on government related issues.

Specific role and responsibilities of the Regional Associations of Refrigeration Technicians will include the following:

The Regional Associations of Refrigeration Technicians will provide technical support for the NOU and PMU in all the activities described above and any others as required. Its input will be particularly important in drawing conclusions from the Retrofit Demonstration activities, ensuring that the retrofit tests themselves are being properly carried out and the workshops are performing retrofits competently. The Associations will also get involved in the selection of trainees and assist in the delivery of training workshop for both Technicians and customs officers. They will also help in the selection certification of repair workshops that will receive toolkits.

Specific roles and responsibilities of the UNEP and UNDP will include the following

- ensuring performance and financial verification ; providing verification to the Executive committee that the phase out targets have been met and associated annual activities have been completed;
- assisting Rwanda in preparation of progress report and the annual Implementation Program; ensuring that, when required, independent technical experts carry out technical reviews;
- carrying out required supervision missions;
- ensuring the presence of an operating mechanism to allow effective, transparent implementation of the annual implementation program and accurate data reporting;
- ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Annual Implementation Program and accurate data reporting;
- verification for the Executive Committee that consumption of the Substances has been eliminated in accordance with the Targets and;
- ensuring that disbursements made to the Country are based on the use of the Indicators and; providing assistance with policy, management and technical support when required.

Results expected:

The project will ensure that all activities (ongoing and new) are satisfactorily implemented and followed-up. Indeed, monitoring will be an effective tool for achieving positive results from the TPMP sub-projects.

Beneficiaries: Refrigeration Technicians and Customs Officers

Budget

Description	Amount (in US\$)
Phase 1	
Project Monitoring Unit staff and national consultants	12,000.00
Support to regional associations of refrigeration technicians(including equipping regional association secretariats offices)	16,000.00
Project Monitoring and follow-up activities (including operation cost for the PMU and meetings with stakeholders)	12,000.00
Subtotal- Phase 1	40,000.00
Phase 2	
Project Monitoring Unit staff and national consultants	12,000.00
Support to regional associations of refrigeration technicians	5,000.00
Project Monitoring and follow-up activities (including operation cost for the PMU and meetings with stakeholders, and preparation of final report)	10,000.00
Subtotal – Phase 2	27,000.00
TOTAL	67,000.00

Timetable

Activity	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1								
Draw up of monitoring plan								
Monitoring and reporting of TPMP activities								
Phase 2								
Monitoring and reporting of TPMP activities								

Annex 2:

**Agreement between the Government of Rwanda and
the Executive Committee for TPMP**

**AGREEMENT BETWEEN THE GOVERNMENT OF RWANDA AND THE
EXECUTIVE COMMITTEE FOR THE TERMINAL PHASE OUT
MANAGEMENT PLAN**

1. This Agreement represents the understanding of the Government of Rwanda and the Executive Committee with respect to the complete phase-out of controlled use of the ozone-depleting substances set out in Appendix 2-A (the “Substances”) prior to 1 January 2010 in compliance with Protocol schedules.

2. The Country agrees to meet the annual consumption limits of the Substances in Annex A (Group I) of the Montreal Protocol as set out in row 2 of Appendix 2-B (the “Targets, and Funding”). The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to the Substances as described in the TPMP document.

3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees in principle to provide the funding set out in row 5 of Appendix 2 B (the “Funding”) to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 2-C (the “Funding Approval Schedule”).

4. The Country will meet the consumption limits for each Substance as indicated in Appendix 2-B. It will also accept independent verification by the relevant Implementing Agency of achievement of these consumption limits as described in paragraph 9 of this Agreement.

5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least 30 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:

- (a) that the Country has met the Target for the applicable year;
- (b) that the meeting of these Targets will be independently verified if requested by the Executive Committee consistent with paragraph (d) of decision 45/54;
- (c) that the Country has substantially completed all actions set out in the last Annual Implementation Programme; and
- (d) that the Country has submitted and received endorsement from the Executive Committee for an annual implementation programme in the form of Appendix 2-D (the “Annual Implementation Programmes”) in respect of the year for which funding is being requested.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 2-E (the “Monitoring”) will monitor and report on that monitoring in accordance with the roles and responsibilities set out in Appendix 2-E. This monitoring will also be subject to independent verification as described in paragraph 9.

7. While the funding was determined on the basis of estimates of the needs of the country to carry out its obligations under this agreement, the Executive Committee agrees that the country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the goals prescribed under this agreement. Reallocations categorized as major changes must be documented in advance in the next annual implementation programme and endorsed by the Executive Committee as described in sub paragraph 5(d). Reallocations not categorized as major changes may be incorporated in the approved annual implementation programme, under implementation at the time, and reported to the Executive Committee in the report on implementation of the annual programme.

8. Specific attention will be paid to the execution of the activities in the servicing sector, in particular:

(a) the Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation;

(b) the technical assistance programme would be implemented in stages so that resources can be diverted to other activities such as, additional training or procurement of service tools, in cases where the proposed results are not achieved, and will be closely monitored in accordance with Appendix 2-E of this Agreement.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfill the obligations under this Agreement. UNEP (the "Lead IA") has agreed to be the lead implementing Agency in respect of the Country's activities under this Agreement. The Lead IA will be responsible for carrying out the activities listed in Appendix 2-F, including but not limited to independent verification. The Country also agrees to periodic evaluations, which will be carried out under the monitoring and evaluation work programs of the Multilateral Fund. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 9 of Appendix 2-B.

10. Should the Country, for any reason, not meet the Targets for the elimination of the Substances in Annex A (Group I) of the Montreal Protocol or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next installment of Funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amounts set out in Appendix 2-G in respect of each ODP ton of reductions in consumption not achieved in any one year.

11. The Funding components of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the Funding of any other consumption sector projects or any other related activities in the Country.

12. The Country will comply with any reasonable request of the Executive Committee and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to information necessary to verify compliance with this Agreement.

13. All of the agreements set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Protocol unless otherwise defined herein.

Appendices

Appendix 2-A: The Substances

Annex A:	Group I	CFC-11, CFC-12 and CFC-115
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Appendix 2-A: The Targets and Funding

	2007	2008	2009	2010	Total
1. Montreal Protocol consumption limits of Annex A, Group I substances (ODP tonnes)	4.56	4.56	4.56	0	
2. Max allowable total consumption of Annex A Group I substances (ODP tonnes)	4.56	4.56	4.56	0	
3.0 New reduction under plan (ODP tones)		2.56	2.0	0	4.56
4. Lead IA (UNEP) agreed funding (US \$)	110,000	67,000			177,000
5. Cooperating IA agreed funding (US\$)	124,500	43,500			168,000
6. Total agreed funding (US \$)	234,500	110,500			345,000
7. Lead IA (UNEP) support costs 13% (US \$)	14,300	8,710			23,010
8. Cooperating IA support cost 9% (US\$)	11,205	3,915			15,120
7. Total agency support costs	25,505	12,625			38,130
8. Grand Total agreed costs (US \$)	260,005	123,125			383,130

Appendix 2-C: Funding Disbursement Schedule

Funding for the second part, will be considered for approval at the last ExCom meeting of 2008. In case the Executive Committee requires verification of the achievements of the targets in the TPMP, it is understood that the approval or disbursement of the second part might be delayed until verification is completed and has been reviewed

Appendix 2-D: Format of Annual Implementation Programme

1.	Data	
	Country	
	Year of plan	
	# of years completed	
	# of years remaining under the plan	
	Target ODS consumption of the preceding year	
	Target ODS consumption of the year of plan	
	Level of funding requested	
	Lead Implementing Agency	

2. Targets

Indicators		Preceding year	Year of plan	Reduction
Supply of ODS	Import			
	Total (1)			
Demand of ODS	Manufacturing			
	Servicing			
	Stockpiling			
	Total (2)			

3. Industry Action

Sector	Consumption preceding year (1)	Consumption year of plan (2)	Reduction within year of plan (1)-(2)	Number of projects completed	Number of servicing related activities	ODS phase-out (in ODP tonnes)
Manufacturing						
Aerosol						
Foam						
Refrigeration						
Solvents						
Other						
Total						
Servicing						
Refrigeration						
Total						
Grand total						

4. Technical Assistance

Proposed Activity: _____
 Objective: _____
 Target Group: _____
 Impact: _____

5. Government Action

Policy activity planned	Schedule of implementation
Type of policy control on ODS import: servicing, etc	
Public awareness	
Others	

6. Annual Budget

Activity	Planned expenditures (US \$)
Total	

7. Administrative Fees

Appendix 2-E: Monitoring Institutions and Roles

1. All the monitoring activities will be coordinated and managed through the project "Monitoring and Management Unit", which is included within this TPMP.
2. The Lead IA will have a particularly prominent role in the monitoring arrangements because of its mandate to monitor ODS imports, whose records will be used as a crosschecking reference in all the monitoring programmes for the different projects within the TPMP. This organization, along with the cooperating IA will also undertake the challenging task of monitoring illegal ODS imports and exports with advisements made to the appropriate national agencies through the National Ozone Office.

Verification and reporting

3. Under this component there are two independent types of verification as follows:
 - (a) in accordance to decision 45/54, the Executive Committee reserves the right for independent verification in case the Executive Committee selects Rwanda for related auditing;
 - (b) Verification for monitoring and in accordance to the TPMP and the TPMP Annual Implementation Programme objectives. The outcome of the different elements of the TPMP and of the monitoring activities will be verified independently by an external organization. The Government, the Lead IA and the independent organization will jointly design the verification procedures.

Institution for conducting the verification

4. Based on the discussion with the Lead IA, the Government of Rwanda should select the independent organization (auditing) to carry out the verification of the TPMP results and the monitoring programme as per paragraph 5 (b) above.

Frequency of verification and reporting

5. The monitoring reports will be produced and verified each year, previous to the first meeting of the Executive Committee. These reports will produce the input for the yearly implementation reports required by the Executive Committee.

Appendix 2-F: Role of the Lead IA

The Lead IA will be responsible for a range of activities to be specified in the project document along the lines of the following:

- (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's phase-out plan;
- (b) Assisting the Country in preparation of the Annual Implementation Programme;
- (c) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the Annual Implementation Programme consistent with paragraph (d) of decision 45/54. For this undertaking, separate funding will be provided by the Executive committee to the Lead Agency;
- (d) Assist the country in Preparation of the Annual Implementation Programme;
- (e) Ensure that the achievements in previous Annual Implementation Programmes are reflected in the future Annual Implementation Programme;
- (f) Reporting on the implementation of the Annual Implementation Programme of the preceding year and preparing for Annual Implementation Programme for the year of submission for submission to the Executive Committee, commencing with the 2008 Annual Implementation Programme combined with the Report on the 2007 Annual Implementation Programme;
- (g) Ensuring that appropriate independent technical experts carry out the technical reviews undertaken by the lead Implementing Agency;
- (h) Carrying out required supervision missions;
- (i) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Annual Implementation Programme and accurate data reporting;
- (j) Verification for the Executive Committee that consumption of the Substances has been eliminated in accordance with the Targets;
- (k) Ensuring that disbursements made to the Country are based on the use of the Indicators; and
- (l) Providing assistance with policy, management and technical support when required.

Appendix 2-G: Reductions in Funding for Failure to Comply

In accordance with paragraph 10 of the Agreement, the amount of funding provided may be reduced by US \$15,000 per ODP tonne of reductions in consumption not achieved.