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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-seventh Meeting
Montreal, 28 November - 2 December 2016

PROJECT PROPOSAL: ZAMBIA

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) UNEP/UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Zambia

| (I) PROJECT TITLE | AGENCY | MEETING APPROVED | CONTROL MEASURE |
|-------------------------------|--------------------|------------------|-----------------|
| HCFC phase out plan (Stage I) | UNEP (lead), UNIDO | 64th | 35% by 2020 |

| | | |
|--|------------|------------------|
| (II) LATEST ARTICLE 7 DATA (Annex C Group I) | Year: 2015 | 3.0 (ODP tonnes) |
|--|------------|------------------|

| (III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes) | | | | | | | | Year: 2015 | |
|---|---------|------|---------------|---------------|-----------|---------|---------------|------------|--------------------------|
| Chemical | Aerosol | Foam | Fire fighting | Refrigeration | | Solvent | Process agent | Lab use | Total sector consumption |
| | | | | Manufacturing | Servicing | | | | |
| HCFC-22 | | | | | 3.0 | | | | 3.0 |

| (IV) CONSUMPTION DATA (ODP tonnes) | | | |
|---|------|--|------|
| 2009 - 2010 baseline: | 5.00 | Starting point for sustained aggregate reductions: | 5.00 |
| CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes) | | | |
| Already approved: | 1.75 | Remaining: | 3.25 |

| (V) BUSINESS PLAN | | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|-------------------|----------------------------|--------|------|--------|------|--------|---------|
| UNEP | ODS phase-out (ODP tonnes) | 0.2 | 0.0 | 0.2 | 0.0 | 0.2 | 0.5 |
| | Funding (US \$) | 39,550 | 0 | 33,900 | 0 | 33,900 | 107,350 |
| UNIDO | ODS phase-out (ODP tonnes) | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| | Funding (US \$) | 76,300 | 0 | 0 | 0 | 0 | 76,300 |

| (VI) PROJECT DATA | | | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|--|---------------|---------------|---------|------|--------|------|------|---------|------|--------|------|--------|---------|
| Montreal Protocol consumption limits | | | n/a | n/a | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.3 | n/a |
| Maximum allowable consumption (ODP tonnes) | | | n/a | n/a | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.3 | n/a |
| Agreed funding (US \$) | UNEP | Project costs | 40,000 | 0 | 40,000 | 0 | 0 | 35,000 | 0 | 30,000 | 0 | 30,000 | 175,000 |
| | | Support costs | 5,200 | 0 | 5,200 | 0 | 0 | 4,550 | 0 | 3,900 | 0 | 3,900 | 22,750 |
| | UNIDO | Project costs | 70,000 | 0 | 0 | 0 | 0 | 70,000 | 0 | 0 | 0 | 0 | 140,000 |
| | | Support costs | 6,300 | 0 | 0 | 0 | 0 | 6,300 | 0 | 0 | 0 | 0 | 12,600 |
| Funds approved by ExCom (US \$) | Project costs | | 110,000 | 0 | 40,000 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 150,000 |
| | Support costs | | 11,500 | 0 | 5,200 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16,700 |
| Total funds requested for approval at this meeting (US \$) | Project costs | | | | | | | 105,000 | | | | | 105,000 |
| | Support costs | | | | | | | 10,850 | | | | | 10,850 |

| | |
|-------------------------------|----------------------|
| Secretariat's recommendation: | For blanket approval |
|-------------------------------|----------------------|

PROJECT DESCRIPTION

1. On behalf of the Government of Zambia, UNEP as the lead implementing agency, has submitted to the 77th meeting a request for funding for the third tranche of stage I of the HCFC phase-out management plan (HPMP), at a total cost of US \$115,850, consisting of US \$35,000, plus agency support costs of US \$4,550 for UNEP, and US \$70,000, plus agency support costs of US \$6,300 for UNIDO¹. The submission includes a progress report on the implementation of the second tranche and the tranche implementation plan for 2017 to 2018.

Report on HCFC consumption

HCFC consumption

2. The Government of Zambia reported a consumption of 3.03 ODP tonnes of HCFC in 2015 which is lower than the Montreal Protocol target for the year of 4.5 ODP tonnes. The 2011-2015 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Zambia (2011-2015 Article 7 data)

| HCFC-22 | 2011 | 2012 | 2013 | 2014 | 2015 | Baseline |
|---------------|--------|--------|-------|-------|-------|----------|
| Metric tonnes | 167.82 | 160.00 | 90.70 | 80.00 | 55.00 | 90.90 |
| ODP tonnes | 9.23 | 8.80 | 5.00 | 4.40 | 3.03 | 5.00 |

3. The decrease in consumption is due to the release of the stockpiled HCFC-22 imported during 2010-2012; the strict licensing and quota system in place; and the training of refrigeration service technicians carried out so far.

4. HCFC-free equipment are being imported in Zambia. This includes imports of refrigeration and air-conditioning equipment using R-600a and R-290, respectively as well as imports of R-410A and R-407C based air-conditioners and imports of HFCs based refrigeration equipment.

Country programme (CP) implementation report

5. The Government of Zambia reported HCFC sector consumption data under the 2015 CP implementation report which is consistent with data reported under Article 7 of the Montreal Protocol.

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

Legal framework

6. Zambia's ODS regulations were gazetted in Statutory Instrument No. 27 of 2001 and were revised in 2011 to incorporate further control measures on the phase-out of ODS including HCFC. The regulations control imports and exports of ODS and ODS-based equipment, and provide for quota and licensing systems.

7. The Zambia Environment Management Agency (ZEMA) is mandated to license the importation, distribution and disposal of ODS. All ODS-based equipment is monitored and controlled by ZEMA in collaboration with Customs Division at the entry points. The restriction or banning of HCFC-using equipment is incorporated in the Environmental Management Licensing Regulations of 2013.

¹ As per the letter of 3 October 2016 from the Zambia Environment Management Agency to the Secretariat.

8. The amended ODS regulations provide for the registration and certification of all stakeholders involved with ODS including refrigeration technicians and importers. The Government further adopted Environmental Impact Assessment guidelines which also identify and safeguard against projects that might use ODS.

Refrigeration servicing sector

9. The activities implemented under the second tranche are summarized as follows:

- (a) Forty-five customs and law enforcement officers were trained on enforcement of ODS policy and regulations; safe handling of refrigerant cylinders during inspections; and on the use of refrigerant identifiers;
- (b) Training of additional 60 refrigeration and air-conditioning (RAC) technicians on good service practices and the safe use of hydrocarbons as a refrigerant (Zambia is currently using the international safety standards and codes for handling and use of flammable refrigerants);
- (c) One hundred-forty refrigeration technicians including those who have received training during the second tranche have been certified after completing intensive refrigeration training programme in good refrigeration practices by the Northern Technical College in collaboration with ZEMA; and
- (d) Ten sets of servicing tools were procured and distributed to the Refrigeration and Air Conditioning Association of Zambia and the servicing centres; technicians were trained on the proper use and maintenance of the tools; and awareness campaigns were conducted to promote the centres so that technicians can access the equipment.

Project implementation and monitoring unit (PMU)

10. The National Ozone Unit (NOU) under the ZEMA co-ordinates, supervises, monitors and evaluates the implementation of all activities in the HPMP.

Level of fund disbursement

11. As of September 2016, of the US \$150,000 so far approved, US \$135,000 had been disbursed (US \$65,000 for UNEP and US \$70,000 for UNIDO). The balance of US \$15,000 will be disbursed in 2017 (Table 2).

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

| Agency | First tranche | | Second tranche | | Total approved | |
|------------------------------|---------------|-----------|----------------|-----------|----------------|-----------|
| | Approved | Disbursed | Approved | Disbursed | Approved | Disbursed |
| UNEP | 40,000 | 40,000 | 40,000 | 25,000 | 80,000 | 65,000 |
| UNIDO | 70,000 | 70,000 | 0 | 0 | 70,000 | 70,000 |
| Total | 110,000 | 110,000 | 40,000 | 25,000 | 150,000 | 135,000 |
| Disbursement rate (%) | 100 | | 62.5 | | 90 | |

Implementation plan for the third tranche of the HPMP

12. The following activities will be implemented:

- (a) An additional 30 customs officers will be trained to reinforce their capacity to monitor import-export of HCFC and other ODSs (UNEP) (US \$15,000);

- (b) An additional 40 refrigeration technicians will be trained on good practice and safety in the handling of refrigerants (UNEP) (US \$15,000);
- (c) Equipment (e.g., recovery machines, vacuum pumps, leak detectors) will be procured and distributed to custom entry points, technicians and service associations to ensure monitoring and proper handling of refrigerants during servicing activities and awareness activities will be implemented in support of good service practices (UNIDO) (US \$70,000); and
- (d) Project management and monitoring (UNEP) (US \$5,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption

13. In the 71st meeting, Government of Zambia confirmed that they would not revise the consumption for the year 2009 though the HPMP survey showed a consumption of 8.56 ODP tonnes (155.6 metric tonnes). Given that Zambia has not revised the baseline, there is no revision in Appendix 2-A of the Agreement. As mentioned in paragraph 2, HCFC consumption for the year 2015 is 3.03 ODP tonnes which is lower than the Montreal Protocol target for 2015.

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

Legal framework

14. The Government has established an import quota of 3.19 ODP tonnes for 2016 (equivalent to 64 per cent of the HCFC baseline).

Refrigeration servicing sector

15. UNEP clarified that the NOU is undertaking awareness workshops and training activities for safe handling of hydrocarbon-based refrigerants. The Zambia Bureau of Standards is collaborating with ZEMA and the European Union to adopt European standard on international safety standards. Further, while the Government does not encourage retrofit of equipment to use hydrocarbon as a refrigerant and is aware of the decisions of the Executive Committee on retrofits², training programmes are designed to cater to implementing good refrigeration servicing practices including safe handling of refrigerants and retrofit activities. Through a combination of training, certification and systematic awareness programmes, the Government proposes to adopt steps for smooth transition from HCFCs to HCFC-free low global warming potential (GWP) flammable technologies.

Conclusion

16. Zambia's HCFC consumption in 2015 of 3.03 ODP tonnes was 33 per cent below the allowable level for that year. The Government of Zambia achieved additional progress in the approved activities, including the training of customs and law enforcement officers and technicians with emphasis on servicing equipment using flammable refrigerants, and certification of technicians. The disbursement of funds under the second tranche amounts to 62.5 per cent of the funds approved. The proposed plan for

² Decisions 72/17 and 73/34

the next two years builds on the progress achieved and is expected to contribute to sustainable reduction of HCFC consumption besides adoption of low-GWP alternatives, wherever feasible.

RECOMMENDATION

17. The Fund Secretariat recommends that the Executive Committee 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 Zambia and further recommends blanket approval of the third tranche of stage I of the HPMP for Zambia and the corresponding 2017-2018 tranche implementation plan, at the funding levels shown in the table below, on the understanding that if Zambia 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) | 35,000 | 4,550 | UNEP |
| (b) | HCFC phase-out management plan (stage I, third tranche) | 70,000 | 6,300 | UNIDO |