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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventieth Meeting
Bangkok, Thailand 1-5 July 2013

PROJECT PROPOSAL: PANAMA

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

Phase-out

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

UNDP/UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**Panama**

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (Stage I)	UNDP (lead), UNEP

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2011	23.76 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2012	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124					0.0				0.0
HCFC-141b					6.7				6.7
HCFC-141b in Imported Pre-blended Polyol		2.7							2.7
HCFC-142b					0.0				0.0
HCFC-22					26.1				26.1

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	24.8	Starting point for sustained aggregate reductions:	27.27
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	4.78	Remaining:	22.49

(V) BUSINESS PLAN		2012	2013	2014	2015	Total
UNEP	ODS phase-out (ODP tonnes)		0.4		0.1	0.5
	Funding (US \$)		30,058		9,492	39,550
UNDP	ODS phase-out (ODP tonnes)		1.4	0.0	0.5	1.9
	Funding (US \$)		108,475	0	34,255	142,730

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	24.8	24.8	22.3	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	24.8	24.8	22.3	
Agreed Funding (US\$)	UNDP	Project costs	132,773		100,907		31,865	265,545
		Support costs	9,958		7,568		2,390	19,916
	UNEP	Project costs	35,000		26,600		8,400	70,000
		Support costs	4,550		3,458		1,092	9,100
Funds approved by ExCom (US\$)			Project Costs	167,773	0	0	0	167,773
			Support Costs	14,508	0	0	0	0
Total funds requested for approval at this meeting (US\$)			Project Costs			127,507		127,507
			Support Costs			11,026		11,026

Secretariat's recommendation:	For blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Panama UNDP, as the lead implementing agency, has submitted to the 70th meeting of the Executive Committee a request for funding of the second tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US \$138,533, consisting of US \$100,907, plus agency support costs of US \$7,568 for UNDP, and US \$26,600, plus agency support costs of US \$3,458 for UNEP. The submission includes a progress report on the implementation of the first tranche of the HPMP, and annual implementation plans for 2013 and 2014.

Background

2. Stage I of the HPMP for Panama was approved in principle by the Executive Committee at its 65th meeting to reduce HCFC consumption by 10 per cent of the baseline by the end of 2014, at a total funding level of US \$335,545, plus agency support costs of US \$29,016. At the same meeting, the Executive Committee also approved the first tranche of stage I of the HPMP at the amount of US \$182,281, consisting of US \$132,773, plus agency support costs of US \$9,958 for UNDP, and US \$35,000, plus agency support costs of US \$4,550 for UNEP.

Progress report on the implementation of the first tranche of the HPMP

3. The results achieved so far are described below:

Strengthening of the legal framework

4. In consultation with the private sector and the National Customs Authority (ANA), the Government of Panama approved Resolution 1236 which establishes the mechanisms for the regulation and control of imports of ODS, including the licensing and quota system for HCFCs. Under the approved mechanism, the Ministry of Health allocates the annual HCFC import quotas to the 29 licensed importers when they request import approvals at the beginning of the year.

5. The NOU in coordination with the ANA established the contents for the customs training courses with emphasis on the application of the HCFC quota system, illegal trade prevention and new import duties. The first two workshops took place with the participation of 60 officers.

Refrigeration training programme

6. A Memorandum of Agreement (MOA) between the NOU and the National Institute of Training and Human Development (INADEH) was prepared for the implementation of the refrigeration training programme. The programme will train 300 technicians in best servicing practices, recovery and recycling, conversion of HCFC-based equipment to low-global-warming-potential (GWP) alternatives, and appropriate techniques for cleaning equipment. Two initial training workshops addressed to 40 trainers are scheduled for early June 2013.

7. The NOU started working with INADEH, the Panamanian Association of Air-Conditioning and Refrigeration (APAYRE) and the Society of Engineers and Architects (SPIA) to facilitate the technicians' certification process and to establish a certification precondition for refrigeration technicians working in construction and in refrigeration servicing companies.

Refrigerant recovery and recycling programme

8. The NOU and INADEH are currently reviewing the functionality of the national network of recovery and recycling, and holding discussions with refrigeration servicing companies, importers, and vocational institutes to determine their participation and role in the network.

Programme for end-user conservation and conversion plans

9. Two workshops for 43 environmental health inspectors nationwide were conducted to strengthen the institutional capacity for the implementation of the Montreal Protocol in the Ministry of Health. The officers were also trained to gather data on installed equipment (including type of equipment, refrigerant charge, energy consumption and year of installation) to start a national inventory of HCFC-based equipment in public hospitals. The NOU also contacted an enterprise with experience in HCFC-based equipment conversions to alternative technologies in order to conduct during the second tranche a pilot project to convert HCFC air-conditioning equipment to hydrocarbon (HC) technology in a public health institution.

Phase-out of HCFC-141b in flushing and cleaning of circuits during servicing

10. The Government of Panama included in Resolution 1236 the ban on production, import, export, use or intentional emission of pure HCFC-141b starting 1 January 2014. To support this ban, the NOU included in the refrigeration training programme appropriate techniques for cleaning equipment, and available alternatives for cleaning of circuits, such as nitrogen. The NOU is currently conducting awareness campaigns on the ban of HCFC-141b and available alternatives.

Project monitoring and evaluation

11. The Ministry of Health is the lead office for the implementation of the HPMP. The project coordination and management of the HPMP is supervised by the NOU, within the General Deputy Direction of Environmental Health, which is directly responsible for the implementation of Montreal Protocol related activities in the country. For the implementation of the HPMP, the NOU has focused in strengthening strategic partners with the ANA; the Technological University of Panama (UTP); INADEH; the Ministry of Education; APAYRE; and importers and distributors of HCFCs and HCFC blends. The production of periodic reports on project activities and results were also part of the monitoring and control programme actions by the NOU.

Status of fund disbursement

12. As of May 2013, of the US \$167,773 in funds approved for the first tranche, US \$55,100 (33 per cent) had been disbursed. The balance of US \$112,673 will be disbursed in 2013.

Annual plans for the second tranche of the HPMP

13. The main activities to be implemented during the second tranche of stage I of the HPMP include:
- (a) *Strengthening of the legal framework (UNEP, US \$26,600)*: The implementation of the HCFC licensing and quota system will continue; the ban on import of HCFC-141b pure will enter into force by 1 January 2014; an on-line system between ANA and the NOU will be established to pre-approve and audit all ODS imports requests; three customs officers training will be held; and a norm to help encourage certification among technicians will be established;

- (b) *Refrigeration training programme (UNDP, US \$20,000)*: 300 refrigeration technicians will be trained on good servicing practices in refrigeration and on handling low-GWP refrigerants; and awareness campaigns to promote certification among technicians and contractors will be continued;
- (c) *Refrigerant recovery and recycling programme (UNDP, US \$25,907)*: Additional recovery and recycling equipment and storage cylinders will be procured to strengthen the existing recovery and recycling project;
- (d) *Programme for end-user conservation and conversion plans (UNDP, US \$15,000)*: The inventory prepared during the first tranche will be evaluated and based on an analysis of cost-effectiveness, 20 institutions will be selected to implement the programme on conservation and conversion of HCFC-based equipment. A pilot project to convert HCFC air-conditioning equipment to HCs in a public health institution will be implemented;
- (e) *Phase-out of HCFC-141b in flushing and cleaning of circuits during servicing (UNDP, US \$22,000)*: Fifty nitrogen kits will be distributed and training in the use of the selected alternative will be provided to avoid the emissive use of HCFC-141b during refrigeration equipment maintenance; and
- (f) *Project monitoring and evaluation (UNDP, US \$18,000)*: The NOU will continue to implement activities aimed to strengthen capabilities within the Ministry of Health and will continue coordinating the interaction with the industry and other Government bodies to promote HCFC phase-out.

14. Funding for the implementation of investment projects to phase out the use of 2.50 ODP tonnes of HCFC-141b imported in pre-blended polyols will be requested during stage II.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Operational licensing system

15. In line with decision 63/17 and as required under the Agreement between the Government of Panama and the Executive Committee, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports is in place and that the system is capable of ensuring compliance with the Montreal Protocol HCFC phase-out schedule for the duration of the Agreement.

16. UNDP clarified that Resolution 1236 establishing the ODS import control does not mention exports because Panama is not a producer or exporter of HCFCs and, therefore, the control is not applicable to exports. This clarification was also provided by the Government of Panama to the Ozone Secretariat on 12 May 2013 to be reflected in the status of licensing systems, as already done for other similar cases.

17. The import quotas in Panama have been established as presented in Table 1.

Table 1: HCFC import quotas in Panama

Year	2013	2014	2015	2017	2018	2019	2020	2021	2022
Quota	24.77	24.77	22.29	21.05	19.82	18.58	16.10	14.86	13.62

Year	2023	2024	2025	2026	2027	2028	2029	2030	2040
Quota	12.39	11.15	8.67	7.43	6.19	4.95	3.72	0.62	0.00

HCFC consumption

18. The HCFC baseline for compliance has been established at 24.8 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol for 2009 and 2010 as shown in Table 2. The difference between the estimated and the established baseline corresponds to rounding off decimals to use one in the established baseline; therefore there is no variation in the starting point and no changes to be made to the Agreement between the Government of Panama and the Executive Committee. Based on the country programme implementation report, the consumption of HCFCs in 2012 was 32.77 ODP tonnes, plus 2.73 ODP tonnes of HCFC-141b contained in imported pre-blended polyols.

Table.2 HCFC consumption in Panama (2007-2012)

HCFC	2007	2008	2009	2010	2011	2012	Baseline
Metric tonnes							
HCFC-22	232.01	472.51	428.28	380.36	381.14	474.48	404.32
HCFC-123	2.49	0.14	0.68	4.06	2.93	0.00	2.37
HCFC-124	0.00	1.42	0.32	0.45	0.98	0.10	0.39
HCFC-141b	21.05	22.59	11.72	30.01	24.36	60.65	20.87
HCFC-142b	0.00	3.63	1.31	4.12	0.59	0.06	2.72
Total (metric tonnes)	255.55	500.02	442.31	419.00	410.00	535.29	430.66
ODP tonnes							
HCFC-22	12.76	25.99	23.56	20.92	20.96	26.10	22.24
HCFC-123	0.05	0.00	0.01	0.08	0.06	0.00	0.05
HCFC-124	0.00	0.03	0.01	0.01	0.02	0.00	0.01
HCFC-141b	2.32	2.48	1.29	3.30	2.68	6.67	2.30
HCFC-142b	0.00	0.24	0.09	0.27	0.04	0.00	0.18
Total (ODP tonnes)	15.13	28.74	24.96	24.58	23.76	32.77	24.77
HCFC-141b in pre-blended polyols (ODP)	2.26	2.77	2.48	2.24	13.51	2.73	(*) 2.50

Source for all years except 2012: Article 7 report.

Source for 2012 and HCFC-141b in pre-blended polyols: country programme implementation reports.

() Average consumption 2007 – 2009.*

19. The increase in the consumption of HCFC-22 and HCFC-141b in 2012 was explained as the result of a momentary increase in the inventory levels of some importers as a precautionary measure due to the entry into force of the quota system in 2013. However, this trend did not continue in 2013 and preliminary data collected until April shows that imports have decreased compared to the previous year level. HCFC-123 was not consumed in 2012 as imports are cyclical, as seen in Table 2. Through the implementation of the quota system, it is confirmed that HCFC-123 will be consumed in 2013. The large

value of imports of HCFC-141b in pre-blended polyols in the year 2011 was attributed to a possible mistake in the recording of data by customs and is being analysed by the NOU.

20. UNDP also confirmed that the ban on import, production, export use and emission of HCFC-141b will enter into force by 1 January 2014 as planned and discussed with involved stakeholders. The related technical assistance activities included the action plan will be implemented during the second half of 2013 and the first quarter of 2014.

Other issues discussed

21. Upon a query from the Secretariat on the need to ensure the long-term sustainability of the technicians' certification system, UNDP informed that there is already a legal norm that requires the certification to those interested in the installation of refrigeration and air-conditioning systems. Through the HPMP, such requirement will be extended to those interested in providing maintenance and service. A specific HCFC emission control measure is not envisaged in the short term, but the adoption of good servicing practices including refrigerant recovery and reuse continues to be promoted among technicians and end-users.

22. Upon request for additional details on the retrofits of air-conditioning equipment taking place in Panama, UNDP specified that a private enterprise is currently retrofitting mini-splits from 9,000 to 36,000 BTU per hour, window units and some small chillers using HCFC-22 to an undisclosed HC mixture. The refrigerant is locally available at a price of US \$8 per pound for retail and US \$4 per pound for wholesale. The enterprise adopted a number of safety protocols for the conversion and servicing of equipment converted to HCs and it uses information on energy savings collected from retrofitted units to encourage potential customers to convert. This data was requested but it was not available.

23. With regard to the NOU's and UNDP's role on the retrofits taking place, UNDP explained that the retrofits are taking place as a private initiative independent from the HPMP. The NOU considers HCs as valuable alternatives to HCFCs and promotes their proper handling. Specific sessions on flammable low-GWP alternatives were included in the refrigeration training courses to guide technicians on the conditions required to safely undertake retrofits using HCs. UNDP believes that this practice could be extended in the country if the following requirements are fulfilled: (a) technicians and end-users receive training on this technology; (b) technicians receive certification in the handling of flammable refrigerants; (c) standards and regulation on type of equipment that could be converted and the maximum refrigerant charge allowable are established.

24. The Secretariat noted that the training related requirements are being fulfilled through the refrigeration training programme under the HPMP, and asked UNDP for the status of development of the mentioned standards and regulations, the specific activities planned on this area under the second tranche and the expected date to have them in place. UNDP explained that the activities being carried out in relation to HCs during stage I are focused on evaluating training needs and viability of adoption of this technology in the local market. However, in view of the time required to adopt and approve new legislation and standards on this issue, during the implementation of stage I, the Government will also gather information, identify and increase awareness of stakeholders, and review regional initiatives, with the objective of getting a clearer course of action for the adoption of control measures in the second stage of their HPMP.

25. Upon revision of the progress report and the additional clarifications provided by UNDP, the Secretariat concludes that the implementation of stage I of the HPMP for Panama is on track and is consistent with the strategy defined by the country. The import licensing and quota systems are operational and will enable the Government to reduce its HCFC consumption by 10 per cent of its

baseline by 2015, all the programmed activities in the servicing sector have started and the level of disbursement is above the minimum required for release of the second tranche. Therefore, the conditions for the release of the second tranche have been met.

RECOMMENDATION

26. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan of (HPMP) in Panama, and further recommends blanket approval of the second tranche of stage I of the HPMP, and the corresponding tranche implementation plans, with associated support costs at the funding level shown in the table below:

	Project Title	Project Funding (US \$)	Support Cost (US \$)	Implementing Agency
(a)	HCFC phase-out management plan (stage I, second tranche)	100,907	7,568	UNDP
(b)	HCFC phase-out management plan (stage I, second tranche)	26,600	3,458	UNEP