



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/82/16
2 November 2018

ORIGINAL: ENGLISH



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

PROGRESS REPORT OF UNDP AS AT 31 DECEMBER 2017

1. This document presents the progress report of UNDP as of 31 December 2017¹.

Scope of the document

2. This document consists of the following parts:

Part I: Projects approved under the regular contributions to the Multilateral Fund. It presents a summary of progress in implementation of projects for 2017 and cumulative since 1991; it contains a review on the status of implementation of each ongoing² project at the country level; and it identifies projects with implementation delays and the potential impact on the phase-out of controlled substances, and projects with outstanding issues for consideration by the Executive Committee.

Part II: Projects approved under the additional voluntary contributions for HFC activities and the status of implementation.

General recommendation.

3. This document also contains the following annexes:

Annex I: A summary status and a recommendation for each ongoing project with outstanding issues for consideration by the Executive Committee.

Annex II: An analysis of the progress report.

¹ The progress report is attached to this document. The data has been included in the Consolidated Progress Report database that is available upon request.

² Ongoing projects are all projects that were under implementation as at 31 December 2017. Key indicators of progress include: percentage of funds disbursed and percentage of projects that have begun disbursing funds; funding expected to be disbursed by the end of the year as a percentage of the approved funding; the average length of projected delay in implementation; and information provided in the remarks column in the progress report database.

PART I: PROJECTS APPROVED UNDER THE REGULAR CONTRIBUTIONS TO THE MULTILATERAL FUND

Summary of progress in implementation of projects for 2017 and cumulative

4. Implementation of projects and activities by UNDP for 2017 and cumulative since 1991 up to 31 December 2017 is summarized as follows:

- (a) **Phase-out:** In 2017, 325.3 ODP tonnes of consumption of HCFCs were phased out and an additional 88.7 ODP tonnes of consumption of HCFCs were approved for phase-out. Since 1991, 66,765 ODP tonnes of consumption of ODS had been phased out, of an expected total of 67,526 ODP tonnes from projects approved (excluding cancelled and transferred projects);
- (b) **Disbursements/approvals:** In 2017, US \$30.71 million was disbursed and US \$31.3 million was planned for disbursement based on the 2016 progress report, representing a rate of disbursement of 98 per cent of that planned. Cumulatively, US \$704.29 million had been disbursed out of the total US \$782.35 million approved for disbursement (excluding agency support costs). This represents a rate of disbursement of 90 per cent. In 2017, US \$30.73 million was approved for implementation;
- (c) **Cost-effectiveness (in ODP):** Since 1991, the average cost-effectiveness of investment projects approved leading to a permanent reduction in consumption was US \$10.20/kg. The average cost-effectiveness of investment projects per ODP tonne was US \$8.49/kg for completed projects and US \$96.77/kg for ongoing projects³;
- (d) **Number of projects completed:** In 2017, 85 projects were completed. Since 1991, 2,231 projects of the 2,377 projects approved (excluding closed or transferred projects) were completed. This represents a completion rate of 94 per cent;
- (e) **Speed of delivery – investment projects:** Projects that were completed in 2017 were completed on average 39 months after their approval. Since 1991, the average time for completion of investment projects has been 33 months after their approval. First disbursements under these projects occurred, on average, 13 months after they had been approved;
- (f) **Speed of delivery – non investment projects:** Projects that were completed in 2017 were completed on average 36 months after their approval. Since 1991, the average time for completion of non-investment projects has been 40 months after their approval. First disbursements under these projects occurred, on average, 13 months after they had been approved;
- (g) **Project preparation:** Of the 520 project preparation activities approved by the end of 2017, 505 have been completed. In 2017, 22 projects were completed, leaving 15 ongoing;
- (h) **Implementation delays:** There were a total of 74 ongoing investment projects under implementation at the end of 2017. These projects, on average, are experiencing a delay of 20 months. However, there are no projects classified as “projects with implementation

³ The higher value of the cost-effectiveness for ongoing projects is largely due to the lower ODP values of HCFCs but also due to the means of assigning phase-out by agencies.

delays” that are subject to the procedures of project cancellation (as project preparation, multi-year agreements (MYAs) and institutional strengthening (IS) are not subject to those procedures); and

- (i) **MYAs:** In 2017, UNDP was implementing 54 MYAs for HCFC phase-out management plans (HPMPs). Since 1991, 134 MYAs have been approved and 80 MYAs have been completed.

Project implementation progress in 2017

5. The Secretariat reviewed the status of project implementation on a country-by-country basis taking into account implementation delays that have occurred with respect to planned completion dates that had been reported in 2017, the potential impact of these delays on phase-out and the rate of planned disbursements.

6. Of the 106 ongoing projects, excluding IS and project preparation, 84 projects have extended planned dates of completion since the 2016 progress report.

7. During the review of the progress report, the Secretariat had several exchanges with UNDP, where a number of issues on ongoing projects were satisfactorily resolved. However, issues could not be resolved for those projects or tranches of MYAs for HCFCs, project preparation and renewal of IS projects shown in Annex I to the present document. For each ongoing project, a brief description on the status of implementation and the outstanding issues are presented and a recommendation is proposed for consideration by the Executive Committee.

8. The issues identified with regard to the following projects are discussed under relevant sections of the reports on projects with specific reporting requirements:⁴ stage I of the HPMP for Bangladesh (first tranche) (BGD/PHA/65/INV/40), the demonstration project for HCFC-free low-global warming potential technology performance in air-conditioning applications (capacity above 8TR) in Kuwait (KUW/REF/76/DEM/32), and stage II of the HPMP for Venezuela (Bolivarian Republic of) (stage II, first tranche) (foam sector) (VEN/PHA/76/INV/33).

PART II: PROJECTS APPROVED UNDER THE ADDITIONAL VOLUNTARY CONTRIBUTIONS FOR HFC ACTIVITIES

9. In 2017, the Executive Committee had approved 16 HFC-related projects under the additional voluntary contributions amounting to US \$4,729,610 (excluding agency support costs). A summary of the status of these projects is presented in Table 1.

Table 1. HFC-related projects approved in 2017

Type	Number of projects			Funding (US \$)*			
	Approved	Completed	% completed	Approved	Disbursed	Balance	% disbursed
Investment	1	0	0	3,131,610	0	3,131,610	0
Project preparation	5	0	0	150,000	0	150,000	0
Technical assistance - Enabling activities	10	0	0	1,448,000	0	1,448,000	0
Total	16	0	0	4,729,610	0	4,729,610	0

* Excludes agency support costs.

⁴ UNEP/OzL.Pro/ExCom/82/20

General recommendation

10. The Executive Committee may wish:
 - (a) To note the progress report of UNDP as at 31 to December 2017 contained in document UNEP/OzL.Pro/ExCom/82/16; and
 - (b) To approve the recommendations related to ongoing projects with specific issues contained in Annex I to the present document.

Annex I

ONGOING PROJECTS WITH OUTSTANDING ISSUES IN THE PROGRESS REPORT FOR UNDP

Country/project code	Project title	Disbursement rate (%)	Status/Issues	Recommendation
Armenia ARM/PHA/77/INV/18	HCFC phase-out management plan (stage II, first tranche)	2	Low disbursement; the procurement process for equipment is at contracting stage and this is expected to increase the disbursement rate	To request a status report to the 83 rd meeting on the level of funds disbursement
Chile CHI/PHA/73/INV/184	HCFC phase-out management plan (stage I, third tranche)	3	Project completion date by decision is December 2017	To request cancellation of the project and return of remaining balances to the 82 nd meeting
Cuba CUB/REF/58/PRP/42	Preparation for HCFC phase-out investment activities (manufacturing sector)	0	The enterprise indicated that it would not adopt low-global warming potential technologies	To request cancellation of the project and return of remaining balances to the 82 nd meeting
Democratic Republic of the Congo (the) DRC/PHA/79/PRP/42	Preparation of a HCFC phase-out management plan (stage II)	0	Low disbursement and slow progress in project preparation; currently, in coordination with UNEP, stage II is proposed to be submitted to the 83 rd meeting	To request a status report to the 83 rd meeting on the level of funds disbursement, noting that stage II is proposed to be submitted to the 83 rd meeting
Haiti HAI/PHA/76/INV/22	HCFC phase-out management plan (stage I, second tranche)	0	Low disbursement rate due to delay in finalisation of agreement	To request: (a) a status report to the 83 rd meeting on the level of funds disbursement and finalization of agreement; and (b) UNEP CAP to provide assistance for expedited implementation of project activities
India IND/SEV/76/INS/467	Extension of institutional strengthening project (phase X: 4/2016-3/2018)	0	Low disbursement rate of approved funds due to delays in signing of project document	To request a status report to the 83 rd meeting on the level of funds disbursement and signing of project document
Iran (Islamic Republic of) IRA/PHA/77/INV/226	HCFC phase-out management plan (stage II, first tranche) (foam sector)	0	Low disbursement rate due to political and economic situation on technology transfer and funds transfer	To request a status report to the 83 rd meeting on the level of funds disbursement
Nigeria NIR/PHA/75/INV/143	HCFC phase-out management plan (stage I, fifth tranche) (foam sector and refrigeration servicing)	0	Low disbursement and slow progress in implementation; extension of project to December 2018 approved at the 80 th meeting	To request a status report to the 83 rd meeting on the level of funds disbursement, noting that the project would be completed by December 2018

Country/project code	Project title	Disbursement rate (%)	Status/Issues	Recommendation
Saint Kitts and Nevis STK/PHA/64/TAS/16	HCFC phase-out management plan (stage I, first tranche)	0	Low disbursement and slow progress in approval of activities; specification of equipment has been approved by ozone office	To request: (a) a status report to the 83 rd meeting on low disbursement rate of approved funds, noting that procurement of equipment has been initiated; and (b) UNEP CAP to provide assistance for expedited implementation of project activities

Annex II

ANALYSIS OF THE PROGRESS REPORT OF UNDP AS AT 31 DECEMBER 2017

1. This Annex consists of the following two parts:

Part I: Projects approved under the regular contributions to the Multilateral Fund.

Part II: Projects approved under the additional voluntary contributions for HFC activities.

PART I: PROJECTS APPROVED UNDER THE REGULAR CONTRIBUTIONS TO THE MULTILATERAL FUND

2. As of 31 December 2017, the Executive Committee had approved US \$888.01 million consisting of US \$782.35 million for the implementation of investment and non-investment projects and US \$105.66 million for agency support costs, as shown in Table 1. In 2017, 28 new projects and activities were approved. This level of funding is expected to result in the phase-out of 67,526 ODP tonnes of ODS consumption.

Table 1: Approved funding by sector for UNDP as at 31 December 2017

Sector	Funding (US \$)
Sector	
Aerosol	26,054,838
Destruction	3,607,085
Fire fighting	50,000
Foam	173,568,025
Halon	4,996,975
Fumigants	20,081,243
Phase-out plan	292,035,855
Process agent	1,286,923
Production	1,056,000
Refrigeration	137,487,947
Several	58,007,316
Solvents	63,699,998
Sterilant	417,628
Sub-total	782,349,834
Agency support costs	105,664,706
Total	888,014,540

3. A summary of the status of projects implemented by category is presented in Table 2.

Table 2: Status of project implementation by category

Type	Number of projects*			Funding (US \$)**			
	Approved	Completed	% completed	Approved	Disbursed	Balance	% disbursed
Country programme	22	22	100	1,628,797	1,628,797	0	100
Demonstration	43	35	81	22,205,198	19,544,729	2,660,470	88
Institutional strengthening	228	203	89	48,234,446	42,415,092	5,819,355	88
Investment	1,243	1,169	94	644,723,109	582,576,205	62,146,903	90
Project preparation	520	505	97	21,891,173	21,171,761	719,413	97
Technical assistance	293	269	92	42,076,621	35,363,830	6,712,791	84
Training	28	28	100	1,590,489	1,590,489	0	100
Total	2,377	2,231	94	782,349,834	704,290,902	78,058,931	90

*Excludes closed and transferred projects.

**Excludes agency support costs.

4. Table 3 presents an overview of status of project implementation by year⁵. All projects and activities approved between 1991 and 2008, have now been completed.

Table 3: Status of project implementation by year

Year	Number of projects*			Funding (US \$)**			
	Approved	Completed	% completed	Approved	Disbursed	Balance	% disbursed
1991	15	15	100	1,149,032	1,149,032	0	100
1992	67	67	100	8,619,002	8,619,002	0	100
1993	57	57	100	13,204,712	13,204,712	0	100
1994	148	148	100	49,481,580	49,481,581	-1	100
1995	117	117	100	29,599,445	29,599,446	-1	100
1996	83	83	100	27,838,805	27,838,805	0	100
1997	188	188	100	44,056,257	44,056,257	0	100
1998	172	172	100	31,305,010	31,305,010	0	100
1999	204	204	100	35,896,883	35,896,884	-1	100
2000	149	149	100	31,268,362	31,268,361	1	100
2001	179	179	100	35,292,272	35,292,271	1	100
2002	117	117	100	44,316,424	44,316,422	2	100
2003	64	64	100	36,336,530	36,336,530	0	100
2004	69	69	100	24,802,715	24,802,714	1	100
2005	53	53	100	29,125,258	29,124,834	425	100
2006	62	62	100	15,753,458	15,753,461	-3	100
2007	54	54	100	12,142,488	12,142,486	2	100
2008	84	84	100	22,873,866	22,873,865	0	100
2009	93	91	98	13,283,556	13,188,578	94,978	99
2010	43	42	98	19,735,825	19,597,909	137,915	99
2011	63	59	94	57,454,510	56,404,467	1,050,043	98
2012	29	25	86	33,933,810	32,282,762	1,651,048	95
2013	43	34	79	34,573,667	31,538,959	3,034,708	91
2014	67	52	78	22,987,400	20,215,699	2,771,701	88
2015	75	39	52	33,705,450	20,955,060	12,750,390	62
2016	54	4	7	42,878,670	16,899,307	25,979,363	39
2017	28	3	11	30,734,847	146,488	30,588,359	0
Total	2,377	2,231	94	782,349,834	704,290,902	78,058,931	90

*Excludes closed and transferred projects.

**Excludes agency support costs.

⁵ The data is presented according to the year when a project was approved by the Executive Committee. It treats all approvals (investment and non-investment projects) equally (i.e., an investment project or a funding tranche of an MYA of US \$1 million is considered one project, same as a country programme preparation of US \$30,000). Key indicators from the annual summary are: the percentage of projects completed, ODP phased out, and percentage of funds disbursed. There are three types of disbursements: during implementation, after implementation and for retroactively-financed projects.

5. Table 4 presents project implementation by country for 2017.

Table 4. Summary of project implementation by UNDP for 2017

Country	Phased out in 2017	Percentage of planned phase-out achieved in 2017	Estimated funds disbursed in 2017 (US\$)	Funds disbursed in 2017 (US\$)	Percentage of funds disbursed over estimation in 2017	Percentage of planned projects completed in 2017
Angola	1.6		35,896	123,112	343	100
Argentina	0.0		176,343	136,116	77	50
Armenia	0.0		60,810	2,590	4	67
Bangladesh	0.6	100	146,850	94,780	65	33
Barbados	0.0		20,000	3,198	16	100
Belize	0.2		0	0		
Bhutan	0.0	0	23,430	21,895	93	0
Brazil	34.5	23	4,353,639	3,272,502	75	25
Brunei Darussalam	0.0		9,840	0	0	0
Cambodia	0.6	100	40,000	50,000	125	50
Chile	2.6	13	750,643	809,216	108	40
China	82.2	53	7,228,303	13,986,970	194	50
Colombia	0.0	0	1,387,429	1,101,004	79	0
Democratic Republic of the Congo (the)	1.8	100	8,665	21,651	250	100
Costa Rica	1.4	100	330,780	646,322	195	67
Cuba	0.0		313,826	221,030	70	29
Dominican Republic (the)	0.0		241,797	405,468	168	75
Egypt	23.0	57	1,293,623	932,133	72	40
El Salvador	0.0	0	57,408	72,207	126	50
Fiji	0.0	0	27,350	7,036	26	50
Georgia	0.0	0	51,473	69,426	135	67
Ghana	7.7	100	172,205	247,208	144	33
Guyana	0.0	0	59,720	23,730	40	0
Haiti	0.0	0	38,848	0	0	0
India	75.0	35	5,536,497	2,380,888	43	41
Indonesia	18.9	68	1,430,078	552,597	39	56
Iran (Islamic Republic of)	0.0	0	735,507	472,600	64	14
Jamaica	3.8		64,527	53,261	83	0
Kuwait	0.0		125,200	0	0	100
Kyrgyzstan	0.0	0	65,983	94,299	143	50
Lebanon	12.4	0	935,684	1,598,644	171	33
Malaysia	16.5	16	2,174,854	1,323,868	61	38
Maldives	0.0		126,505	21,448	17	50
Mali	0.0	0	42,243	0	0	0
Mexico	24.8	35	1,092,219	294,138	27	0
Republic of Moldova (the)	0.0	0	46,632	1	0	80
Nepal	0.0	0	27,040	10,000	37	0
Nigeria	8.0	14	495,827	408,503	82	14
Pakistan	0.0		300,869	104,731	35	33
Panama	0.0	0	232,693	163,130	70	25

Country	Phased out in 2017	Percentage of planned phase-out achieved in 2017	Estimated funds disbursed in 2017 (US\$)	Funds disbursed in 2017 (US\$)	Percentage of funds disbursed over estimation in 2017	Percentage of planned projects completed in 2017
Paraguay	0.0	0	66,931	66,786	100	50
Peru	2.2	100	75,899	131,663	173	100
Saint Kitts and Nevis	0.0	0	16,000	0	0	0
Sri Lanka	1.4	56	131,232	116,937	89	40
Timor-Leste	0.0		16,000	0	0	50
Trinidad and Tobago	4.2		230,665	261,196	113	67
Uruguay	1.9	0	199,281	197,617	99	40
Venezuela (Bolivarian Republic of)	0.0	0	298,439	209,561	70	33
Global	0.0		0	0		100
Grand Total	325.3	31	31,295,683	30,709,461	98	42

PART II: PROJECTS APPROVED UNDER THE ADDITIONAL VOLUNTARY CONTRIBUTIONS FOR HFC ACTIVITIES

6. In 2017, the Executive Committee had approved 16 HFC-related projects under the additional voluntary contributions amounting to US \$4,729,610 (excluding agency support costs). A summary of the status of these projects is presented in Table 5.

Table 5. HFC-related projects approved in 2017

Type	Number of projects			Funding (US \$)*			
	Approved	Completed	% completed	Approved	Disbursed	Balance	% disbursed
Investment	1	0	0	3,131,610	0	3,131,610	0
Project preparation	5	0	0	150,000	0	150,000	0
Technical assistance - Enabling activities	10	0	0	1,448,000	0	1,448,000	0
Total	16	0	0	4,729,610	0	4,729,610	0

* Excludes agency support costs.



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**Executive Committee of the Multilateral Fund
for the Implementation of the Montreal Protocol**

UNDP Annual Progress and Financial Report Narrative: 1991-2017

82nd Meeting, 3 – 7 December 2018, Montreal, Canada

I. INTRODUCTION

The following narrative is based on a database of 2,393 projects funded by the Multilateral Fund, which contains basic information on their status of implementation as of 31 December 2017. However, some updates of activities which took place during 2018 are also included for information purposes. The database results in 11 summary tables which can be found at the end of this report, and which are referred to throughout this narrative.

As can be seen in the following sections, UNDP has disbursed US\$ 704,286,959 of the US\$ 787,207,936 worth of projects that were approved under the Multilateral Fund since its inception in 1991. These programmes were supposed to eliminate 67,466 ODP T/year, of which 66,751 (99%) were phased out as of 31 December 2017. This demonstrates UNDP's important role in the success of MLF's assistance towards the elimination of Ozone Depleting Substances.

As of the end of 2017, UNDP was active in 47 countries, of which 24 are low volume consuming (LVCs). The vast majority of ongoing projects are implemented using the National Implementation modality, providing countries with larger country ownership.

A large portion of the current ongoing programmes consist of HCFC phase-out management plans (HPMPs). For these, UNDP is the lead agency in 29 countries. In addition, UNDP also acts as the cooperating agency for 18 countries. There is a surge of workload for UNDP to meet the needs of so many HPMPs that are currently under implementation. This significant workload comes at a time that preparation of Stage II HPMPs is under way. Most countries, for which UNDP is the lead agency, have submitted their requests for Stage II HPMP full proposals in 2015/2016 and only one country (Democratic Republic of Congo) is expected to submit its request after 2017. Despite this challenging situation, UNDP, with its network of country offices, remains fully committed to meet the increased workload and ensure that countries receive the assistance needed to be in compliance with all requirements of the Montreal Protocol.

UNDP has also been at the forefront of technical assessments and demonstration projects for potentially cost-effective alternatives to HCFCs that minimize environmental impacts, particularly for those specific applications where such alternatives are not presently available and applicable. Pursuant to ExCom decision 72/40, UNDP has prepared additional projects to demonstrate climate-friendly and energy-efficient alternative technologies to HCFCs, and feasibility studies on district cooling. UNDP has received approval for eight demonstration projects in seven countries. In addition, UNDP is also exploring demonstration projects for cost-effective alternatives to HFCs that minimize environmental impacts. Pursuant to ExCom decision 78/3(g), UNDP is preparing investment/demonstration projects to phase down HFCs and has received approval for three HFC technology demonstration projects in Bangladesh, Dominican Republic, and Mexico and has received preparatory funding for four other countries.

II. PROJECT APPROVALS AND DISBURSEMENTS

A. Annual Summary Data (See table 1)

Table 1: “Annual Summary” shows the important summary data on the number of project approvals, corresponding budgets, ODP, and disbursement figures. The table highlights that, cumulatively, as of 31 December 2017, UNDP had a total of 2488 approved projects under the Multilateral Fund, of which 95 had been canceled or transferred. Of the remaining projects, 2,227, or 93% have been completed. They are set to eliminate 67,466 ODP T/year, of which 66,751 ODP T (99%) have already been eliminated.

As of 31 December 2017, UNDP had received cumulative net project approvals of US\$ 787,207,936 (excluding support costs). Of these, UNDP, as of end-2017, had disbursed US\$ 704,286,959 excluding all obligations. This translates to 89% of approved funding. Furthermore, an additional US\$ 557,166 of obligations were outstanding as of end-December 2017, representing orders placed but final payments not yet made

B. Interest and Adjustments

Interest income earned on MLF resources in 2017 is US\$ 1,034,258. Once the financial statements are submitted to the MLF Treasurer by the agreed deadline of 30 September, the difference between the provisional and final 2017 interest income can be adjusted against UNDP project approvals in 2018.

C. Summary Data By Type and Chemical [CPG, DEM, INS, INV, PRP, TAS, TRA] (See table 2)

Table 2: Summary Data by Project Type presents an overview of the approvals by the type of project. It demonstrates that of the total amounts approved, 82% of the budgets were dedicated to investment projects, 5.2% to technical assistance projects, 6% to institutional strengthening and 3.5% to project preparation activities. The remaining 3% was dedicated to country programmes and demonstration/training activities.

III. GLOBAL AND REGIONAL PROJECT HIGHLIGHTS

A. Global Projects: There is one on-going global programmes under implementation by UNDP:

GLO/SEV/80/TAS/343, the Core unit support (2018) programme approved at the 80th meeting of the Executive Committee, that covers the administrative costs of UNDP’s Montreal Protocol Unit; and continuation of Core Unit support at a level that allows UNDP to provide the oversight, reporting and assistance needed to sustain the large programmer is critical.

B. Regional Projects: There are no ongoing regional projects at this time.

IV. PERFORMANCE INDICATORS

A. Results in 2017

Decision 41/93 of the Executive Committee approved the following indicators to allow for the evaluation of performance of implementing agencies, with the weightings indicated in the table below. Annex V of the report of the 77th meeting of the Executive Committee contained UNDP's 2017 targets. One can see from the table below that UNDP fully met 5 out of 9 of its targets and that its score amounts to 90%.

Category of performance indicator	Item	Weight	UNDP's target for 2017	Result achieved in 2017	Score
1. Approval	Number of tranches approved vs. those planned*	10	23	16 → 70% (see annex 2, 1)	6.9
2. Approval	Number of projects/activities approved vs. those planned (including project preparation activities)**	10	15	11 → 73% (see annex 2, 2)	7.3
3. Implementation	Funds disbursed	15	\$27,839,943	\$30,454,624 → 100% (see annex 2, 3)	15.0
4. Implementation	ODS phase-out for the tranche when the next tranche is approved vs. those planned per business plans	25	186.04	155.4 → 84% (see annex 2, 4)	20.9
5. Implementation	Project completion vs. planned in progress reports for all activities (excluding project preparation)	20	62	63 → 100% (see annex 2, 5)	20.0
6. Administrative	The extent to which projects are financially completed 12 months after project completion	10	70% of those due (out of 51, so target is 36)	36 finrevs out of 100% (see annex 2, 7)	10.0
7. Administrative	Timely submission of project completion reports vs. those agreed	5	70% of those due (out of 8, so target is 6)	100% achieved (7 individual PCRs submitted out of 7 planned and 1 MYA PCR submitted out of 1 planned -- see annex 2, 8)	5.0
8. Administrative	Timely submission of progress reports and responses unless otherwise agreed	5	On-time	100% achieved (see annex 2, 9)	5.0
TOTAL		100			90.1

*The target of an agency would be reduced if it could not submit a tranche owing to another cooperating or lead agency, if agreed by that agency.

** Project preparation should not be assessed if the Executive Committee has not taken a decision on its funding.

Note on performance indicator on MYA tranches: As per our 2017 Business Plan, UNDP submitted the Nigeria Stage II HPMP tranche to the 80th meeting but was requested by the MLF Secretariat to withdraw the project. As we submitted this tranche in 2017 as we had planned, this should be included in the assessment against our performance target.

B. Cumulative completed investment projects (Table 4)

As Table 4: Cumulative completed investment projects shows, a total of 1,165 investment projects have been completed, with a corresponding elimination of 61,335 ODP T. Of the US\$ 516,960,307 in their approved budgets in the sectors of Foam, Refrigeration, Phase-out Plan, Aerosol, Solvents, Fumigants, Halon, Process Agents, and Sterilants, 100% has already been disbursed. It took an average of 13 months from approval to first disbursement and 33 months from approval to completion. The overall cost-effectiveness of the projects to the Fund was \$7.56 /kg. A breakdown of this group of projects is given by region, sector, implementation modality, etc.

C. **Cumulative completed non-investment projects (Table 5)**

As Table 5 shows, UNDP has completed 557 non-investment projects excluding project preparation assistance. Of the US\$ 95,254,269 in their approved budgets, 99% has been disbursed. It took an average of 13 months from approval to first disbursement and 40 months from approval to completion. A breakdown of this group of projects is given by region, type, sector, implementation modality, etc.

D. **Cumulative ongoing investment projects (Table 6)**

As can be seen in Table 6, UNDP has 79 ongoing investment projects in the sectors of Phase-out Plans, Foam Aerosol, and Fumigants with corresponding budgets of US\$ 124,449,861. Of this amount, 49% has already been disbursed. It takes an average of 10 months from approval to first disbursement and an average of 45 months from approval to the estimated project completion. The overall cost-effectiveness of the projects to the Fund was \$65.37 /kg. A breakdown of this group of projects is given by region, sector, implementation modality, etc.

E. **Cumulative ongoing non-investment projects (Table 7)**

Table 7 shows that UNDP has 67 ongoing non-investment projects excluding project preparation assistance. Of the US\$ 21,474,517 in approved budgets, 26% has been disbursed. It takes an average of 9 months from approval to first disbursement and 36 months from approval to the estimated project completion. A breakdown of this group of projects is given by region, type, sector, implementation modality, etc.

V. STATUS OF AGREEMENTS AND PROJECT PREPARATION BY COUNTRY

A. **Agreements To Be Signed/Executed/Finalized**

Since UNDP has a standard legal agreement in place in each developing country that covers UNDP activities in that country, no additional legal agreement is required. There were no specific issues related to this in 2014.

B. **Project Preparation By Country, Approved Amount And Amount Disbursed (Table 8)**

Table 8: Project Preparation by Country, Approved Amount and Amount Disbursed, indicates active project preparation accounts. Of the ongoing 20 PRP projects listed with US\$ 1,012,143 in associated approvals, 47% has been disbursed.

VI. DESCRIPTION OF KEY ONGOING ACTIVITIES

This section contains a narrative description of the following key ongoing activities:

- A. Technology demonstration projects for HCFCs
- B. Technology demonstration projects for HFCs
- C. ODS destruction demonstration projects
- D. Country Highlights

A. **Technology demonstration projects for HCFCs**

UNDP has been at the forefront of developing and implementing demonstration projects in various regions and sectors to assess relatively new technological developments for which little or no experience or data exists on technical performance and costs since 1996. The major objectives of such types of demonstrations

were to find alternative solutions and cost-saving methods to the Multilateral Fund for the Implementation of the Montreal Protocol in order to carry out HCFC-investment activities in the future years, bearing in mind the impact on the climate. The results of the demonstrations of emerging technologies in various industrial processes under local conditions in the following countries are described below:

A1. Demonstrations related to Stage I HPMPs

Brazil and Mexico

Pilot projects for the assessment of alternative technologies in PU Foam Applications were approved in Brazil and Mexico to develop, optimize and assess the use of methyl formate and methylal as blowing agents in PU applications. As a result of the demonstration projects, methyl formate was selected as an alternative technology in Egypt, Mexico, Nigeria, Brazil, Jamaica, Trinidad and Tobago, Cameroon, and some other countries. System houses in both Mexico and Brazil have adopted methylal technology in their HPMPs as a result of the successful pilot project.

China

Foam Sector

The Executive Committee approved a demonstration project to convert HCFC-22/HCFC-142b technology to CO₂ with methyl formate co-blowing technology in the manufacture of extruded polystyrene foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd. It can be concluded that the CO₂ and methyl formate formulation tested can be applied to XPS manufacturing given that thermal conductivity, compression strength and limited oxygen index are acceptable. It was also determined that using methyl formate as the co-blowing agent of CO₂ had no significant influence on the processing process of XPS board.

Refrigeration and Air Conditioning

- Demonstration project for conversion from HCFC-22 to HFC-32 in the manufacture of commercial air-source chillers/heat pumps at Tsinghua Tong Fang Artificial Environment Co. Ltd.: The project is the first in China to adopt HFC-32 in place of HCFC-22 in the production of small-sized commercial air-source chillers/heat pumps. The demonstration project has directly led to the use of HFC-32 as a major alternative to HCFC-22 in the industrial and commercial refrigeration sector plan of stage I of the HPMP for China. Further conversion activities to HFC-32 technology have been approved for the HPMP in Indonesia, Algeria and Thailand.
- Demonstration project for conversion from HCFC-22 technology to ammonia/CO₂ technology in the manufacture of two-stage refrigeration systems for cold storage and freezing applications at Yantai Moon Group Co. Ltd: The capacity of the production line has been converted to use substitute refrigerants and is capable of manufacture the converted products. The project has passed the national acceptance verification. The converted products have been put into use by users in Yantai, Weihai and Dalian. The market has expressed interest. The technology route is innovative, the resulting product has significant advantages in terms of environment friendliness and energy efficiency, and the safety performance is greatly improved.

Solvents

The Executive Committee approved a demonstration project for conversion from HCFC-141b based technology to iso-paraffin and siloxane (KC-6) technology for cleaning in the manufacture of medical devices at Zhejiang Kindly Medical Devices Co. Ltd. The project carried out an assessment of more than 15 solvents widely used in the medical devices sector globally. The project tested the use of KC-6 as an alternative to HCFC-141b. With necessary equipment modifications for needle assembly lines and silicification tooling

cleaning line KC-3 presents itself as a viable alternative to HCFC-141b for cleaning in the manufacture of medical devices.

Colombia

The Executive Committee approved the assessment project for supercritical CO₂ technology in the manufacture of sprayed polyurethane rigid foams in Colombia. The project was designed to evaluate in developing countries the performance of super-critical CO₂, a relatively new technology currently used in Japan for polyurethane (PU) spray rigid foam. Results from this project showed that supercritical CO₂ technology is a non-flammable, zero ODP and low GWP technology and it shouldn't create any additional industrial hygiene and safety hazards for the use as a replacement for HCFC-141b technology.

Egypt

Low cost options for the use of Hydrocarbons (HC) as foaming agents in the manufacture of PU Foam were considered as part of a demonstration project in Egypt. The objective of this project was to develop, optimize, and disseminate low-cost systems for the use of hydrocarbons in the manufacture of PU rigid insulation and integral skin foams. Both options that are emerging from the project—pre-blended cyclopentane systems and direct HC injection—have been selected for ODS phase-out projects in Brazil and Egypt. The findings of the demonstration project show that further mixing head optimization would be beneficial and might enhance the foam densities and reduce operational costs. This optimization was finalized at a system house in Egypt with the complementary report with additional findings submitted in 2015.

Nigeria

The hydrocarbon production demonstration project, being implemented at Pamaque Ltd as part of the HPMP in Nigeria (Stage 1), has been completed in its pilot phase in 2015, and the pilot plant commissioned on 19 November 2015. The establishment of the distillation and bottling unit has proved to be functional and safe. The commercial production is linked to private sector's further involvement and investment and work and consultations are still ongoing in this regard. Replication abroad is also being considered. A side event on the project was organized by UNDP and the Government of Nigeria at the 27th MOP in Dubai (1-5 November 2015) and a final report of this pilot demonstration project was submitted as an Annex to the request for the 5th tranche of the first stage of the HPMP, approved at the 75th ExCom Meeting.

Turkey

A pilot project validating the use of HFO-1234ze as Blowing Agent in the Manufacture of Extruded Polystyrene (XPS) Foam Boardstock in Turkey was designed to assess the use of HFO-1234ze in a developing country context. All planned production trials have been completed in 2011 and early 2012 and a final assessment was submitted to the 67th ExCom. The current findings show that there is a need for further trials as this will help obtain better assessment of the feasibility of the technology for developing countries. Unfortunately, funding for these additional activities was not approved so that no final conclusions about the technical feasibility of this technology could be arrived at.

A2. Demonstrations related to Stage II HPMPs

Pursuant to ExCom decision 72/40, UNDP is preparing additional projects to demonstrate climate-friendly and energy-efficient alternative technologies to HCFCs, and feasibility studies on district cooling. UNDP has prepared and received approval for eight demonstration projects for the following seven countries. Please see brief updates on the status of these projects.

- **China:** demonstrating ammonia semi-hermetic frequency convertible screw refrigeration compression unit in the industrial and commercial refrigeration industry.

In order to produce the small discharge semi-hermetic frequency convertible screw refrigeration compression unit with ammonia as a viable replacement for HCFC-22 technology, the Executive Committee approved a demonstration project at its 76th meeting. Project demonstration activities ongoing in 2017. However, demonstration results will take longer than expected to be completed. As per ExCom Decision 80/26, project completion was extended to June 2018.

The demonstration project was eventually completed and passed national acceptance in May 2018. The small redesigned demonstration system with lower NH₃ charging amount and constructed to fit the small discharge semi-hermetic frequency convertible screw refrigeration compression unit has been built in two locations in China. The one at Xiamen Taiqu cold storage began operation in March 2017 and has been running safely for one and half year. The one at Chengdu Taiqu cold storage began operation in June 2017 and has been running safely for one year.

- **Colombia:** Demonstration of HC-290 (propane) as an alternative refrigerant in commercial air-conditioning manufacturing at Industrias Thermotar Ltda.

The demonstration project at Thermotar was completed successfully. The international expert did a long range of test to assure the safe use of the equipment. There have been some challenges with the supply of compressors for the company, but this is expected to be resolved in the future. The final report was developed by the international expert and it has been submitted formally to the Multilateral Fund Secretariat. The main conclusion is that R-290 can be used safely in the Commercial AC unit that are being manufactured by Thermotar. An extensive work on safety has been conducted where potential failure scenarios were simulated and tested with good results. Thermotar is confident that R-290 models can be used safely in the market. However, it is important to stress the need to properly train the installers and servicing technicians as they are key to the safe use and operation of the AC units.

- **Colombia:** Demonstration project to validate the use of hydrofluoro-olefins for discontinuous panels in Article 5 parties through the development of cost-effective formulations.

The formulations were developed and tested in the field. It was tested with two different types of HFOs, and the results underwent statistical analysis to determine if the changes were real. The project implementation was completed successfully and the final report was presented to the MLFS. The technical results are very promising, but the costs and availability of specialized chemicals continue to be of concern. It is important to note that the development of reduced HFO formulations is much more complicated than what is the case with HCFC 141b. It requires that System House acquire additional technical skills and this is likely to add to the costs of the Systems. Any modification in the foam system will require additional work from the System House. The more the HFO system is reduced (reducing HFO and adding Water) the more complicated is the System Development and the expertise required to do so.

- **Costa Rica:** Demonstration of the application of an ammonia/carbon dioxide refrigeration system in replacement of HCFC-22 for the medium-sized producer and retail store of Premezclas Industriales S.A.

The equipment has been installed in PINOVAs plant in Costa Rica. Training has been provided to the technicians at the company. The commissioning has been done satisfactorily. The final report has been prepared and was submitted to the MLFS. The project has achieved some interesting results in

terms of Energy Savings and functionality. The new system is very reliable and have resulted in substantial savings in Energy consumption compared to the past. One of the challenges has been the training of technicians, as there is very limited experience with NH₃-CO₂ in Latin America and the Caribbean. It is important to strengthen the capacity of the technicians in the country if this experience is to be replicated.

- **Dominican Republic:** feasibility study for district cooling in Punta Cana.

The study was conducted, which showed that district cooling is a viable approach for this location, avoiding emission of ODS (future need of approximately 1000 kg of HFC can be avoided) and GHG (8.500 ton CO₂/year reduction). A seminar to present the findings and results was organized and attracted the interest of many stakeholders. The feasibility study determined that a very interesting rate of return on the investment could be obtained with this project. With conservative assumptions, it was concluded that an investment in the range of 10 m US\$ could lead to annual energy savings in the range of 2 m US\$, and additional benefits could be achieved (postpone other investments). Additionally, it was determined that at least an 80 % reduction in CO₂ emissions could be achieved given that currently un-used Waste Energy could be used for new absorption chillers.

Egypt: demonstrating low-cost options for the conversion to non-ODS technologies in polyurethane foams at very small users.

Project documentation has not yet been cleared by the Government, and once this milestone is achieved and the project is registered, the implementation works will commence in full. Initial technology provider survey and contacts (with one mission) have been made by the project team to save time and speed up the project implementation. Potential models of equipment for smaller users have been checked for suitability under this project. UNDP will prepare accurate technical specifications to request only those options which fit the project's purpose.

- **Kuwait:** demonstrating HCFC-free low-global warming potential technology performance in air-conditioning applications.

Project documentation was signed with the Government in the beginning of 2017, and currently a joint work is being carried out to prepare technical specifications for procurement of the required demonstration equipment. International tender is to be announced in second quarter of 2017. Recipient buildings (4 sites) have been selected jointly with KISR – a National Refrigeration Institute. This Institute will be providing technical backstopping for the programme.

- **Maldives:** testing HCFC-free low-global warming potential alternatives in refrigeration in fisheries sector are being tested.

Demonstration project for HCFC-free low-global warming potential alternatives in refrigeration in fisheries sector was approved at the 76th ExCom. The consulting firm was engaged in 2017. Desk study was completed to find the available alternate refrigerant with low GWP. Due to concerns with flammability, the only refrigerant applicable came in selection in the first round of study was R448A (GWP 1387) and the report was submitted to 80th ExCom. The same was discussed in ExCom and UNDP was asked to continue more research on low GWP alternatives. As per ExCom Decision 80/26, another round of desk study was conducted by the consulting team on the available alternates in the market. In the condition of non-acceptance on A2L refrigerant by the industries, three refrigerants of R450A, R513A and R448A came into the final selection round. The consulting team

together with the MIFCO Engineering Team (main fisheries vessels owner) reviewed the options and selected R448A for a demo alternative in the vessel. The PCR of the project was submitted to the 81st ExCom.

B. HFC demonstration projects

Pursuant to ExCom decision 78/3(g), UNDP is preparing investment/demonstration projects to phase down HFCs. UNDP has received approval for one HFC technology demonstration project in Bangladesh and has received preparatory funding for four other countries listed below.

- **Bangladesh:** Conversion from HFC-134a to isobutane as refrigerant in manufacturing household refrigerator and of reciprocating compressor of HFC-134a to energy efficient compressor (isobutane) in Walton Hi-Tech Industries Limited;
- **China:** Project preparation for conversion from HFC-245fa to cyclopentane plus HFOs (C5+HFO) as a foam agent in a refrigerator manufacturer and Project preparation for a demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.;
- **Dominican Republic:** Project preparation for conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco;
- **Egypt:** Project preparation for conversion from HFC-134a to HFO-1234ze and other liquid HFOs in the manufacture of polyurethane foam and spray foam; and
- **Zimbabwe:** Project preparation for elimination of HFC-134a in the manufacture of domestic refrigerators at Capri.

C. ODS destruction demonstration projects

The UNDP Montreal Protocol & Chemicals Unit has been supporting countries to take steps to manage their stocks of ODS, which cannot be reused in a sound way. The potential for recovery, proper management and final disposal of such unwanted ODS and ODS containing appliances/equipment banked, have been proven as being possible in developed countries if the proper legislation and price incentives, as well as business opportunities, exist. However, the applicability of banks management schemes in developed countries needs to also be demonstrated in Article 5 countries. The Executive Committee has approved preparation activities for Brazil, Colombia, Cuba, Georgia, Ghana and India, to address ODS waste management leading to ODS destruction. Five such projects (Brazil, Colombia, Cuba, Georgia, and Ghana) have been submitted and approved by the Executive Committee in prior years.

The project in **Brazil** is advancing in both, strengthening of the collection center network (reclaim centers) and identification of possible locations for the destruction facility. Cylinders, equipment and tools were delivered to reclaim centers and the procurement process of lab equipment was prepared and launched. The incinerator was defined through Manifestation of Interest, as reported in 2017. At this moment, the reconversion plan for adaptation in the ODS burning operation is being defined.

The project in **Colombia** has also advanced further in 2017 and was completed in the beginning of 2018. A review of legal framework for the management of ODS waste was conducted and comments to proposed waste management regulations were made. Support was provided for the implementation of "Red Verde" for the collection of old refrigerators. One destruction test was conducted. The writing of the final report has been completed and was submitted to ExCom 81. It is important to note that additional tests would be needed for HFCs, as this will be a challenge for the future under the Kigali Amendment. Also important to note that the recollection scheme and dismantling of old refrigerators at a reasonable

cost an important factor for the sustainability of the operation. The future of the recollection and disposal scheme is being financed via an Extended Producer Responsibility programme.

The project in **Cuba** was completed in 2015. All the civil works and burning tests were completed, leading to the start of the destruction of ODS in Cuba, nevertheless the supply of material for destruction and the control of the feed current into the kiln are challenging which has been a key aspect highlighted in other projects of this kind. It is important to note the challenges related to the adaptation of an old Cement kiln (wet) as compared to a new one. One of the main successes in Cuba has been the recollection scheme of old refrigerators which was funded 100% by the Government of Cuba and a key part of a successful scheme. However, some external factors lead to destruction rates lower than what was originally anticipated.

The project in **Georgia** has been completed and enabled export and disposal of ODS waste in partnership with a parallel GEF-funded POPs pesticides destruction project. Overall, 1.5 tons of ODS waste was exported for sound disposal to EU. A final report was submitted to the ExCom in 2017. Lessons learned were reflected in the report.

From the **Ghana** demonstration project, a major lesson was that combining the ODS disposal programme with a rebate scheme encouraging the adoption of more energy-efficient equipment is a very effective approach – it requires, however strong ownership and backing of the Government, as was the case for Ghana. In addition to facilitating the collection process of equipment and refrigerants, the rebate scheme also helps create a working cooperation between ozone and energy efficiency institutions, which facilitates joint work in the long run in the country on these 2 dimensions, MP implementation and energy efficiency . Additionally, having solutions for recovered ODSs is essential when a country adopts a ban on second-hand equipment, which was what Ghana enforced during the project period. Another lesson was that a specific strategy and methodology should be devised during the design stage to deal with the foam part of the refrigerators, and not only focusing on ODSs to be collected as refrigerants. In Ghana it was possible to find an environmentally adequate solution through the cooperation with other ongoing projects in the country to make sure that the foam was disposed of and that gases in the foam would be appropriately managed. Finally, the cooperation with other disposal operation, particularly of hazardous chemicals covered by the Stockholm Convention (PCBs, pesticides...) can make the export operation more economically and practically viable (by reaching a critical mass of materials to be destroyed). Having a demonstration project also sets a motion in the country – now some operations by private companies in Ghana have been launched to dispose of final stocks of ODSs through financing of the voluntary carbon markets in the US, which is an encouraging trend in terms of post-project sustainability. The final report of the demonstration project was submitted and accepted by the ExCom in 2017.

D. Country Highlights (January – December 2017)

UNDP has been at the forefront of innovative solutions for countries to address their Montreal Protocol compliance obligations. UNDP's work has resulted in market transformation for the introduction of environment-friendly products and corresponding policy and technological advances and has bought to countries access to emerging technologies, reduced energy bills for consumers, fostered innovation, and created a more equitable market for greener products, allowing indigenous manufacturers to maintain competitiveness.

The next section showcases several prominent examples showing the impact of UNDP's support at the country level.

Bangladesh

ExCom Decision 80/42 (a) approved the first HFC phase-out investment project in support of the Kigali Amendment. This was approved for Walton Hitech Industries Limited, Bangladesh to convert the refrigerant used by this domestic refrigerator manufacturing facility from HFC-134a to isobutane (R-600a), and support conversion of its compressor manufacturing facility from HFC-134a-based compressors to isobutane-based (R600a) compressors. The conversion to isobutene technology in the refrigerator manufacturing sector will result in a phase-out of 197.3 metric tonnes of HFC-134a consumption and 282,139 CO₂ equivalent tons (as related to changes in refrigerant charge). Apart from the HFC phase out in manufacturing sector, Walton will phase out 33.33 metric tonnes of HFC-134a currently consumed in the refrigeration and air-conditioning (RAC) servicing sector of Walton-owned service outlets, which will correspond to 47,662 CO₂-equivalent tonnes in emission reduction. The conversion of the compressor manufacturing facility from HFC-134a-based compressors to isobutane-based compressors, makes low GWP, in-house manufactured compressors available to the market.

In addition, a complementary KCEP project will be implemented by UNDP in partnership with Walton to increase the energy efficiency performance of domestic refrigerators during the process of conversion of its plant under the MLF funded project. The execution of this KCEP project will include a combination of interventions to facilitate technology transfer, training and capacity building, awareness, monitoring and management.

Chile

With funding from the CCAC and the MLF, UNDP and the Government of Chile supported the installation of the first two transcritical CO₂ supermarkets in Chile. This is a new technology in Chile and a lot of training and awareness raising has been done to make this happen. The new technologies will require a new skillset from the technicians and the whole supply chain also needs to have training on new technologies. The successful projects have not only introduced natural refrigerants in the supermarket sector, but it has also lead to improved energy efficiency in the new stores. Both things are very important. The most important part of the project is related to the sustainability of the intervention. Two supermarket chains have now committed to continue the installation of new supermarkets with transcritical CO₂, and it is expected that eight stores will be using this technology by the end of 2018.

China

Funding was approved at the 80th Meeting of the ExCom (Decision 80/42) for the preparation of a standalone project for conversion from HFC-245fa to C5+HFO as a foam agent in a domestic refrigerator manufacturer, Hisense Kelon Electrical Holdings Company Ltd., China. The Hisense Group was established in 1984, and is a major domestic refrigerator manufacturer in China. Hisense-Kelon has 5 manufacturing factories for domestic refrigerators, with annual production capacity of 12.6 million units. It is estimated that 1200 MT of HFC-245fa is consumed by Hisense-Kelon; and with this project, 200MT of HFC-245fa will be phased out. This proposed project is expected to facilitate adoption of non-HFCs technologies, as well as to assist exploration of efficient management mechanisms to phase down HFCs as a foaming agent. This project will provide valuable support to the government and industry to control HFCs and meet the future targets of the Kigali Amendment.

Kuwait

Kuwait RAC-technology demonstration project was approved by the Executive Committee of the Multilateral Fund in order to showcase non-HCFC technological solutions and their operation in high-ambient temperature areas. The project has been under implementation since early 2017 preparing for the procurement of new RAC technologies with low GWP, such as R290 (propane). A market research study was completed to select participating organizations (buildings) and the supply routes of such equipment in

Kuwait. As a result, some of the potential suppliers were removed from consideration due to non-availability of required capacity equipment, and an international tender was announced to sub-contract suitable suppliers of the equipment. Due to high initial costs received for a number of participating buildings, it was decided to reduce the number of participants, and the new tender in 2018 is expected to bring in such demonstration equipment into the country to complete the project. Results of the project will be shared with other countries in the region, and a report will be provided to the Executive Committee as soon as the project has been fully completed.

Lebanon

Lebanon's HCFC Phase-out Management Plan (HPMP Stage-I) was designed to implement a combination of interventions such as technology transfer investments, policies and regulations, technical assistance, training, awareness and communications and management, coordination and monitoring in the Foam and Air Conditioning/Refrigeration sectors, and will last over six years from 2011 to 2017. HPMP Stage-I resulted in net sustainable reductions of 20.03 ODP tonnes in the national HCFC consumption by 2015, contributing to Lebanon's compliance with the 2013 and 2015 control targets for HCFCs. In addition, the project will result in a net CO₂-equivalent emission reductions of about 0.66 million tonnes annually from 2015.

The following rationale and strategic considerations were the base of this phase-out strategy for compliance with the 2013 and 2015 as well as beyond 2015 compliance targets: the manufacturing sectors have been prioritized, and the servicing sector will be addressed in 2018 and beyond. Successful implementation of the HCFC Phase-out Management Plan (Stage-II) for Lebanon will result in the reduction of HCFC consumption levels to 18.39 ODP tons by the year 2025. In order to meet this objective, actions to ensure a minimum phase-out of 55 ODP tonnes (based on 2014 consumption levels) of HCFC consumption will need to be accomplished in a time span of about ten years. This phase-out will be addressed in this HPMP (Stage-II), through technology conversions in the enterprises manufacturing discontinuous sandwich panels, air-conditioning products and in enterprises engaged in servicing of RAC equipment.

ODS alternatives surveys in Latin America

UNDP successfully completed the seven ODS alternative surveys that were approved for the Latin American & Caribbean region. It is important for the countries to have updated information, especially on the HFC consumption, as this will be important for countries' future obligations under the Kigali Amendment. The projects allowed the countries to make a thorough analysis about the demands for refrigerants in the RAC sector, and to develop some consumption trends. It also allowed the countries to make an analysis about their licensing system to see if everything is being captured in it. All countries now feel that they are now in a much better position to understand the RAC sector in their countries.

Belarus, Tajikistan, Ukraine, Uzbekistan (GEF regional project)

This GEF-financed project aimed to support the accelerated HCFC phase-out in CEITs (Belarus, Tajikistan, Ukraine and Uzbekistan) and to strengthen these countries' preparedness for the complete phase-out of HCFCs. The project organized two regional Training of Trainers' session on natural refrigerants (hydrocarbons, ammonia and carbon dioxide) for servicing technicians to strengthen preparedness for system conversion to alternatives. These trainings were replicated in all four countries with elements of safety standards. The project produced 13 regional trainers who will be available in the Europe and Central Asia (ECA) region and follow up trainings have already reached to more than 250 servicing technicians in all four participating CEITs. Several pilot projects are demonstrated in participating countries (absorption chiller and low charge ammonia systems in Belarus; free cooling in Tajikistan; methylal systems in Ukraine; and ammonia chillers in Uzbekistan) and lessons learnt are being

disseminated in international meetings and conferences. The project also reviewed the status of ODS management in the participating countries and produced two key guidance documents on 1) ODS data collection methodology and 2) ODS waste management strategy with country specific road maps. As noted in the documents, the challenges in MLF-funded ECA countries is similar with lack of ODS disposal options on which the regional approach is suggested. In 2017, this project intensified translation activities to make key resources available in Russian language. In coordination with UN Environment ECA OzonAction, key UN Environment publications (and video series for RAC technicians) were translated into Russian. The project also translated the e-learning modules of realalternatives.eu, which covers the safety, efficiency, reliability and containment of low GWP alternative refrigerants – Carbon Dioxide, Ammonia, Hydrocarbon and low flammables (HFOs and R32). All these materials in Russian are being available and disseminated with the support of UN Environment ECA regional Ozone network.

South to South Cooperation

UNDP with support from FECO, China, organized two successful study tours for Indian and Indonesian industries (Foam and RAC sector respectively) to China, for delegates to have better understandings of the technology, performance, strategy etc. implemented in China to phase out HCFC in the Foam and RAC sectors. Each tour included both convening workshops and plant visits. Through these modes of knowledge exchange, the delegates gained deeper understanding of available and emerging technologies. This model promotes direct communication between host and visiting countries, between government authorities and enterprises alike; and very good feedback was received from all the participants, as they found the tour meaningful and informative.

VII. ADMINISTRATIVE ISSUES (OPERATIONAL, POLICY, FINANCIAL, OTHER)

A. Meetings Attended by UNDP in 2017

From	To	Location	Description
25-Jan-17	27-Jan-17	Ghana	Policy Support and Programme Oversight
26-Jan-17	27-Jan-17	Colombia	Policy Support and Programme Oversight
31-Jan-17	2-Feb-17	USA	CCAC Workshop
14-Feb-17	16-Feb-17	Mexico	Policy Support and Programme Oversight
20-Feb-17	23-Feb-17	Canada	IACM
20-Feb-17	23-Feb-17	Nigeria	Policy Support and Programme Oversight
21-Feb-17	24-Feb-17	Peru	Policy Support and Programme Oversight
28-Feb-17	2-Mar-17	Iran	Policy Support and Programme Oversight
4-Mar-17	15-Mar-17	India	Policy Support and Programme Oversight
13-Mar-17	17-Mar-17	Nigeria	Policy Support and Programme Oversight
20-Mar-17	24-Mar-17	Cote d'Ivoire	Joint Network Meeting for National Ozone Officers for English-speaking and French-speaking Africa and Thematic Meeting on the Kigali Amendment
2-Apr-17	4-Apr-17	Mexico	Policy Support and Programme Oversight
4-Apr-17	8-Apr-17	Canada	78th ExCom Meeting
4-Apr-17	14-Apr-17	China	Policy Support and Programme Oversight
1-May-17	5-May-17	Cuba	Policy Support and Programme Oversight
2-May-17	7-May-17	Thailand	Network Meeting for South East Asia and Pacific
6-May-17	13-May-17	Malaysia,	Stage II HPMP Launch

		Indonesia	
8-May-17	12-May-17	Brazil	Policy Support and Programme Oversight
10-May-17	13-May-17	Indonesia	Policy Support and Programme Oversight
10-May-17	12-May-17	FYR Macedonia	Network Meeting for Europe/CIS Ozone Officers
17-May-17	19-May-17	Grenada	Network Meeting for English speaking LAC countries
19-May-17	27-May-17	India	Network Meeting for South Asia
22-May-17	25-May-17	Peru	Policy Support and Programme Oversight
26-Jun-17	29-Jun-17	USA	Meeting with K-CEP
1-Jul-17	14-Jul-17	Thailand	OEWG, 58th ImpCom and 79th Excom Meeting
16-Jul-17	18-Jul-17	Indonesia	Policy Support and Programme Oversight
17-Jul-17	20-Jul-17	Bangladesh	Policy Support and Programme Oversight
23-Jul-17	28-Jul-17	Nigeria	Policy Support and Programme Oversight
24-Jul-17	26-Jul-17	Peru	Policy Support and Programme Oversight
7-Aug-17	11-Aug-17	Colombia	Policy Support and Programme Oversight
12-Aug-17	18-Aug-17	China	Policy Support and Programme Oversight
14-Aug-17	17-Aug-17	Maldives	Policy Support and Programme Oversight
17-Aug-17	18-Aug-17	Sri Lanka	Policy Support and Programme Oversight
20-Aug-17	24-Aug-17	Malaysia	Policy Support and Programme Oversight
22-Aug-17	25-Aug-17	Uruguay	Policy Support and Programme Oversight
4-Sep-17	6-Sep-17	Canada	IACM
4-Sep-17	6-Sep-17	Mexico	Policy Support and Programme Oversight
11-Sep-17	12-Sep-17	China	30th Anniversary of Montreal Protocol & 2017 International Ozone Day
12-Sep-17	15-Sep-17	Brazil	Policy Support and Programme Oversight
14-Sep-17	15-Sep-17	Nepal	Policy Support and Programme Oversight
16-Sep-17	18-Sep-17	India	Policy Support and Programme Oversight
24-Sep-17	27-Sep-17	France	CCAC Work Group Meeting
27-Sep-17	29-Sep-17	Colombia	Policy Support and Programme Oversight
3-Oct-17	5-Oct-17	Costa Rica	Joint Network meeting of the English and Spanish speaking networks for Latin America and the Caribbean
14-Oct-17	17-Oct-17	Bangladesh	Policy Support and Programme Oversight
16-Oct-17	18-Oct-17	Kyrgyzstan	Policy Support and Programme Oversight
23-Oct-17	25-Oct-17	China	Policy Support and Programme Oversight
23-Oct-17	26-Oct-17	Brazil	Policy Support and Programme Oversight
2-Nov-17	4-Nov-17	China	Policy Support and Programme Oversight
6-Nov-17	10-Nov-17	Angola	Policy Support and Programme Oversight
6-Nov-17	8-Nov-17	Chile	CCAC technology workshop for Commercial refrigeration
10-Nov-17	10-Nov-17	Mexico	Events marking the 30th anniversary of the Montreal Protocol
12-Nov-17	24-Nov-17	Montreal	80th Executive Committee Meeting, 59th ImpCom and 29th MOP Meeting
2-Dec-17	5-Dec-17	Iran	Policy Support and Programme Oversight
7-Dec-17	8-Dec-17	Cambodia	Policy Support and Programme Oversight
11-Dec-17	15-Dec-17	Malaysia	Policy Support and Programme Oversight
17-Dec-17	23-Dec-17	Indonesia	Policy Support and Programme Oversight
18-Dec-17	22-Dec-17	Ghana	Policy Support and Programme Oversight

B. **Other Issues.**

There were no specific issues in 2017 that need to be addressed

ANNEX 1: Tables related to the Performance Indicators

1. Performance Indicator 1: MYAs

Multi-year agreements submitted in 2017 are listed in the following table.

MLF Number
ANG/PHA/79/INV/19
BAR/PHA/80/INV/27
BRA/PHA/80/TAS/318
BZE/PHA/79/INV/32
COS/PHA/80/INV/57
CPR/PHA/80/INV/586
CPR/PHA/80/INV/587
DRC/PHA/80/INV/45
EGY/PHA/79/TAS/132
LEB/PHA/79/INV/90
MAU/PHA/80/INV/25
PER/PHA/79/INV/52
PER/PHA/80/INV/55
TLS/PHA/80/INV/15
TLS/PHA/80/INV/18
Nigeria Stage II HPMP

2. Performance Indicator 2: Individual Projects

The number of individual projects approved in 2017 are listed in the following table.

MLF Number
CHI/SEV/79/INS/194
COL/SEV/79/INS/101
COS/SEV/80/INS/56
DRC/PHA/79/PRP/42
ELS/PHA/79/TAS/36
GLO/SEV/80/TAS/343
IDS/SEV/80/INS/212
MAL/SEV/80/INS/185
PAN/SEV/80/INS/45
TRI/SEV/79/INS/34
URU/SEV/80/INS/70

3. Performance Indicator 3: Funds disbursed

2017 Disbursements	\$30,454,627
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4. Performance Indicator 4: 2015 ODS phase-out

MLF Number	ODP to be Phased Out
BZE/PHA/79/INV/32	0.2
LEB/PHA/79/INV/90	12.4
ANG/PHA/79/INV/19	4.0
BAR/PHA/80/INV/27	

	0.4
BRA/PHA/80/INV/319	-
BRA/PHA/80/TAS/318	53.3
COS/PHA/80/INV/57	1.7
CPR/PHA/80/INV/586	59.8
CPR/PHA/80/INV/587	-
DRC/PHA/80/INV/45	0.3
EGY/PHA/79/INV/135	11.0
EGY/PHA/79/TAS/132	
MAU/PHA/80/INV/25	0.9
PER/PHA/79/INV/52	0.9
PER/PHA/80/INV/55	2.7
TLS/PHA/80/INV/15	-
TLS/PHA/80/INV/18	-

* Tonnages come from 2017 Business Plan for entries highlighted in yellow.

5. **Performance Indicator 5: Projects completed in 2017.**

The following 63 projects were completed in 2017:

MLF Number	Actual Date Completed
ANG/PHA/77/INV/18	Dec-17
ARG/SEV/71/INS/172	Dec-17
ARM/PHA/66/INV/09	Aug-17
BAR/PHA/69/INV/21	Dec-17
BGD/SEV/71/INS/41	Mar-17
BGD/SEV/75/TAS/46	Dec-17
BRA/PHA/73/INV/306	Dec-17
BRA/REF/47/DEM/275	Jun-17
BZE/PHA/79/INV/32	Dec-17
CHI/PHA/71/INV/179	Dec-17
CHI/SEV/74/INS/186	Dec-17
COS/PHA/74/INV/50	Dec-17
COS/PHA/75/TAS/54	Dec-17
COS/REF/76/DEM/55	Dec-17
COS/SEV/74/TAS/52	Feb-17
CPR/PHA/75/INV/569	Dec-17
CPR/SEV/73/INS/549	Jan-17
CUB/SEV/71/INS/52	Dec-17
CUB/SEV/75/TAS/55	Sep-17
DOM/PHA/74/INV/58	Dec-17

DOM/REF/74/TAS/57	Nov-17
DOM/SEV/75/TAS/59	Sep-17
DRC/PHA/70/INV/37	Dec-17
ELS/SEV/74/TAS/33	Sep-17
FIJ/PHA/73/INV/27	Jun-17
GEO/PHA/75/TAS/38	Dec-17
GEO/SEV/74/INS/37	Dec-17
GHA/PHA/72/INV/39	Nov-17
GLO/SEV/77/TAS/339	Dec-17
IDS/PHA/71/INV/198	Dec-17
IDS/PHA/71/INV/199	Dec-17
IDS/SEV/75/INS/206	Dec-17
IND/PHA/71/INV/451	Dec-17
IND/PHA/71/TAS/448	Dec-17
IND/PHA/75/INV/463	Nov-17
IND/PHA/75/INV/464	Dec-17
IND/PRO/75/INV/447	Nov-17
IND/SEV/72/INS/457	Jan-17
IRA/PHA/63/INV/204	Dec-17
IRA/SEV/72/INS/213	Jul-17
KAM/PHA/70/INV/28	Dec-17
KYR/PHA/77/TAS/38	Dec-17
LEB/PHA/74/INV/84	Dec-17
LEB/PHA/79/INV/90	Dec-17
LEB/SEV/73/INS/82	Dec-17
MAL/SEV/75/INS/180	Dec-17
MDV/REF/38/TAS/05	Dec-17
MOL/PHA/73/TAS/30	Nov-17
MOL/PHA/74/INV/31	May-17
MOL/SEV/75/TAS/33	Mar-17
NIR/SEV/73/INS/141	Jan-17
PAK/ARS/56/INV/71	Jun-17
PAN/SEV/74/TAS/41	Sep-17
PAR/SEV/75/TAS/35	Sep-17
PER/PHA/75/INV/48	Mar-17
PER/PHA/79/INV/52	Dec-17
PER/SEV/75/TAS/50	Sep-17
SRL/PHA/71/TAS/45	Dec-17
SRL/SEV/72/INS/46	Jan-17
TRI/PHA/64/INV/26	Dec-17
TRI/SEV/73/INS/31	Jan-17
URU/SEV/75/INS/65	Dec-17
VEN/SEV/73/INS/128	Dec-17

7. Performance Indicator 7: Final Revisions

Last year's database counted 51 projects, of which 36 should have been financially completed in

2017. This year's database counts 36 projects for which a final revision was issued in 2017, which meets our target.

8. Performance Indicator 8: PCRs

100% achieved (7 individual PCRs and 1 multi-year PCR submitted out of 8 PCRs scheduled for submission in 2017).

9. Performance Indicator 9

Progress Report produced on 27 August 2018 as required.