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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-eighth Meeting
Montreal, 15-19 November 2021[1]

# PROJECT PROPOSALS: NORTH MACEDONIA

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

Phase-out

- HCFC phase-out management plan (stage I, eleventh tranche) UNIDO
- HCFC phase-out management plan (stage II, first tranche) UNIDO

[1] Online meetings and an intersessional approval process will be held in November and December 2021 due to coronavirus disease (COVID-19)

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

**NORTH MACEDONIA**

| **(I) PROJECT TITLE** | **AGENCY** | **MEETING APPROVED** | **CONTROL MEASURE** |
|---|---|---|---|
| HCFC phase out plan (stage I) | UNIDO | 60th | 35% by 2020 |

| **(II) LATEST ARTICLE 7 DATA (Annex C Group l)** | Year: 2020 | 0.37 (ODP tonnes) |
|---|---|---|

| **(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)** | | | | | | | | | **Year: 2020** |
|---|---|---|---|---|---|---|---|---|---|
| Chemical | Aerosol | Foam | Fire fighting | Refrigeration | | Solvent | Process agent | Lab use | Total sector consumption |
| | | | | Manufacturing | Servicing | | | | |
| HCFC-22 | | | | | 0.37 | | | | 0.37 |

| **(IV) CONSUMPTION DATA (ODP tonnes)** | | | |
|---|---|---|---|
| 2009 - 2010 baseline: | 1.8 | Starting point for sustained aggregate reductions: | 3.35 |
| **CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)** | | | |
| Already approved: | 2.18 | Remaining: | 1.17 |

| **(V) BUSINESS PLAN** | | **2021** |
|---|---|---|
| UNIDO | ODS phase-out (ODP tonnes) | 0.14 |
| | Funding (US $) | 80,625 |

| **(VI) PROJECT DATA** | | | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018*** | **2019** | **2020** | **2021** | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Montreal Protocol consumption limits | | | n/a | n/a | n/a | 1.80 | 1.80 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.17 | 1.17 | n/a |
| Maximum allowable consumption (ODP tonnes) | | | n/a | n/a | n/a | 1.80 | 1.80 | 1.62 | 1.53 | 1.44 | 1.35 | 1.26 | 1.17 | 1.17 | n/a |
| Agreed funding (US $) | UNIDO | Project costs | 15,000 | 107,000 | 294,955 | 148,000 | 82,000 | 82,000 | 0 | 82,000 | 101,000 | 75,000 | 75,000 | 75,000 | 1,136,955 |
| | | Support costs | 1,125 | 8,025 | 22,122 | 11,100 | 6,150 | 6,150 | 0 | 6,150 | 7,575 | 5,625 | 5,625 | 5,625 | 85,272 |
| Funds approved by ExCom (US $) | | Project costs | 15,000 | 107,000 | 294,955 | 148,000 | 82,000 | 82,000 | 0 | 82,000 | 101,000 | 75,000 | 75,000 | | 1,061,955 |
| | | Support costs | 1,125 | 8,025 | 22,122 | 11,100 | 6,150 | 6,150 | 0 | 6,150 | 7,575 | 5,625 | 5,625 | | 79,647 |
| Total funds requested for approval at this meeting (US $) | | Project costs | | | | | | | | | | | | 75,000 | 75,000 |
| | | Support costs | | | | | | | | | | | | 5,625 | 5,625 |

* Funding updated to reflect the return of US $30,000, plus agency support costs of US $2,250 due to Sileks withdrawing from the project (decision 83/26)

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

## PROJECT DESCRIPTION

1. On behalf of the Government of North Macedonia, UNIDO as the designated implementing agency, has submitted a request for funding for the eleventh and final tranche of stage I of the HCFC phase-out management plan (HPMP), at the amount of US $75,000, plus agency support costs of US $5,625.[2] The submission includes a progress report on the implementation of the tenth tranche, the verification report on HCFC consumption for 2020 and the tranche implementation plan for 2022.

Report on HCFC consumption

2. The Government of North Macedonia reported a consumption of 0.37 ODP tonnes of HCFC in 2020, which is 79 per cent below the HCFC baseline for compliance. The 2016-2020 HCFC consumption is shown in Table 1.

**Table 1. HCFC consumption in North Macedonia (2016-2020 Article 7 data)**

| HCFC | 2016 | 2017 | 2018 | 2019* | 2020 | Baseline |
|---|---|---|---|---|---|---|
| **Metric tonnes (mt)** | | | | | | |
| HCFC-22 | 4.92 | 0.00 | 4.76 | 11.56 | 6.79 | 32.78 |
| HCFC-141b in imported pre-blended polyols** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.10*** |
| **ODP tonnes** | | | | | | |
| HCFC-22 | 0.27 | 0.00 | 0.26 | 0.64 | 0.37 | 1.80 |
| HCFC-141b in imported pre-blended polyols** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.55*** |

*The increase in consumption was due to an HCFC import permit issued during the second semester of 2018 but used in 2019 (paragraph 16 of document UNEP/OzL.Pro/ExCom/86/65).
**Country programme (CP) data.
***Average consumption between 2007 and 2009.

3. North Macedonia continued to maintain its HCFC consumption below the maximum allowable consumption under the Montreal Protocol and its Agreement with the Executive Committee as a result of activities in the servicing sector implemented under the HPMP, and the 5 per cent annual reduction on the import quota of HCFCs coupled with the environmental tax (€1/kg) on the import of HCFC-22. The introduction of refrigeration and air-conditioning (RAC) equipment based on HFCs/HFC blends and natural refrigerants also contributed to the decreased demand for HCFCs in the country.

*CP implementation report*

4. The Government of North Macedonia reported HCFC sector consumption data under the 2020 CP implementation report, consistent with the data reported under Article 7 of the Montreal Protocol. It was noted that the actual use in the country for the servicing sector in 2020 was 0.16 ODP tonnes (2.94 mt) and the remaining amount (3.85 mt) was for stockpile. At the end of 2020, one importer had a stockpile of 0.88 ODP tonnes (15.94 mt) of HCFC-22.

*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 consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2020 was 0.37 ODP tonnes, as shown in Table 1. The report also verified the country's consumption of HFCs and blends thereof, and noted that the online import permit system was functioning very well, and that recovery and recycling (R&R) scheme recovered/recycled a total of 36.12 mt of various refrigerants in 2020.

[2] As per the letter of 1 July 2021 from the Ministry of Environment and Physical Planning of North Macedonia to UNIDO.

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

*Legal framework*

6. The Government of North Macedonia has established an operational licensing and quota system for the control of import and export of HCFCs; the order requiring a 50 per cent reduction from the country's baseline in 2021, 6 per cent annual reductions on HCFC import quotas between 2022-2027, and a complete ban from 1 January 2028 entered into force on 20 May 2021. In addition, North Macedonia has a ban on the import and export of HCFC-based equipment (as of 1 January 2012), a ban on refillable cylinders (as of 1 January 2015), a prohibition on the import and export of HCFC-141b bulk and contained in pre-blended polyols (as of 20 March 2021); and has implemented a variety of regulations to support the HCFC phase-out, including mandatory logbooks for users of equipment containing 3 kg or more of HCFCs, labeling and recording of such equipment, requirements on R&R and minimization of emissions to the atmosphere.

7. The Government of North Macedonia ratified the Kigali Amendment on 12 March 2020 and has implemented a mandatory licensing system for HFCs. In addition, draft amendments to the Law on Environment were prepared, including extending the provisions on leak prevention, detection and control to HFCs; and a ban on the import and export of used RAC equipment, including HFC-based RAC equipment; criteria for establishment of sustainable technician training centres, including minimum equipment requirements, a requirement for on-site practical testing as part of the technician certification in line with European Union (EU) requirements, and minimum educational requirements and experience for trainers. Adoption of the amendments by Parliament is expected by December 2021. The rulebook on the procedure of R&R of ozone-depleting substances (ODS), has been revised to address HFCs, and is expected to be finalized by December 2021.

8. A total of 163 customs officers were trained under stage I in good practices for the identification of refrigerants and control on imports of substances controlled under the Montreal Protocol, including training on the use of the five refrigerant identifiers provided under the HPMP. The national ozone unit (NOU) developed and published the manual for good practices in refrigerants control at the border points.

*Refrigeration servicing sector*

9. The following activities were undertaken:

(a) A training workshop on 7 July 2021 for 10 participants (of which six were women) on HCFC management and new legislation related to HFCs; to date, 576 technicians and 76 trainers have been trained under stage I. In addition, 172 technicians and 202 equipment owners and environmental inspectors have been trained on leak-checking equipment containing 3 or more kg of refrigerant charge;

(b) Continued recording and labelling of RAC equipment with 3 or more kg of refrigerant,[3] resulting in 1,129 pieces of equipment being recorded and labeled under stage I. A total of six refrigerant identifiers and ten leak detectors were procured for environment inspectors under stage I to enable enforcement of regulations;

[3] Including HCFC-22, HFCs, and alternatives; approximately three quarters of recorded equipment with a charge greater than 3 kg are HFC-based.

(c) Continued monitoring of the R&R scheme, with 36.12 mt of refrigerants recovered and recycled in 2020 (Table 2) and a total of 233.96 mt under stage I. A total of 55 R&R machines for service shops and 3 machines for secondary vocational schools were procured under stage I to support the R&R scheme; and

**Table 2. Recovered, recycled, and waste (kg) by refrigerant in 2020**

| | CFC-12 | HCFC-22 | HFC134a | R-404A | R-410A | HFC-32 | R-407C | R-452A | R-507A | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Recovered | 21.0 | 1,858.0 | 4,314.0 | 2,594.0 | 4,404.1 | 611.0 | 2,013.6 | 23.0 | 0 | 15,838.7 |
| Recycled | 0 | 2,331.2 | 5,260.0 | 3,503.0 | 5,378.2 | 485.0 | 2,839.0 | 0 | 480.0 | 20,276.4 |
| **Total** | **21.0** | **4,189.2** | **9,574.0** | **6,097.0** | **9,782.3** | **1,096.0** | **4,852.6** | **23.0** | **480.0** | **36,115.1** |
| Waste | 0 | 500.5 | 168.5 | 63.0 | 825.1 | 116.0 | 260.0 | 0 | 0 | 1,933.1 |
| Waste (%) | 0 | 12 | 2 | 1 | 8 | 11 | 5 | 0 | 0 | 5 |

(d) In light of challenges associated with holding in-person trainings during the COVID-19 pandemic, a series of videos available from the NOU website were produced for RAC technicians and equipment owners on good service practices, safety aspects of alternative refrigerants, recording and labeling of equipment, R&R, and refrigerant leak checking; implementation of an online help desk within the NOU website; development of a guide for training on refrigerant management for vocational schools and training centres, which addresses new technologies and HFCs; and two brochures on the HCFC phase-out and the Montreal Protocol and the UN sustainable development goals were developed.

*Activities implemented by the IS*

10. The NOU was involved in issuing permits for import/export of ODS, ODS alternative refrigerants and equipment containing refrigerants, and registering and labeling equipment containing more than 3 kg of refrigerants; coordinated legislative updates; implemented a public awareness programme on the Montreal Protocol; participated virtually in a number of regional and international meetings; and reported CP and Article 7 data to the Multilateral Fund and the Ozone Secretariats, respectively.

11. Of the US $485,635 approved so far for IS, US $443,657 has been disbursed for staff and consultants (US $275,052), equipment (US $125,420), operational costs (US $823), training/study (US $10,971), contractual services (US $3,614), travel (US $14,505), and other expenses (US $13,272).

Level of fund disbursement

12. As of August 2021, of the US $1,061,955 approved so far, US $1,010,423 had been disbursed as shown in Table 3. The balance of US $51,532 will be disbursed in 2021-2023.

**Table 3. Financial report of stage I of the HPMP for North Macedonia (US $)**

| Funding tranche | Funds approved | Funds disbursed | Disbursement rate (%) |
|---|---|---|---|
| First-ninth tranche* | 986,955 | 979,944 | 99 |
| Tenth tranche | 75,000 | 30,480 | 41 |
| **Total** | **1,061,955** | **1,010,423** | 95 |

* Including the return of US $30,000, plus agency support costs of US $2,250, due to Sileks withdrawing from the project (decision 83/26).

Implementation plan for the eleventh and final tranche of the HPMP

13. The following activities will be implemented between January and August 2022:

(a) Development of a quota system for HFCs imports, in alignment with the EU F-gas regulation (US $15,000);

(b) Continued implementation of the recording and labeling of RAC systems with over 3 kg refrigerant charge, and leak checks by owners every three, six or 12 months, depending on the refrigerant charge (US $10,000);

(c) Development of training materials and three workshops for 70 customs officers on the HCFC phase-out; disaggregated data on gender participation will be provided (US $13,000);

(d) Continued monitoring of import/export of controlled substances and equipment (US $12,000);

(e) Development and distribution of brochures and leaflets on the updated schedule for the phase-out of HCFCs and HFCs; organization of International Ozone Day, where R&R awards are given out and female technicians are recognized (US $10,000); and

(f) Monitoring of the R&R scheme (US $15,000).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

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

*Legal framework*

14. The Government of North Macedonia has already issued HCFC import quotas for 2021 at 0.90 ODP tonnes, which is lower than the Montreal Protocol control targets.

15. Regarding the draft ban on the import of used RAC equipment, the Secretariat inquired whether consideration had been given to exempting energy efficient, low-GWP-based equipment from the ban. UNIDO clarified that the purpose of the ban was to prevent the import of used equipment that increase the HFC bank, and of waste electric equipment (WEE), including RAC equipment, that was prone to leakage. As the draft ban was not expected to be implemented until December 2021, imports of used low-GWP-based RAC equipment could continue until the implementation of the ban.

*Refrigeration servicing sector*

16. While the Secretariat appreciated the intent of the country to establish a quota system for HFC imports, that activity was not eligible for funding under the HPMP and should instead be funded under the country's enabling activities or the preparation of the country's Kigali HFC implementation plan approved at the 87th meeting (decision 87/33(f)).

17. The Secretariat also noted that stage II of the HPMP submitted to the present meeting included a request for funding for the development of a national plan for refrigerant waste management, which was not eligible under stage II and, therefore, was removed from that project.[4] However, in line with decision 60/38(g)(ii)[5] the Secretariat suggested, on an exceptional basis, to include under stage I of the HPMP, a limited technical assistance activity to develop a national plan for refrigerant waste management.

[4] See paragraphs 36(c), 40(c), 44 and 45 of the present document.

[5] To allow the former Yugoslav Republic of Macedonia to submit to the Executive Committee at a future meeting for subsequent inclusion in its HPMP funding requests for activities related to disposal of ODS.

18. Based on the above, UNIDO submitted a revised plan of action for the eleventh tranche of stage I as follows:

(a) Development of training materials and three workshops for 70 customs officers on the HCFC phase-out; disaggregated data on gender participation will be provided (US $5,000);

(b) Continued monitoring of import/export of controlled substances and equipment (US $9,000);

(c) Monitoring of the R&R scheme, including communication with service shops, data review and assessment, development of a report on the recovered, recycled and waste quantities and establishment of R&R award criteria and selection of awardees (US $8,000);

(d) Study on refrigerant waste quantities and identification of national priorities for sound refrigerant waste management: identification of key stakeholders, establishment of three working groups to assess refrigerant waste, waste RAC equipment, and waste refrigerant emissions to the atmosphere, and a refrigerant waste survey and data collection; training on good practices for refrigerant waste management and WEE containing refrigerants; development of the country's first inventory of waste refrigerants and waste RAC bank; and identification of priorities for refrigerant waste management (US $40,000); and

(e) Project monitoring and evaluation used for preparation of the progress report for the eleventh tranche (consultants, data collection, report development) (US $13,000).

19. UNIDO further clarified that since 2015, workshops are collecting data on refrigerant waste by substance under the R&R scheme as shown in Table 4; only aggregated data on refrigerant waste was available between 2011 and 2014, and no data was available on refrigerant waste generated prior to 2011, nor was there an inventory of WEE and refrigerant waste contained therein. The planned data collection would address those gaps.

**Table 4. Refrigerant waste (kg) by substance/blend in the period 2015–2020**

| Refrigerant | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| CFC-12 | 6.0 | 5.0 | 7.0 | 7.3 | 5.0 | 0.0 |
| HCFC-22 | 529.0 | 539.1 | 129.6 | 436.0 | 409.2 | 500.5 |
| R-134A | 64.0 | 70.0 | 72.5 | 69.0 | 64.5 | 168.5 |
| R-404A | 45.0 | 108.0 | 100.2 | 53.0 | 59.0 | 63.0 |
| R-407C | 98.0 | 25.0 | 104.0 | 120.0 | 110.0 | 260.0 |
| R-410A | 210.0 | 217.3 | 251.0 | 204.6 | 225.2 | 825.1 |
| R-403B | 0.0 | 0.0 | 3.0 | 2.0 | 2.0 | 0.0 |
| R-452A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| R-502 | 0.0 | 0.0 | 6.0 | 4.0 | 3.0 | 0.0 |
| R-507 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 |
| HFC-32 | 0.0 | 0.0 | 0.0 | 27.0 | 29.0 | 116.0 |
| **Total** | **952.0** | **964.4** | **680.3** | **922.9** | **906.9** | **1,933.1** |

20. The Secretariat noted that the implementation of the R&R had resulted in a substantial quantity of refrigerant waste, and that there was an increase in the quantity of refrigerant waste in 2020, primarily driven by increased waste HFC blends. Given the country's 2012 ban on HCFC-based equipment, and the uptake of HFC-based equipment in the market, that trend is likely to continue.

21. The activities proposed under stage I for the disposal of the waste refrigerants stored aim to lay the foundation for the formulation of a comprehensive refrigerant management plan; service workshops, owners of RAC equipment, the RAC association, importers, non-governmental organizations, and others, will contribute to the identification of priorities for refrigerant waste management which would be reviewed

every five years and would be taken up by the National Committee for Chemicals and Waste Management of the Ministry of Environment and Physical Planning, which would develop the national refrigerant waste management plan. The timeline for development of the national plan for refrigerant waste management depends on the available financial resources.

*Secretariat's observations related to the implementation of the R&R scheme*

22. In light of the effectiveness of the R&R scheme, the Secretariat discussed with UNIDO what lessons might be useful for other Article 5 countries. Key elements to an effective and sustainable R&R scheme were strengthening the capacity of local service shops rather than the creation of local or regional R&R centres; and the inclusion of the R&R principle in the service technicians training curricula. The Secretariat noted that the R&R scheme worked as effectively with HFC blends that have a temperature glide as with single-component refrigerants like HCFC-22 or HFC-32; indeed, those two refrigerants generated a slightly higher percentage waste than R-410A, R-407C, and R-404A (see Table 2). The introduction of mandatory leak checks was key to the effective R&R of refrigerant blends as it prevents decomposition of the blend composition; and the provision of adequate tools and equipment for recovering refrigerants and refrigerant analysis.

*Institutional strengthening (IS)*

23. In line with decision 60/38(c)(i), funding for IS was provided to North Macedonia until 2020, and the Government of North Macedonia submitted a request for IS to the present meeting separately from the stage II proposal.

<u>Completion of stage I</u>

24. In light of time required to implement the activities related to the development of the national plan for refrigerant waste management, the Government proposed to extend the date of completion to 31 December 2023. The Secretariat supports that extension.

<u>Sustainability of the HCFC phase-out</u>

25. North Macedonia has a licensing and quota system in place that ensures the sustained control of HCFC imports. Regulations are in place that prohibit the consumption of substances phased out under the Montreal Protocol, and the training of customs officers includes phased-out ODS to prevent illegal trade; five refrigerant identifiers are being used by customs to ensure the sustainability of control procedures at customs points. Environmental inspectors, responsible for the enforcement of the Law on Environment, are trained on ODS management. The NOU can monitor stockpiled controlled substances as importers are required under the Law on Environment to annually report any stockpiles of those substances. The March 2021 ban on imports of HCFC-141b pure or contained in pre-blended polyols will support the long-term sustainability of the phase-out in the foam manufacturing sector. The country has banned the import of HCFC-based equipment (as of 1 January 2012), and refillable cylinders (as of 1 January 2015).

<u>Conclusion</u>

26. North Macedonia continues to be in compliance with the Montreal Protocol and the HCFC consumption targets specified in its Agreement with the Executive Committee; in 2020, consumption of HCFCs was 79 per cent below the country's Montreal Protocol target and 68 per cent lower than the maximum allowable consumption specified in the Agreement. The verification confirms the licensing and quota system is functioning. The R&R scheme continues to function well, with over 234 mt of refrigerants recovered and recycled to date under stage I. The proposal to undertake limited technical assistance activities to develop a national plan for refrigerant waste management is in line with decision 60/38(g)(ii), and addresses a well-developed need; the Secretariat recommends extending the date of completion of

stage I of the HPMP by one year to allow implementation of planned activities. The level of disbursement of the tenth tranche is 41 per cent and the overall disbursement rate is 95 per cent. The activities so far implemented and those planned under the eleventh tranche will continue to help the country meet its compliance obligations under the Protocol.

**RECOMMENDATION**

27. The Fund Secretariat recommends that the Executive Committee:

(a) Takes note of the progress report on the implementation of the tenth tranche of stage I of the HCFC phase-out management plan (HPMP) for North Macedonia; and

(b) Extends, on an exceptional basis, the completion date of stage I of the HPMP for North Macedonia until 31 December 2023 to allow the completion of the planned activities related to the development of a national plan for refrigerant waste management, on the understanding that no further extension would be requested.

28. The Fund Secretariat further recommends blanket approval of the eleventh and final tranche of stage I of the HPMP for North Macedonia, and the corresponding 2021-2023 tranche implementation plan, at the funding level shown in the table below:

| | Project title | Project funding (US $) | Support cost (US $) | Implementing agency |
|---|---|---|---|---|
| (a) | HCFC phase-out management plan (stage I, eleventh tranche) | 75,000 | 5,625 | UNIDO |

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

## NORTH MACEDONIA

| (I) PROJECT TITLE | AGENCY |
|---|---|
| HCFC phase-out plan (stage II) | UNIDO (lead) |

| (II) LATEST ARTICLE 7 DATA (Annex C Group l) | Year: 2020 | 0.37 (ODP tonnes) |
|---|---|---|

| (III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes) | | | | | | | | | Year: 2020 |
|---|---|---|---|---|---|---|---|---|---|
| Chemical | Aerosol | Foam | Fire fighting | Refrigeration | | Solvent | Process agent | Lab use | Total sector consumption |
| | | | | Manufacturing | Servicing | | | | |
| HCFC-22 | | | | | 0.37 | | | | 0.37 |

| (IV) CONSUMPTION DATA (ODP tonnes) | | | |
|---|---|---|---|
| 2009 - 2010 baseline: | 1.8 | Starting point for sustained aggregate reductions: | 3.35 |
| CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes) | | | |
| Already approved: | 2.18 | Remaining: | 1.17 |

| (V) BUSINESS PLAN | | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|
| UNIDO | ODS phase-out (ODP tonnes) | 0.50 | 0 | 0.58 | 1.08 |
| | Funding (US $) | 66,049 | 0 | 83,327 | 149,376 |

| (VI) PROJECT DATA | | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Montreal Protocol consumption limits | | | 1.17 | 1.17 | 1.17 | 1.17 | 0.59 | 0.59 | 0.59 | 0.59 | n/a |
| Maximum allowable consumption (ODP tonnes) | | | 0.90 | 0.79 | 0.68 | 0.58 | 0.47 | 0.36 | 0.25 | 0 | n/a |
| Project costs requested in principle (US $) | UNIDO | Project costs | 120,000 | 0 | 200,000 | 0 | 0 | 118,750 | 0 | 48,750 | 487,500 |
| | | Support costs | 8,400 | 0 | 14,000 | 0 | 0 | 8,313 | 0 | 3,413 | 34,125 |
| Total project costs requested in principle (US $) | | | 120,000 | 0 | 200,000 | 0 | 0 | 118,750 | 0 | 48,750 | 487,500 |
| Total support costs requested in principle (US $) | | | 8,400 | 0 | 14,000 | 0 | 0 | 8,313 | 0 | 3,413 | 34,125 |
| Total funds requested in principle (US $) | | | 128,400 | 0 | 214,000 | 0 | 0 | 127,063 | 0 | 52,163 | 521,625 |

| (VII) Request for approval of funding for the first tranche (2021) | | |
|---|---|---|
| Agency | Funds requested (US $) | Support costs (US $) |
| UNIDO | 120,000 | 8,400 |

| Secretariat's recommendation: | Individual consideration |
|---|---|

## PROJECT DESCRIPTION

### Background

29. On behalf of the Government of North Macedonia, UNIDO as the designated implementing agency has submitted a request for stage II of the HCFC phase-out management plan (HPMP), at the amount of US $487,500, plus agency support costs of US $34,125, as originally submitted.[6] The implementation of stage II of the HPMP will phase out the remaining consumption of HCFCs by 2028.

30. The first tranche of stage II of the HPMP being requested at this meeting amounts to US $161,000, plus agency support costs of US $11,270 for UNIDO, as originally submitted.

### Status of implementation of stage I of the HPMP

31. Stage I of the HPMP for North Macedonia was originally approved at the 60th meeting,[7] updated at the 67th meeting[8] and revised at the 86th meeting[9] to meet the 35 per cent reduction from the baseline by 2020, at a total cost of US $1,136,955, plus agency support costs, to phase out 2.18 ODP tonnes in the refrigeration and air-conditioning (RAC) servicing and foam sectors, and including institutional strengthening (IS) at the level of US $600,000 for nine years and eight months starting April 2011. An overview of implementation of stage I, including an analysis of the HCFC consumption; the progress and financial reports on the implementation, the request for the eleventh and final tranche submitted to the current meeting, is described in paragraphs 1 to 26 of the present document.

### Stage II of the HPMP

Remaining consumption eligible for funding

32. After deducting 2.18 ODP tonnes of HCFCs associated with stage I of the HPMP, the remaining consumption eligible for funding for complete phase-out in stage II amounts to 1.17 ODP tonnes of HCFC-22.

Sector distribution of HCFCs

33. There are approximately 600 technicians in the servicing sector, consuming HCFC-22 to service residential, industrial and commercial systems as shown in Table 5. HCFC-22 represents approximately 16 per cent of the refrigerants used in the servicing sector.

**Table 5. Distribution of HCFC-22 in the RAC sector in 2019**

| Type of unit | # of units | Average charge (kg) | % of HCFC-22 units | Leakage rate (%) | Installed HCFC-22 capacity (mt) | HCFC-22 servicing needs (mt) |
|---|---|---|---|---|---|---|
| **Stationary equipment with refrigerant charge with less than 3 kg** | | | | | | |
| Room air-conditioners in households | 224,677 | 1.000 | 15 | 5 | 33.70 | 1.69 |
| Room air-conditioners in light commercial sector | 100,000 | 1.000 | 20 | 5 | 20.00 | 1.00 |
| **Total (charge < 3kg)** | **324,677** | **-** | **-** | **-** | **53.70** | **2.69** |

[6] As per the letter of 1 July 2021 from the Ministry of Environment and Physical Planning of North Macedonia to UNIDO.
[7] UNEP/OzL.Pro/ExCom/60/40
[8] UNEP/OzL.Pro/ExCom/67/31 and Add.1
[9] Annex XVII of UNEP/OzL.Pro/ExCom/86/100

| Type of unit | # of units | Average charge (kg) | % of HCFC-22 units | Leakage rate (%) | Installed HCFC-22 capacity (mt) | HCFC-22 servicing needs (mt) |
|---|---|---|---|---|---|---|
| **Stationary equipment with more than 3 kg of refrigerant (labeled and recorded - inventory)** | | | | | | |
| Display cabinets, condensing units, large central pack systems | 72 | 0.977 | 15 | 10 | 6.51 | 0.65 |
| Refrigeration equipment in administrative and public buildings | 9 | 0.148 | 15 | 10 | 0.99 | 0.10 |
| Industrial refrigeration systems | 35 | 5.833 | 10 | 10 | 58.33 | 5.83 |
| Industrial and production air-conditioning (AC) equipment | 40 | 1.157 | 10 | 10 | 11.57 | 1.16 |
| AC equipment in administrative and public buildings | 38 | 1.499 | 15 | 10 | 9.99 | 1.00 |
| AC equipment in commercial and accommodation amenities | 84 | 0.420 | 10 | 10 | 4.20 | 0.42 |
| **Total (charge ≥ 3kg)** | **278** | **10.034** | **-** | **-** | **91.59** | **9.16** |
| **Total** | | | | | **145.29** | **11.84** |

34. In light of the 2012 ban on HCFC-22-based equipment, such equipment constitutes a minority (approximately 24 per cent) of RAC equipment in the country; most RAC equipment is HFC-based (mostly HFC-134a, R-404A, R-407C, and R-410A), though imports of R-290- and HFC-32-based room air-conditioners started in 2020 and 2017, respectively. HCFC-22 constitutes a minority (12 per cent) of the refrigerants recovered and recycled, with HCFs (HFC-134a, R-410A, R-404A, R-407C, and HFC-32) accounting for most of the remaining recovered and recycled refrigerants.

35. In addition, HFC-152a was consumed for the manufacture of extruded polystyrene foam; on a metric tonne basis, that consumption accounted for more than half of the country's 2020 HFC consumption; the country phased out its consumption of HCFC-141b in the polyurethane foam manufacturing sector in 2013.

Phase-out strategy in stage II of the HPMP

36. Stage II of the HPMP will phase out the remaining consumption of HCFCs by 2028 through the following activities:

(a) Upgrading of the R&R scheme: Continue monitoring of quantities of recovered and recycled refrigerants; undertake a survey of R&R capacities; define criteria for selection of the entities/service shops to be granted with R&R equipment, select such beneficiaries and provide them with 30 R&R machines and ancillary equipment; and organize five training sessions for 100 technicians, including those specifically designed for female technicians and candidates (US $148,000);

(b) Establishment of the sustainable training centres and certification scheme: Issuance of a public call for and establishment of three to four training centres, including procurement of training equipment (e.g., reclamation machines, recovery machines, charging stations and leak detectors); procurement of reclamation equipment for two centres; review of legislation with the aim to strengthen reclamation provisions; study tour to a training centre in an EU country; development of training on how to operate the training and reclamation equipment, including those specifically designed for female technicians and candidates, and training of 115 service technicians on good service practices (US $151,500); and

(c) Development of a national refrigerant waste management plan: Establishment of three working groups to assess refrigerant waste, waste RAC equipment, and waste refrigerant emissions, and data collection for the development of an inventory of waste refrigerants and waste RAC bank; training on good practices for refrigerant waste management and WEE containing refrigerants; development of a refrigerant waste management plan and a workshop on that plan; collection of 20 mt of refrigerant waste and export of the waste for incineration in line with the Basel Convention (US $143,000).

*Project implementation and monitoring*

37. The NOU and UNIDO will monitor activities, report on progress, and work with stakeholders to phase out HCFCs with the support of two local consultants. The cost of those activities amounts to US $40,000 for consultants and US $5,000 for travel.

*Gender policy implementation*[10]

38. In line with decision 84/92(d), trainings and meetings organized by the NOU will incorporate sessions on gender to further sensitize project staff and stakeholders on the importance of gender mainstreaming and women empowerment. A meeting with female RAC technicians will be used to further explore options to incentivize the participation of women, and RAC trainings will incorporate conclusions from those meetings to encourage more women to become service technicians. Gender mainstreaming will also be considered in the selection of consultants, implementation and project monitoring teams, and trainees in training programmes, including but not limited to service technicians, customs officers, and environmental inspectors. Public awareness campaigns will incorporate gender aspects, and efforts to encourage female application and recruitment, and to ensure access and active participation of all genders, will be adopted to support gender-balanced participation. Gender-disaggregated data and qualitative information will be collected to track progress in complying with the operational policy on gender mainstreaming for Multilateral Fund-supported projects.

Total cost of stage II of the HPMP

39. The total cost of stage II of the HPMP for North Macedonia has been estimated at US $487,500 (plus agency support costs), as originally submitted, for achieving 100 per cent reduction from its HCFC baseline consumption by 2028. The proposed activities and cost breakdown are summarized in Table 6.

**Table 6. Total cost (US $) of stage II of the HPMP for North Macedonia, as submitted**

| Activity | 2021 | 2023 | 2025 | Total |
|---|---|---|---|---|
| Upgrading the R&R scheme | 13,000 | 128,000 | 7,000 | 148,000 |
| Establishment of sustainable training centres | 100,000 | 17,000 | 34,500 | 151,500 |
| Development of a national refrigerant waste management plan | 35,000 | 41,000 | 67,000 | 143,000 |
| Project coordination and management | 15,000 | 15,000 | 15,000 | 45,000 |
| **Total** | **163,000** | **201,000** | **123,500** | **487,500** |

[10] Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.

Activities planned for the first tranche of stage II

40. The first funding tranche of stage II of the HPMP at the total amount of US $163,000 will be implemented between October 2021 to August 2023 and will include the following activities:

(a) Upgrading the R&R scheme: Monitor the recovered and recycled quantities of refrigerants; undertake a survey of existing R&R capacities, develop a plan to address identified needs, define criteria for selection of the entities/service shops to be granted with R&R equipment, implement the procedure for the stakeholders/entities selection, and define a list of the equipment to be provided (US $13,000);

(b) Establishment of the sustainable training centres and certification scheme: Issuance of a public call for and establishment of three to four training centres, including procurement of training equipment (e.g., reclamation machines, recovery machines, charging stations and leak detectors); procurement of reclamation equipment for two centres (US $100,000);

(c) Development of a national refrigerant waste management plan: Establish two working groups on waste RAC equipment assessment and on estimating waste refrigerant emissions; undertake a refrigerant waste survey and data collection, and develop the country's first inventory of waste refrigerants and waste RAC bank; and training on good practices for refrigerant waste management and WEE containing refrigerants (US $35,000); and

(d) Recruit two national consultants to assist in project implementation and monitoring (US $15,000).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

## COMMENTS

41. The Secretariat reviewed stage II of the HPMP in light of stage I, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decision 74/50), and the 2021-2023 business plan of the Multilateral Fund.

Overarching strategy

42. The Government of North Macedonia confirmed its commitment to achieve 100 per cent reduction of its HCFC baseline consumption and achieve compliance with the Montreal Protocol measures, by 2028, and confirmed that it will not require any HCFC for servicing needs after that date.

43. The 2020 consumption was already 79 per cent below the HCFC baseline for compliance, the 2021 quota was below the country's Montreal Protocol targets, and the country intended to continue to set its quotas below the country's Montreal Protocol targets. Accordingly, the country proposed to set its 2021 target in line with the quota for that year (i.e., 50 per cent reduction from the HCFC baseline for compliance), and to progressively reduce its consumption by 6 per cent each year until 2027, when the reduction will be 86 per cent, and 100 per cent in 2028.

Technical and cost-related issues

44. The Secretariat noted that the Executive Committee was considering the issue of funding for the disposal of controlled substances in the context of its discussions on the cost guidelines for the phase-down of HFCs, and in the context of its consideration of the synthesis report describing best practices and ways for the Executive Committee to consider operationalizing paragraph 24 of decision XXVIII/2

(decision 84/87(b)). Accordingly, the request for funding for the development of a national plan for refrigerant waste management was not eligible under stage II of the HPMP; however, as discussed in paragraph 18 of the present document, limited technical assistance activities to develop a national plan for refrigerant waste management could be eligible for funding under stage I of the HPMP, in line with decision 60/38(g)(ii). Moreover, the Secretariat noted that the tranche distribution, as submitted, would need to be modified in line with decision 62/17, extending the duration of the HPMP to 31 December 2029.

45. On that basis, UNIDO revised stage II of the HPMP as follows:

(a) Removing the development of a national plan for refrigerant waste management;

(b) Allocating an additional US $1,000 for monitoring of the R&R scheme and US $15,000 for project implementation and monitoring, in light of the extended duration of the HPMP;

(c) Increasing the funding for the establishment of the sustainable training centres and certification scheme to US $237,500 based on the procurement of three (vice two) reclamation machines, two trainings for 50 technicians and 172 service shops on the business models for reclamation, organization of safety inspections for the training centres, and training of 270 (vice 115) service technicians on good service practices; and

(d) Including a new component for strengthening best practices to avoid illegal imports and control of refrigerant quality, consisting of development of training materials on best practices, labelling and harmonized system (HS) codes (US $12,000), and training for 80 customs officers and environmental inspectors on detecting illegal imports and assessing refrigerant quality (US $29,000).

46. Regarding the establishment of sustainable technician training centres and a certification system, in line with the amendments of the Law on Environment, the Secretariat recalled that 576 service technicians had been trained on good service practices under stage I. UNIDO clarified that those technicians were trained at secondary vocational schools; the trainings included a theoretical and practical part, and an exam; and technicians were issued a certificate by the NOU. While a certification scheme did not exist under stage I, one of the conditions that service companies had to meet in order to obtain R&R equipment under stage I was to hire at least one service technician that had been awarded a certificate. Under stage II, certification will be mandatory; four levels of certification will be offered, in line with EU regulations. Each centre will be provided funding for the training and certification of the first 80-90 candidates; subsequent candidates will cover the costs of training and certification to ensure the sustainability of the certification scheme.

47. The Secretariat notes that the plan for the establishment of training centres and the certification scheme will support the sustainability of the certification scheme after the completion of the HPMP. The planned activities to establish reclamation centres are well-conceived; since it will be the first time that reclamation is introduced, reclamation rules and principles will be added within the legislation by December 2023; trainings on the business models for reclamation, and the continued implementation of the R&R scheme, will ensure that the servicing needs of any remaining HCFC-22 equipment after 2028 can be met with recovered or reclaimed HCFC-22. The 2012 ban on the import of HCFC-based equipment suggests that a limited number of such equipment will remain in operation after 1 January 2028.

Total project cost

48. The total cost for stage II of the HPMP amounts to US $487,500, in line with decision 74/50(c)(xii). In line with decision 62/17, the following changes to the tranche distribution were made: funding for the first tranche was reduced to US $120,000; the second tranche was delayed from 2023 to 2024, and an additional tranche was added in 2028, as shown in Table 7.

**Table 7. Revised cost (US $) by activity of stage II of the HPMP for North Macedonia**

| Activity | 2021 | 2024 | 2026 | 2028 | Total |
|---|---|---|---|---|---|
| Upgrading the R&R scheme | 88,000 | 44,000 | 16,000 | 1,000 | 149,000 |
| Establishment of sustainable training centres | 11,000 | 135,000 | 82,750 | 8,750 | 237,500 |
| Strengthening of best practices to avoid illegal import and control refrigerant quality | 6,000 | 6,000 | 5,000 | 24,000 | 41,000 |
| Project coordination and management | 15,000 | 15,000 | 15,000 | 15,000 | 60,000 |
| **Total** | **120,000** | **200,000** | **118,750** | **48,750** | **487,500** |

49. Based on the revised tranche distribution, the following activities will be implemented between January 2022 to December 2023 under the first tranche:

(a) Upgrading of the R&R scheme: Continue monitoring of quantities of recovered and recycled refrigerants; undertake a survey of R&R capacities; define criteria for selection of the entities/service shops to be granted with R&R equipment, and implement the procedure for beneficiary selection; and procure and distribute 17 R&R machines[11] and ancillary equipment (US $88,000);

(b) Establishment of the sustainable training centres and certification scheme: Issuance of a public call for the establishment of three to four training centres, selection of the centres, and assessment of training equipment needs (US $11,000);

(c) Strengthening of best practices to avoid illegal import and control refrigerant quality: Development of training materials on best practices, labeling, and HS codes (US $6,000) and

(d) Recruit two national consultants to assist in project implementation and monitoring (US $15,000).

Impact on the climate

50. The proposed activities in the servicing sector, which include better containment of refrigerants through training and provision of equipment, will reduce the amount of HCFC-22 used for RAC servicing. Each kilogramme of HCFC-22 not emitted due to better refrigeration practices results in savings of approximately 1.8 $CO_2$-equivalent tonnes. A calculation of the impact on the climate was provided in the HPMP. The activities planned by North Macedonia, including its efforts to promote low-GWP alternatives, as well as refrigerant recovery, reuse, and reclamation indicate that the implementation of the HPMP will reduce the emission of refrigerants into the atmosphere, resulting in climate benefits.

**2021-2023 draft business plan of the Multilateral Fund**

51. UNIDO is requesting US $487,500, plus agency support costs, for the implementation of stage II of the HPMP for North Macedonia. The total requested value of US $128,400, including agency support costs for the period of 2021–2023, is US $20,976 below the amount in the business plan.

**Draft Agreement**

52. A draft Agreement between the Government of North Macedonia and the Executive Committee for the phase-out of HCFCs in stage II of the HPMP is contained in Annex I to the present document.

[11] Under the original tranche distribution, 30 R&R machines would be purchased under the second tranche. Under the revised tranche distribution, 17 R&R machines will be procured under the first tranche, and the remaining 13 machines will be distributed under the second and third tranche.

**RECOMMENDATION**

53. The Executive Committee may wish to consider:

(a) Approving, in principle, stage II of the HCFC phase-out management plan (HPMP) for North Macedonia for the period from 2021 to 2028 for the complete phase-out of HCFC consumption, in the amount of US $487,500, plus agency support costs of US $34,125 for UNIDO, on the understanding that no more funding from the Multilateral Fund would be provided for the phase-out of HCFCs and no servicing tail would be needed;

(b) Noting the commitment of the Government of North Macedonia to reduce HCFC consumption by 50 per cent in 2021, 56 per cent in 2022, 62 per cent in 2023, 68 per cent in 2024, 74 per cent in 2025, 80 per cent in 2026, 86 per cent in 2027, and to phase out completely HCFCs by 1 January 2028 in advance of the Montreal Protocol phase-out schedule, and that HCFCs would not be imported after that date;

(c) Deducting 1.17 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;

(d) Approving the draft Agreement between the Government of North Macedonia and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage II of the HPMP, contained in Annex I to the present document; and

(e) Approving the first tranche of stage II of the HPMP for North Macedonia, and the corresponding tranche implementation plan, in the amount of US $120,000, plus agency support costs of US $8,400 for UNIDO.

## Annex I

## DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF NORTH MACEDONIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN

### Purpose

1. This Agreement represents the understanding of the Government of the Republic of North Macedonia (the "Country") and the Executive Committee with respect to the reduction of controlled use of the ozone depleting substances (ODS) set out in Appendix 1-A ("The Substances") to a sustained level of zero ODP tonnes by 1 January 2028 in compliance with Montreal Protocol schedule.

2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A ("The Targets, and Funding") in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in rows 4.1.3 and 4.2.3 (remaining consumption eligible for funding).

3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A ("Funding Approval Schedule").

4. The Country agrees to implement this Agreement in accordance with the stage II of the HCFC phase-out management plan (HPMP) approved ("the Plan"). In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

### Conditions for funding release

5. The Executive Committee will only provide the Funding in accordance with the Funding Approval Schedule when the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:

(a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;

(b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;

(c) That the Country had submitted a Tranche Implementation Report in the form of Appendix 4-A (“Format of Tranche Implementation Reports and Plans”) covering each previous calendar year; that it had achieved a significant level of implementation of activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

(d) That the Country has submitted a Tranche Implementation Plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

**Monitoring**

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same appendix.

**Flexibility in the reallocation of funds**

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all of the approved funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

(a) Reallocations categorized as major changes must be documented in advance either in a Tranche Implementation Plan as foreseen in sub-paragraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:

(i) Issues potentially concerning the rules and policies of the Multilateral Fund;

(ii) Changes which would modify any clause of this Agreement;

(iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches;

(iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche; and

(v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would decrease the overall funding level under this Agreement accordingly;

(b) Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report;

(c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

**Considerations for the refrigeration servicing sector**

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sector included in the Plan, in particular:

(a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and

(b) The Country and relevant bilateral and/or implementing agencies would take into consideration relevant decisions on the refrigeration servicing sector during the implementation of the Plan.

**Bilateral and implementing agencies**

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (the "Lead IA") in respect of the Country's activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). The role of the Lead IA is contained in Appendix 6-A. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2 of Appendix 2-A.

**Non-compliance with the Agreement**

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A ("Reductions in Funding for Failure to Comply") in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to the information necessary to verify compliance with this Agreement.

**Date of completion**

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

**Validity**

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

16. This Agreement may be modified or terminated only by mutual written agreement of the Country and the Executive Committee of the Multilateral Fund.

**APPENDICES**

**APPENDIX 1-A: THE SUBSTANCES**

| Substance | Annex | Group | Starting point for aggregate reductions in consumption (ODP tonnes) |
|---|---|---|---|
| HCFC-22 | C | I | 1.80 |
| HCFC-141b contained in imported pre-blended polyols | | | 1.55 |
| Total | | | 3.35 |

**APPENDIX 2-A: THE TARGETS, AND FUNDING**

| Row | Particulars | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.1 | Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes) | 1.17 | 1.17 | 1.17 | 1.17 | 0.59 | 0.59 | 0.59 | 0.59 | n/a |
| 1.2 | Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes) | 0.90 | 0.79 | 0.68 | 0.58 | 0.47 | 0.36 | 0.25 | 0 | n/a |
| 2.1 | Lead IA (UNIDO) agreed funding (US $) | 120,000 | 0 | 0 | 200,000 | 0 | 118,750 | 0 | 48,750 | 487,500 |
| 2.2 | Support costs for Lead IA (US $) | 8,400 | 0 | 0 | 14,000 | 0 | 8,313 | 0 | 3,413 | 34,125 |
| 3.1 | Total agreed funding (US $) | 120,000 | 0 | 0 | 200,000 | 0 | 118,750 | 0 | 48,750 | 487,500 |
| 3.2 | Total support costs (US $) | 8,400 | 0 | 0 | 14,000 | 0 | 8,313 | 0 | 3,413 | 34,125 |
| 3.3 | Total agreed costs (US $) | 128,400 | 0 | 0 | 214,000 | 0 | 127,063 | 0 | 52,163 | 521,625 |

| Row | Particulars | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 4.1.1 | Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes) | | | | | | | | | 1.17 |
| 4.1.2 | Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes) | | | | | | | | | 0.63 |
| 4.1.3 | Remaining eligible consumption for HCFC-22 (ODP tonnes) | | | | | | | | | 0 |
| 4.2.1 | Total phase-out of HCFC-141b contained in imported pre-blended polyol agreed to be achieved under this agreement (ODP tonnes) | | | | | | | | | 0 |
| 4.2.2 | Phase-out of HCFC-141b contained in imported pre-blended polyol to be achieved in the previous stage (ODP tonnes) | | | | | | | | | 1.55 |
| 4.2.3 | Remaining eligible consumption for HCFC-141b contained in imported pre-blended polyol (ODP tonnes) | | | | | | | | | 0 |

* Date of completion of stage I as decided at the 88th meeting: 31 December 2023

## APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the second meeting of the year specified in Appendix 2-A.

## APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of five parts:

(a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase-out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include the amount of ODS phased out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes;

(b) An independent verification report of the Plan results and the consumption of the Substances, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;

(c) A written description of the activities to be undertaken during the period covered by the requested tranche, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall plan.

This description of future activities can be submitted as a part of the same document as the narrative report under sub-paragraph (b) above;

(d) A set of quantitative information for all Tranche Implementation Reports and Plans, submitted through an online database; and

(e) An Executive Summary of about five paragraphs, summarizing the information of the above sub-paragraphs 1(a) to 1(d).

2. In the event that in a particular year two stages of the HPMP are being implemented in parallel, the following considerations should be taken in preparing the Tranche Implementation Reports and Plans:

(a) The Tranche Implementation Reports and Plans referred to as part of this Agreement, will exclusively refer to activities and funds covered by this Agreement; and

(b) If the stages under implementation have different HCFC consumption targets under Appendix 2-A of each Agreement in a particular year, the lower HCFC consumption target will be used as reference for compliance with these Agreements and will be the basis for the independent verification.

**APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES**

1. The national ozone unit will submit a progress report every six months on implementation status of the Plan to the Lead IA. This progress report will be referred to in the Tranche Implementation Report in each tranche request document.

2. The actual consumption will be verified by an independent local company or consultant engaged by the Lead IA.

**APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY**

1. The Lead IA will be responsible for a range of activities, including at least the following:

(a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country’s HPMP;

(b) Assisting the Country in preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;

(c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan consistent with Appendix 4-A;

(d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future Tranche Implementation Plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;

(e) Fulfilling the reporting requirements for the Tranche Implementation Reports and Plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee;

(f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual tranche implementation reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HCFC consumption targets had been met;

(g) Ensuring that appropriate independent technical experts carry out the technical reviews;

(h) Carrying out required supervision missions;

(i) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;

(j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country, the allocation of the reductions to the different budget items and to the funding of the Lead IA;

(k) Ensuring that disbursements made to the Country are based on the use of the indicators;

(l) Providing assistance with policy, management and technical support when required; and

(m) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

## APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US $180 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years.

2. In the event that the penalty needs to be applied for a year in which there are two Agreements in force (two stages of the HPMP being implemented in parallel) with different penalty levels, the application of the penalty will be determined on a case-by-case basis taking into consideration the specific sectors that lead to the non-compliance. If it is not possible to determine a sector, or both stages are addressing the same sector, the penalty level to be applied would be the largest.