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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-second Meeting
Montreal, 3-7 December 2018

PROJECT PROPOSAL: CHAD

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, fourth tranche) UNEP and UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Chad

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (Stage I)	UNEP (lead), UNIDO	62 nd	35% by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2017	11.91 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2017	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124									
HCFC-141b									
HCFC-142b									
HCFC-22					11.88				11.88

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	16.10	Starting point for sustained aggregate reductions:	16.10
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	5.63	Remaining:	10.47

(V) BUSINESS PLAN		2018	2019	2020	Total
UNEP	ODS phase-out (ODP tonnes)	0.45		0.65	1.1
	Funding (US \$)	50,850		73,450	124,300

(VI) PROJECT DATA			2010-2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	16.10	16.10	14.49	14.49	14.49	14.49	14.49	10.47	n/a
Maximum allowable consumption (ODP tonnes)			n/a	16.10	16.10	14.49	14.49	14.49	14.49	14.49	10.47	n/a
Agreed funding (US\$)	UNEP	Project costs	100,000	70,000	0	0	45,000	0	45,000	0	65,000	325,000
		Support costs	13,000	9,100	0	0	5,850	0	5,850	0	8,450	42,250
	UNIDO	Project costs	135,000	0	0	0	100,000	0	0	0	0	235,000
		Support costs	10,125	0	0	0	7,500	0	0	0	0	17,625
Funds approved by ExCom (US\$)	Project costs		235,000	70,000	0	0	145,000	0	0	0	0	450,000
	Support costs		23,125	9,100	0	0	13,350	0	0	0	0	45,575
Total funds requested for approval at this meeting (US\$)	Project costs		0	0	0	0	0	0	45,000	0	0	45,000
	Support costs		0	0	0	0	0	0	5,850	0	0	5,850

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Chad, UNEP as the lead implementing agency, has submitted a request for funding for the fourth tranche of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$45,000, plus agency support costs of US \$5,850 for UNEP only.¹ The submission includes a progress report on the implementation of the third tranche, the verification report on HCFC consumption for 2016 and 2017 and the tranche implementation plan for 2019 to 2020.

Report on HCFC consumption

2. The Government of Chad reported a consumption of 11.91 ODP tonnes of HCFC in 2017, which is 26 per cent below the HCFC baseline for compliance. The 2013-2017 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Chad (2013-2017 Article 7 data)

HCFC-22	2013	2014	2015	2016	2017	Baseline
Metric tonnes	276.40	265.80	258.20	255.70	216.60	292.7
ODP tonnes	15.20	14.62	14.20	14.06	11.91	16.1

3. The use of HCFC-22 in Chad is mainly for servicing and maintenance of refrigeration and air-conditioning equipment. The decreasing trend is due to the activities implemented under the HPMP: training of technicians in good servicing practices such as leakage prevention and recovery and recycling, and implementation of quota system.

Country programme (CP) implementation report

4. The Government of Chad reported HCFC sector consumption data under the 2017 CP implementation report which has a minor difference (-0.03 ODP tonnes) with the data reported under Article 7 of the Montreal Protocol due to rounding of CP data in metric tonnes.

Verification report

5. 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 2016 and 2017 were 14.06 and 11.91 ODP tonnes, respectively. The verification concluded that Chad has complied with the HCFC consumption limits established in the Agreement with the Executive Committee for 2016 and 2017 and has set a legal and institutional framework to implement the Montreal Protocol. The verification report indicated the presence of R-504² in the country, not reported under Article 7 or in the CP implementation report.

6. The report highlighted challenges faced by customs, *inter alia*, insufficient number and high turnover of trained customs officers and their lack of knowledge on ODS regulations, as well as importers lack of knowledge on the safe handling of flammable substances and ODS regulations, and indicated that the refrigeration technicians raised safety issues related to the use of hydrocarbons (HC) and ammonia. In addition, the verification report made the following recommendations:

- (a) Development of training modules for refrigeration technicians on the use of alternatives and distribution of modules to centers of excellence, universities and specialized schools;
- (b) Provision of additional refrigerant identifiers to cover the national territory; and

¹ As per the letter of 28 September 2018 from the Ministry of Agriculture and Environment of Chad to the Secretariat.

² Blend containing 48.2 per cent of HFC-32 and 51.8 per cent of CFC-115.

- (c) Organization of information and awareness campaigns on effects of flammable and toxic refrigerants.

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

Legal framework

7. Chad is implementing the sub-regional regulation of the Commission de la Communauté Economique et Monétaire de l’Afrique Centrale (CEMAC), that regulates the management of controlled substances, including HCFCs. The import of ODS is controlled through a system of prior import authorization. An online tool between Customs department and the national ozone unit (NOU) to share information on the use of import quotas for HCFCs is under development.

Refrigeration servicing sector

8. The following activities were implemented:
- (a) Ten training workshops for 182 customs and other enforcement officers on control and identification of HCFCs and HCFC-based equipment and alternatives;
 - (b) Seven workshops for 170 refrigeration technicians on good refrigeration practices, including recovery and recycling of HCFCs and safe handling of HCs, and upgrade of training manual to include safe handling of HCs; and
 - (c) Strengthening of six centres of excellence through the purchase and delivery of additional equipment and tools (e.g. vacuum pumps, recovery units, refrigerant identifiers, leak detectors, charging stations, weighing scale, and accessories) and training on its use.

Project implementation and monitoring unit (PMU)

9. The NOU, located within Ministry of Agriculture and Environment, continues to coordinate the implementation of all HPMP activities.

Level of fund disbursement

10. As of August 2018, of the US \$450,000 approved so far, US \$444,809 had been disbursed (US \$210,000 for UNEP and US \$234,809 for UNIDO) as shown in Table 2. The balance of US \$5,191 will be disbursed in 2019 and 2020.

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

Tranche		UNEP	UNIDO	Total	Disbursement rate (%)
First tranche	Approved	100,000	135,000	235,000	97.8
	Disbursed	95,000	134,867	229,867	
Second tranche	Approved	70,000	0	70,000	100.0
	Disbursed	70,000	0	70,000	
Third tranche	Approved	45,000	100,000	145,000	100.0
	Disbursed	45,000	99,942	144,942	
Total	Approved	215,000	235,000	450,000	98.9
	Disbursed	210,000	234,809	444,809	

Implementation plan for the fourth tranche of the HPMP

11. The following activities will be implemented between January 2019 and December 2020:

- (a) Six workshops for 125 customs officers on control and identification of HCFCs and HCFC-based equipment and ODS regulations (UNEP) (US \$20,000);
- (b) Six workshops for 150 refrigeration technicians on good refrigeration practices and safe handling of HC refrigerants (UNEP) (US \$20,000); and
- (c) Monitoring the implementation of all HPMP activities (UNEP) (US \$5,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Verification report

12. The Secretariat expressed concern about challenges faced by customs officers, importers' lack of knowledge on the safe handling of flammable substances and ODS regulations, and that the refrigeration technicians raised safety issues related to the use of HC and ammonia. UNEP indicated that additional trainings of customs officers will be organized and an ozone module will be introduced into the curriculum of the customs training school, the safe use of flammable substances will be included in the training of refrigeration technicians in 2019 and 2020, and that importers will be invited to the trainings of refrigerant technicians and/or customs officers. UNEP further indicated that the NOU requested additional funding³ from the Government to complement funding under the HPMP for these activities and activities to address the recommendations of the verification report highlighted in paragraph 6 during 2019 to 2020.

13. Regarding the presence of R-504 in the country, UNEP confirmed that the country banned the import of CFCs and CFC-based equipment and no import of virgin R-504 took place; however, given the size of the country and its somewhat porous border, an illegal import of equipment with R-504 could have taken place. UNEP also submitted a revised verification report and indicated that inclusion of R-504 in the list of used substances in the original report was an error; based on this, the verifier revised the verification report. UNEP, through the Compliance Assistance Programme (CAP), will assist the Government of Chad in monitoring import and use of all ODS.

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

Legal framework

14. The Government of Chad has issued HCFC import quotas for 2018 at 11.0 ODP tonnes, which is lower than the Montreal Protocol control targets.

15. The Secretariat noted in the progress report that some importers exceeded their annual quotas in 2016 and 2017. UNEP explained that it was due to the lack of coordination between the NOU and the Customs department and confirmed that the country is establishing an online tool between two entities to allow information exchange on the use of import quotas for HCFCs.

Refrigeration servicing sector

16. On the availability of alternatives to HCFCs, UNEP indicated that HFC-134a and blends R-404A and R-507A are used in the domestic, commercial and industrial refrigeration sectors. Blends R-407A, R-407C and R-410A are used in the domestic, commercial and industrial air-conditioning sectors. More climate friendly alternatives, R-600a and ammonia, are also available. The equipment with R-290 is present in limited quantities in the country.

³ Final approval of the funds is awaited.

17. On the retrofits using HCs, UNEP indicated that domestic and commercial refrigeration equipment originally designed for HFC-134a is being retrofitted to R-600a, and therefore, the country continues to import large quantities of R-600a for servicing such equipment; in addition, new refrigeration equipment is imported with R-600a. UNEP confirmed that the NOU is not promoting retrofit to HCs and all the relevant stakeholders (technicians, NOU) are aware of the decisions of the Executive Committee on retrofits⁴; safe handling of HCs is included in the refrigeration technicians training programmes. UNEP also indicated that the country does not have regulatory standards and protocols on the use of flammable and toxic substances in refrigeration and air-conditioning equipment. The Secretariat advised UNEP to work with the Government on the development of regulatory environment on the safe use of flammable and toxic refrigerants given the current situation in the country.

18. UNEP indicated that to ensure long-term sustainability of the refrigeration technicians training programme an ozone module will be included in the refrigeration institute curriculum. Furthermore, training centres with facilities supported with training modules will continue training technicians on good and safe servicing practices of refrigeration and air-conditioning equipment.

Conclusion

19. The country was in compliance with the Montreal Protocol targets and the 2017 consumption was 26 per cent below the HCFC baseline. Training was provided to 182 customs and other enforcement officers and 170 refrigeration technicians during the third tranche, exceeding the targets set for the tranche. Six centers of excellence received additional equipment and tools. The overall disbursement rate for stage I has reached 98.9 per cent. The verification report identified the need for a number of additional actions, which will be taken by the NOU. UNEP through the CAP and in close coordination with the Government of Chad will monitor import of ODS-based equipment including illegal import of R-504-based equipment.

RECOMMENDATION

20. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the third tranche of stage I of the HCFC phase-out management plan (HPMP) for Chad and further recommends blanket approval of the fourth tranche of stage I of the HPMP for Chad, and the corresponding 2019–2020 tranche implementation plan, at the funding level shown in the table below, on the understanding that:

- (a) If Chad 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;
- (b) Request for funding for the fifth tranche of stage I of the HPMP would be provided on the understanding that a report has been received on:
 - (i) Measures taken by the country to address challenges and recommendations from the verification report on the development of training modules for refrigeration technicians on the use of alternatives; provision of additional refrigerant identifiers to cover the national territory; and organization of information and awareness campaigns on effects of flammable and toxic refrigerants;
 - (ii) The status of development of an online tool between the Customs department and the National Ozone Unit to share information on the use of import quotas for HCFCs;

⁴ Decisions 72/17 and 73/34

- (iii) The status of the regulatory environment for the safe use of flammable and toxic refrigerants; and
- (iv) Actions taken by UNEP through the Compliance Assistance Programme in coordination with the Government to address controls on import of ODS-based equipment and preventing illegal imports.

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage I, fourth tranche)	45,000	5,850	UNEP