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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-fourth Meeting
Montreal, 25-29 July 2011

PROJECT PROPOSAL: TRINIDAD AND TOBAGO

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

Phase-out

- HCFC phase-out management plan (stage I, first tranche)

UNDP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Trinidad and Tobago

(I) PROJECT TITLE	AGENCY
HPMP	UNDP (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2010	38.0 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)						Year: 2009				
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption	
				Manufacturing	Serviceing					
HCFC-123					0.3					0.3
HCFC-124					0.1					0.1
HCFC-141b					0.0					0.0
HCFC-142b										
HCFC-22					38.1					38.1

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	46.2	Starting point for sustained aggregate reductions:	46.2
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	30

(V) BUSINESS PLAN		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNDP	ODS phase-out (ODP tonnes)	1.2	1.2	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	3.9
	Funding (US \$)	64,746	64,746	64,746	21,582	0	0	0	0	0	0	215,820

(VI) PROJECT DATA		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits (estimate)		n/a	n/a	46.2	46.2	41.6	41.6	41.6	41.6	41.6	30	n/a
Maximum allowable consumption (ODP tonnes)		n/a	n/a	46.2	46.2	39.3	39.3	39.3	39.3	39.3	28.5	n/a
Project Costs requested in principle(US\$)	UNDP	Project costs	559,900	198,000		471,833		145,000			88,000	1,462,733
		Support costs	41,993	14,850		35,387		10,875			6,600	109,705
Total project costs requested in principle (US \$)			559,900	198,000		471,833		145,000			88,000	1,462,733
Total support costs requested in principle (US \$)			41,993	14,850		35,387		10,875			6,600	109,705
Total funds requested in principle (US \$)			601,893	212,850		507,220		155,875			94,600	1,572,438

(VII) Request for funding for the first tranche (2011)		
Agency	Funds requested (US \$)	Support costs (US \$)
UNDP	559,900	41,993

Funding request:	Approval of funding for the first tranche (2011) as indicated above
Secretariat's recommendation:	Individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Trinidad and Tobago UNDP, has submitted to the 64th Meeting of the Executive Committee stage I of a HCFC phase-out management plan (HPMP) at a total cost as originally submitted, of US \$756,450 plus agency support costs of US \$56,734. The HPMP covers strategies and activities to achieve the 10 per cent reduction in HCFC consumption by 2015, and will be implemented solely by UNDP.

2. The first tranche for stage I being requested at this meeting, amounts to US \$444,450 plus agency support costs of US \$33,334 for UNDP, as originally submitted.

Background

ODS regulations

3. The Ministry of Housing and Environment is the national body responsible for the implementation of the Montreal Protocol in the country. The National Ozone Unit (NOU), operating under this ministry since 1997, is responsible for coordinating and implementing activities to comply with the Montreal Protocol. The overall policy and legal framework to support the phase-out of ozone depleting substances (ODS) embodies the country's commitment to the Montreal Protocol and is defined in the National Environmental Policy of Trinidad and Tobago. The national import and export control regulations adopted initially in 1941 was amended in 1999 to include ODS and mixtures containing ODS. This is implemented through an institutional framework for cooperation between and among other government ministries led by the NOU to control the import, export and consumption of ODS, and has allowed the country to permanently phase out CFCs. These amended regulations also include HCFCs, however, a number of specific guidelines for HCFCs still need to be defined, including the establishment of a quota system for HCFC imports by 2012.

4. In addition, the Cabinet of Ministers of Trinidad and Tobago is considering a draft Climate Change Policy which has among its objectives, the reduction or avoidance of greenhouse gases from all emitting sectors. This policy will also apply, to the extent feasible, to the selection of replacement technologies for HCFCs.

HCFC consumption

5. Trinidad and Tobago does not produce HCFCs therefore all HCFCs in the country are imported. HCFC-22 is the main HCFC imported into the country, used predominantly for servicing refrigeration and air-conditioning equipment (RAC). Some small quantities of pure HCFC-141b are also imported. In addition, HCFC-141b contained in imported pre-blended polyols, which is not reported under Article 7 of the Montreal Protocol, is used by small foam manufacturing enterprises in the country. The HPMP survey identified 12 licensed importers that bring HCFC into Trinidad and Tobago. These importers retail refrigerants on the local market and two of them also export to neighbouring islands.

6. The country survey revealed that, in 2009, the demand for refrigerants was 692.2 metric tonnes (mt), 9.31 mt of which was used to fill locally assembled domestic small commercial air-conditioning (AC) systems. Small amounts of HCFCs contained in blends and HCFC-141b (pure) used for fushing and cleaning in the servicing sector were also identified. This data is summarized in the table below.

Table 1: HCFC level of consumption

	Article 7 reports								Survey Results								
	HCFC 22		HCFC 123		HCFC 141b		HCFC 124		HCFC 22		HCFC 123		HCFC 141b		HCFC 142b		
	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	
2006	1267	69.7	-	-	-	-	-	-	-	1282	70.51	-	-	-	-	-	-
2007	825	45.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	1025	56.4	-	-	-	-	-	-	997	54.8	-	-	-	-	-	-	-
2009	683.9	37.6	13.4	0.27	0.27	0.02	4.2	0.09	622.8	34.26	2.03	0.04	21.6	2.36	1.03	.067	
2010*	-	-	-	-	-	-	-	-	914	50.27	-	-	24.9	2.74	-	-	

* 2010 data is estimated

Sectoral distribution of HCFCs in servicing sector

7. There are nineteen large refrigeration and air-conditioning service enterprises in Trinidad and Tobago employing between 5 and 40 technicians each, and a number of smaller, one or two person operations. In addition, several of the large office buildings and commercial enterprises have in-house maintenance services with refrigeration expertise, but rely on the larger service agencies for major services. These comprise the formal sector, which has about eight hundred (800) technicians, 435 of whom received some level of training under the refrigeration management plant (RMP) or terminal phase-out management plan (TPMP), or both. The informal sector is estimated to include about 400 technicians. The survey data suggested that in 2009, 18,979 pieces of HCFC based equipment were serviced in the country, 74 per cent of which were small split air conditioning systems.

8. Some HCFC-22 is also used to fill refrigeration equipment which is assembled from equipment kits (residential split type units). A summary of HCFC consumption, excluding HCFC-141b in imported pre-blended polyols, by sector is shown in Table 2.

Table 2: Consumption of HCFC-22 in the servicing sector

SECTOR	Total number of units	Total charge of refrigerant (tonnes)	Service frequency per annum	% of equipment requiring charge annually	Average recharge amount (kg)	Service demand (tonnes)	
						mt	ODP
Residential & small Commercial	375,000	562,500	2	30	2	168.75	9.28
Transport	60	90	1	10	2.5	0.02	0
Commercial ref	12,235	18,352.5	1.5	25	20	61.18	3.36
Commercial ac	49,440	74,160	1.5	10	50	247.20	13.60
Marine	30	45	1.5	25	3.75	0.03	0
Industrial Refrigeration	35,000	52,500	1.5	20	4	28	1.54
A/c Chillers	10,390	15,585	1.5	10	180	187.02	10.29
TOTAL DEMAND	482,155	723,233				692.20	38.07

HCFC consumption in the foam sector:

9. Based on the HCFC survey, six enterprises were identified as foam manufacturers in Trinidad and Tobago, but only five of them use HCFC-141b in imported pre-blended polyols for the manufacturing sector and are included in the request for conversion for the foam sector. The process of production is mainly hand mixing and only basic equipment is involved. The 2009-2010 average aggregate

HCFC-141b contained in pre-blended polyols by these enterprises is 23.25 mt. An overview of the surveyed companies and their HCFC-141b consumption is presented below:

Table 3: Overview of the surveyed companies and HCFC-141b consumption

#	Company	Application	HCFC-141b use Average (2009-2010) (mt)
1	Vetter Boxes	Fish boxes	7.75
2	Tropical Marine	Fish boxes	1.7
3	Ice Connection	Fish boxes	6.3
4	Seal	Sprayfoam	4.5
5	Ice Fab	Ice makers, truck bodies	3.0
6	Mecalfab	Panels, truck bodies	0
TOTAL			23.25

Estimated baseline for HCFC consumption

10. The baseline for HCFC consumption was estimated at 807.9 mt (44.1 ODP tonnes) by using the average of the reported 2009 consumption of 701.8 mt (38 ODP tonnes) consumption and the estimated 2010 consumption of 914 mt (50.3 ODP tonnes) excluding HCFC-141b consumption based on customs data available for this year. This represents a 30 per cent increase as compared to consumption in 2009.

11. Consequently, the starting point was calculated using the estimated baseline of 807.9 mt (44.1 ODP tonnes) plus consumption of HCFC-141b in imported pre-blended polyols of 23.25 mt (2.6 ODP tonnes), resulting in a value of 831.1 mt (46.7 ODP tonnes).

HCFC phase-out strategy

12. The Government is proposing to follow the Montreal Protocol schedule and adopt a staged approach to achieve the complete phase-out of HCFCs by 2030 with a service tail to 2040. The current submission only consists of stage I of the HPMP to achieve a 10 per cent reduction by 2015, and focuses on activities for the servicing sector using HCFC-22, as well as an investment component covering the foam enterprises using HCFC-141b contained in imported pre-blended polyols as part of stage 1.

13. In stage I of the HPMP, the country will control the imports of bulk HCFCs through applying a strict licensing and quota system consistent with the reduction schedule in the Montreal Protocol. The country will also reduce the demand for HCFCs for servicing existing equipment through refrigerant recovery and reuse, and the capacity building of technicians in better servicing practices. The summary of activities and proposed implementation period is shown in Table 4.

Table 4: Specific activities of the HPMP and proposed period of implementation

Description of activities	Time frame
Technical support to the service industry	
Training in good service practices, Retrofitting and R&R	2011 - 2030
Training in low GWP refrigerant technology	2011 - 2030
General equipment retrofits	2011 - 2030
Specific Equipment Retrofits	2011 - 2030
Provision of recovery equipment, recovery cylinders and service tools for natural refrigerants	2011 - 2030
Upgrade of training institutions	2011-2015
Commercial AC and chiller conversion	2011-2020
Foams sector	

Description of activities	Time frame
Conversion of HCFC based Foams production	2011-2015
Equipment Assembly	
Conversion of Air-conditioning Assembly Operations	2011-2020
Policy, Legal and Institutional	
Expansion of current licensing system to include HCFCs	2011-2015
Expansion of current licensing system to cover labelling of containers and equipment	2011-2015
Establish standards for the transportation, handling and storage of refrigerants	2011-2015
Develop policies and regulations for the labelling of refrigerant containers and HCFC-based equipment offered for sale.	2011-2015
Certification of technicians	2011-2015
Technician certification to be made a condition to purchase refrigerants and equipment	2011 - 2030
Establish and implementation mechanism for disposal of illegal imports of refrigerants and equipment	2011-2015
Establish controls over exports of refrigerants and related equipment.	2011-2015
Training of enforcement personnel	2011-2030
Introduction of market based incentives/ disincentives	2011-2020
Procedures to monitor servicing of Trinidadian flagged vessels	2011-2020
Phased prohibition of imports of HCFC charged equipment	2011-2030
Policies to prohibit importation of HCFC based equipment without charge	2011-2030
Net installations over 100 tonnes to include recovery machine capable of recovering at 10 lbs/minute and recovery cylinders with capacity of twice the charge of the largest unit.	2011-2030
Requirements for data capture and reporting	2011-2015
Control of sales of equipment over 5 tonnes to certified technicians	2011-2015
Education and Awareness	
General public education and information dissemination	2011-2030
Education and awareness programmes to promote specific projects	2011-2030
Monitoring, Evaluation and Reporting	
Continuous monitoring, evaluation and reporting on project execution	2011-2030

Conversion of the foam enterprises

14. With respect to the foam sector while each company made its own technology choice for the conversion, the government's strategy was to apply where possible low-global warming potential (GWP) alternatives as the technology replacement, bearing in mind that these would need to be cost-effective for these small foam enterprises. In reviewing the various technology options, the Government did not consider HFC options as these were global warming gases. It also considered that hydrocarbons were too expensive for the small companies and water based systems did not meet the companies' requirements.

15. Based on technical and economic considerations of available non-HCFC technologies, the five enterprises decided to replace HCFC-141b used as a blowing agent by methyl formate (MF) in pre-blended polyol systems that will be purchased from systems houses in Mexico (the Government of Mexico has submitted stage 1 of the HPMP to the 64th Meeting (UNEP/OzL.Pro/ExCom/64/39), including a foam project for retrofitting all systems houses to allow the production of methyl formate-based polyols). Capital costs are requested for retrofitting the existing four spray foam dispensers; trials, testing and training; technology transfer and contingencies. Incremental operating costs were estimated at US \$26,300 in total for all five companies. The total funding requested for the five companies to phase out 23.25 mt was US \$208,450 plus support costs. The cost effectiveness is US \$8.98/kg.

16. The table below provides a summary of the forecast HCFC consumption and expected reductions for both the refrigeration servicing and the foam manufacturing sector, until 2015.

Table 5: Forecast consumption of HCFCs in Trinidad and Tobago

Year	2008*	2009*	2010	2011	2012	2013	2014	2015	Total Mt	ODP	GWP
Consumption	1019.6	701.8	914.00	959.70	1007.69	1058.07	1110.97	1166.52	3335.56		
Baseline						807.9				44.135	
Allowed consumption						807.9	802.46	722.21	2327.12		
Consumption reductions						255.61		80.25	335.86		597,830
Servicing baseline consumption (ODP tonnes)						44.135		39.722			
Consumption reductions (ODP tonnes)						14.059		4.4135	18.47		
Foams baseline (mt)						23.25					16,577
Foams baseline (ODP tonnes)						2.56					

*Article 7 data0

Cost of the HPMP

17. The total cost of stage I of the HPMP has been estimated at US \$756,450 (US \$548,000 for the servicing sector and US \$208,450 for the foam investment component) plus support costs. The HPMP calculated the baseline for the servicing sector at 807.9 mt. The requested funding is expected to achieve a 10 per cent reduction in HCFC consumption by 2015, resulting in a phase-out of 80.79 mt (4.4 ODP tonnes) of HCFCs. The detailed cost breakdown for stage I activities is listed in Table 6.

Table 6: Total cost of the HPMP

Description of activities	UNDP (US \$)
Technical support to the refrigeration service industry	318,000
Policy, legal and institutional framework	80,000
Public educating and awareness	40,000
Project management and monitoring	110,000
Sub- Total (US \$)	548,000
Conversion of five foam enterprises	
Ice Con	45,550
Ice Fab	42,350
Seal	34,100
Tropical Marine	40,450
Vetter boxes	46,000
Sub-total	208,450
TOTAL COST	756,450

SECRETARIAT COMMENTS AND RECOMMENDATION

COMMENTS

18. The Secretariat reviewed the HPMP for Trinidad and Tobago in the context of the guidelines for the preparation of HPMPs (decision 54/39), the criteria for funding HCFC phase-out in the consumption sector agreed at the 60th Meeting (decision 60/44), and subsequent decisions on HPMPs made at the 62nd and 63rd meetings and the 2011-2014 business plan of the Multilateral Fund.

Issue related to HCFC consumption

19. The Secretariat noted the difference between the data provided in the HPMP and the officially reported Article 7 data, and sought clarification from UNDP. It also analysed the information provided from the HCFC survey focusing in particular on how the 2009 data was validated, and how the 2010 HCFC consumption data was estimated. It also sought clarification with regards to the small HCFC-141b consumption reported under Article 7 for 2009, and inquired whether this was for imported pre-blended polyols. UNDP provided information that supported the data included in the HPMP. It explained that the small consumption of HCFC-141b that was reported in 2009 was used for flushing in refrigeration servicing, and further indicated that the data validation done during the survey clearly focused on the years 2005-2009 through a review of data available with the Customs department and compared with downstream users. It also mentioned that the survey was unable to validate data for 2007 for reasons that there were no Customs data available.

Issue related to the estimated baseline and starting point

20. The Fund Secretariat advised UNDP that in calculating the estimated baseline, it would be useful if actual customs data for 2010 is used rather than an estimate based on the 2009 consumption. UNDP confirmed that the calculation of the estimated baseline was done using preliminary HCFC data (excluding HCFC-141b) from the customs department for 2010 and also indicated that the country was in the process of submitting this data under Article 7 to the Ozone Secretariat. Subsequent to the submission of the HPMP to the Secretariat, Trinidad and Tobago had officially submitted its official 2010 data under Article 7. Based on the reported 2010 data of 975.99 mt (54.5 ODP tonnes) the baseline is estimated at 838.9 mt (46.2 ODP tonnes). The Secretariat however noted that Trinidad and Tobago had reported a high consumption of HCFC-141b (40.82 mt) for 2010 as compared to 2009 (0.27 mt) which was not recorded as contained in imported pre-blended polyols and sought clarification on this. UNDP advised the Secretariat that the country has reported HCFC-141b in pre-blended polyols as consumption in 2010.

21. Following discussions, UNDP informed the Secretariat that the country would like to use the average reported consumption for 2009 and 2010 as the starting point in line with decision 60/44(d). Accordingly, the starting point is adjusted to 838.9 mt (46.2 ODP tonnes). The servicing sector baseline would thus be 818.4 mt. The business plan indicated a baseline of 711.33 mt.

22. Out of this, since stage 1 of the HPMP will meet the 2020 35 per cent reduction in HCFC consumption, the amount of HCFC that is required to be phased out for the country to comply with the Protocol would be 293.6 mt based on their starting point of 838.9 mt.

Overarching strategy

23. The country chose to meet the 2013 freeze and the 10 per cent reduction target by 2015 as well as the phase-out of HCFC-141b contained in imported pre-blended polyols in stage I of the HPMP. In discussing these with UNDP, the Secretariat advised that stage I of the HPMP could be extended to include up to the 35 per cent reduction of HCFC consumption until 2020 to allow the country to phase out the amount of HCFC required to comply with the 2013, 2015 as well as the 35 per cent reduction in 2020,

since the activities that are planned under the strategy would be very similar and could accomplish more if planned for a longer period. The Government through UNDP informed the Secretariat that it agreed to extend stage I to include the 35 per cent reduction for 2020 for stage I of the HPMP as the funding level that would apply for the refrigeration servicing sector to achieve a 10 per cent reduction in 2015 is not sufficient to implement the activities proposed prior to 2015.

24. The Secretariat also raised the issue regarding the five foam enterprises using HCFC-141b in imported pre-blended polyols, and on the need to consider these at the present meeting as they were not required for compliance. Also the consumption of these enterprises has been considered in the calculation of the country's starting point for aggregate reduction. The Secretariat requested UNDP to consider addressing the foam enterprises at a later point as part of stage I in line with decisions 61/47 and 63/15, when they could be submitted once proven cost-effective and commercially available low-GWP technology made it possible to replace the HCFC-141b used by small enterprises. However, subsequent to the discussions, the country reported 2010 HCFC consumption under Article 7 which included HCFC-141b in pre-blended polyols as consumption, and has elected to use the 2010 consumption as its starting point as described in paragraphs 20-22 above. Based on this development, the Secretariat noted that the phase-out of HCFC-141b consumption in the country would now be required for compliance as part of stage 1 of the HPMP.

Technical and cost issues

25. The Secretariat discussed the funding requested for the regulatory framework for HCFCs as it related to decision 54/39, the guidelines for HPMP preparation. UNDP explained that during the preparation of the HPMP, consultations on the effectiveness of the related CFC phase-out arrangements were made and options to strengthen support for HCFC phase-out identified. The additional activities that are required to strengthen the regulatory framework to control HCFC consumption are included in stage I and are seen as necessary to create the enabling legal and policy framework to support HCFC phase-out. UNDP indicated that several of these interventions are significant additions to the framework that supported the ODS phase-out in the country. It also indicated that a quota system for HCFC imports is expected to be in place by 2012.

26. The Secretariat also raised issues related to the activities identified under the technical assistance for the servicing sector, noting that a number of the training and certification activities had been implemented during the earlier CFC phase-out. It also requested UNDP to adjust the costs of some activities that could be consolidated, as well as costs for developing training manuals for refrigeration technicians and customs officers. UNDP also provided at the request of the Secretariat a detailed list of equipment that will be provided to service technicians under the technician training programme.

27. The activities in stage I of the HPMP related to the servicing sector include training of technicians, provision of equipment to facilitate refrigerant recovery and improving servicing practices. The country will also conduct awareness programmes and training of customs officers to control the imports of HCFCs. Based on this, the eligible consumption in the servicing sector to reduce HCFC consumption by 35 percent in 2020 using its estimated servicing baseline of 818.4 mt would be 286.43 mt. Based on US \$4.5/kg, the funding for the servicing sector would be US \$1,288,933 plus support costs. This funding will allow the Government to plan for a longer term and to provide commitments of support to key stakeholders in advance.

Issues related to the foam sector

28. In reviewing the foam sector plan for Trinidad and Tobago, the Secretariat noted that there was no indication in the proposal of the measures/mechanisms to be put in place to prevent reverting to the use of HCFC-141b polyols once the enterprises are converted to MF as required in decisions 61/47 and 63/15. UNDP indicated that this will be one of the policy measures that will be put in place during HPMP

implementation, and that the Government has requested downstream in the form of commitment letters where they would agree to phase-out HCFC-141b in pre-blended polyols.

29. The Secretariat also noted that the cost requested for technology transfer (US \$3,000/enterprise) and for trials were high given the level of foam production at each enterprise. In the discussions that followed, the Secretariat requested UNDP to rename the costs associated with technology transfer to “UNDP technical assistance” as this seemed more appropriate for the activities that needed to be done under this cost component. In addition, UNDP was also asked to provide a technical justification for the need for two trials. UNDP indicated that the trials and testing component of the investment project consisted of more than just the costs of the material. It also emphasized that as a new technology (MF) is still being tested, the enterprises would need more support in order to ensure that this is successfully implemented.

30. Following these discussions, the cost for the conversion of the five enterprises was agreed at the funding level of US \$173,800 plus support costs. These were adjusted based on the Secretariat’s comments and agreed with the Government of Trinidad and Tobago. This will phase out 23.3 mt of HCFC-141b in the manufacturing sector at a cost-effectiveness of US \$7.49/kg. These are summarised below:

Table 7: Cost for the conversion of foam the enterprises

Enterprise Name	Agreed costs (US\$)
Ice Con	35,600
Ice Fab	31,900
Seal	31,900
Tropical marine	30,500
Vetter boxes	43,900
TOTAL	173,800

31. Subsequent to the agreement on the foam conversion costs, UNDP adjusted the funding requested under the HPMP as summarized in table 8 below. Following these, the remaining eligible consumption for Trinidad and Tobago would thus be 682.3 mt of HCFCs.

Table 8: Total cost of stage I of the HPMP

Activities	Total budget	Annual allocations (US \$)				
		2011	2013	2015	2017	2020
TECHNICAL SUPPORT TO INDUSTRY						
Training in Good Refrigeration Practices	188,500	68,500	30,000	30,000	30,000	30,000
Provision of Tools and Equipment	353,933	229,600	0	124,333	0	0
Upgrade of Training institutions	100,000		100,000			
Green Refrigeration Guide	25,000	5,000	5,000	5,000	5,000	5,000
Retrofit Programme	110,000	0	0	78,000	32,000	0
Retrofit Equipment Sub total	106,500	0	0	106,500	0	0
Retrofit Incentives	80,000			60,000	20,000	
Component total	963,933	303,100	135,000	403,833	87,000	35,000
Policy legal and institutional framework	120,000	42,000	22,000	27,000	17,000	12,000
Public education and awareness	85,000	17,000	17,000	17,000	17,000	17,000

Activities	Total budget	Annual allocations (US \$)				
		2011	2013	2015	2017	2020
TECHNICAL SUPPORT TO SERVICE INDUSTRY						
Monitoring, evaluation and reporting	120,000	24,000	24,000	24,000	24,000	24,000
Sub-total	1,288,933	386,100	198,000	471,833	145,000	88,000
Conversion of five foam enterprises						
Ice Con	35,600					
Ice Fab	31,900					
Seal	31,900					
Tropical Marine	30,500					
Vetter boxes	43,900	-	-	-	-	-
Sub-total	173,800	173,800	-	-	-	-
TOTAL COST	1,462,733	559,900	198,000	471,833	145,000	88,000

Impact on the climate

32. The proposed technical assistance activities in the HPMP, which include the introduction of better servicing practices and enforcement of HCFC import controls, will reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogram (kg) of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO₂-equivalent tonnes saved. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by the country, in particular training for technicians on improved service practices, refrigerant recovery and reuse, indicate that it is likely that the country will achieve the reduction of 12,864 CO₂-equivalent tonnes in emission to the atmosphere as estimated in the 2011-2014 business plan. However, at this time, the Secretariat is not in a position to quantitatively estimate the impact on the climate. The impact might be established through an assessment of implementation reports by, *inter alia*, comparing the levels of refrigerants used annually from the commencement of the implementation of the HPMP, the reported amounts of refrigerants being recovered and recycled, the number of technicians trained and the HCFC-22 based equipment being retrofitted.

33. A calculation of the impact on the climate of the HCFC-141b used in imported pre-blended polyols by foam enterprises in Trinidad and Tobago based only on the GWP values of the blowing agents and their level of consumption before and after conversion is as follows: 23.3 mt of HCFC-141b will be phased out, 11.6 tonnes of MF will be phased in, and 16,544 tonnes of CO₂ that would have been emitted into the atmosphere will have been avoided (Table 5).

Table 10: Calculation of the impact on the climate

Substance	GWP	Tonnes/year	CO ₂ -eq (tonnes/year)
Before conversion			
Before conversion			
HCFC-141b	720	23.3	16,776
After conversion			
Methyl formate	20	11.6	232
Net impact			(16,544)

Co-financing

34. The Secretariat noted that co-financing opportunities for mobilizing additional resources to maximize the environmental benefits of the HPMP for Trinidad and Tobago were not clearly indicated in the HPMP document except that this will be through in-kind Government contributions and co-funding by recipients for non-eligible items such as structures, infrastructure and technology upgrades. The Secretariat encouraged UNDP to ensure that Trinidad and Tobago explores more opportunities for co-funding especially in stage II of the HPMP.

2011-2014 business plan of the Multilateral Fund

35. UNDP is requesting US \$1,462,733 plus support costs for implementation of stage I of the HPMP. The total value requested for the period 2011-2014 of US \$814,743 including support cost is above that in the business plan for the period. The difference in the figures is due to the difference in baseline between business plan and actual HPMP submitted.

Project management, monitoring and evaluation

36. Monitoring and evaluation activities are planned to take place throughout the implementation period. The NOU will implement and monitor the project activities with the support from UNDP

Draft Agreement

37. A draft Agreement between the Government and the Executive Committee for HCFCs phase-out is contained in Annex I to the present document.

RECOMMENDATION

38. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for Trinidad and Tobago for the period 2011 to 2020, at the amount of US \$1,462,733 plus agency support costs of US \$109,705 for UNDP, on the understanding that:
 - (i) US \$1,288,933 was provided to address HCFC consumption in the refrigeration servicing sector to reach up to and including the 35 per cent reduction in 2020 in line with decision 60/44; and
 - (ii) US \$173,800 was provided for the investment component for the phase-out of 23.3 metric tonnes (2.5 ODP tonnes) of HCFC-141b used in the foam manufacturing sector.
- (b) Noting that the Government of the Trinidad and Tobago had agreed to establish an estimated baseline of 46.2 ODP tonnes, as a starting point for aggregate reduction in HCFC consumption calculated using actual consumption of 38 ODP tonnes and 54.5 ODP tonnes reported for 2009 and 2010 respectively;
- (c) Deducting 309.65 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption;
- (d) Approving the Agreement between the Government of the Trinidad and Tobago and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present report;

- (e) Requesting the Secretariat, once the baseline data were known, to update Appendix 2-A to include the Agreement with the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting change in the levels of maximum allowable consumption accordingly, and of any potential related impact on the eligible funding level, with any adjustments needed being made when the next tranche was submitted; and
- (f) Approving the first implementation plan for 2011-2012, and the first tranche of the HPMP for the Trinidad and Tobago at the amount of US \$559,900 plus agency support costs of US \$41,993 for UNDP.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF TRINIDAD AND TOBAGO AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

1. This Agreement represents the understanding of the Government of Trinidad and Tobago (the “Country”) and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A (“The Substances”) to a sustained level of 28.5 ODP tonnes by 1 January 2020 in compliance with Montreal Protocol schedules, with the understanding that this figure is to be revised one single time, once the baseline consumption for compliance has been established based on Article 7 data, with the funding to be adjusted accordingly, as per decision 60/44.
2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. 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 any consumption of the Substances which exceeds the level defined in row 1.2 of Appendix 2-A (“Maximum allowable total consumption of Annex C, Group I Substances”) as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances which exceeds the level defined in rows 4.1.3 and 4.2.3 (remaining eligible consumption).
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 3.1 of Appendix 2-A (“The Targets, and Funding”) to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.
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 60 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets for all relevant years. Relevant years are all years since the year in which the hydrochlorofluorocarbons phase-out management plan (HPMP) was approved. Exempt are years for which no obligation for reporting of country programme data exists at the date of the Executive Committee Meeting at which the funding request is being presented;
 - (b) That the meeting of these Targets has been independently verified, except if the Executive Committee decided that such verification would not be required;

- (c) That the Country had submitted annual implementation reports in the form of Appendix 4-A (“Format of Implementation Reports and Plans”) covering each previous calendar year, that it had achieved a significant level of implementation of activities initiated with previously approved tranches, and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent;
- (d) That the Country has submitted and received approval from the Executive Committee for an annual implementation plan in the form of Appendix 4-A (“Format of Implementation Reports and Plans”) covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen; and
- (e) That, for all submissions from the 68th Meeting onwards, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place and that the system is capable of ensuring the Country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this Agreement.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous annual implementation plans in accordance with their roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 4 above.

7. 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 smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A.

- (a) Reallocations categorized as major changes must be documented in advance in an annual implementation plan and approved by the Executive Committee as described in sub-paragraph 5(d) above. Major changes would relate to issues potentially concerning the rules and policies of the Multilateral Fund; changes which would modify any clause of this Agreement; changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and provision of funding for programmes or activities not included in the current endorsed annual implementation plan, or removal of an activity in the annual implementation plan, with a cost greater than 30 per cent of the total cost of the tranche;
- (b) Reallocations not categorized as major changes may be incorporated in the approved annual implementation plan, under implementation at the time, and reported to the Executive Committee in the annual implementation report; and
- (c) Any remaining funds will be returned to the Multilateral Fund upon closure of the last tranche of the plan.

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

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and
- (b) The Country and the bilateral and implementing agencies involved will take full account

of the requirements of decisions 41/100 and 49/6 during the implementation of the plan.

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 fulfil the obligations under this Agreement. UNDP has agreed to be the lead implementing agency (the “Lead IA”) in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of any of the agencies taking part in this Agreement.

10. The Lead IA will be responsible for carrying out the activities of the overall plan with the changes approved as part of the subsequent submissions, including but not limited to independent verification as per sub-paragraph 5(b). The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2.

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A 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 tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once these decisions are taken, this specific case will not be an impediment for future tranches as per paragraph 5 above.

12. The Funding 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.

13. 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.

14. The completion of the HPMP and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption has been specified in Appendix 2-A. Should at that time activities be still outstanding which were foreseen in the Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A continue until the time of the completion if not specified by the Executive Committee otherwise.

15. All of the conditions 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 Montreal Protocol unless otherwise defined herein.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	43.3
HCFC-123	C	I	0.13
HCFC-124	C	I	0.51
HCFC-141b	C	I	2.3
Total			46.2

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	46.2	46.2	41.6	41.6	41.6	41.6	41.6	30	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	46.2	46.2	39.3	39.3	39.3	39.3	39.3	28.5	n/a
2.1	Lead IA UNDP agreed funding(US \$)	559,900		198,000		471,833		145,000			88,000	1,462,733
2.2	Support costs for Lead IA(US \$)	41,993		14,850		35,387		10,875			6,600	109,705
3.1	Total agreed funding (US \$)	559,900		198,000		471,833		145,000			88,000	1,462,733
3.2	Total support costs (US \$)	41,993		14,850		35,387		10,875			6,600	109,705
3.3	Total agreed costs (US \$)	601,893		212,850		507,220		155,875			94,600	1,572,438
4.1.1	Total phase-out of HCFC-22, HCFC-123, HCFC-124 (ODP tonnes)											15.4
4.1.2	Phase-out of HCFCs to be achieved in previously approved projects (ODP tonnes)											n/a
4.1.3	Remaining eligible consumption for HCFCs mentioned in 4.1.1 (ODP tonnes)											28.5
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this agreement (ODP tonnes)											2.3
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)											0
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)											0

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval not earlier than the second meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Implementation Report and Plan for each tranche request will consist of five parts:
 - (a) A narrative report regarding the progress since the approval of the previous tranche, reflecting on the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it and how they relate to each other. The report should further highlight successes, experiences and challenges related to the different activities included in the Plan, reflecting on changes in the circumstances in the Country, and providing other relevant information. The report should also include information about and justification for any changes vis-à-vis the previously submitted tranche plan, such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes. The narrative report will cover all relevant years specified in sub-paragraph 5(a) of the Agreement and can in addition also include information about activities in the current year;
 - (b) A verification report of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;
 - (c) A written description of the activities to be undertaken until the planned submission of the next tranche request, highlighting their interdependence, and taking into account experiences made and progress achieved in the implementation of earlier tranches. The description should also include a reference to the overall plan and progress achieved, as well as any possible changes to the overall plan foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain any revisions to the overall plan which were found to be necessary;
 - (d) A set of quantitative information for the report and plan, submitted into a database. As per the relevant decisions of the Executive Committee in respect to the format required, the data should be submitted online. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), and will cover the same time periods and activities; it will also capture the quantitative information regarding any necessary revisions of the overall plan as per sub-paragraph 1(c) above. While the quantitative information is required only for previous and future years, the format will include the option to submit in addition information regarding the current year if desired by the Country and the Lead IA; and
 - (e) An Executive Summary of about five paragraphs, summarizing the information of above sub-paragraphs 1(a) to 1(d).

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The monitoring activities will be carried out within the HPMP implementation, monitoring and control project, and will include the implementation of all the projects within the HPMP, the regular monitoring of the project implementation and results, the production of periodic reports on project results

in order to facilitate corrective actions, the production of timely project progress reports to the Executive Committee, and regular monitoring of market developments and trends at the national and international levels.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities. These can be specified in the project document further, but include at least 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 HPMP;
- (b) Assisting the Country in preparation of the Implementation Plans and subsequent reports as per Appendix 4-A;
- (c) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the Implementation Plan consistent with Appendix 4-A;
- (d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future annual implementation plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;
- (e) Fulfilling the reporting requirements for the annual implementation reports, annual implementation plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee;
- (f) Ensuring that appropriate independent technical experts carry out the technical reviews;
- (g) Carrying out required supervision missions;
- (h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Implementation Plan and accurate data reporting;
- (i) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;
- (j) Ensuring that disbursements made to the Country are based on the use of the indicators; and
- (k) Providing assistance with policy, management and technical support when required.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent organization to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$180 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met.