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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
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Item 7(b) of the provisional agenda¹

REPORTS ON PROJECTS WITH SPECIFIC REPORTING REQUIREMENTS

Introduction

1. The present document on projects with specific reporting requirements consists of the following sections:

- I Overview
- II “Blanket” approval
- III Individual consideration

2. In addition, document UNEP/OzL.Pro/ExCom/91/18/Add.1 consists of three reports related to China: report on progress in the implementation of activities listed in decision 83/41(e); study to determine the regulatory, enforcement, policy or market circumstances that might have led to the illegal production and use of CFC-11 and CFC-12 (decision 83/41(d)); and updated report on the production of CTC and its feedstock uses (decision 84/41(b) and (c)), which will be for individual consideration by the Executive Committee.

I. Overview

3. Table 1 lists the reports on projects with specific reporting requirements submitted to the 91st meeting recommended for blanket approval.

¹ UNEP/OzL.Pro/ExCom/91/1

Table 1. Reports on projects with specific reporting requirements recommended for blanket approval

Country	Project title	Paragraphs
Reports related to HCFC phase-out management plans		
Algeria	HCFC phase-out management plan (stage I – status report on the use of HFC-32 as a refrigerant in the enterprise manufacturing air-conditioners)	6 – 12
Argentina	HCFC phase-out management plan (stage II – update on the financial viability of the enterprise Celpack)	13 – 17
Bangladesh	HCFC phase-out management plan (stage II – verification report)	18 – 22
Brunei Darussalam	HCFC phase-out management plan (stage II – request for change in cooperating implementing agency)	23 – 31
Colombia	HCFC phase-out management plan (stage II – update on progress toward finalization of the draft Act and the entry into force of the bans described in document UNEP/OzL.Pro/ExCom/88/44 and request for extension of the completion date)	32 – 42
Côte d’Ivoire	HCFC phase-out management plan (stage I – report on the adoption of the interministerial decree (“arrêté interministériel”) for regulating import, export, transit, re-export and trade of ODS, and other measures on strengthening monitoring and reporting systems relating to HCFC import and export)	43 – 48
Philippines (the)	HCFC phase-out management plan (stage II – verification report)	49 – 53
Senegal	HCFC phase-out management plan (stage I – final progress report)	54 – 67
Trinidad and Tobago	HCFC phase-out management plan (stage I – final progress report on the implementation of the work programme associated with the final tranche and the submission of the project completion report)	68 – 73
Uruguay	HCFC phase-out management plan (stage II – progress report on the implementation of the conversion of the foam sector and request for additional extension of the date of completion for stage II)	74 – 90
Reports related to HFC		
Argentina	Control of emissions of HFC-23 generated in the production of HCFC-22	91 – 99
Reports related to methyl bromide		
Argentina	Methyl bromide phase-out plan	100 – 102

4. Table 2 lists one report on a project with specific reporting requirements submitted to the 91st meeting for individual consideration and a brief explanation of related issues.

Table 2. Reports on projects with specific reporting requirements for individual consideration

Country	Project title	Issue	Paragraphs
Reports related to HCFC phase-out management plans			
Brazil	HCFC phase-out management plan (stage II – progress report on the implementation of the fifth tranche and request for extension)	Stage II – progress report on the implementation of the fifth tranche and request for extension	104 – 138

II. “Blanket” approval

5. This section includes reports on projects related to HCFC phase-out management plans, one report on an HFC project and one report on methyl bromide.

A. Reports related to HCFC phase-out management plans

Algeria: HCFC phase-out management plan (stage I – status report on the use of HFC-32 as a refrigerant in the enterprise manufacturing air conditioners) (UNIDO)

Background

6. The project for the enterprise, Condor, was approved at the 66th meeting as a part of stage I of the HCFC phase-out management plan (HPMP) for Algeria; it aimed to phase out 150 mt of HCFC-22 (8.25 ODP tonnes) used by the enterprise, the only one in the room air-conditioning manufacturing sector in the country using HFC-32 as a refrigerant. Although the enterprise has installed equipment for manufacturing HFC-32-based air conditioners and has stopped using HCFC-22 in their manufacturing of room air conditioners, they have not been able to fully convert their manufacturing facility to produce HFC-32-based air conditioners; instead, they have been producing R-410A-based air conditioners.

7. At its 90th meeting, the Executive Committee, *inter alia*, noting that the enterprise manufacturing air conditioners that was supported under the HPMP for Algeria is using R-410A as a refrigerant in place of HFC-32, urged the Government of Algeria to work with UNIDO to provide a status report to the 91st meeting on the use of HFC-32 as a refrigerant in the enterprise manufacturing air conditioners (decision 90/30(b)).²

8. In response to the decision, UNIDO, on behalf of the Government of Algeria, submitted the requested report.

Progress report

9. The report contains the following information:

- (a) The company has informed the Government of Algeria that the main reason for not being able to produce HFC-32-based air conditioners is due to lack of national regulatory and administrative framework that helps in producing HFC-32-based air conditioners at a competitive price; without this support, HFC-32-based air conditioners are not price competitive compared to air-conditioners using R-410A in the country; and
- (b) The company also mentioned that they are committed to fully converting their facility to HFC-32 as soon as possible and this is in line with their strategy to promote products nationally and internationally with new technologies. They also informed that they have concluded a production and marketing agreement with a large international air conditioner manufacturer for the production of HFC-32-based air conditioners; this agreement would help the company produce HFC-32-based air conditioners in the next two to three years.

² Provision contained in Annex VII of document UNEP/OzL.Pro/ExCom/90/40.

Secretariat's comments

10. The Secretariat requested additional information from UNIDO on the timelines for concluding full conversion to HFC-32-based air conditioners at the enterprise, noting with concern that the project was delayed for a long period since its approval in 2012 and that there are no technology barriers on producing these products. UNIDO explained that it is in consultations with the national ozone unit and the enterprise to agree on a firm completion date for this project and would be able to report back on the completion date to the 92nd meeting along with the request for the third and fourth (final) tranches.

11. On the regulatory support needs for facilitating the adoption of HFC-32, UNIDO informed that the Government is planning to implement a range of fiscal incentives and other regulatory measures to promote the adoption of lower/low-global-warming-potential (GWP) refrigerant-based air conditioners and disincentivize manufacturing and/or sale of high-GWP refrigerant-based air conditioners; the Government is also expected to ratify the Kigali Amendment by 2023, following which additional measures would be implemented to reduce consumption of R-410A on priority; in addition, the Government would develop and implement codes and standards for the safe use of low-GWP refrigerants.

Recommendation

12. The Executive Committee may wish:

- (a) To note the report on the use of HFC-32 as a refrigerant in the enterprise manufacturing air conditioners in Algeria under stage I of the HCFC phase-out management plan (HPMP), submitted by UNIDO and contained in document UNEP/OzL.Pro/ExCom/91/18; and
- (b) To request the Government of Algeria, through UNIDO, to submit at the 92nd meeting, the request for the third and fourth tranches of stage I of the HPMP including the plan for the full conversion of the enterprise mentioned in sub-paragraph (a) above to use HFC-32 as a refrigerant in the manufacturing of air conditioners.

Argentina: HCFC phase-out management plan (stage II – update on the financial viability of the enterprise Celpack) (UNIDO and the Government of Italy)

Background

13. At its 84th meeting, the Executive Committee considered the funding request for the second tranche of stage II of the HPMP for Argentina.³ The tranche request included a progress report indicating *inter alia* that the conversion from HCFC-22 to CO₂ at the extruded polystyrene (XPS) foam enterprise Celpack had been delayed due to economic difficulties faced by the enterprise and to its interest in evaluating butane as an alternative to HCFCs. In approving the funding tranche, the Committee requested UNIDO to submit at the 85th meeting an update on the financial viability of the enterprise and whether it would be assisted by the Multilateral Fund, on the understanding that the funds from the conversion would be returned in the event that the enterprise were removed from the project (decision 84/64(d)(ii)).

14. Since then and in line with decision 84/64(d)(ii), UNIDO has submitted progress reports to all relevant Executive Committee meetings,⁴ reiterating that the majority of Celpack's debt was with the Federal Agency for Public Incomes (AFIP), and that the Parliament of Argentina, recognizing the economic impact of COVID-19, approved a moratorium for financing debts that had been due by 31 July 2020.

³ UNEP/OzL.Pro/ExCom/84/39

⁴ The Executive Committee noted the relevant progress reports submitted between the 85th and 90th meeting in decisions 85/4, 86/22, 87/7, 88/17, and 90/7.

Celpack has been paying off its debt in accordance with the schedule approved by the Tax Authority. This was expected to have a positive impact on the financial viability of the enterprise.

Progress report

15. UNIDO has submitted an update to the 91st meeting, indicating that Celpack continues to meet all scheduled payments as approved by AFIP. The Government of Argentina and UNIDO affirmed that they would continue monitoring the financial situation of the enterprise, and the Government further reiterated that the funding associated with Celpack would not be disbursed until the issue had been resolved (i.e., the financial health of the enterprise was confirmed) and its resolution had been considered by the Executive Committee. Should it be determined that the enterprise was not financially viable, the level of funds to be returned to the Multilateral Fund would be calculated taking into consideration the terms of flexibility used for the approval of funds for the XPS foam sector in Argentina.⁵

Secretariat's comments

16. The Secretariat notes the status of Celpack and the efforts of the Government of Argentina and UNIDO to continue monitoring the financial situation of the enterprise, and will request an update on the matter as part of the submission of the request for the subsequent tranche of stage II of the HPMP for Argentina, in line with decision 84/64(d)(ii).

Recommendation

17. The Executive Committee may wish:

- (a) To note the update on the financial viability of the extruded polystyrene (XPS) foam enterprise Celpack funded under stage II of the HCFC phase-out management plan (HPMP) for Argentina, provided by UNIDO and contained in document UNEP/OzL.Pro/ExCom/91/18;
- (b) To request the Government of Argentina, through UNIDO, to provide, as part of the submission of the subsequent tranche request, an update on the financial viability of the XPS foam enterprise Celpack and a decision on whether the enterprise would be assisted by the Multilateral Fund under stage II of the HPMP for Argentina, in line with decision 84/64(d)(ii), and
- (c) To note that, in the event that the enterprise Celpack would not be assisted by the Multilateral Fund, the funds associated with its conversion would be calculated taking into consideration the flexibility in the allocation of funds approved for the Government of Argentina for the XPS foam sector and would be deducted from the approval of the subsequent tranche of stage II of the HPMP for Argentina.

⁵ Funding approved for two enterprises in the XPS foam sector in the amount of US \$348,767 was lower than the estimated incremental costs of US \$439,200; it was agreed that the Government of Argentina would have flexibility in the allocation of funds between the two enterprises, on the understanding that both enterprises would convert to the selected technology on time (paragraph 76 of document UNEP/OzL.Pro/ExCom/79/27).

Bangladesh: HCFC phase-out management plan (stage II – verification report) (UNDP and UNEP)

Background

18. Stage II of the HCFC phase-out management plan (HPMP) for Bangladesh for the period 2018 to 2025 to reduce HCFC consumption by 67.5 per cent of the baseline by 2025, was approved in principle at the 81st meeting⁶ and revised at the 90th meeting,⁷ in the amount of US \$6,334,430, consisting of US \$5,356,014, plus agency support cost of US \$374,921 for UNDP, and US \$534,680, plus agency support cost of US \$68,815 for UNEP.

19. At the 90th meeting, through decision 90/44 the Executive Committee approved the second tranche of stage II of the HPMP for Bangladesh, and the corresponding 2022-2024 tranche implementation plan, at the amount of US \$2,142,405, plus agency support costs of US \$149,968 for UNDP, on the understanding that:

- (a) The Treasurer would be requested to transfer the approved funds to UNDP only upon receipt and review of the verification report by the Secretariat in line with decision 72/19(b);
- (b) UNDP has committed to submitting the verification report by the end of June 2022 and no later than 12 weeks prior to the 91st meeting;
- (c) The recommendations included in the verification report would be addressed during the implementation of the second tranche of stage II of the HPMP and that the actions implemented towards that end would be included in the progress report of the second tranche for stage II of the HPMP for Bangladesh to be submitted with the third tranche request; and
- (d) In the event that the verification report confirmed that Bangladesh had not been in compliance with the Montreal Protocol and its Agreement with the Executive Committee, the Secretariat would inform the Executive Committee so that relevant actions, *inter alia*, the application of the penalty clause, could be considered at the 91st meeting.

20. In line with decision 90/44, on behalf of the Government of Bangladesh, UNDP has submitted the verification report.

Secretariat's comments

21. The Secretariat received the verification report on the country's HCFC consumption for 2019-2021 on 2 November 2022, seven weeks after the deadline for submission. Due to the late receipt of this document, the Secretariat was unable to review the submission and will provide a summary of this report at the 92nd meeting.

Recommendation

22. The Executive Committee may wish to take note of the submission by UNDP of the verification report of HCFC consumption for Bangladesh for 2019-2021, which will be reviewed and presented by the Secretariat at the 92nd meeting; and that the Treasurer would be requested to transfer the approved funds to

⁶ Decision 81/30, document UNEP/OzL.Pro/ExCom/81/23

⁷ Decision 90/44, Annex XIX of document UNEP/OzL.Pro/ExCom/90/40

UNDP only upon the review of the verification report by the Secretariat in line with decisions 72/19(b) and 90/44.

Brunei Darussalam: HCFC phase-out management plan (stage II – request for change in cooperating implementing agency) (UNEP and UNDP)

Background

23. Through an official communication dated 17 August 2022, the Government of Brunei Darussalam requested to replace UNDP with UNIDO as the cooperating implementing agency for stage II of the HCFC phase-out management plan (HPMP). UNEP, as the lead implementing agency, and UNDP and UNIDO confirmed this request.

24. Stage II of the HPMP was approved in principle at the 86th meeting in the amount of US \$651,690, consisting of US \$351,000, plus agency support costs of US \$45,630 for UNEP, and US \$234,000, plus agency support costs of US \$21,060 for UNDP. The first tranche and corresponding implementation plans were also approved at the same meeting in the amount of US \$180,473, consisting of US \$149,100, plus agency support costs of US \$19,383 for UNEP, and US \$11,000, plus agency support costs of US \$990 for UNDP.⁸

25. On behalf of the Government of Brunei Darussalam, UNEP has submitted the request for change of cooperating implementing agency, including a revised implementation plan for UNIDO's component and a revised Agreement between the Government and the Executive Committee.

Revised implementation plan and Agreement

26. UNIDO's plan of action as cooperating implementing agency will follow, to the extent possible, the original scope of activities agreed for UNDP, including strengthening customs operation to control import/export of HCFCs through the provision of five multi-refrigerant identifiers (including consumables); and the procurement of equipment for training centres after conducting needs assessment and servicing tools for refrigeration and air-conditioning (RAC) servicing workshops selected through eligibility criteria to be established; and technical assistance and consultation.

27. The implementation plan for the first tranche of UNIDO's component comprises the same activities as approved under the original submission,⁹ which included strengthening customs operation to control import/export of HCFCs (US \$6,000) and the acquisition of training equipment (US \$5,000). Specifically, in the first tranche, UNIDO will procure one refrigerant identifier for customs operation, which will be delivered to a selected customs checkpoint by the NOU. UNIDO will also engage a consultant to assess the need, modality, and selection criteria to distribute RAC servicing tools to servicing workshops.

28. The revised Agreement includes the change of cooperating implementing agency and reflects the transfer of funding from UNDP to UNIDO. The duration of stage II and the tranche submission schedule was maintained as originally proposed.

Secretariat's comments

29. The Secretariat notes that the request to change the cooperating implementing agency from UNDP to UNIDO for stage II of the HPMP was presented upon consultation and agreement among the relevant parties, and that the consideration of the change at the present meeting will allow the country to achieve

⁸ Decision 86/65; Annex XXII of document UNEP/OzL.Pro/ExCom/86/100

⁹ UNEP/OzL.Pro/ExCom/86/42

further progress in the implementation of the first tranche and submit the second tranche in 2024 as scheduled.

30. UNDP confirmed that the funding approved under the first tranche (US \$11,000, plus agency support cost of US \$990) had not been disbursed. These funds will be returned to the Multilateral Fund and transferred to UNIDO at the present meeting. In addition, the transfer from UNDP to UNIDO of funds approved in principle for future tranches of stage II has been introduced in the updated Agreement between the Government and the Executive Committee as contained in Annex I to the present document. Table 3 presents the level of approved funds to be returned by UNDP and of funds to be transferred to UNIDO.

Table 3. Funds to be transferred from UNDP to UNIDO for stage II of the HPMP (US \$)

Description	Value	Agency support costs	Total
First tranche (approved) (BRU/PHA/86/INV/29)	11,000	990	11,990
Funds approved in principle for the second, third and fourth tranches	223,000	20,070	243,070
Total	234,000	21,060	255,060

Recommendation

31. The Executive Committee may wish:

- (a) To note:
 - (i) The request by the Government of Brunei Darussalam to transfer to UNIDO all activities included in stage II of the HCFC phase-out management plan (HPMP) initially planned for implementation by UNDP;
 - (ii) That the Fund Secretariat has updated the Agreement between the Government of Brunei Darussalam and the Executive Committee for stage II of the HPMP, as contained in Annex I to the present document, specifically Appendix 2-A and paragraph 9, on the basis of the transfer of UNDP's component to UNIDO, and paragraph 17, which has been added to indicate that the updated Agreement supersedes that reached at the 86th meeting; and
- (b) With regard to the first tranche of stage II of the HPMP:
 - (i) To request UNDP to return to the Multilateral Fund at the 91st meeting the amount of US \$11,000, plus agency support costs of US \$990 (BRU/PHA/86/INV/29);
 - (ii) To approve the transfer to UNIDO of the amount of US \$11,000, plus agency support costs of US \$990; and
- (c) Further to approve the transfer of the amount of US \$223,000, plus agency support costs of US \$20,070, approved in principle, associated with the second, third and fourth tranches of stage II of the HPMP.

Colombia: HCFC phase-out management plan (stage II – update on progress toward finalization of the draft Act and the entry into force of the bans described in document UNEP/OzL.Pro/ExCom/88/44 and request for extension of the completion date) (UNDP)

Background

32. At the 88th meeting, in the request for the fourth and final tranche of stage II of the HCFC phase-out management plan (HPMP) for Colombia, it was reported that the bans on the use of HCFC-141b in the fire protection sector (expected by 31 December 2017, in line with decision 75/44(b)(ii)), for all uses of HCFC-141b pure and contained in imported pre-blended polyols (expected by 31 December 2020, in line with decision 75/44(b)(iii)), and on the manufacture and import of packaged type and condensed air-conditioning (AC) equipment that used HCFC-22 with a cooling capacity of less than 5 tonnes (expected by 1 January 2021, in line with decision 75/44(b)(iv)) were delayed as the Government decided to combine the legislative measures into a single draft Act. The remaining steps for finalization of the Act were approval by the Vice Minister of Environment and the legal office, and signatures of the draft Act by the ministers of Environment and of Industry and Commerce, which were expected by December 2021. The entry into force of these bans would be upon those signatures.

33. Subsequently, in approving the tranche request, UNDP was requested to provide to the 90th meeting confirmation of the finalization of the draft Act described in document UNEP/OzL.Pro/ExCom/88/44 and the entry into force of the bans on the use of HCFC-141b in the fire protection sector, for all uses of HCFC-141b pure and contained in pre-blended polyols, and on the manufacture and import of HCFC-based refrigeration and air-conditioning (RAC) equipment (decision 88/40(a)).

34. In line with that decision, UNDP submitted to the 90th meeting an update on the progress of the finalization of the draft Act and the entry into force of the aforementioned bans. The draft Act had not yet been finalized, as a new tariff code required a complete revision of codes and description of the draft Act, along with an endorsement letter. UNDP had noted that all guilds that would be controlled by or are related to the Act had indicated their support for the draft Act and reported in its country programme data report that there were no imports of HCFC-141b in 2021. The revision and endorsement letter were completed; the remaining step was signing of the draft Act by the ministers of Environment and of Industry and Commerce. Subsequently, UNDP was requested to provide, to the 91st meeting, confirmation of the finalization of the draft Act and the entry into force of the aforementioned bans (decision 90/11).

35. In line with decision 90/11, and on behalf of the Government of Colombia, UNDP has submitted an update on the progress of the finalization of the draft Act described in document UNEP/OzL.Pro/ExCom/88/44 and the entry into force of the bans on the use of HCFC-141b in the fire protection sector, for all uses of HCFC-141b pure and contained in pre-blended polyols, and on the manufacture and import of HCFC-based RAC equipment. UNDP has also submitted a request for extension of the implementation of stage II.

Progress report

36. The Act was signed on 17 June 2022 by the ministers of Environment and of Industry and Commerce. The Government of Colombia enacted the bans on the use of HCFC-141b in the fire protection sector, for all uses of HCFC-141b pure and contained in pre-blended polyols, immediately upon finalization of the Act, and on the manufacture and import of HCFC-based RAC equipment on 17 September 2022, three months after its publication in the national gazette.

Request for extension

37. UNDP was requesting to extend the completion date of stage II by six months to 30 June 2023 due to recent administrative and accounting changes within UNDP, which caused limited availability of staff trained in the new accounting system and a delay in the availability of the fourth and final tranche funds.

38. Remaining activities to be implemented by UNDP include continued monitoring and management of the licensing, permits, and quota system; organizing a second committee meeting on ODS trade control with customs and the Ministry of Trade, Industry and Tourism, and two workshops to train customs officers on ODS trade control; supplying select National Learning Service (SENA) training centres with tools for the installation and maintenance of hydrocarbon-based RAC equipment; four meetings to promote the technician certification process; continued monitoring of the recovery, recycling, and reclamation network, and an additional workshop for technicians and operators of the collection and reclamation centres; continued technical assistance to promote the uptake of low-GWP, energy efficient RAC equipment through workshops with end-users in the agribusiness sub-sectors and cold chain food sectors, including an assessment of equipment and refrigeration systems used in the meat production and storage sub-sector; and continued monitoring and implementation of the project, including preparation of the project completion report.

39. UNEP plans to organize three virtual courses to train customs officers on ODS trade control, and a second dissemination workshop to present the results of the pilot project on the use of refillable cylinders. Activities by the Government of Germany have been completed.

Secretariat's comments

40. The Secretariat noted with appreciation that the bans on the use of HCFC-141b in the fire protection sector, for all uses of HCFC-141b pure and contained in imported pre-blended polyols, and on the manufacture and import of packaged type and condensed AC equipment that used HCFC-22 with a cooling capacity of less than 5 tonnes are in force, in line with decisions 75/44(b)(ii), 75/44(b)(iii), and 75/44(b)(iv).

41. The Secretariat considered that the request for extension of the HPMP until end of June 2023 would allow the Government of Colombia, UNDP, and UNEP to complete all the remaining activities in the approved implementation plan for the fourth and final tranche of stage II of the HPMP for the country.

Recommendation

42. The Executive Committee may wish:

- (a) To note the update on progress toward finalization of the draft Act and the entry into force of the bans described in document UNEP/OzL.Pro/ExCom/88/44, in the context of stage II of the HCFC phase-out management plan for Colombia, submitted by UNDP and contained in document UNEP/OzL.Pro/ExCom/91/18; and
- (b) To approve the extension of the date of completion of the project referred to in sub-paragraph (a) above to 30 June 2023, on the understanding that no further extension would be requested.

Côte d’Ivoire: HCFC phase-out management plan (stage I – report on the adoption of the interministerial decree (“arrêté interministériel”) for regulating import, export, transit, re-export and trade of ODS, and other measures on strengthening monitoring and reporting systems relating to HCFC import and export) (UNEP)

Background

43. At its 90th meeting, the Executive Committee approved the fifth tranche of stage I of the HCFC phase-out management plan (HPMP) for Côte d’Ivoire on the understanding that the Government will provide an update, through UNEP, at the 91st meeting, on the adoption of the interministerial decree for regulating import, export, transit, re-export and trade of ODS, and other measures on strengthening monitoring and reporting systems relating to HCFC import and export (decision 90/32).¹⁰

Progress report

44. In line with decision 90/32, the Government of Côte d’Ivoire, through UNEP, reported that the Minister of Environment and Sustainable Development signed the interministerial decree in February 2022 and sent it to the other three Ministers (i.e., the Minister of Commerce and Industry, the Minister of Budget and State Portfolio and the Minister of Economy and Finance) for their signatures. Additional comments were received from the other three Ministers for inclusion in the decree.

45. As of 20 October 2022, the Ministry of Environment and Sustainable Development had incorporated those comments and resent the decree to the other three Ministers for their signatures. The decree is expected to be signed by 31 December 2022.

Secretariat’s comments

46. The Secretariat noted that the delay in the signing of the decree is due to the inclusion therein of additional comments made by the three Ministers; and that the updated document has been sent for final signatures. UNEP indicated that it is closely following up on this matter with the national ozone unit (NOU) to avoid further delays.

47. The Secretariat noted that although the interministerial decree is yet to be signed, the NOU, under the guidance of the National Ozone Committee, continues to monitor the implementation of the ODS import/export licensing system.

Recommendation

48. The Executive Committee may wish:

- (a) To note the report on progress in the future adoption of the interministerial decree (“arrêté interministériel”) for regulating import, export, transit, re-export and trade of ODS and other measures for strengthening monitoring and reporting systems relating to HCFC import and export under stage I of the HCFC phase-out management plan for Côte d’Ivoire, submitted by UNEP and contained in document UNEP/OzL.Pro/ExCom/91/18; and
- (b) To request the Government of Côte d’Ivoire to provide an update, through UNEP, at the 92nd meeting, on the adoption of the interministerial decree mentioned in sub-paragraph (a) above.

¹⁰ Provision contained in Annex VIII of document UNEP/OzL.Pro/ExCom/90/40.

Philippines (the): HCFC phase-out management plan (stage II – verification report)
(UNIDO)

Background

49. At the 87th meeting, the Executive Committee, *inter alia*, approved the request from the Government of the Philippines through UNIDO as designated implementing agency, to cancel the air-conditioning (AC) manufacturing sector plan originally included in stage II of the HCFC phase-out management plan (HPMP) at the 80th meeting and approved a revised implementation plan for the combined first, second and third tranche activities in the servicing sector and technical assistance in the AC manufacturing sector. It requested UNIDO to return to the Multilateral Fund at the 90th meeting the amount of US \$212,152, approved as part of the first tranche of stage II of the HPMP; and further requested the Government of the Philippines and UNIDO to submit progress reports on a yearly basis on the implementation of the work programme associated with the combined tranches until the completion of the project, verification reports until approval of stage III, and the project completion report to the second meeting in 2023 (decision 87/19).

50. At the 90th meeting the Executive Committee decided to extend, on an exceptional basis, due to the delays imposed by the COVID-19 pandemic, the completion date of stage II of the HPMP for the Philippines until 31 December 2023 noting that no further extension would be requested and also requested the Government of the Philippines through UNIDO to submit the verification report of HCFC consumption for 2021 to the 91st meeting (decision 90/17(b) and (c)(i)).

51. In line with decision 90/17(c)(i), on behalf of the Government of the Philippines, UNIDO submitted the verification report.

Secretariat's comments

52. The Secretariat received the verification report on the country's 2021 HCFC consumption on 28 October 2022, seven weeks after the deadline for submission. Due to the late receipt of this document, the Secretariat was unable to review the submission and will provide a summary of this report at the 92nd meeting.

Recommendation

53. The Executive Committee may wish to take note of the submission by UNIDO of the verification report of HCFC consumption for the Philippines for 2021, which will be reviewed and presented by the Secretariat at the 92nd meeting.

Senegal: HCFC phase-out management plan (stage I – final progress report) (UNEP and UNIDO)

Background

54. Stage I of the HCFC phase-out management plan (HPMP) for Senegal was originally approved at the 65th meeting¹¹ and revised at the 77th meeting, to phase-out of 7.34 ODP tonnes of HCFCs to meet the target of 35 per cent reduction from the revised starting point by 2020, at a total cost of US \$630,000, plus agency support costs.¹²

¹¹ Decision 65/46, Annex XXXII of document UNEP/OzL.Pro/ExCom/65/60.

¹² Decision 77/55, document UNEP/OzL.Pro/ExCom/77/61.

55. At the 85th meeting, upon a request by the Government, the Executive Committee approved an extension of the duration of stage I of the HPMP to 31 December 2021, a change in implementing agencies, the combined third and fourth tranches of stage I of the HPMP and a revised updated Agreement.¹³ It was requested that the Government of Senegal, UNEP and UNIDO submit a progress report on an annual basis until the completion of stage I, verification reports until approval of stage II, and the project completion report to the first meeting of the Executive Committee in 2023 (decision 85/36(d)). Stage II of the HPMP was approved by the Executive Committee at its 88th meeting.¹⁴

56. UNEP as the lead implementing agency, has submitted the final progress report on the implementation of stage I of the HPMP in line with decision 85/36(d) which covers the activities implemented under the final tranche.

HCFC consumption

57. The Government of Senegal reported a consumption of 11.88 ODP tonnes of HCFCs in 2021, which is 67 per cent below its HCFC baseline for compliance of 36.2 ODP tonnes and 13 per cent below the maximum allowable consumption in the Agreement with the Executive Committee of 13.62 ODP tonnes.

58. The Government submitted sector consumption data under the 2021 country programme (CP) implementation report consistent with the data reported under Article 7 of the Montreal Protocol.

Progress report

59. In the course of implementation of the third and final tranche of the HPMP, the Government of Senegal continued controlling HCFC consumption through the operation of the electronic licensing and quota system (which was regularly maintained and updated) and monitoring of illegal trade. A total of 245 customs officers have been trained on identification and control of ODS and ODS-based equipment using refrigerant identifiers. Ozone protection issues have been incorporated into the customs training curricula to ensure continuous training to future officers.

60. In line with decision 85/36(e), and as reported at the 88th meeting,¹⁵ the Government of Senegal implemented the recommendations made in the verification report: provided additional training to customs officers at the border on refrigerant identification and prevention of illegal trade of ozone depleting substances (ODS), created a group of media professionals to disseminate information on HCFC controls, provided additional training to technicians working in informal workshops, and revised the 2017 consumption reported under the CP implementation and the Article 7 data reports.

61. A total of 430 refrigeration technicians have been trained in good practices in refrigeration, including HCFC alternatives and the safe handling of flammable refrigerants. Activities to support the recovery/recycling network were implemented including a technician certification scheme and database, the development of a handbook on good practices for emission prevention, and three training workshops for a total of 54 technicians were held on the recovery/recycling network, the Kigali Amendment, alternatives to HCFCs and HFCs, and the technician licensing and prior authorization system.

62. Funding of US \$2,118 for the monitoring and coordination of the implementation of the HPMP had been carried over from the second tranche and was used for the recruitment of two consultants (one refrigeration and one customs expert) in addition to the existing National Ozone Unit (NOU) team.

¹³ Decision 85/36(b) and (c), Annex XIII of document UNEP/OzL.Pro/ExCom/85/67.

¹⁴ Decision 88/55.

¹⁵ Paragraph 10 of document UNEP/OzL.Pro/ExCom/88/62

Status of disbursement

63. As of October 2022, of the US \$630,000 approved under stage I, US \$575,114 (91 per cent) had been disbursed (US \$294,023 for UNEP and US \$281,091 for UNIDO). The balance of US \$46,400 will be disbursed until December 2022, noting that US \$8,486 had already been returned to previous meetings.¹⁶

Completion of stage I

64. UNEP indicated that a number of in-person activities such as training, delayed due to the pandemic, will still need to be carried out, and that stage I of the HPMP would be completed by 31 December 2022, as stipulated in paragraph 14 of the revised Agreement.

Secretariat's comments

65. In responding to the Secretariat's request for clarification on the remaining training courses for refrigeration technicians and customs officers that are still outstanding, UNEP confirmed that these remaining activities will be completed by the end of 2022.

Gender policy implementation

66. In line with decision 84/92(d), decision 90/48(c),¹⁷ the NOU has encouraged women to participate in technician and customs officers training throughout the implementation of the stage I of the HPMP and has one woman trainer for the technician training workshops.

Recommendation

67. The Executive Committee may wish to note the final progress report on the implementation of the work programme associated with the third and final tranche of stage I of the HCFC phase-out management plan for Senegal, submitted by UNEP and contained in document UNEP/OzL.Pro/ExCom/91/18.

Trinidad and Tobago: HCFC phase-out management plan (stage I – final progress report on the implementation of the work programme associated with the final tranche and the submission of the project completion report (UNDP))

Background

68. At its 86th meeting, the Executive Committee approved the fifth and final tranche of the HCFC phase-out management plan (HPMP) for Trinidad and Tobago, wherein it requested the Government of Trinidad and Tobago and UNDP to submit a progress report on the implementation of the work programme associated with the final tranche and the project completion report (PCR) to the first meeting of the Executive Committee in 2022 (decision 86/53(a)).¹⁸

¹⁶ US \$5,977 was returned by UNEP to the fund under the first tranche and that US \$2,509 was returned to the 88th meeting.

¹⁷ In line with decision 84/92(d), decision 90/48(c) encouraged bilateral and implementing agencies to continue ensuring that the operational gender mainstreaming policy was applied to all projects, taking into consideration the specific activities presented in table 2 of document UNEP/OzL.Pro/ExCom/90/37.

¹⁸ Approval conditions contained in Annex XV of document UNEP/OzL.Pro/ExCom/86/100

Progress report

69. On behalf of the Government of Trinidad and Tobago, UNDP submitted the following information on the implementation of the fifth tranche of stage I:

- (a) A total of 140 technicians were trained on good refrigeration practices and new alternative refrigerants, through virtual training programmes due to restrictions on account of the COVID-19 pandemic; a total of 61 technicians were qualified for a recertification process in 2021 and this process is expected to be completed in 2022. The national ozone unit (NOU) is continuing its efforts to develop a more robust platform/tool which would not only serve as a repository for knowledge on low-global-warming-potential (GWP) alternative refrigerants but also incorporate useful technical resources for refrigeration and air-conditioning (RAC) technicians. An update on the virtual training platform would be provided in stage II of the HPMP;
- (b) The foam sector projects for the four enterprises, namely, Vetter Boxes, Ice Fab, Tropical Marine, Seal Spray Solutions, were completed as of 31 December 2020; these four enterprises converted to methyl formate/water-based technologies. One enterprise (Ice Con) withdrew from the conversion project due to internal organisational reasons and the funding balance amounting to US \$30,600, was returned to the 86th meeting;
- (c) Implementation of the fifth tranche of stage I was completed as of 31 December 2021; and
- (d) The total funds approved under stage I, in the amount of US \$1,462,733, were fully disbursed and the project has been financially closed. The PCR has been submitted.

Secretariat's comments

70. The Secretariat noted that stage I of the HPMP for Trinidad and Tobago was successfully completed as of 31 December 2021; while there were challenges in implementing different components in-person in 2021, the NOU, in consultation with UNDP, managed to complete all the remaining activities through various online tools and virtual processes.

71. The Secretariat requested clarifications relating to the continued use of low-GWP alternative foam blowing agents in Trinidad and Tobago; UNDP informed that the enterprises funded under the conversion project continue to use the low-GWP alternative technologies.

72. The Secretariat noted that the NOU has put considerable efforts on adopting low-GWP alternative technologies in RAC applications. On the availability and use of low-GWP refrigerant-based air-conditioning in the country, UNDP informed that while the Government and the NOU favor hydrocarbons (HCs) as refrigerants, the supply of HC-based air conditioners remains a challenge due to non-availability of such equipment and limited support by retailers on honouring warranty for these products. UNDP mentioned that the Government in consultation with UNDP would continue to monitor the situation and implement activities for the sustainable adoption of the low-GWP alternative technologies keeping in view technical and market factors.

Recommendation

73. The Executive Committee may wish to note the final progress report on the implementation of the work programme associated with the fifth and final tranche and the project completion report for the HCFC phase-out management plan for Trinidad and Tobago, submitted by UNDP and contained in document UNEP/OzL.Pro/ExCom/91/18.

Uruguay: HCFC phase-out management plan (stage II – progress report on the implementation of the conversion of the foam sector and request for additional extension of the date of completion for stage II) (UNDP)

Background

74. Stage II of the HCFC phase-out management plan (HPMP) for Uruguay was approved in principle, at the 77th meeting¹⁹ and the second tranche which included a request for the implementation of a conversion project in 21 small- and medium-sized foam manufacturing enterprises (SMEs) for the phase-out of 5.53 ODP tonnes (50.24 metric tonnes (mt)) of HCFC-141b contained in imported pre-blended polyols to hydrofluoroolefin (HFO) technology was approved at the 82nd meeting²⁰. In approving the tranche, the Executive Committee requested UNDP to report on the progress in implementation of the conversion of the SMEs and the availability of HFO/HFO-based polyurethane (PU) systems and their associated components to the 84th meeting (decision 82/76(b)(ii)). Following this, the Executive Committee requested UNDP to continue reporting on the implementation of the conversions at subsequent meetings.²¹

75. At the 90th meeting, UNDP reported that none of the conversions for the 20 remaining eligible SMEs participating in the project had been completed²² because of continued difficulties sourcing HFOs. Two water heater manufacturers (Warner and Rivomark S.A.) and a thermoware enterprise (Ferroco) had performed trials with HFO-based and water-based products albeit with unsatisfactory results and could not do further testing because of low availability of samples on the market. The same challenges were faced in the spray foam sub-sector; these remaining SMEs have been unable to complete their conversions because of the continued lack of HFO in the market.

76. UNDP had also reported that the National Ozone Unit (NOU), with the support of UNDP and a foam expert, had been working with different systems houses around the region and with local distributors to facilitate samples of HFO-based PU systems, while exploring options such as receiving HFO-based PU systems without the catalyst and blending it in-place, or trying other low-global warming potential (GWP) alternatives (such as water-based systems); that the five importers/distributors of foam blowing agents in the country were assessing different alternatives to HCFC-141b contained in imported pre-blended polyols including water-blown- and HFO-based systems; and that as a consequence of the pandemic, there were logistical constraints in obtaining the raw materials, which has led to a shortage of polyols and other components, as well as a drastic increase in the freight costs.

77. Subsequently, the Executive Committee requested the Government of Uruguay, through UNDP, to submit a progress report on the implementation of the conversion of the foam enterprises, the availability of HFO/HFO-based PU systems and the status of the legislation for the ban on import and use of HCFC-141b and HCFC-141b contained in imported pre-blended polyols at the 91st meeting (decision 90/19).

78. In line with decision 90/19, UNDP has submitted this progress report to the present meeting.

Progress report

79. Since the 90th meeting, UNDP reported that there is still very little availability of HFO in the market with long delays in the supply of material for trials and testing and eventual implementation, due to continued problems in the global supply chain. UNDP further reported that the high cost of HFO systems, compared with the actual cost of HCFC-141b-based formulation is becoming an additional challenge for

¹⁹ UNEP/OzL.Pro/ExCom/77/67 and Annex XXIV of document UNEP/OzL.Pro/ExCom/77/76.

²⁰ UNEP/OzL.Pro/ExCom/82/61.

²¹ Decisions 84/37(b) and 87/20(e).

²² At the 87th meeting UNDP reported that one enterprise (James) in the water heating sub-sector had converted its production to cyclopentane, with an associated phase-out of 1.02 ODP tonnes (9.3 mt) of HCFC-141b.

the formulation of systems especially for spray foam applications, where the concentration of blowing agent is higher, impacting the cost of the final product. UNDP noted that the present situation had not changed from the previous report; most of the enterprises are still awaiting new formulations from their suppliers to conduct additional trials and tests. However, one enterprise (Rivomark) has completed their conversion to HFO as the blowing agent in the production of water heaters, phasing out 1.12 mt (0.12 ODP tonnes) of HCFC-141b and four enterprises have withdrawn from the project and the associated funds will be returned to the Multilateral Fund. These four enterprises use 0.79 mt (0.09 ODP tonnes) of HCFC-141b, which are considered as phased out in the project.

80. The NOU has continued to conduct meetings with the different suppliers to assess the situation. All suppliers, in particular Polyser (the main supplier for the spray application sub-sector), have reaffirmed their commitment to transition to low-GWP alternatives but have continued to experience challenges and have expressed the need to conduct additional trials in winter 2023 (June to September), as lower temperatures have a bigger impact in the behavior of the PU reaction.

81. After consultation with importers and suppliers it has been agreed that the ban on the import of HCFC-141b initially planned for 1 January 2021 would be implemented from 1 January 2023, that imports of HCFC-141b contained in pre-blended polyols would be allowed until 31 December 2023, to give importers the opportunity to complete ongoing purchase orders that had been delayed due to logistical and production problems, exacerbated by the COVID-19 pandemic, and to supply the market until the conversion of the remaining enterprises with the alternative blowing agent is completed.

Completion of stage II

82. The Government of Uruguay through UNDP has requested another extension of the completion date of stage II of the HPMP²³ to complete the conversions of the remaining SMEs in the foam sector to HFO, by 31 December 2023²⁴ due to difficulties faced by these remaining enterprises to source HFO because of supply issues. The extension would allow additional time to get the supply of HFO, approve formulations and conduct field tests which will be key for suppliers and beneficiary companies.

Secretariat's comments

83. The Secretariat expressed concern at the continued delay of the conversions for these remaining enterprises which has inadvertently hampered the completion of stage II of the HPMP; UNDP conveyed that the situation with HFO availability had been impending even before 2020, but supply chain and production issues caused by the pandemic made this even more challenging, especially for small enterprises.

84. In response to requests for clarification on certain issues, UNDP explained with regard to how continued imports of HCFC-141b contained in imported pre-blended polyols would affect the consumption of this substance in the country prior to the ban in the end of 2023, that imports would only be for those companies that are participating in the project and have not completed their conversion. While there is no quota for the import of HCFC-141b contained in imported pre-blended polyols as these are not controlled under the Montreal Protocol, the Government had committed to closely monitor these to ensure that those who had already moved away from HCFC-141b would not revert to using this substance.

²³ Stage II of the HPMP was extended to 31 December 2022 at the 87th meeting (decision 87/20(b)).

²⁴ As per the letter of 3 October 2022 from the Ministry of Environment of Uruguay to UNDP.

85. Regarding the bans on imports of HCFC-141b and HCFC-141b in imported pre-blended polyols, UNDP noted that the Government had committed that the ban on imports of pure HCFC-141b will be enforced by 1 January 2023, and that the ban on HCFC-141b in imported pre-blended polyols will be effective 1 January 2024.

86. UNDP also confirmed that the amount of US \$6,665 will be returned to the 92nd meeting from the four enterprises that have withdrawn from the project. These will comprise only balances from incremental operating costs (IOC) for these enterprises.

87. The Secretariat noted that at the 87th meeting, when agreeing to extend stage II of the HPMP for Uruguay to 31 December 2022, the Executive Committee mentioned that no further extension of project implementation would be requested. In discussions with the Government of Uruguay, UNDP appreciated the continued commitment of the country to ensure that these enterprises complete the conversions and requested that this be taken into account when considering the request for an additional extension.

88. UNDP also committed to continue working with suppliers to ensure the sustainability of the conversions and the availability of alternatives. UNDP further explained that if HFO-based PU systems do not work after the testing period or do not become available in time for the ban to take place, the main suppliers in the country will work with international systems houses that already had other alternatives available, like water-based systems.

89. Based on the information provided by UNDP, the Secretariat considers it appropriate to let the Government and UNDP continue implementation until December 2023, and to report at the 93rd meeting on the progress of these conversions.

Recommendation

90. The Executive Committee may wish:

- (a) To take note of the report on the progress in the implementation of the conversion of the foam enterprises, the availability of hydrofluoroolefin/hydrofluoroolefin-based polyurethane (PU) systems and their associated components funded under stage II of the HCFC phase-out management plan (HPMP) for Uruguay and the request for an additional extension of the date of completion for stage II, submitted by UNDP, and contained in document UNEP/OzL.Pro/ExCom/91/18;
- (b) To approve, on an exceptional basis, the further extension of the date of completion of stage II of the HPMP for Uruguay to 31 December 2023, given the delay in completing the conversions of the remaining foam enterprises due to availability of the alternative and supply chain disruptions;
- (c) To note that the ban on imports of pure HCFC-141b will be implemented by 1 January 2023, and that the ban on HCFC-141b contained in imported pre-blended polyols will be effective from 1 January 2024;
- (d) To request the Government of Uruguay, through UNDP to submit:
 - (i) A progress report on the implementation of the conversion of the foam enterprises, the availability of HFO/HFO based PU systems and the status of the legislation for the ban on import and use of HCFC-141b and HCFC-141b contained in imported pre-blended polyols, at the 93rd meeting; and

- (ii) A progress report on the implementation of the work programme associated with the final tranche and the project completion report to the first meeting of the Executive Committee in 2024.

B. Reports related to HFC projects

Argentina: Control of emissions of HFC-23 generated in the production of HCFC-22 (UNIDO)

Background

91. At its 87th meeting, the Executive Committee approved the project for the control of emissions of HFC-23 generated in the production of HCFC-22 at Frio Industrias Argentina (FIASA) (decision 87/52(b)), followed by, at its 88th meeting, approval of the draft Agreement (decision 88/77(c)) and 2021-2022 annual implementation plan (decisions 87/52(f) and 88/77(b)).

92. The 2021-2022 annual implementation plan *inter alia* anticipated that any HFC-23 by-product generated after 1 January 2022 and before the completion of the refurbishment of the incinerator would be stored in the on-site cryogenic tank until the maximum capacity of the cryogenic tank had been reached. UNIDO noted that in case of unforeseen delays caused by *force majeure*, such as the COVID-19 pandemic, FIASA, the Government of Argentina, and UNIDO would immediately inform the Executive Committee and propose HFC-23 emission mitigation measures.²⁵

93. At the 90th meeting, UNIDO reported delays finalizing a contract for the refurbishment of the incinerator; as a result, delivery of the parts had been delayed. The cryogenic storage tank could have been used to store HFC-23 by-product while the incinerator refurbishment was ongoing at FIASA; however, due to concern by the Government that the cryogenic tank would reach its maximum capacity before the refurbishment was complete, FIASA had not connected the cryogenic tank, and HFC-23 had been vented to the atmosphere between January 2022 and March or April 2022 when it was reconnected. In March 2022, FIASA had also temporarily stopped producing HCFC-22 due to challenges in purchasing raw materials given supply chain disruptions. It was agreed that once the enterprise restarted production of HCFC-22, it would store the HFC-23 by-product generated in the cryogenic tank until the refurbishment of the incinerator was complete or the maximum capacity of the cryogenic tank was reached, as originally planned.

94. Following an informal discussion at its 90th meeting, the Executive Committee decided to request UNIDO to provide to the 91st meeting an update on the progress in implementing the referenced project, including progress in the delivery of the parts needed to refurbish the incinerator, progress toward refurbishing the incinerator, confirmation that the cryogenic tank was storing the HFC-23 by-product generated, the quantity of HFC-23 by-product stored, and the amount of HFC-23 vented, in case there had been any new occurrences (decision 90/24).

Progress report submitted to the 91st meeting

95. In line with decision 90/24, the Government of Argentina, through UNIDO, has submitted a progress report to the 91st meeting. The report confirms that the cryogenic tank is connected and storing the HFC-23 by-product generated, and that there have been no further emissions of HFC-23 vented to the atmosphere beyond those reported to the 90th meeting. FIASA resumed production of HCFC-22 on 13 June 2022. Since that time, production of HCFC-22 at the enterprise had been intermittent due to delays in the supply of anhydrous hydrogen fluoride caused by supply chain disruptions. HFC-23 by-product

²⁵ Paragraph 5 of document UNEP/OzL.Pro/ExCom/88/77.

generated during that period of intermittent production was stored in the cryogenic tank. At the time of finalization of the present document, 6.70 mt of HFC-23 by-product were stored in the cryogenic tank.

96. Many but not all the parts needed to refurbish the incinerator have been delivered. In particular, all the equipment purchased directly by FIASA was delivered except the natural gas flow control and block valves, which were expected to arrive in November 2022. Delivery of some parts from SGL Carbon Group of Meitingen, Germany (SGL), the technology provider for the incinerator, were delayed as the required documentation to initiate the diplomatic franchise process was not provided until October 2022; it was expected that delivery of those parts would take up to three months.

97. To mitigate further delays in the start-up of the incinerator, UNIDO, the Government of Argentina and FIASA were evaluating alternative options. In particular, the natural gas flow control and block valves were expected to be delivered in November 2022, after which FIASA planned to start the incinerator with local parts while waiting for the shipment from SGL to arrive. Accordingly, FIASA expected to operationalize the incinerator by December 2022.

Secretariat's comments

98. FIASA is storing the HFC-23 by-product generated in the onsite cryogenic tank and, notwithstanding delays in the delivery of some of the parts needed to refurbish the incinerator, was expecting to start destroying HFC-23 by-product by December 2022. Based on the current quantity of HFC-23 stored in the cryogenic tank (6.70 mt), the maximum capacity of the tank (31.95 mt), and FIASA's 2021 HCFC-22 production and historic by-product generation rate, the Secretariat estimates that the maximum capacity of the tank would be reached within approximately eight or nine months. The Secretariat notes, however, that FIASA produces HCFC-22 in campaigns and the peak in demand for HCFC-22 is likely to be in the Argentine summer, which could result in the tank being filled sooner. The enterprise expects the incinerator to be operational by the end of 2022, which is at least several months before the maximum capacity of the cryogenic tank would be reached.

Recommendation

99. The Executive Committee may wish to note the progress report on the implementation of the project for the control of emissions of HFC-23 generated in the production of HCFC-22 at Frio Industrias Argentina, submitted by UNIDO, and contained in document UNEP/OzL.Pro/ExCom/91/18.

C. Methyl bromide

Argentina: Methyl bromide phase-out plan (UNIDO)

Background

100. At its 30th meeting, the Executive Committee approved the project for the phase-out of methyl bromide (MB) in strawberry, protected vegetable and cut flower production in Argentina, and at its 36th meeting, approved the project for the phase-out of MB for soil fumigation in tobacco and non-protected vegetable seed-beds. The Agreement between the Government and the Executive Committee was subsequently modified at the 45th meeting. While the Agreement explicitly excluded quarantine and pre-shipment applications from the targets for national MB consumption, the Agreement did not include an exclusion for critical-use exemptions (CUEs) that the Parties to the Montreal Protocol may authorize, and instead specified zero national consumption of MB by 2015. The Parties authorized CUEs for Argentina at each of their meetings from 2015 (26th meeting) to 2021 (32nd meeting).

Secretariat's comments

101. Argentina reported MB consumption of 6.74 ODP tonnes in 2021 which is less than the authorized CUE of 6.79 ODP tonnes for that year. Accordingly, the Secretariat considers that the level of consumption of MB for Argentina in 2021 was zero, as the maximum level specified in the Agreement, except for any CUEs approved by the Parties.

Recommendation

102. The Executive Committee may wish to note that the reported level of consumption of methyl bromide for Argentina in 2021 was zero, as per the Agreement between the Government and the Executive Committee, except for the critical-use exemptions approved by the Parties to the Montreal Protocol.

III. Individual consideration

103. This section includes only one HPMP tranche for individual consideration.

A. Reports related to HCFC phase-out management plans

Brazil: HCFC phase-out management plan (stage II - progress report on the implementation of the fifth tranche and request for extension) (UNDP, UNIDO, the Government of Germany and the Government of Italy)

Background

104. On behalf of the Government of Brazil, UNDP as the lead implementing agency has submitted a progress report and a revised plan of action for stage II of the HCFC phase-out management plan (HPMP).²⁶ The report includes a request by the Government of Brazil to revise its Agreement with the Executive Committee by cancelling the sixth tranche for UNDP in the amount of US \$2,495,000 due to the non-participation of several polyurethane (PU) foam enterprises in the sector plan for conversion to low-global-warming-potential (GWP) alternatives.

Report on HCFC consumption

105. The Government of Brazil reported a consumption of 490.93 ODP tonnes of HCFCs in 2021, which is 63 per cent below its HCFC baseline for compliance. The data on HCFC consumption in the 2021 country programme (CP) implementation report is consistent with that reported under Article 7 of the Montreal Protocol.

106. HCFC consumption in 2021 was slightly higher than that reported in 2020 (452.81 ODP tonnes). The decline in HCFC-141b consumption noted in 2020 and 2021 was influenced by the ban on imports of HCFC-141b used as a foam-blowing agent that went into effect on 1 January 2020; whereas reductions in the use of HCFC-22 in 2020 are ascribed to the COVID-19 pandemic-related restrictions. HCFC-22 consumption increased again in 2021 and is expected to remain at similar levels between 2022 and 2024.

²⁶ As per the letter of 29 August 2022 from the Ministry of the Environment of Brazil to UNDP.

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

PU foam manufacturing sector

Conversion of 13 stand-alone PU foam enterprises (53.52 ODP tonnes)²⁷

107. Eleven enterprises have completed their conversions to water-based technology, methyl formate (MF), methylal, or hydrofluoroolefins (HFOs), phasing out 49.06 ODP tonnes of HCFC-141b, and one additional enterprise is finalizing its conversion to HFOs. The following adjustments have been made to the sector plan:

- (a) The enterprise Ananda Metais (6.93 ODP tonnes) converted to MF instead of hydrocarbon (HC) as originally planned, achieving savings of US \$154,222 by incurring lower incremental capital costs (ICCs). These unspent funds will be deducted from funding for the sixth tranche; and
- (b) The enterprise Tecpur (1.43 ODP tonnes) developed formulations for several low-GWP alternatives; however, it eventually withdrew from participating in the project due to the unavailability of HFOs in the domestic market, coupled with the availability of HFC-365mfc/227ea²⁸ at competitive prices. The remaining funds allocated for this conversion (US \$89,810) will be deducted from the sixth tranche.

108. Table 4 summarizes the progress of conversions in the 13 participating PU foam enterprises.

Table 4. Status of progress of conversion projects in the PU foam manufacturing sector in Brazil

Participating enterprises	Selected alternative technology	Status of implementation	HCFC phase-out (ODP tonnes)
Ananda Metais, Artico, Cold Air, F. Ibipora, Gelopar, IBF, Isar, Niju, Refrimate, São Rafael, Termjet/Thermotelas (11)	CO ₂ , MF, methylal, HFO	Project completed	49.06
Bulltrade (1)	HFO	Completed formulation development and started industrial conversions	3.03
Tecpur (1)	HFC (self-funded)	Withdrew from the project	1.43
Total:	13		53.52

Conversion of 14 systems houses with 445 downstream users²⁹ (116.20 ODP tonnes)

109. Nine eligible systems houses have completed developing their formulations with low-GWP blowing agents, followed by plant conversions where needed, and are now in the process of assisting their downstream users (DSUs) to convert to the new formulations; 100 DSUs have already completed conversions. The remaining systems houses and DSUs are at different stages of implementation. During the implementation of the project the following issues were encountered:

- (a) It was not possible to reach an agreement with Basf and Dow (both ineligible systems houses) to support the conversion of their (eligible) DSUs. Therefore, UNDP started assisting these DSUs directly, having so far completed two conversions and started a

²⁷ The project originally included 14 enterprises consuming 57.14 ODP tonnes of HCFCs, but funding for the enterprise Poliumetka (3.63 ODP tonnes) was removed from stage II as the project had been completed under stage I.

²⁸ The blend being used in Brazil consists of 93 per cent HFC-365mfc and 7 per cent HFC-227ea.

²⁹ Out of over 700 DSUs identified in the country, only 445 were included for funding under the Multilateral Fund.

third one;

- (b) One systems house (Polisystem) declined to participate in the project, stating that it would migrate from the use of HCFC-141b to HFC-365mfc/HFC-227ea technology with its own resources, and making the associated conversions of its 47 DSUs ineligible for assistance. Accordingly, funding associated with the Polisystem group investment project (US \$950,562) will be deducted from the sixth tranche; and
- (c) Thirty-three DSUs will not participate in the HPMP because they have either stopped manufacturing PU foam (4), already received assistance under stage I (20), been identified as ineligible (1), or declined to participate in the project and chosen to convert to HFC-365mfc/HFC-227ea with their own resources (8). In addition, one DSU had lower consumption than initially reported, resulting in ICC savings. The resources associated with the conversion of these DSUs (US \$1,300,407) will be deducted from the sixth tranche.

110. The status of progress of the group projects is presented in table 5.

Table 5. Status of progress of group conversion projects in the PU foam manufacturing sector in Brazil

Participating systems houses	Selected alternative technology	Status of systems house conversions	Number of participating DSUs			Status of DSU conversions	HCFC phase-out (ODP tonnes)
			Planned*	Actual	Converted		
Amino	Methylal	Completed formulation and plant conversions; converting DSUs	46	43	6	Ongoing	37.26
Ariston	MF, methylal		28	28	0		
Ecoblaster	MF		31	26	3		
Flexível	HFO		33	30	8		
M. Cassab	HFO		23	21	3		
Polyurethane	MF		16	16	36		
Purcom	MF		90	83	26		
Shimtek	HFO		11	9	2		
U-Tech	MF, HFO		5	5	0		
Comfibras	HFO	Ongoing	12	12	0	Not started	
Univar	Methylal, HFO, CO ₂	Ineligible	84	76	14	Ongoing **	
Basf	HFO		8	7	2		
Dow	HFO		11	9	0		
Polisystem	MF	Removed from the HPMP	47	0	0	Removed from the HPMP	
Total		14	445	365	100		37.26

* Only including enterprises funded by the Multilateral Fund. The total estimated number of DSUs in the country is over 700.

** DSU conversions associated with Basf and Dow are being implemented directly by UNDP.

111. As reported at the 86th and 88th meetings, the constraints imposed by the COVID-19 pandemic continued to slow down the ongoing conversion of systems houses and DSUs, and reduced the demand for foam products. The delayed conversions to low-GWP foam-blowing agents led systems houses to use existing stocks of HCFC-141b as well as several low-GWP alternatives (i.e., MF, methylal) after the ban on imports of HCFC-141b entered into force on 1 January 2020. However, many enterprises have deferred their decision to join the project because they prefer not to commit to never using HFCs, owing to concerns about the imbalance in the supply of zero-ODP and low-GWP blowing agents, especially HFOs.

Temporary use of high-GWP technology

112. One systems house (U-Tech), which has completed the conversion of its manufacturing plant from HCFC-141b to MF, continues to temporarily use HFC-134a to replace the use of HCFC-22 at some of its DSUs using the froth application, which requires the use of a gaseous blowing agent (i.e., the usual low-GWP technology alternatives to HCFC-141b cannot be used in this application), with the commitment to discontinue the use of HFC-134a with its own resources as soon as gaseous HFO is available on the market and polyol systems containing it have been developed and optimized.

113. In addition, due to the shortage of HFOs in the domestic market resulting from two emergency situations declared by the HFC producer in the region during the last year, three systems houses (Amino, Flexível and Purcom, that had already converted to low-GWP alternatives) have requested authorization from the Government of Brazil to use HFC-365mfc/HFC-227ea to supply some of their clients.

Refrigeration and air-conditioning manufacturing sector (61.05 ODP tonnes)

114. Activities undertaken in the commercial refrigeration manufacturing sector included individual projects in the supermarket sector, group projects, and a technical assistance project in small and medium-sized enterprises (SMEs). The status of implementation is presented below.

Commercial refrigeration individual projects (8.67 ODP tonnes)

115. This project includes the conversion to R-290 of two enterprises (Eletrofrio and Plotter Rack), consuming more than 35 mt of HCFC-22, and a demonstration of the new technology in the supermarket sector. As previously reported, both enterprises completed the conversion of their manufacturing plants to operate with R-290, developed R-290-based modular chiller prototypes, and installed them in supermarkets. Several workshops were held to disseminate the results of the projects.

Commercial refrigeration group projects (3.22 ODP tonnes)

116. This project includes the conversion of three enterprises with consumption between 10 and 35 mt of HCFC-22. As previously reported, two of these enterprises (Chopeiras Ribeirão Memo, 1.24 ODP tonnes, and Aquagel Refrigeração, 1.05 ODP tonnes) have completed their conversions, and manufactured and installed R-290-based units at several customers. The funds associated with the third enterprise (Freeart Seral, 0.93 ODP tonnes), which withdrew from the HPMP, were returned by UNIDO at the 90th meeting (US \$202,100, plus agency support costs of US \$14,147).

Commercial refrigeration technical assistance project for SMEs³⁰ (3.85 ODP tonnes)

117. Between 2018 and 2022, UNIDO and the Government of Brazil held eight workshops for 398 SMEs, installers and educational institutions, *inter alia* on the experiences of enterprises in the sector that had converted or were in the process of converting to low-GWP technologies, the availability of components for low-GWP technologies, and the revised standards for commercial refrigeration.

118. Out of the 20 SMEs that manufacture commercial refrigeration equipment completely in their plants, two have completed conversions to R-290-based technology, and seven have started conversions to technologies based on R-290 (five) and HFO (two). All conversions at SMEs are expected to be completed by the end of 2023.

³⁰ Of the 33 SMEs included in the project as approved, four SMEs that decided not to participate were replaced by four other eligible SMEs; these changes were approved at the 82nd and 84th meetings (decisions 82/62 and 84/33).

119. At the 88th meeting, UNIDO had identified three SMEs that might have stopped activities and potentially eligible SMEs that could replace them. In line with decision 88/61(b)(ii), UNIDO reported that two of those enterprises, Gelomax (0.23 mt) and So Frio (2.31 mt), would not participate in the HPMP, and that associated funding³¹ would be allocated to two other eligible enterprises with similar levels of consumption, Peracchi (2.10 mt) and Zero Grau (0.90 mt). The third enterprise, AGB, continues to be included in the project.

Room air-conditioning (AC) manufacturing sector (45.31 ODP tonnes)

120. The project included the conversion of three room AC manufacturers (Climazon, Elgin and Gree) to R-290, at a total funding of US \$7,353,365, approved in principle. At the 86th meeting, the Executive Committee noted that the three enterprises had converted with their own resources to R-410A-based technology, resulting in the phase-out of 823.80 mt (45.31 ODP tonnes) of HCFC-22. Accordingly, the funding balance of US \$7,147,469, plus agency support costs of US \$500,323 for UNIDO, associated with the conversion of the enterprises was deducted from stage II of the HPMP (decision 86/89(a)(iii) and (iv)).

Refrigeration and air-conditioning servicing sector

121. Activities in this sector continue to be implemented without modification. Additional progress reported since the approval of the fifth tranche includes the training of an additional 1,113 (for a total of 5,868) technicians in best servicing practices for split and window-type air conditioners and the training of an additional 207 (for a total of 1,127) technicians in best commercial refrigeration practices; the selection and contracting of five technical training institutions to carry out training on the safe use of flammable refrigerants in AC systems and the initiation of a tendering process for the acquisition of R-290 air conditioners and tools for the aforementioned training; the production of technical information on the safe use of HC and carbon dioxide refrigerants; the development and distribution of technical handbooks and awareness materials; and the continued support provided for the review, discussion and development of technical standards in the refrigeration and air-conditioning sector.

Project implementation and monitoring

122. The project implementation and monitoring unit (PMU) continues to provide both international and national technical assistance to the Government and the eligible enterprises, including missions and technical visits, as well as managing the implementation of investment projects; drafting, executing and monitoring service contracts; preparing periodic progress and financial reports and technical documentation; organizing follow-up meetings with the Ministry of the Environment and the Brazilian Cooperation Agency; undertaking technical analyses of products and financial control of the funds approved; and organizing awareness-raising activities.

Level of fund disbursement

123. As of July 2022, of the US \$25,146,674 approved so far, US \$15,392,807 had been disbursed (US \$9,220,937 for UNDP, US \$2,494,554 for UNIDO, US \$3,427,316 for the Government of Germany, and US \$250,000 for the Government of Italy) as shown in table 6. The balance of US \$9,753,867 will be disbursed in 2023-2024. No funds are being requested at the present meeting.

Table 6. Financial report of stage II of the HPMP for Brazil (US \$)

Tranche		UNDP	UNIDO	Germany	Italy	Total	Disbursement rate (%)
First tranche	Approved	3,078,900	*1,748,175	1,299,386	250,000	6,376,461	96
	Disbursed	3,078,900	1,523,343	1,299,386	250,000	6,151,629	

³¹ US \$66,000 per enterprise, including a refrigerant handling package (US \$50,000), safety measures (US \$10,000), and contingencies (US \$6,000). No IOCs are included in the project.

Tranche		UNDP	UNIDO	Germany	Italy	Total	Disbursement rate (%)
Second tranche	Approved	2,627,704	0	686,978	0	3,314,682	100
	Disbursed	2,627,704	0	686,978	0	3,314,682	
Third tranche	Approved	7,168,396	**1,902,953	2,363,637	0	11,434,986	47
	Disbursed	3,421,625	971,210	992,520	0	5,385,355	
Fourth tranche	Approved	0	0	1,004,545	0	1,004,545	26
	Disbursed	0	0	260,400	0	260,400	
Fifth tranche	Approved	***1,400,000	116,000	1,500,000	0	3,016,000	9
	Disbursed	92,708	0	188,032	0	280,740	
Total	Approved	14,275,000	3,767,128	6,854,546	250,000	25,146,674	61
	Disbursed	9,220,937	2,494,554	3,427,316	250,000	15,392,807	
Balance		5,054,063	1,272,574	3,427,230	0	9,753,867	

* Including a deduction of US \$202,100 in line with decision 88/61(a)(iii).

** Value revised in line with decision 86/89(a)(ii).

*** Value revised in line with decision 88/61(a)(ii).

124. In line with decision 88/61(a)(iii), UNIDO deducted US \$202,100 from the first tranche based on the return of funds made at the 90th meeting. Accordingly, the first tranche for UNIDO will be adjusted from US \$1,950,275 to US \$1,748,175, as shown in table 6. This adjustment will be reflected in the revised Agreement, as done with the previous returns of funds.

Extension of stage II of the HPMP

125. UNDP reported that procurement and supply-chain issues created by the COVID-19 pandemic have caused delays in the implementation of project activities, making it necessary to extend the duration of stage II to December 2025. The last tranche of the stage will therefore be requested in 2024 rather than 2023.

Secretariat's comments

Modifications to the PU foam sector and the Agreement

126. The summary of adjustments proposed to the PU foam sector plan and the associated changes in funding are presented in table 7.

Table 7. Proposed adjustments to the PU foam sector plan in stage II of the HPMP for Brazil

Enterprise	Reason for modifications	HCFC-141b consumption (ODP tonnes)	Funding to be deducted from the sixth tranche (US \$)
Ananda Metais (individual conversion)	Savings due to change of technology from cyclopentane to MF	6.93	154,221
Tecpur (individual conversion)	Enterprise declined participation	1.43	89,810
Polisystem systems house and its 47 DSUs	Systems house declined participation	13.09	950,562
Eight DSUs	Enterprises declined participation	3.56	230,638
20 DSUs	Enterprises already converted to low GWP alternatives	8.82	547,658
Four DSUs	Enterprises discontinued manufacturing PU foam	3.66	343,104
One DSU	Enterprise found ineligible for funding	0.44	39,760
One DSU	Verified enterprise consumption was lower than initially reported	3.67	139,246
Total		41.6	2,495,000

127. The Secretariat verified the funding levels to be returned by enterprises that would not be participating in the plan. In the case of Ananda Metais, the savings are associated to a lower level of ICCs due to fewer items required for the conversion to MF than to HCs (i.e., high-pressure foam equipment and safety adaptations to the plant). As for the remaining enterprises, the values in the table accurately reflect the level of allocated funds. Accordingly, the total value of US \$2,495,000 for UNDP will be deducted from the sixth tranche of stage II of the HPMP for Brazil.

Temporary use of high-GWP alternatives

128. Regarding the use of HFC-134a by U-Tech, the Secretariat notes that there have not been any new developments since the 88th meeting. Regarding the authorization given to Amino, Flexível and Purcom to use high-GWP technology on a temporary basis, upon request UNDP provided the average consumption of HFC-365mfc/HFC-227ea for the three systems houses, as shown in table 8.

Table 8. Temporary consumption of HFCs by three systems houses in Brazil

Systems house	Monthly average consumption of HFC-365mfc/HFC-227ea (mt)
Amino	0.96
Flexível	11.76
Purcom	3.56
Total	16.28

129. The Secretariat noted that the overall GWP of the blend was higher than that of the originally proposed HCFC-141b and HFO-1233zd(E). Regarding the estimated timeframe for the use of HFC blends by these enterprises, UNDP reported that it had initially been authorized until September 2022, but an extension was being discussed between UNDP and the systems houses. UNDP explained that it was difficult to determine how long the temporary use of HFCs should last, with systems houses indicating that the supply of HFOs would likely continue to be limited in Brazil, as global producers focus on their main markets and clients, i.e., the European Union market and large international systems houses with long-term contracts.

130. Regarding the question of the three systems houses potentially adopting other available low-GWP technologies rather than HFCs, UNDP reported that Flexível had selected HFO as an alternative, and that a new conversion to flammable technologies without Multilateral Fund assistance would not be economically feasible due to the high investment required for plant adaptations. Amino and Purcom are already using other technologies (MF, methylal and water-based) for many of their clients, and have only requested the temporary use of HFCs to supply some of their unassisted DSUs who do not meet the technical requirements for adopting new technologies. Both systems houses stated that they would use HFOs for these DSUs once the supply became stable and affordable. The current price of HFC-365mfc/HFC-227ea is between US \$10.75 and US \$13.80 per kg, while the price of HFO-1233zd(E), when available, is between US \$17.80 and US \$20.80 per kg.

131. UNDP further explained that so far the Government had not considered any disincentive to the import or use of HFC blends, as it was still in the process of ratifying the Kigali Amendment. The Secretariat notes with appreciation that during the last stage of review of the present report, the Government of Brazil had completed the process of ratification of the Kigali Amendment (19 October 2022).

132. Considering the above circumstances, and in line with precedent cases related to the temporary use of high-GWP alternatives and decision 88/61(b)(i)a., the Secretariat suggests that UNDP continue to assist the Government of Brazil in securing the supply of low-GWP alternative technologies for the Amino, Flexível, Purcom and U-Tech systems houses, on the understanding that any incremental operational costs related to the conversions (where applicable) would not be paid until the technology originally selected or

another low-GWP technology had been fully introduced, and to provide, at each meeting until the technology originally selected or another low-GWP technology had been fully introduced, a report on the status of temporary use of high-GWP alternatives, along with an update from the suppliers on the progress made towards ensuring that the selected technologies, including associated components, were available on a commercial basis in the country.

133. In the case of Brazil, these reports will also be valuable to continue monitoring the special situation with regard to the availability of HFC-365mfc/HFC-227ea at competitive prices combined with the lack of availability of HFO-1233zd(E), which has affected some conversions in the PU foam sector plan.

Replacement of two eligible enterprises in the technical assistance project for SMEs in commercial refrigeration

134. Gelomax and So Frio are phasing out 2.54 mt of HCFC-22 without Multilateral Fund assistance. UNIDO proposed that the funds previously allocated for these enterprises be reallocated to the newly identified eligible enterprises Peracchi and Zero Grau (3.0 mt). Upon review of the information provided, the Secretariat recommends the reallocation of US \$132,000 from Gelomax and So Frio to Peracchi and Zero Grau (3.0 mt), noting that the costs of conversion will be the same. Accordingly, the project will phase out an additional 0.46 mt (0.04 ODP tonnes) of HCFC-22.

Project implementation and monitoring

135. The Secretariat proposed a reduction in PMU funding, proportionate to the lower cost and effort represented by the combined removal from the project of individual conversions, systems house conversions and 80 DSUs in the PU foam sector. UNDP explained that the PMU had deployed additional efforts linked to verifying and validating the information for each enterprise in order to adjust the PU foam sector plan, and had further spent additional resources to monitor and provide clarifications to enterprises in the foam sector in the context of the HFO shortage in combination with the COVID-19 pandemic. The remaining resources were therefore still needed to assist the remaining enterprises to convert.

136. Based on the level of PMU funding previously approved for stage II (5.75 per cent of the total value of the stage), the amount associated to the enterprises removed from the HPMP and the effort already made to verify and validate the information related to these enterprises, the Secretariat estimated that the level of funding to be returned was US \$87,487. In order to maintain the resources to assist the remaining enterprises, UNDP agreed to associate this sum to additional reductions of HCFC-22 in stage II of the HPMP. At US \$4.80/kg, this represents 18.60 mt (one ODP tonne) of HCFC-22. Accordingly, one additional ODP tonne of HCFC-22 will be deducted from the country's remaining eligible consumption for funding.

Revised Agreement

137. The Secretariat has modified Appendix 2-A of the Agreement between the Government of Brazil and the Executive Committee to reflect the adjustments proposed to the PU foam sector plan and the associated cancellation of the sixth tranche for UNDP (US \$2,495,000 plus agency support costs), the request from the Government of Brazil to update the value of the first tranche for UNIDO from US \$1,950,275 to US \$1,748,175 (plus agency support costs) due to a fund return from the commercial refrigeration sector that took place at the 90th meeting, and the reduction of one ODP tonne from the remaining eligible consumption of HCFC-22. The Secretariat also updated in Appendix 7-A the reductions in funding for failure to comply from US \$154.98 per ODP kg to US \$111.90 per ODP kg, based on the revised overall level of funding of stage II of the HPMP.

Recommendation

138. The Executive Committee may wish:

- (a) To note:
- (i) The progress report on the implementation of the fifth tranche of stage II of the HCFC phase-out management plan (HPMP) for Brazil and the request for extension submitted by UNDP, contained in document UNEP/OzL.Pro/ExCom/91/18;
 - (ii) That the polyurethane (PU) foam enterprise Ananda Metais changed the selected technology from cyclopentane to methyl formate, resulting in savings of US \$154,222;
 - (iii) That the PU foam enterprise Tecpur, the systems house Polisystem and the 80 downstream PU foam users would not participate in stage II of the HPMP, and that one additional PU foam enterprise had lower consumption of HCFC-141b than initially reported, resulting in savings of US \$2,340,778;
 - (iv) That savings of US \$2,459,000, plus agency support costs of US \$174,650 for UNDP, associated with the conversion of the PU foam enterprises referred to in sub-paragraphs (a)(i) and (a)(ii) above, would be deducted from the sixth tranche of stage II of the HPMP;
 - (v) That one ODP tonne would be deducted from the remaining eligible consumption of HCFC-22 associated to the project monitoring unit costs related to the reductions in the PU foam sector plan referred to in sub-paragraph (a)(iv);
 - (vi) That the enterprises Gelomax and So Frio, consuming 2.54 mt (0.14 ODP tonnes) of HCFC-22, have withdrawn from stage II of the HPMP, and that the enterprises Peracchi and Zero Grau, with a total consumption of 3.00 mt (0.17 ODP tonnes) of HCFC-22, have been included in stage II, at no additional cost to the Multilateral Fund;
 - (vii) That the Fund Secretariat has updated the Agreement between the Government of Brazil and the Executive Committee, as contained in Annex II to the present document, specifically: Appendix 2-A, including the funding deduction from the sixth tranche for UNDP referred to in sub-paragraph (a)(iv) above, the adjustment of the first tranche for UNIDO due to the return of funds referred to in decision 88/61(a)(iii), the reduction of the remaining eligible consumption referred to in sub-paragraph (a)(v) above, and the postponement of the sixth tranche to 2024; Appendix 7-A, adjusting the reductions in funding for failure to comply; and paragraph 16, modified to indicate that the updated Agreement supersedes that reached at the 88th meeting;
- (b) To approve:
- (i) The reallocation of US \$132,000 from the enterprises Gelomax and So Frio to the enterprises Peracchi and Zero Grau, as indicated in sub-paragraph (a)(vi) above;

- (ii) The extension of the implementation period of stage II of the HPMP for Brazil to 31 December 2025, given delays in implementing phase-out activities owing to the COVID-19 pandemic, on the understanding that no further extension would be requested; and
- (c) To request that UNDP continue to assist the Government of Brazil in securing the supply of alternative technologies with low global-warming potential (GWP) to the Amino, Flexível, Purcom and U-Tech systems houses, on the understanding that any incremental operational costs related to the conversions (where applicable) would not be paid until the technology originally selected or another low-GWP technology had been fully introduced, and to provide, at each meeting until the technology originally selected or another low-GWP technology had been fully introduced, a report on the status of temporary use of high-GWP alternatives, along with an update from the suppliers on the progress made towards ensuring that the selected technologies, including associated components, were available on a commercial basis in the country.

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF BRUNEI DARUSSALAM 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

(Relevant changes are in bold font for ease of reference)

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. UNEP has agreed to be the lead implementing agency (the “Lead IA”) and **UNIDO** has agreed to be the cooperating implementing agency (the “Cooperating IA”) under the lead of 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.

17. At the 91st meeting, UNDP stopped being the Cooperating IA in respect of the Country’s activities under this Agreement. This updated Agreement supersedes the Agreement reached between the Government of Brunei Darussalam and the Executive Committee at the 86th meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2020	2021-2023	2024	2025-2026	2027	2028-2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	3.96	3.96	3.96	1.98	1.98	1.98	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	3.96	3.96	3.96	1.98	1.98	1.98	0.00	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)	149,100	0	76,100	0	67,300	0	58,500	351,000
2.2	Support costs for Lead IA (US \$)	19,383	0	9,893	0	8,749	0	7,605	45,630
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	**11,000	0	154,000	0	69,000	0	0	234,000
2.4	Support costs for Cooperating IA (US \$)	**990	0	13,860	0	6,210	0	0	21,060
3.1	Total agreed funding (US \$)	160,100	0	230,100	0	136,300	0	58,500	585,000
3.2	Total support cost (US \$)	20,373	0	23,753	0	14,959	0	7,605	66,690
3.3	Total agreed costs (US \$)	180,473	0	253,853	0	151,259	0	66,105	651,690
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)								3.96
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)								2.14
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								0.00

*Date of completion of stage I as per stage I Agreement: 31 December 2022 as per decision 87/8(b)

** Funds were transferred from UNDP to UNIDO at the 91st meeting

Annex II

TEXT TO BE INCLUDED IN THE REVISED UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL 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

(Relevant changes are in bold font for ease of reference)

16. This updated Agreement supersedes the Agreement reached between the Government of Brazil and the Executive Committee at the 88th meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	1,194.60	1,194.60	1,194.60	1,194.60	1,194.60	862.74	862.74	862.74	862.74	862.74	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	1,194.60	1,194.60	1,194.60	1,194.60	1,194.60	862.74	730.02	730.02	730.02	730.02	n/a
2.1	Lead IA (UNDP) agreed funding (US \$)	3,078,900	0	2,627,704	7,168,396	0	0	1,400,000	0	0	0	14,275,000
2.2	Support costs for Lead IA (US \$)	215,523	0	183,939	501,788	0	0	98,000	0	0	0	999,250
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	1,748,175	0	0	1,902,953	0	0	116,000	0	0	0	3,767,128
2.4	Support costs for Cooperating IA (US \$)	122,372	0	0	133,207	0	0	8,120	0	0	0	263,699
2.5	Cooperating IA (Germany) agreed funding (US \$)	1,299,386	0	686,978	2,363,637	0	1,004,545	1,500,000	0	0	872,727	7,727,273
2.6	Support costs for Cooperating IA (US \$)	144,614	0	76,457	263,059	0	111,800	166,941	0	0	97,129	860,000
2.7	Cooperating IA (Italy) agreed funding (US \$)	250,000	0	0	0	0	0	0	0	0	0	250,000
2.8	Support costs for Cooperating IA (US \$)	32,500	0	0	0	0	0	0	0	0	0	32,500
3.1	Total agreed funding (US \$)	6,376,461	0	3,314,682	11,434,986	0	1,004,545	3,016,000	0	0	872,727	26,019,401
3.2	Total support costs (US \$)	515,009	0	260,396	898,053	0	111,800	273,061	0	0	97,129	2,155,449
3.3	Total agreed costs (US \$)	6,891,470	0	3,575,078	12,333,039	0	1,116,345	3,289,061	0	0	969,856	28,174,850
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)											164.16
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)											51.50
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)											576.34
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)											300.90
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)											168.80
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)											52.00
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)											0.00
4.3.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)											0.00
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)											5.60
4.4.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)											0.00
4.4.2	Phase-out of HCFC-123 to be achieved in previously approved projects (ODP tonnes)											0.00
4.4.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)											0.30
4.5.1	Total phase-out of HCFC-124 agreed to be achieved under this Agreement (ODP tonnes)											0.00
4.5.2	Phase-out of HCFC-124 to be achieved in previously approved projects (ODP tonnes)											0.00
4.5.3	Remaining eligible consumption for HCFC-124 (ODP tonnes)											7.70

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 \$111.90** 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. 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 related 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.
