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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-first Meeting
Montreal, 5–9 December 2022
Item 16 of the provisional agenda¹

REPORT OF THE SUB-GROUP ON THE PRODUCTION SECTOR

Introduction

1. The Sub-group on the Production Sector, which had been reconstituted at the 90th meeting of the Executive Committee, met on 5 and 8 December 2022 in the margins of the 91st meeting. It consisted of the representatives of Brazil, Canada, Cuba, Finland, India, Italy, the United States of America, and Zimbabwe, with Canada acting as facilitator. Representatives of the World Bank were also present as observers.

Agenda item 1: Adoption of the agenda

2. The facilitator of the Sub-group welcomed the participants.
3. The Sub-group adopted the provisional agenda as set out in document UNEP/OzL.Pro/ExCom/91/SGP/1.

Agenda item 2: Organization of work

4. The Sub-group agreed to follow the organization of work proposed by the facilitator.

Agenda item 3(a): 2021 verification report of the HCFC production sector

5. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/91/SGP/2, presenting the 2021 verification report of the HCFC production sector in China. She informed the Sub-group that the verification had been conducted virtually, as was the case for the 2019 and 2020 verifications. The report also included information related to the verification of the feedstock lines, as requested by decision 88/79(b) and (c), as well as the report on the assessment of the producer that exceeded its production quota in 2020, as requested by decision 88/79(d).

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¹ UNEP/OzL.Pro/ExCom/91/1

6. In the ensuing discussion, appreciation was expressed at the progress being made by the Government of China in phasing out HCFC production for controlled use, and the fact that it continued to be in compliance with its HCFC production and consumption obligations under its agreement with the Executive Committee, despite the challenges presented by the COVID-19 pandemic. The hard work by the Government and producers to control emissions of HFC-23 by-product was also noted.

7. Members raised queries on several issues. On the matter of the HCFC producer that had inadvertently used 18.58 metric tonnes of compensated capacity to produce HCFC-142b for feedstock use, some members queried whether the penalty applied of US \$2,787, calculated at US \$0.15 per kilogram, was sufficient deterrent to prevent recurrence. One member, while acknowledging the intention of the Government to organize training workshops and seminars for all HCFC producers to improve their daily production management, asked whether additional domestic sanctions might be applied to the enterprise. Another member enquired as to whether the penalty rate was fixed or was within a certain range.

8. In response to the query, the representative of the Secretariat confirmed that the producer had inadvertently produced 18.58 metric tonnes more HCFC than its maximum allowable production in 2021 for feedstock use. The penalty of US \$0.15 per kg had been calculated based on the Agreement between the Government of China and the Executive Committee, and was the maximum allowable under the Agreement. The representative of the World Bank confirmed that the use of compensated capacity had been unintentional and had arisen from a lapse in record keeping. The representative of China added that the error was not common, and there was no basis under existing domestic policy and regulations for the imposition of further sanctions. Strengthening training and improving management systems in the production sector should help prevent further similar incidents.

9. Clarification was also sought by members on the matter of the HCFC feedstock producer that had purchased 145.72 metric tonnes of HCFC-22 for feedstock use and had diverted 59.41 metric tonnes of that amount to a controlled use within the facility, and the implications of that diversion for China's reporting under Article 7 of the Protocol. Queries were also raised as to whether the events described had any implications for the original producer of the HCFC-22 purchased by the feedstock producer, whether such an event might recur in the future, and whether sanctions were in place to prevent such a recurrence.

10. The representative of the Secretariat confirmed that the producer had purchased from another producer HCFC-22 for feedstock use but had instead used part of that purchased HCFC-22 for a controlled use, and the Government of China would revise its Article 7 data and country programme data accordingly. On the matter of the implications for the original producer of the HCFC, it was clarified that that the amount fell within the quota of the producer to produce HCFC for controlled use, in which case the amount diverted would simply be reclassified from feedstock to controlled use. Regarding any penalty that might apply, sanctions under the Agreement covered overproduction compared to the quota and redirection of phased out capacity to feedstock use, but it did not directly cover the current case where the end-user had registered for both controlled and feedstock use. The user purchased the total 145.72 metric tonnes for feedstock use, but used part of it as refrigerant without informing the producer of this change.

11. Further clarification was also requested by members on the differences between the quantities of HFC-23 by-product generated and emitted as reported in the verification report and the quantities reported by China under Article 7 of the Montreal Protocol. One member stated that the use of different methodologies to report HFC-23 generation and emissions gave rise to confusion and could be addressed in future. While the verification report indicated that China had emitted less than 30 metric tonnes of HFC-23 by-product in 2021, reflecting the country's considerable efforts to reduce such emissions, the country had reported emitting over 1,000 metric tonnes of HFC-23 by-product under Article 7, and the reasons for the substantial difference between those reported quantities remained unclear. Additional information related to the HFC-23 generated at two lines producing HFC-23 as the intended product that were included in the country's Article 7 data report was requested, as was more information on the reasons for the reduction in the by-product generation rate.

12. The representative of the Secretariat responded to the issues raised. On the difference between the data included in the verification report and those submitted under Article 7, and whether that difference had arisen because China had included HFC-23 generation from HFC production lines in the country's Article 7 data report, the Secretariat clarified that China had not included HFC-23 generation from HFC production lines other than from the two lines whose intended product was HFC-23. While the difference between the data in the verification report and the data submitted under Article 7 in terms of the amount of HFC-23 destroyed was quite small, the difference in the amounts generated and emitted was much larger, as the Article 7 data had been based on a mass balance approach and an independent verification that only became available after the verification undertaken by the World Bank. On the matter of the reduction in the by-product generation rate, new HCFC-22 production lines were more easily able to take advantage of process optimization, while existing lines benefited from improved production practices.

13. Subsequently, in its second session, the Sub-group further discussed the recommendation under the present agenda item, including the importance to the Executive Committee of obtaining information clarifying the discrepancy between the 2021 emissions of HFC-23 reported under Article 7 of the Montreal Protocol and in the 2021 verification report.

14. The Sub-group on the Production Sector recommended that the Executive Committee:

- (a) Note:
 - (i) The 2021 verification report of the HCFC production sector in China considered by the Sub-group on the Production Sector;
 - (ii) The report on the outcome of the assessment by the Government of an HCFC producer that might have exceeded its assigned 2020 quota for production of ozone-depleting substances for domestic use, submitted in line with decision 88/79(d);
 - (iii) That the verification referred to in sub-paragraph (a)(i) above was undertaken virtually in light of the COVID-19 pandemic and the World Bank had not yet been able to undertake the verification required by decisions 84/93(b), 86/99(e) and 88/79(c), or to provide the addenda required by decision 88/79(b)(i);
- (b) Request the World Bank to submit to the Executive Committee at the last meeting of 2023:
 - (i) An addendum to the 2019, 2020, and 2021 verification report of the HCFC production sector in China;
 - (ii) The one-off verifications required by decisions 86/99(e) and 88/79(c);
 - (iii) An update related to Suqian Kaier, including related to the integrated nature, closure and dismantling of the HCFC-22 production line, as part of the verification of the 2022 HCFC production sector in China;
- (c) Request the World Bank to verify, on a one-off basis, that the newly established production lines for HCFC-22 in Jiangxi Lee and Man Chemical Company Limited, Jiangsu Changshu 3F Zhonghao New Chemical Material, and Liaocheng Fu'er New Materials Science and Technology Co. Ltd, as well as the line in Zibo Feiyuan Chemical Co. Ltd for HCFC-133a, were vertically integrated with the production of the downstream facilities and all HCFCs produced in the new lines would be for feedstock use, and to submit that report to the last meeting of 2023;

- (d) Apply the penalty clause in the Agreement between the Executive Committee and the Government of China on the basis that 18.58 metric tonnes of compensated HCFC production capacity had been redirected towards feedstock by the Zhejiang Artsen Chemical Co. Ltd facility, noting that:
 - (i) The penalty was calculated at US \$0.15 per kg, resulting in an amount of US \$2,787 to be returned to the Multilateral Fund through China and the World Bank to the 91st meeting;
 - (ii) The Government of China was taking steps to prevent further cases of redirection towards feedstock production by reviewing domestic options available to it, including by organizing training workshops and seminars for all HCFC producers to raise awareness and to enhance their daily production management, and organizing trainings for local Ecology and Environment Bureaus to enhance their capacity in enforcing regulations, managing phase-out, and monitoring HCFCs producers;
- (e) To invite the Government of China, through the World Bank, to submit to the last meeting of 2023 an update on the development of the technical guideline being developed by the Government of China for HFC-23 generation and emission reporting and a description of the methodology used to report that generation and those emissions under Article 7 of the Montreal Protocol; and
- (f) To further request the Government of China, through the World Bank, to submit, to the last meeting of 2023, an analysis and information that would clarify the discrepancy between the 2021 emissions of HFC-23 reported under Article 7 of the Montreal Protocol and the 2021 verification report.

Agenda item 3(b): Progress report on implementation of the first tranche and request for funding of the second tranche of stage II of the HPPMP

15. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/91/SGP/3, presenting the Secretariat's comments and recommendations on the project proposal related to the HCFC production phase-out management plan (HPPMP) (stage II, second tranche) for China, as well as a report on progress made on implementation of the first tranche. Information was also presented on the 2023–2024 tranche implementation plan, which included the expected closure and dismantling of two HCFC-141b production lines, in line with China's commitment to give priority to HCFC production closure.

16. In the ensuing discussion, appreciation was again expressed for the continued successful implementation of China's HPPMP. One member observed that in the request for funding under the second tranche, a considerable proportion of the proposed reduction in HCFC production would be achieved by lowering quotas of HCFC producers, which could be more challenging to verify than reductions through closure of production lines and asked how such reductions would be enforced and verified. Another member, noting that table 4 of document UNEP/OzL.Pro/ExCom/91/SGP/3 indicated the establishment of a number of HCFC feedstock production lines between 2019 and 2022, asked what impact that would have on implementation of the Agreement between the Executive Committee and the Government of China and whether it could be expected that more lines would be established in the future. He also requested further information of the legal and regulatory status of the notification on control of HFC-23 issued in September 2021 by the Ministry of Ecology and Environment, including clarification of the meaning and scope of the specifications under the notification that HFC-23 by-product generated in the production of HCFC-22 or HFCs should not be directly vented to the atmosphere; and that, except for feedstock and controlled uses, HFC-23 by-product should be destroyed to the extent practicable using technology approved by the Parties.

He also asked whether, within that context, semi-conductor etching was classified as a feedstock use or a consumptive use.

17. In relation to the query regarding enforcement and verification, the representative of the Secretariat noted that China had regulations and mechanisms in place to enforce those regulations, and that the World Bank adopted a comprehensive methodology for verification of production for controlled uses that would continue for the duration of the HPPMP. Regarding the increase in the number of feedstock facilities, he said that that was a market-driven increase and could be expected to continue unless there was a change in market conditions. With regard to the notification by the Ministry of Ecology and Environment, the Secretariat understood that the regulation on direct venting to the atmosphere of HFC-23 by-product generated in the production of HCFC-22 or HFCs referred to intentional emissions rather than to fugitive emissions that could not be controlled, but the Government of China could provide further information on that and related issues, including the regulatory status of the notification. On the matter of semi-conductor etching, that was indeed a consumptive use, but the Secretariat was unaware as to whether the Government of China had specific regulations in that regard.

18. Subsequently, in its second session, the Sub-group further discussed the recommendation under the present agenda item, which had been updated following inputs from the Government of China, the World Bank, and members of the Sub-group, including related to the appropriate terminology for the measures of the Government of China to control emissions of HFC-23 by-product. During the discussion, one member noted that it was not the intention of the Executive Committee to micromanage implementation of the Agreement between the Executive Committee and the Government of China, but rather to encourage the Government of China through its internal approaches to take the appropriate actions to ensure its implementation, including paragraph 10, which related to an issue of great importance for his delegation.

19. The Sub-group on the Production Sector recommended that the Executive Committee:

- (a) Note the progress report on the implementation of the first tranche of stage II of the HCFC production phase-out management plan (HPPMP) for China, considered by the Sub-group on the Production Sector;
- (b) Request the Government of China, through the World Bank, to submit the reports of the following technical assistance activities supported under the HPPMP:
 - (i) The 2019–2022 investigation of HCFC feedstock applications in China to the last meeting of 2023;
 - (ii) The 2020–2021 investigation of HCFC dealers in China to the first meeting of 2023;
- (c) Note China's 2021 notification requiring HFC-23 by-product destruction to the extent practicable from HCFC-22 and HFC production facilities, and invite the Government of China, through the World Bank, to provide an update to the second meeting of the Executive Committee in 2023 with the most recent information on HFC-23 generation, destruction, and emissions in China, and any relevant regulatory or implementation updates;
- (d) Approve the second tranche of the HPPMP in China, and the corresponding 2023–2024 tranche implementation plan, in the amount of US \$22,000,000, plus agency support costs of US \$1,232,000 for the World Bank; and

- (e) Request the Treasurer to offset future transfers to the World Bank by US \$431, representing interest accrued from funds previously transferred for the implementation of stage II of the HPPMP.

Agenda item 4: Draft guidelines and the standard format used for the verification of ODS production phase-out (decision 90/52)

20. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/91/SGP/4, which, in line with decision 90/52, included relevant information on ways to better define vertical integration; changes to the draft updated guidelines requested in decision 83/70(b) and those made following the Secretariat's intersessional consultations with the World Bank; and some editorial changes to improve clarity and to reflect the ongoing ODS production phase-out programmes.

21. During the ensuing discussion on the proposed definition of "vertically integrated facilities," there was some debate on the usage and applicability of the terms "ozone-depleting substances (ODS)", "controlled substances" and "HCFCs." While global information on production processes was lacking, the key issue in the definition of a "vertically integrated facility" was a matter of process, which would apply irrespective of the controlled substance used. One member favoured use of the term "HCFCs", as the guidelines were applicable to projects financed by the Multilateral Fund currently under implementation to phase out HCFCs and would not apply retroactively to any other substances that had already been phased out. The representative of the Secretariat confirmed that, as stated in paragraph 16 of the document, "the guidelines would not apply to completed production phase-out projects." Other members said that care should be taken to ensure consistency of terminology, noting that the term ODS was currently used throughout the guidelines, including in the title; replacing that term with "HCFCs" throughout would involve a major revision.

22. One member said that, with regard to the essential features listed in the definition of a vertically integrated facility, the final feature – stating that "The vertically integrated facility may also purchase controlled substances to supplement those produced from the in-house production line(s) as long as the quantities of such supplementary controlled substances are monitored and reported clearly" – might not correctly be defined as an essential feature, and might be better placed elsewhere, for example in the chapeau section of the definition.

23. One member requested further clarity on the meaning of the element of a vertically integrated facility defined as follows in paragraph 17 of the document: "The design capacity of the downstream production process must be compatible or larger than the capacity of the upstream line(s) producing controlled substances." The representative of the Secretariat said that, while acknowledging the limited data on which to base conclusions, the analysis of the Secretariat had indicated that the mode of transportation was a less relevant feature in defining a vertically integrated facility than the institutional and operational integration of the upstream HCFC production line and the downstream process that used the HCFC that was produced. If the HCFC production was less than or equal to the amount needed by the downstream facility, that would help provide reassurance to the Executive Committee that all the HCFCs produced on the production line were in fact directed to downstream feedstock use and there would be no redirection of HCFCs from the production line to controlled use, such that the production facility would not have to undergo annual verification. If, however, the HCFC production line had a larger capacity than that of the downstream facility, there could be greater risk of diversion. Those elements of the definition in paragraph 17 of the document were intended to recognize that both the HCFC production line and the downstream feedstock production facilities were industrial processes that needed to be able to respond to market demand; however, the relative size and capacity of those facilities was an important factor in whether the Executive Committee was reassured that all HCFC production was channelled to the downstream facility and whether the production facility should be subject to annual verification, irrespective of the mode of transportation.

24. In response to a query, the representative of the Secretariat clarified that Article 7 data included aggregate information on production, import, export and destruction, but did not include information related to stock levels at specific facilities.

25. Due to the limited time available, the Sub-group agreed to continue discussion of the agenda item at its next meeting.

Agenda item 5: Draft HCFC production sector guidelines (decision 90/53)

26. Due to a lack of time to discuss the matter, the Sub-group on the Production Sector recommends that the Executive Committee defer consideration of the HCFC production sector guidelines to a future meeting of the Executive Committee.

Agenda item 6: Other matters

27. No other matters were raised.

Agenda item 7: Adoption of the report

28. The present report was reviewed by the facilitator and submitted to the Chair of the Executive Committee for transmission to the 91st meeting of the Executive Committee.

Agenda item 8: Closure

29. The meeting of the Sub-group on the Production Sector was closed at 9.45 a.m. on 8 December 2022.