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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-fourth Meeting
Montreal, 18-22 May 2015

PROJECT PROPOSAL: PANAMA

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

Phase-out

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

UNDP/UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Panama

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (Stage I)	UNDP (lead), UNEP	65th	10% by 2015

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2013	21.37 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2013	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123					0.0				0.0
HCFC-124					0.0				0.0
HCFC-141b					2.0				2.0
HCFC-141b in Imported Pre-blended Polyol		2.2							2.2
HCFC-142b					0.0				0.0
HCFC-22					19.3				19.3

(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		2015	Total
UNDP	ODS phase-out (ODP tonnes)	0.5	0.5
	Funding (US \$)	34,255	34,255
UNEP	ODS phase-out (ODP tonnes)	0.1	0.1
	Funding (US \$)	9,492	9,492

(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	127,507	0	0.0	295,280	
	Support costs	14,508	0	11,026	0	0.0	25,534	
Total funds requested for approval at this meeting (US\$)	Project costs					40,265	40,265	
	Support costs					3,482	3,482	

Secretariat's recommendation:	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 74th meeting a request for funding for the third and final tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US \$43,747, consisting of US \$31,865, plus agency support costs of US \$2,390 for UNDP, and US \$8,400, plus agency support costs of US \$1,092 for UNEP. The submission includes a progress report on the implementation of the second tranche, the verification report on HCFC consumption and the tranche implementation plan for 2015 and 2016.

Report on HCFC consumption

HCFC consumption

2. The Government of Panama reported a consumption of 21.37 ODP tonnes of HCFC in 2013 and estimated a consumption of 19.23 ODP tonnes for 2014, which are below the allowable consumption of 24.77 ODP tonnes. HCFC consumption for 2010-2014 is shown in Table 1.

Table 1. HCFC consumption in Panama (2010-2014 Article 7 data)

HCFC	2010	2011	2012	2013	2014*	Baseline
Metric tonnes						
HCFC-22	380.36	381.14	474.48	350.76	348.60	404.32
HCFC-123	4.06	2.93	0.00	2.42	0.74	2.37
HCFC-124	0.45	0.98	0.10	0.10	0.09	0.39
HCFC-141b	30.01	25.50	60.65	18.41	0.00	20.87
HCFC-142b	4.12	0.59	0.06	0.01	0.52	2.72
Total (metric tonnes)	419.00	410.00	535.29	371.74	349.95	430.66
ODP tonnes						
HCFC-22	20.9	20.96	26.10	19.30	19.17	22.24
HCFC-123	0.1	0.06	0.00	0.05	0.01	0.05
HCFC-124	0.0	0.02	0.00	0.00	0.00	0.01
HCFC-141b	3.3	2.81	6.67	2.02	0.00	2.30
HCFC-142b	0.3	0.04	0.00	0.00	0.03	0.18
Total (ODP tonnes)	24.6	23.89	32.77	21.37	19.23	24.77
HCFC-141b in imported pre-blended polyols	2.2	13.51	2.73	2.18	n/a**	2.50***

*Not reported yet but verified.

**Not available at the time of issuance of this document.

***Average consumption of 2007-2009.

3. The decrease in consumption of HCFC-22 is explained by the application of the HCFC import quota system, and the zero consumption of HCFC-141b in 2014 is the result of establishing the ban on the import, production, export and use of HCFC-141b in bulk, as planned in the HPMP.

Verification report

4. The verification report confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs for 2013 was 21.37 ODP tonnes, with a total of 19.23 ODP tonnes for 2014. The verification report concluded that national legislation and procedures are being adequately implemented, and that the data reported by the National Ozone Unit (NOU) is reliable as compared to the statistical report provided by the National Customs Authority (ANA).

Country programme (CP) implementation report

5. The Government of Panama reported sectoral HCFC consumption data under 2013 CP implementation report which is consistent with the data reported under Article 7. The 2014 CP report will be submitted by mid-April 2015.

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

Strengthening of the legal framework

6. The HCFC import licensing and quota system has been operational since 2013 and provides the status of HCFC imports by enterprise in real time. In 2014 the Government of Panama granted annual HCFC import licenses to 33 importers.

7. Training on the new legal framework, including the licensing and quota system, was provided through the ANA to 49 customs officers completing 109 out of the 160 planned under stage I. The ANA also provided additional training to 92 officers and received two refrigerant identifiers.

8. In addition, the ban on imports of pure HCFC-141b for use in the refrigeration servicing sector entered into force on 1 January 2014.

Manufacturing sector

9. In line with decision 63/15¹, Panama had proposed to submit at a future meeting as part of stage I, a project to address the consumption of HCFC-141b contained in imported pre-blended polyols estimated at 2.50 ODP tonnes (average for 2007-2009). However, UNDP has informed the Secretariat that the foam project will be submitted during stage II.

Refrigeration training programme

10. Twenty-seven refrigeration instructors and 392 technicians received training on good refrigeration practices and low-global-warming potential (GWP) alternatives to HCFC refrigerants (target for stage I is 550 technicians). The subject of the train-the-trainers workshop was included in the refrigeration curriculum of the National Institute of Training and Human Development (INADEH), which committed to continue providing good refrigeration practice courses at its training centres around the country. The NOU also continued supporting the implementation of the technicians' certification scheme, with a total of 106 technicians certified during this period.

11. The NOU, in collaboration with the Panamanian Association of Air Conditioning and Refrigeration (APAYRE), updated the technical regulations for air-conditioning and ventilation, which include conditions for the installation, operation and servicing of refrigeration equipment; guidelines to adopt non-ODP and low-GWP refrigerants when designing new air-conditioning systems; and the ban on new HCFC-based air-conditioning installations starting 1 January 2016. A committee on standards for hydrocarbons (HC) was also created to establish a technical and safety standard for the installation, maintenance and repair of HC-based equipment, as some are already entering the country.

12. In addition, the NOU visited service workshops, HCFC importers and end-users to promote the adoption of non-ODP, low-GWP alternative refrigerants, and the replacement of HCFC-141b by nitrogen in flushing activities.

¹ Article 5 countries with HCFC consumption reported under Article 7 solely in the refrigeration servicing sector and with foam enterprises relying exclusively on imported HCFC-141b pre-blended polyol systems not reported as consumption are allowed, on an exceptional and case-by-case basis, and consistent with decision 61/47, to submit a funding request for the conversion of those enterprises during implementation of stage I of the HPMP.

Refrigerant recovery and recycling programme

13. Ten tool kits were distributed to training centers and an additional 80 kits including nitrogen-based flushing tools were delivered to service workshops during the first half of 2015.

14. Upon review of the functionality of the national recovery and recycling network it was concluded that recovery is mostly done by large workshops. Recovery and recycling equipment will be provided to additional workshops that have shown interest in improving their servicing practices.

Programme for end-user conservation and conversion plans

15. Two databases were designed to improve the information management of activities carried out by the NOU: one for refrigeration technicians trained by the HPMP and INADEH, and the other for refrigeration equipment in public hospitals. Several public hospitals will receive support for conversion and/or conservation activities.

Project implementation and monitoring unit (PMU)

16. The NOU continued implementing the HPMP in partnership with ANA, INADEH, APAYRE, the Technological University of Panama, the Ministry of Education (MEDUCA), the National Energy Secretariat (SNE), the Ministry of Commerce and Industry (MICI), the Panamanian Society of Engineers and Architects (SPIA-JTIA) and the importers and distributors of HCFCs and HCFC blends.

Level of fund disbursement

17. As of January 2015, of the US \$295,280 approved so far, US \$248,835 had been disbursed (US \$203,235 for UNDP and US \$45,600 for UNEP). The balance of US \$46,445 will be disbursed in 2015 (Table 2).

Table 2. Financial report of stage I of the HPMP for Panama (US \$)

Agency	First tranche		Second tranche		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
UNDP	132,773	132,773	100,907	70,462	233,680	203,235
UNEP	35,000	35,000	26,600	10,600	61,600	45,600
Total	167,773	167,773	127,507	81,062	295,280	248,835
Disbursement rate	100.0%		63.6%		84.3%	

Implementation plan for the third tranche of the HPMP

18. During the third funding tranche of the HPMP, the Government of Panama will implement the following activities:

- (a) *Strengthening of the legal framework (UNEP, US \$8,400)*: The NOU will participate in the committee on standards for HC and will support the preparation of regulations for HC-based refrigerants. Follow-up on the implementation of HCFC licensing and quota system will continue, and three workshops will be organized for customs officers on prevention of illegal trade of ODS.

- (b) *Refrigeration training programme (UNDP, US \$6,000)*: 150 refrigeration technicians will be trained in good practices in refrigeration and air-conditioning systems, and in the handling of low-GWP refrigerants. Awareness campaigns to promote certification among technicians and contractors will continue;
- (c) *Refrigerant recovery and recycling programme (UNDP, US \$3,000)*: Five kits for recovery and recycling will be distributed and meetings with interested enterprises to establish a reclaim centre will take place;
- (d) *Programme for end-user conservation and conversion plans (UNDP, US \$2,000)*: A pilot project to convert HCFC-based air-conditioning equipment to an alternative technology (to be determined) in a public health institution will be implemented; and
- (e) *Project monitoring and evaluation (UNDP, US \$20,865)*: The NOU will continue supporting project activities aimed at strengthening capacity within the Ministry of Health and will continue coordinating meetings between the industry and other Government bodies to promote HCFC phase-out.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption

19. The Secretariat noted that several of the recommendations in the independent verification report are already being addressed as part of the NOU tasks and the HPMP implementation. For example, the NOU is keeping track of all refrigerants (not only HCFC) to identify any consumption trends, ANA received advanced refrigerant identifiers to detect HCFC contained in blends, and training on handling HCFCs and promoting low-GWP alternatives is being provided. One suggestion to further increase efficiency in the use of the quotas was to proactively exercise periodic review of the quota allocation balance and timely reallocate quotas not used. As demand for HCFC-22 continues to increase and supply starts to decrease, withholding unused quotas could potentially create conditions for illegal trade. UNDP informed that the regulation allowing reallocation of unused quotas has been implemented. In August each year, importers must inform the NOU when they are planning not to use their entire quota for that year. The Ministry warns and monitors importers that have failed to do so.

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

Legal framework

20. The Government of Panama has already issued HCFC import quotas for 2015 in accordance with the Montreal Protocol control targets.

Refrigeration servicing sector

21. In the context of the ban on new HCFC-based air-conditioning installations planned for 1 January 2016, the Secretariat and UNDP discussed the current status of alternative technologies in Panama after three years of implementation of the HPMP. UNDP reported that the arrival of HFC-based air-conditioners and commercial refrigeration equipment is increasing despite the efforts to promote the use of low-GWP alternatives. Imports of HC-based domestic refrigerators have also increased but at a smaller scale. The main challenges in adopting low-GWP alternatives (including HCs) at present are the lack of technical regulations, supply by local distributors of equipment and refrigerants, and technical

knowledge by users. The NOU is working intensely to address these challenges through technician training and certification, as well as the development of standards and regulations.

22. On the sustainability and sufficiency of current technician training to handle flammable refrigerants, UNDP explained that technicians will require further training and proper tools in the future, as standards and regulations are developed. Technician certification is being provided through SPIA, but its cost (US \$150) has been considered a deterrent by many technicians. During stage II, the Government will continue to address training and certification limitations to further facilitate the introduction of low-GWP alternatives.

23. With regard to the use of HCFC-141b for cleaning systems in the refrigeration sector, UNDP confirmed that the flushing kits will be distributed to technicians during the first half of 2015, and that since the ban on imports of HCFC-141b came into effect on 1 January 2015 technicians have been using nitrogen in combination with non-HFC-based solvents.

24. The Secretariat noted that the activity addressed to end-users was progressing slowly and discussed with UNDP the need to ensure completion of all activities before the end of stage I (31 December 2016). As a result, UNDP presented an adjusted plan of action for the end-user activity including a pilot project in one public hospital. The project will collect information on energy use and refrigerant emissions savings with the implementation of good refrigeration practices and conversion of key equipment. The data will be used to consider possible conversion activities in more hospitals during stage II. The Government of Panama is aware of decisions 72/17 and 73/34²; UNDP considers that it is unlikely that conversion of refrigeration equipment to flammable substances will take place at this point as regulations and standards are still being developed. UNDP confirmed that all activities and corresponding tranches will be completed before 31 December 2016.

Conclusion

25. The Secretariat noted that Panama was in compliance with the Montreal Protocol in 2013 and 2014, and continued with progress the regulations and activities planned under stage I. The target of 550 technicians and 160 customs officers trained in stage I will be achieved, and relevant institutions have been strengthened to continue providing customs and refrigeration training beyond the HPMP. The Government of Panama complied with its commitment to ban imports of pure HCFC-141b for use in refrigeration servicing and is planning controls on imports of HCFC-based equipment. While activities in the end-users component went more slowly than expected, UNDP provided a realistic plan of action to complete activities before 31 December 2016. The overall level of disbursement is over 84 percent and there has been substantial progress.

RECOMMENDATION

26. The Fund Secretariat recommends that the Executive Committee:

- (a) Takes note of the progress report on the implementation of the second tranche of stage I of the HCFC phase-out management plan of (HPMP) for Panama; and
- (b) Requests the Government of Panama, UNDP and UNEP to submit the project completion report to the second meeting of the Executive Committee in 2017.

27. The Fund Secretariat further recommends blanket approval of the third and final tranche of stage I of the HPMP for Panama, and the corresponding 2015-2016 tranche implementation plan, at the

² These decisions recommend that if a country were to decide to proceed with retrofits and associated servicing to flammable and toxic refrigerants in refrigeration and air-conditioning equipment originally designed for non-flammable substances, it would do so assuming all associated responsibilities and risks and only in accordance with the relevant standards and protocols.

funding levels shown in the table below, on the understanding that if Panama were to decide to proceed with retrofits and associated servicing to flammable and toxic refrigerants in refrigeration and air-conditioning equipment originally designed for non-flammable substances, it would do so assuming all associated responsibilities and risks and only in accordance with the relevant standards and protocols:

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage I, third tranche)	31,865	2,390	UNDP
(b)	HCFC phase-out management plan (stage I, third tranche)	8,400	1,092	UNEP
