

**United Nations
Environment
Programme**Distr.
GENERALUNEP/OzL.Pro/ExCom/83/38
3 May 2019

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-third Meeting
Montreal, 27-31 May 2019

**OVERVIEW OF CURRENT MONITORING, REPORTING, VERIFICATION AND
ENFORCEABLE LICENSING AND QUOTA SYSTEMS****Background**

1. At its 82nd meeting, the Executive Committee considered a note from the Secretariat on issues related to: energy efficiency; cost guidelines for the phase-down of HFCs; and the increase in the global emissions of CFC-11,¹ under agenda item 12 on matters relevant to the Multilateral Fund arising from the 40th meeting of the Open-ended Working Group of the Parties and the Thirtieth Meeting of the Parties.
2. Following the presentation, the first member to take the floor expressed the view that the issue of unexplained CFC-11 emissions was one of most serious challenges ever faced by the Montreal Protocol. Responding successfully to that challenge would ensure the Protocol's future health and reputation. It was therefore of the utmost importance to identify opportunities for improvement, but also the vulnerabilities that might exist within the policies and procedures of the Fund, in order to strengthen the Montreal Protocol and all of its institutions. The member argued in favour of going beyond simply examining policy frameworks or monitoring and verification systems. The goal should be to obtain consistent reporting from those frameworks and systems to enable ongoing assessment of the performance of the Fund and identification of opportunities and vulnerabilities in real time.
3. The member also pointed out that the Fund played a role in ensuring compliance, both with the Protocol and with the Agreements between countries and the Committee. Information should therefore be provided to the Parties on the specific provisions in the Agreements aimed at ensuring compliance, such as: the return of funds; penalties for non-compliance; the procedure for obtaining the approval of the Committee regarding major changes to activities under the Agreement; sustained reductions throughout multi-year agreements (MYAs); and country ownership of long-term compliance with the Protocol. The Secretariat should further provide information on the provisions in the Agreements that required reporting and that were related to institutional strengthening (IS) thereby aiming to ensure the long-term, sustained compliance with the Montreal Protocol after project completion. On the matter of licensing systems, it was necessary to go beyond information on their existence to consider their enforceability. One member

¹ UNEP/OzL.Pro/ExCom/82/70

mentioned a number of issues related to controlled substances that merited further analysis, including production, stockpiles, movement through free-trade zones (FTZs), and import and export. In addition, robust monitoring, verification and reporting was required to ensure that lessons learned from past and current issues.

4. Another member said that the seriousness of the issue required all Montreal Protocol institutions and parties to work together to address the matter and provide input. Information was required not only on the framework and systems that existed, but also on how those systems functioned in reporting the required information. The member also said that it would be useful to request the Secretariat to consider how those systems could be strengthened and what tools were needed to update them, including for monitoring activities following the closure of projects. A review of verification processes could also be undertaken to establish whether they adhered to the terms of reference under which they operated and what could be done to improve them. In addition, it would be useful to undertake evaluation of the mechanisms to monitor redirection from non-controlled uses to controlled uses in production facilities and the phase-out of production after project completion. On the matter of illegal trade, work could be carried out in collaboration with the Ozone Secretariat to find improved methods of reporting illegal trade in a non-judgemental way, thus gaining an improved understanding of such trade.

5. Another member said that it was necessary to undertake a careful and critical evaluation of existing procedures in order to have an effective and sustainable system in place for reviewing activities. Shortcomings in the existing system should be identified and rectified before adding to the list of activities to be undertaken.

6. Following the discussion,² the Chair proposed to proceed by tasking a group of interested Committee members with making concrete recommendations to the Secretariat regarding future steps. Following the report by the contact group, the Executive Committee decided *inter alia*:

- (a) To request the Secretariat to provide the Ozone Secretariat with information as required and in a timely manner, to enable it to provide parties with an overview to the 41st Open-Ended Working Group meeting, outlining the procedures under the Protocol and the Multilateral Fund with reference to controlled substances by which the Parties review and ensure continuing compliance with Protocol obligations and with the terms of Agreements under the Fund, including with regard to monitoring, reporting and verification, in line with paragraph 6 of decision XXX/3, based on the information contained in document UNEP/OzL.Pro/ExCom/82/70; and
- (b) To request the Secretariat to develop a document for consideration at the 83rd meeting that would include an overview of current monitoring, reporting, verification and enforceable licensing and quota systems, including the requirements and practices of the systems for reporting back to the Executive Committee that had been developed with support from the Multilateral Fund (decision 82/86(b) and (c)).

Actions taken since the 82nd meeting

7. In line with decision 82/86(b), on 28 February 2019 the Fund Secretariat submitted to the Ozone Secretariat a document³ containing a Note from the Multilateral Fund Secretariat based on the information contained in document UNEP/OzL.Pro/ExCom/82/70.

² Paragraphs 323 to 331 of document UNEP/OzL.Pro/ExCom/82/72

³ Overview of the procedures under the Multilateral Fund by which the Parties review and ensure continuing compliance with the terms of Agreements under the Fund, available at <http://conf.montreal-protocol.org/meeting/oewg/oewg-41/presession/Backgrounddocumentsothers/OEWG-41-CFC11-NotebyFundSecretariat.pdf>

8. The Note from the Secretariat provides information on procedures under the Fund with reference to controlled substances by which the Committee reviews and ensures continuing compliance with the terms of Agreements under the Fund, including with regard to monitoring, reporting and verification.⁴ It outlines the Multilateral Fund policies and procedures with emphasis on:

- (a) The regulatory framework established by Article 5 countries under the Multilateral Fund;
- (b) The relevance of IS projects through which funding has been provided to the national ozone units (NOUs);
- (c) The mandatory reporting on consumption and production of controlled substances by Article 5 countries, and the consistency of the data reported under country programme (CP) reports and under Article 7 of the Montreal Protocol;
- (d) The monitoring and evaluation activities under the Multilateral Fund, with a list of desk studies and field evaluation reports relevant to the request by the Parties to the Montreal Protocol;
- (e) The conditions in MYAs that need to be met before releasing funding tranches, including: independent verification of compliance with ODS reduction targets stipulated in the phase-out Agreements; the monitoring of the agreed activities undertaken under the Agreements; the roles and responsibilities of the national institutions; the roles and responsibilities of the bilateral and implementing agencies; and the implications of non-compliance with the Agreements; and
- (f) The role of UNEP Compliance Assistance Programme (CAP) in providing compliance assistance to Article 5 countries, and the tools, products and services that it has developed for customs and enforcement officers.

Discussions at the Inter-agency coordination meeting (IACM)⁵

9. Noting the relevance of the above-mentioned issue for the Executive Committee and the major implications associated with it, the Secretariat included this issue at the IACM. To facilitate the discussions, the Secretariat prepared a document presenting an overview of current monitoring, reporting, verification and enforceable licensing and quota systems.⁶

10. During the discussions, the Secretariat reiterated the relevance of the issue and the urgency to take immediate actions to address it. Serious concerns have been expressed at the Executive Committee, as well as at the Meeting of the Parties, regarding the unexplained emissions of CFC-11. A number of suggestions were made, including clearly defining the final accountability for monitoring completed projects, the industry's role in enforcement, establishing new performance indicators for countries when implementing IS projects, and changes in national monitoring approaches to better monitor and verify the use of ODS, including those already phased out. It was also suggested that the CP data reporting format could include the reporting of the use of already phased-out substances, where this information was available.

⁴ For the purposes of the present document, "verification" is intended as independent verification of compliance with the targets specified in MYAs.

⁵ Montreal, 5 – 7 March 2019.

⁶ MLF/IACM.2019/1/23

11. The difficulties of these mechanisms (i.e., monitoring, reporting, verification, and controlling licenses and quotas) with respect to FTZs and controlled substances contained in imported pre-blended polyols, and the potential role FTZs play in facilitating the movement of controlled substances outside regular monitoring, reporting, verification and licensing and quota systems, were discussed.

12. UNEP indicated its willingness to adjust the future CAP priorities and to make these topics a regular feature of the network meetings, possibly taking example from countries with effective enforcement policies and using them for other countries. Referring to performance indicators for IS, there were already a number that focused on enforcement, including reporting on the licensing and quota systems and monitoring of illegal trade.

13. UNDP, UNIDO and the World Bank emphasized that the agencies' responsibilities ended once the agreement between the country and the agency was completed, all activities were implemented, and assets from the project were transferred to the enterprise/Government. Once these were turned over, the agency had no legal authority to continue monitoring activities in the country. It was suggested the need to tighten the conditions for sector plans, for instance ensuring that bans were included, established and enforced, as these legal and institutional actions would prevent the entry of the phased-out substance.

14. It was highlighted that many Article 5 countries, particularly low-volume consuming (LVC) countries, did not have penalties for non-compliance with applicable regulations. Article 5 countries could use successful examples from countries where penalties for non-compliance were enforced and which might encourage compliance with applicable rules and regulations.

15. It was suggested that the verification of consumption could also be used as a monitoring mechanism for controlled substances other than those covered by the Agreement for which the verification was committed. However, the terms of reference of the verifications would need to be revised to expand its scope and ensure this could take place.

Actions taken during the project review process for the 83rd meeting

16. During the review process of tranche funding requests submitted to the 83rd meeting, the Secretariat raised specific questions related to the sustainability of the phase-out achieved, including whether a ban on the import of controlled substances that have already been phased out and equipment containing those substances is in place; whether the current licensing and quota system still includes the monitoring of such substances; whether there have been cases of illegal imports of those substances; whether the national ozone officers (NOOs) are aware of stocks of such substances in their country; and whether the NOOs were aware of any use of those substances in the market, noting that such use would not necessarily constitute consumption. Responses to those questions have been incorporated in relevant country project proposal documents submitted to the 83rd meeting.⁷

17. In addition, the Secretariat confirmed with bilateral and implementing agencies that they ensure that ODS-based equipment had been destroyed/dismantled/rendered unusable upon completion of investment projects in the consumption sector, that the projects are declared completed only after this is done, and that the project completion reports (PCRs) include information on the actions taken to ensure that specific equipment or components replaced had in fact been destroyed or rendered unusable, in line with decisions 17/22, 22/38(c), 23/7, 24/56, 28/2 and 30/6. Relevant bilateral and implementing agencies reassured that they complied with the above-mentioned decisions.

⁷ In addition to those cases identified in UNEP/OzL.Pro/ExCom/83/11/Add.1, one country reported a seizure of CFC-12; in addition, during the international workshop on capacity-building for the implementation of the Montreal Protocol (18-19 March 2019, Beijing), another country reported the seizure and subsequent re-export of an illegal shipment of HCFC-22. No other reports of illegal use or shipments were received.

18. The Secretariat expresses its appreciation for the assistance provided by bilateral and implementing agencies in addressing those matters.

Document submitted to the 83rd meeting

19. In line with decision 82/86(c), the Secretariat has prepared the present document.

20. The document consists of the following sections:

- (a) Monitoring and reporting: an overview on the relevance of IS in supporting countries' compliance with the Montreal Protocol obligations and with the terms of Agreements under the Multilateral Fund; the monitoring and reporting systems in place, focussing on consumption and production data of controlled substances reported under CP data reports as well as under Article 7 of the Montreal Protocol; monitoring and evaluation that is undertaken by the Senior Monitoring and Evaluation Officer (SMEO); and support provided by UNEP CAP to Article 5 countries in strengthening their national capacities and infrastructure established with the assistance from the Multilateral Fund;
- (b) Verification under MYAs: an overview of the independent verification of a country's compliance with the reduction targets under the Agreements for the phase-out of controlled substances between the Governments concerned and the Executive Committee; a review of the implementation of the licensing, quota, import/export control and monitoring system carried out as part of the consumption verification; and the verification requirements for the production sector; and
- (c) Regulatory framework for controlled substances: an overview of the support provided under the Multilateral Fund for policy and regulatory frameworks to facilitate the compliance of Article 5 countries with the Montreal Protocol, with emphasis on their national licensing and quota systems accompanied by other control regulations.

21. Based on the overview of the above-mentioned systems and frameworks, the document suggests ways to further strengthen the current monitoring, reporting, verification and the regulatory framework that has been established under the Fund, for consideration by the Executive Committee. The document presents a recommendation.

22. The document also includes the following two annexes:

Annex I: A summary of relevant documents prepared by the SMEO

Annex II: Summary of Customs and Enforcement UNEP OzonAction Tools, Products and Services

Monitoring and reporting

23. IS has over the years become synonymous with support for NOUs, which are on the front line of implementation of Montreal Protocol-related activities, and has become one of the pillars of the Multilateral Fund.⁸ IS has been relevant in supporting countries' compliance with the Montreal Protocol obligations and with the terms of MYAs under the Multilateral Fund by:

- (a) Assisting authorities in the ratification of the amendments to the Montreal Protocol. As of 4 December 2014 all of the long-standing amendments to the Montreal Protocol have been universally ratified, and as of 5 April 2019, 70 Article 5 countries have ratified the Kigali Amendment;
- (b) Assisting authorities to put in place and enforce legislation and regulations for the control and monitoring of controlled substances;
- (c) Managing the collection, analysis and submission of consumption and production data reports under Article 7 of the Montreal Protocol to the Ozone Secretariat, and under progress reports on the implementation of CP to the Fund Secretariat;
- (d) Coordinating stakeholders, namely Government institutions, including customs authorities and ODS importers/exporters and traders; industry and industry/trade associations; training centres; and non-governmental organizations (NGOs); and linking Government authorities with the Executive Committee, the Fund Secretariat, and bilateral and implementing agencies;
- (e) Planning, organizing, directing and coordinating all activities required for the implementation of phase-out plans;
- (f) Integrating ozone protection issues into national plans; and
- (g) Implementing awareness raising for stakeholders including the public.

Monitoring and reporting of controlled substances

24. In line with reporting requirements of the Montreal Protocol, all Article 5 countries are reporting imports, exports and production of controlled substances under Article 7 of the Montreal Protocol to the Ozone Secretariat, and all Parties that have received funding from the Multilateral Fund, are submitting progress reports on the implementation of CP to the Fund Secretariat.⁹

25. CP reports represent the sole source of information on the sector distribution of the use of the controlled substances in Article 5 countries. Based on the CP data reports, the Secretariat prepares a document on CP data and prospects for compliance, which is submitted at each meetings of the Executive Committee, and of the Implementation Committee under the Non-compliance Procedure of the Montreal Protocol as an information document.

⁸ The final report on the evaluation of IS projects submitted to the 56th meeting concluded that most Article 5 countries had achieved the ozone-depletion substance (ODS) phase-out as scheduled, and that this could not have been achieved without IS funding (UNEP/OzL.Pro/ExCom/56/8).

⁹ At its 5th meeting, the Executive Committee noted that Governments should monitor the progress being made in reducing consumption of controlled substances in line with their plans set out in the CP, and should periodically review the effectiveness of the measures being taken, and requested Article 5 Parties to present annually information on progress being made in the implementation of their CPs. (UNEP/OzL.Pro/ExCom/5/16, paragraphs 22 and 23).

26. The document summarizes data and information from the CP reports received, presenting *inter alia* an analysis of the status of compliance of these countries with the control measures under the Montreal Protocol (currently, the final phase-out of MB and TCA and the 10 per cent reduction of HCFCs by 2015, and the 35 per cent reductions of HCFCs by 1 January 2020). However, the document does not address consumption and production of controlled substances that have already been phased out (e.g., CFCs, carbon tetrachloride (CTC) and halons).

27. The document also compares the consumption and production data under CP reports with the data reported under Article 7 of the Protocol, and identifies potential data inconsistencies between the two data sets.¹⁰ On several occasions, data inconsistencies have been drawn to the attention of both the Executive Committee and the Parties to the Montreal Protocol. While sectoral uses reported under the CP in any given year (i.e., CP data) may differ from the imports in that year (i.e., Article 7 data), such differences should be explained (e.g., because an import that entered the country in one year was used in the subsequent year, because of stockpiling, or other reasons). Moreover, except for the reporting of controlled substances contained in pre-blended polyols, imports reported under the CP should not differ from those reported under Article 7. In cases of unexplained data inconsistency, the Executive Committee requests relevant bilateral and implementing agencies to assist the Governments concerned in clarifying the cause of the inconsistency. The two independent data sets and the comparison of data reported under each provides a useful quality assurance mechanism.

28. Article 5 countries also include consumption and production data (where applicable) in their project proposals, and the data reported therein are compared with CP data and Article 7 data to determine eligible consumption and production (where applicable) for funding.¹¹ Moreover, progress reports submitted with each funding tranche request include information on the consumption of controlled substances. Those detailed progress reports have been useful to *inter alia* assess the potential risk of a Party to be in non-compliance with the Protocol; determine the accuracy of the consumption previously reported (e.g., a number of countries had changed their starting points and levels of consumption in base years and subsequent years); identify consumption that had not been reported (e.g., HCFC-22/HCFC-142b blends); and use that had not been reported (i.e., HCFC-141b in pre-blended polyols).

29. Reports on the production of controlled substances submitted to the Ozone Secretariat, break down production for controlled uses¹² and for non-controlled uses.¹³ In contrast, production for non-controlled uses is not included in CP reports, except for QPS uses of methyl bromide. Countries that have production for non-controlled uses must control and track the country's production to ensure that there is no diversion to controlled uses. Such controls are critical to ensuring the sustained compliance of the phase-out beyond the completion of the project phasing out the production for controlled uses.

Monitoring and reporting of phase-out activities supported by the Multilateral Fund¹⁴

30. As specified in the Agreements for the phase-out of controlled substances between the Governments concerned and the Executive Committee, countries conduct regular monitoring of the progress of the activities in their national phase-out plans. The institutions proposed for monitoring and their roles and responsibilities vary by country and are described in the Agreements. The reporting of such

¹⁰ For example, the document submitted to the 82nd meeting discusses data discrepancies found in: Brunei Darussalam; Burundi; China; Jordan; Morocco; South Africa; Syrian Arab Republic; Trinidad and Tobago; Venezuela (Bolivarian Republic of) (UNEP/OzL.Pro/ExCom/82/9).

¹¹ Decision 34/18(a) and decision 41/16.

¹² Controlled uses are those uses that are subject to a phase-out schedule under the Montreal Protocol.

¹³ For example, for feedstock or for quarantine and pre-shipment (QPS).

¹⁴ In addition to the monitoring and reporting discussed in this section, bilateral and implementing agencies submit annual financial and progress reports that enable monitoring the status of implementation of projects, delays in implementation, and ensure financial accountability including by ensuring financial completion and return of balances.

monitoring is through the submission of tranche progress reports, which are reviewed by the Secretariat prior to submission to the Executive Committee. This reporting ends upon completion of the project.

31. The Agreements also define the roles and responsibilities of the bilateral and implementing agencies that provide assistance to the countries concerned:

- (a) As lead agency: ensuring performance and financial verification in accordance with the Agreements and with its specific internal procedures and requirements; preparing progress reports for previous funding tranches and plans of action for the following funding tranche; independent verification that the phase-out targets have been met and the associated tranche activities have been completed; fulfilling the reporting requirements for the progress reports and the overall plans; ensuring that independent technical experts carry out technical reviews; carrying out supervision missions; ensuring that the mechanism in place allows for effective, transparent implementation of the phase-out plan and accurate data reporting; and policy, management and technical support;
- (b) As cooperating agency: policy development when required; implementing and assessing the activities funded by the cooperating agency while referring to the lead agency to ensure a co-ordinated sequence in the activities; and reaching consensus with the lead implementing agency on any planning, co-ordination and reporting arrangements to facilitate the implementation of the plan.

Monitoring and evaluation under the Multilateral Fund

32. The monitoring and evaluation of Multilateral Fund-financed projects is undertaken by the SMEO, and involves periodic reporting to measure progress or lack thereof of on-going and completed projects. It provides information on the strengths and limitations of various types of projects and phase-out plans, the major causes of failure to reach targets, lessons learned during implementation, and recommendations for actions to improve the performance of the Fund. The SMEO also monitors the submission of PCRs, which are submitted by agencies within six months of completion of a project. PCRs for stand-alone investment projects included detailed information on eligible incremental capital costs, incremental operating costs, any possible savings incurred during the conversion and relevant factors that facilitated implementation.¹⁵ PCRs for MYAs have been streamlined to focus on the lessons learned during implementation of the project and can encompass multiple sectors and activities.

33. The monitoring and evaluation work programme of the SMEO is submitted annually for approval by the Executive Committee. Based on the approved work programmes, the SMEO has undertaken a number of desk studies, case studies, and field evaluations on a wide range of issues including those relevant to the request by the OEWG. For reference, Annex I to the present document presents a summary of relevant documents prepared by the SMEO.

UNEP CAP

34. The CAP was approved by the Executive Committee for the first time in 2002 to, *inter alia*, provide services to Article 5 countries through a regional presence to ensure and sustain the countries' compliance with the Montreal Protocol measures. Since its approval, CAP's core services include:

- (a) Providing country-specific assistance to address individual compliance-related needs articulated by NOUs;

¹⁵ Annex XI.5: Format for project completion report (investment projects). *Policies, procedures, guidelines, criteria (As at November 2017)*.

- (b) Strengthening national capacity of countries for effective customs and trade controls, most specifically through the informal and voluntary prior informed consent (iPIC) mechanism designed to exchange information on intended trade between importing and exporting partners in ODS, and ODS-containing mixtures, products and equipment;¹⁶ and
- (c) Developing materials and tools that are freely distributed to support countries in their monitoring, reporting, and licensing and quota systems. Annex II to the present document presents a summary of CAP tools, products and services to support customs and enforcement officers in implementing their ODS licensing systems, facilitate legal trade, and detect and prevent illegal trade.

35. The CAP also operates nine¹⁷ regional networks of ODS Officers that support capacity-building of Ozone Officers to design and implement phase-out policies, strategies, and programmes that are appropriate to the conditions in their countries. These networks meet twice each year to share lessons learned and exchange experiences, information and approaches among the network members, non-Article 5 country partners, the Fund Secretariat, the Ozone Secretariat, bilateral and implementing agencies, and technical experts, other organizations and individuals experienced with the ODS phase-out.

Verification under MYAs

36. Since 1999, MYAs have become the predominant funding modality of the Multilateral Fund to assist Article 5 countries in achieving the phase-out targets under the Montreal Protocol. Currently, MYAs relate to HCFC phase-out management plans (HPMP) and HCFC production phase-out management plans (HPPMPs), which specify the commitment of the Governments concerned to achieve sustained aggregate reductions of consumption and production (where applicable); the funding approved in principle; the conditions that need to be met before releasing funding tranches, including independent verification of a country's compliance with the reduction targets under the Agreement, unless otherwise specified by the Executive Committee;¹⁸ the monitoring of the activities included in the Agreements, and the roles and responsibilities of the national institutions and the bilateral and implementing agencies; and the implications of non-compliance with the Agreements.

37. To facilitate the preparation of verification reports of the phase-out plans, which is under the responsibilities of the lead implementing agency, the Executive Committee approved guidelines and standard formats for verification of both consumption and production of controlled substances. Following the guidelines, the verification reviews national legislation, policies and procedures on imports/exports of the controlled substances covered by the Agreement.

38. Annual consumption and production (where applicable) levels of controlled substances are verified against the targets specified in the Agreement, for all years for which a target is set in the Agreement, except those years which have been previously verified, unless otherwise specified by the Executive Committee.

39. A review of the implementation of the licensing, quota, import/export control and monitoring system is carried out as part of the verification in the consumption sector. It includes a description of how the annual quota is set, who can apply for a license, who is responsible for granting or refusing applications

¹⁶ To further support this initiative, UNEP has also launched the iPIC online system that provides member countries with real-time, 24-hour, 7-days a week personalized access to key licensing system data in each of the participating countries. In 2019, UNEP will continue to promote the use of the iPIC and other tools to prevent illegal trade of ODS and ODS-based equipment, and facilitate legal trade in Article 5 countries.

¹⁷ Southeast Asia, South Asia, Pacific Island Countries (PIC), West Asia, English-speaking Africa, French-speaking Africa, Europe and Central Asia, Central and Latin America, and the Caribbean networks.

¹⁸ For LVC countries (i.e., countries with an HCFC consumption baseline in the refrigeration servicing sector of 360 metric tonnes and below), a sample of 20 per cent of these countries will be selected for the purposes of verification for that year. Additional funding is provided to these countries to undertake this exercise.

and under what criteria, and how the decision is communicated to the applicant and other relevant stakeholders. Data collected for actual imports is compared with the reported data in both the CP data report and Article 7 data report, as well as with the consumption targets specified in the Agreement.

40. The information on administrative procedures contained in verification reports includes whether national customs codes can identify imports of different controlled substances and controlled substances contained in imported pre-blended polyols where applicable. The legal basis for the licensing process is provided (e.g., supported by national regulation, internal agreement), including conditions for refusal, non-extension of annual quotas, and the responsible authority for issuing import and export licenses. Sanctions or penalties to be imposed on violation of legal regulations are described. In countries where one or more authorities are involved, a description of the specific roles of each, and a flowchart is provided.

41. Verifications in the production sector are carried out according to the standard format for verification of ODS production phase-out approved by the Executive Committee at its 32nd meeting (decision 32/70).¹⁹ Verifications should include: an analysis of daily production logs and the financial records; a comparison of actual production to annual quota assigned for each ODS production monitored and at each plant site; review of any quota trading or changes of quotas during the verification year, review and verification of conformity of raw materials consumption with the ODS production monitored; identification of each production campaign and distributed production and raw material consumption data per campaign; confirmation of production quantities and raw material consumption from production logs; verification of sales and procurements of monitored ODS products against financial records; verification of stock at the beginning and the end of year against financial records; a review of the system of record keeping at each production facility for adequacy; confirmation that cumulative inventory change of monitored ODS corresponds to annual production and sales data; integration of hourly in-plant flow rate data (corrected for concentration if necessary), over time (either graphically or analytically) to get an independent value for production; and other data.

42. Verifications vary depending on whether production for exempted uses continues after the phase-out of production of controlled uses. Where closure of production facilities is not required as production for uses that are not controlled may continue, verifications include a parallel technical and financial verification, where the former focuses on the production line to determine production, total sales, internal uses, stock inventory changes, and raw material consumption from daily operation logs and original material movement records. The financial verification covers the producer's financial system and original accounting records to determine production, internal use, overall raw material consumption, domestic sales and exports for ODS use and for feedstock use, sorted by direct sales/exports (by producer) and indirect sales/exports (through dealers). In the process, a cross-check is conducted between the producer export records and customs for each individual plant being verified. Upon completion of the independent technical and financial verifications, the verification outputs from both sides are cross-checked by going through the technical data and financial data to ensure the consistency of verified results.

43. Where closure of the production facilities is required after phase-out of the production for controlled uses, verifications further include documentation, including photographic or video evidence, of the dismantling of key equipment so that production cannot resume after the completion of the project.

44. Independent verification of ODS consumption and production has been a useful tool to assist Article 5 countries to improve their ODS import and export licensing and quota systems and the procedures to operate them in a reliable manner. There are many instances in which the verification has provided recommendations to address deficiencies or introduce improvements in the system. The Secretariat is

¹⁹ UNEP/OzL.Pro/ExCom/83/SGP/2 contains a review of the guidelines and standard format used during the verification of ODS production phase-out, and analysis of aspects where further improvements could be made to support compliance through strengthening the monitoring of the ODS production and the associated costs (decision 82/87). That document will be discussed under agenda item 15.

directly involved in reviewing the findings and recommendations contained in a verification report, and bring relevant issues to the attention of the Executive Committee for decision. In several cases, funding of subsequent tranche requests is subject to conformation of the Government concerned that the recommendations set out in the verification report have been fully implemented.

45. To date, no HPMP or HPPMP Agreement has included compliance targets for controlled substances other than HCFCs. In contrast, some Agreements for previously phased out substances (e.g., CFCs, CTC, halons) specified targets for different groups of controlled substances.²⁰ Regardless, the verification needs to verify the consumption or production (where applicable) of the country against the targets specified in the Agreement.

Regulatory framework for controlled substances

46. Since the approval of the first activities funded by the Multilateral Fund at the 4th meeting, the Executive Committee has taken decisions to strengthen the support for policy and regulatory frameworks in Article 5 countries to facilitate their compliance with the Montreal Protocol.

47. Over the years, Article 5 countries have established and strengthened their national licensing and quota systems accompanied by other control regulations, which has contributed to the reduction of the supply of controlled substances under the Protocol by restricting imports, exports, and, where applicable, production.

48. In support of the regulatory framework for controlled substances and its enforcement, assistance has been provided for the training of customs and law enforcement officers as part of each country's national ODS phase-out plan. For Article 5 countries that produce ODS, capacity-building has been provided to ensure controls on the levels of production, including licensing and quota systems, and controls on exports for which non-controlled uses of such substances (e.g., feedstock, QPS, and others) remain.

49. The regulatory framework established during the phase-out of CFCs continued to be used for the accelerated phase-out of HCFCs. With the funding provided during the preparation of HPMPs, Article 5 countries had included HCFC control measures in their legislation, regulations and licensing systems, which was a pre-requisite for receiving funding for the implementation of their HPMPs. In line with the requirements of the Executive Committee, from the 68th meeting onwards, all funding tranche requests submitted by the Governments for their HPMPs, provide confirmation that an enforceable system of licensing and quotas for HCFC imports and, where applicable, HCFC production and exports, was in place and that the system was capable of ensuring the country's compliance with the HCFC phase-out schedule, as a condition for approving funding for tranche requests.

50. In addition, through the implementation of ODS phase-out plans, Article 5 countries had established specific regulatory measures to ensure the sustainability of the phase-out, such as issuance of import bans on specific substances or equipment containing a controlled substance after total conversion of the relevant manufacturing sector has been finalized. Licensing and quota systems, as well as the necessary supporting regulations, in countries that produce controlled substances for non-controlled uses are considerably more complex than in countries where there is no such production. The Executive Committee monitors the implementation of these regulatory actions in the countries; however, for the latter, such monitoring ceases after the completion of the ODS phase-out project.

²⁰ For example, the Agreement between the Government of China and the Executive Committee for the CFCs/CTC/halon accelerated phase-out plan specified targets for CFC production, CFC consumption, CFC-11 consumption in the PU foam sector, maximum allowable net CFC exports; CTC production, CTC consumption; maximum allowable CTC as CFC feedstock; halon production, halon consumption, halon-1301 production, halon-1301 export.

Observations for the attention of the Executive Committee

51. In preparing the present document, the Secretariat arrived to the following observations regarding monitoring systems, institutions and mechanisms for reporting consumption and production of controlled substances, and verification procedures. The Executive Committee may wish to consider these observations with a view to strengthen the monitoring systems, institutions, and mechanisms in place, as required.

Monitoring and reporting

52. Funding for IS has been approved almost since the inception of the Multilateral Fund and is expected to continue to be instrumental in ensuring the sustainability of the phase-out of controlled substances so far achieved, including by integrating ozone protection issues into national plans, and ensuring robust data reporting. The data reporting forms to be used under Article 7 of the Protocol include all controlled substances, including those that have been phased out, and the parties were requested to enter a number in each cell in the data reporting forms that they submit, including zero, where appropriate, rather than leaving the cell blank; and the Ozone Secretariat was asked to request clarification from any party that submits a reporting form containing a blank cell (decision XXIV/14).

53. The Executive Committee may wish to note that at its 74th meeting, considered a document on the review of funding of IS projects,²¹ and decided *inter alia* to review IS, including funding levels, at the first meeting in 2020 (decision 74/51(d)).²² The Parties directed the Executive Committee to increase IS support in light of the new commitments related to HFCs under the Kigali Amendment (decision XXVIII/2(21)).

54. Regarding data reporting, the Secretariat identified the following issues that might require the attention of the Executive Committee: ensuring the continuity of project management units (PMUs) across multi-year projects; illegal trade; FTZs; export of ODS contained in pre-blended polyols; and continued monitoring and reporting of production under non-production Agreements.

Ensuring the continuity of PMUs across multi-year projects

55. Multi-year projects typically include PMUs, which help ensure the smooth implementation of those projects by coordinating the day-to-day implementation of the investment projects (where applicable), training programmes, technical assistance and awareness-raising activities.²³ In those cases where projects include investment projects to convert one or more sectors, through their day-to-day interaction with enterprises, PMUs have an in-depth knowledge of the enterprises in a sector, and the use of controlled substances by those enterprises. As such, PMUs can play a key role in helping the NOU to report accurate CP data. In addition, PMUs monitor the status of implementation of projects, trends in the local market, and can frequently identify particular challenges in implementation.

56. While renewals of IS are expected to continue for the foreseeable future, in theory PMUs end upon completion of the MYA under which the PMU was established. In practice, the overlap between stage I and stage II of HPMPs has frequently allowed PMUs that were established under the former to continue under the latter. Such an overlap is also likely to occur during the initial stages of the HFC phase-down, when the phase-out of HCFCs is still being completed. The Executive Committee may wish to consider ensuring that there is some overlap between two concurrent MYAs to ensure the continuity of PMUs. Additional benefits of such an overlap would be to enable activities to continue, thereby ensuring the continued engagement of Governments, enterprises, service technicians, and other stakeholders in the management of controlled substances; and to ensure that PMUs and bilateral and implementing agencies can, if necessary, continue to monitor the phase-out achieved under the previous MYA. However, there would be a need to ensure

²¹ UNEP/OzL.Pro/ExCom/74/51

²² At its 74th meeting, the Executive Committee decided *inter alia* to review IS, including funding levels, at the first meeting in 2020 (decision 74/51(d)).

²³ UNEP/OzL.Pro/ExCom/83/40

continued separate financial accounting and reporting under the MYAs, including financial completion and return of balances. The Executive Committee may also wish to modify Appendix 5-A in the template for draft Agreements to include a request that the country and the lead implementing agency specify the role of the NOU and PMU, as relevant, in monitoring and reporting after the completion of the project.

Illegal trade

57. As evidenced by publicly available reporting, illegal trade in controlled substances is happening. However, seizures of such illegal trade, which are reported in public literature, are not reported to the Executive Committee.²⁴ One factor that may contribute to this lack of reporting is the concern by Article 5 countries that such seizures will be accounted as import and could result in larger than the maximum allowed consumption levels in the Agreements, which could result on applying the penalty clause stipulated in the Agreement. The Executive Committee may wish to consider:

- (a) Encouraging Article 5 countries to report seizures of illegal trade to the Secretariat through the relevant bilateral or implementing agency responsible for the IS project;
- (b) Clarifying that the penalty clause stipulated in the Agreement with the country concerned would not be applied in those cases where an Article 5 country reports the seizure of illegally traded controlled substances that are subsequently handled in accordance with domestic legislation (e.g., confiscated, destroyed and/or exported); and
- (c) Requesting the Secretariat to include in the document on CP data and prospects for compliance a section summarizing reported seizures of illegally traded controlled substances.

FTZs

58. While the guidelines for reporting consumption and production data under Article 7 of the Montreal Protocol encourage the reporting of movement of controlled substances through FTZs, some Article 5 countries do not consider such movement to affect consumption or compliance.²⁵ Notwithstanding that Article 5 countries may account for the movement of controlled substances to or from their FTZ in accordance with their respective rules and regulations, which may differ, the Executive Committee may wish to consider clarifying that that all Article 5 countries that receive IS funding would report the movement of controlled substances to or from their FTZ to the Secretariat. In such case, the Secretariat would not count such movement toward a country's consumption unless so directed by the country, and could include in the document on CP data and prospects for compliance a section on the reported movement of controlled substances through FTZs.

Export of ODS contained in pre-blended polyols

59. Regulations associated with the movement of controlled substances contained in pre-blended polyols vary by country and can raise challenges when those regulations and reporting mechanisms differ.

²⁴ The Fourteenth Meeting of the Parties invited Parties to report to the Ozone Secretariat fully proved cases of illegal trade in ODS (decision XIV/7). Such reports could provide useful lessons on how to further strengthen the regulatory frameworks in place and prevent illegal trade of substances controlled under the Protocol.

²⁵ Regulatory and reporting frameworks can be adjusted to include a requirement for controlled substances passing through a FTZ in order to avoid illegal trade and to comply with paragraph 3(d) of decision XIX/12 on Preventing illegal trade in ODS. Paragraph 3(d) of decision XIX/12 states that Parties wishing to improve implementation and enforcement of their licensing systems in order to combat illegal trade more effectively may wish to consider implementing domestically, on a voluntary basis, monitoring of transit movements (trans-shipments) of ODS, including those passing through duty-free zones, for instance by identifying each shipment with a unique consignment reference number.

Accordingly, the regulatory frameworks necessary to ensure compliance with the Montreal Protocol will vary based on particular national circumstances. Regarding the export of ODS contained in pre-blended polyols, some Article 5 countries report such exports as exports, while others consider the exported pre-blended polyol a product and therefore do not report such exports.

60. The Executive Committee may wish to clarify that all Article 5 countries that receive assistance from the Multilateral Fund and that produce or import controlled substances to blend them in pre-blended polyols for export, should report such exports in their CP data, identifying the country or countries to which the pre-blended polyols are exported to, and the respective quantities of ODS contained therein. The Secretariat could include in the document on CP data and prospects for compliance a section summarizing those reported exports of ODS contained in pre-blended polyols.

Continued monitoring and reporting of production under non-production Agreements

61. In Article 5 countries where a MYA in the production sector has been completed or no Agreement in the production sector has been approved, monitoring the production of controlled substances under ongoing MYAs in the consumption sector can be a cost-effective mechanism to monitor continued compliance in the production sector. For example, stages I and II of the HPMPs for Argentina and of Mexico included funding for annual monitoring of HCFC production. In the case of Argentina, the monitoring and reporting on the production of controlled substances is undertaken by the Government; while in the case of Mexico, reporting is accompanied by an independent verification. However, stage II of other Article 5 countries that had continued HCFC production and no approved HPPMP did not include funding for such monitoring.

62. The Executive Committee may wish to consider requesting the Governments of Argentina, the Democratic People's Republic of Korea, India, Mexico and Venezuela (Bolivarian Republic of), to include a request for funding for annual verification and monitoring of HCFC production until such production has been completely phased out either when submitting the following stage of their HPMPs, or when submitting a project to control HFC-23 by-product emissions, whichever comes first.

Clarification of continued reporting under the production sector

63. Agreements for ODS production phase-out stipulated that funding was provided for the phase-out of the entire production capacity of the respective ODS for controlled uses in the country. It is expected that Article 5 countries will continue implementing their licensing and quota systems and monitoring compliance with the control levels stipulated in their respective Agreements even if such Agreements have been completed, irrespective of whether production for exempted uses continues or all production has been phased out. The Executive Committee may wish to clarify that all Article 5 producing countries for which an ODS production phase-out project had been approved and that had received IS funding, should continue to monitor their compliance with the targets specified in their Agreement with the Executive Committee after the completion of the project, and would report to the Secretariat any instances where the country did not meet those targets or had found cases of illegal production. The Secretariat would notify the Executive Committee of such cases so that it could decide whether measures or actions would be appropriate.

Changes to the template for Agreements under the production sector

64. In order to ensure sustained compliance with the phase-out of production of controlled substances after the completion of the project, the Executive Committee could consider the following changes to the template of future production sector Agreements:

- (a) To clarify that the lead agency is responsible for assisting the country in cases of possible non-compliance, if so requested by the country, even after the project has been completed;

- (b) That the country would continue to monitor its compliance with the targets specified in the Agreement after the completion of the project, and would report to the Secretariat any instances where it did not meet those targets or had found cases of illegal production; and
- (c) To clarify that in years after the completion of the project, should the country not meet the final phase-out target for the phase-out of controlled substances under the Agreement, the funding associated with the penalty specified in that Agreement would be returned to the Multilateral Fund by the country through the lead agency.

Verification under MYAs

65. Once a MYA has been completed, the verification process of the controlled substances covered under such Agreement will cease. The Secretariat does not consider requiring continued verifications after an ODS phase-out project has been completed to be sustainable. This is particularly the case when production for non-controlled uses is expected to continue for the foreseeable future. In contrast, continued verifications may be sustainable in the context of future HFC phase-down projects, where consumption or production of HFCs may continue as part of the “servicing tail.” In such cases, verifications may need to continue as long as there is consumption or production for controlled uses.

66. Following the current decisions and guidelines, verifications only cover the controlled substances specified in the Agreement. However, a few verification reports submitted as part of tranche requests for HPMPs included information on possible imports of controlled substances not covered under the ongoing Agreements that were uncovered as part of the regular verification process (e.g., review of sample of reports from importers/exporters, review of official statistics on imports/export). The Executive Committee may wish to encourage this practice by inviting bilateral and implementing agencies to include information on all controlled substances found during the regular course of the verification, irrespective of whether the controlled substance is covered by the Agreement for which the verification is being undertaken. Concurrently, the Executive Committee may wish to request the Secretariat to present an analysis to the 85th meeting of the feasibility for and additional costs of broadening the terms of reference of verifications to include previously phased out controlled substances.

Summary

67. For ease of reference, a summary of the Secretariat’s observations that the Executive Committee may wish to consider are whether or not to:

Ensuring the continuity of PMUs across multi-year projects

- (a) Ensure that there is overlap between two concurrent MYAs to ensure the continuity of PMUs across MYAs, while reiterating the need for separate financial accounting and reporting of the MYAs;
- (b) Modify Appendix 5-A in the template for draft Agreements to include a request that the country and the lead implementing agency specify the role of the NOU and PMU, as relevant, in monitoring and reporting after the completion of the project;

Illegal trade

- (c) Encourage Article 5 countries to report seizures of illegal trade to the Secretariat through the relevant bilateral or implementing agency responsible for the IS project;
- (d) Clarify that the penalty clause stipulated in the Agreement with the country concerned would not be applied in those cases where an Article 5 country reports the seizure of

illegally traded controlled substances that are subsequently handled in accordance with domestic legislation (e.g., confiscated, destroyed and/or exported);

- (e) Request the Secretariat to include in the document on CP data and prospects for compliance a section on reported seizures of illegally traded controlled substances;

FTZs

- (f) To request all Article 5 countries that receive IS funding, to report the movement of controlled substances to or from their FTZ to the Secretariat irrespective if the country concerned does not count such movement of controlled substances to/or from FTZ toward the country's consumption;
- (g) To request the Secretariat to include in the document on CP data and prospects for compliance a section on the reported movement of controlled substances through FTZs;

Export of ODS contained in pre-blended polyols

- (h) Request all Article 5 countries that receive assistance from the Multilateral Fund and that produce or import controlled substances to blend them in pre-blended polyols for export, to report such exports, identifying the country or countries to which the pre-blended polyols are exported to, and the respective quantities of ODS contained therein;
- (i) To request the Secretariat to include in the document on CP data and prospects for compliance a section summarizing those reported exports of ODS contained in pre-blended polyols;

Continued monitoring and reporting of production under non-production Agreements

- (j) To request the Governments of Argentina, the Democratic People's Republic of Korea, India, Mexico and Venezuela (Bolivarian Republic of), to include a request for funding for annual verification and monitoring of HCFC production until such production has been completely phased out either when submitting the following stage of their HPMPs, or when submitting a project to control HFC-23 by-product emissions, whichever comes first;

Clarification of continued reporting under the production sector

- (k) To request all Article 5 countries that received funding for IS and for the phase-out of production of ODS for controlled uses to continue to monitor their compliance with the targets specified in their Agreement with the Executive Committee after the completion of the project, and to report to the Secretariat any instances where the country did not meet those targets or had found cases of illegal production;
- (l) To request the Secretariat to notify the Executive Committee of such cases so that it could decide whether measures or actions would be appropriate;

Changes to the template for Agreements under the production sector

- (m) To make the following changes to the template of future production sector Agreements:
 - (i) To clarify that the lead agency is responsible for assisting the country in cases of possible non-compliance, if so requested by the country, even after the project has been completed;

- (ii) That the country would continue to monitor its compliance with the targets specified in the Agreement after the completion of the project, and would report to the Secretariat any instances where it did not meet those targets or had found cases of illegal production;
- (iii) To clarify that in years after the completion of the project, should the country not meet the final phase-out target for the phase-out of controlled substances under the Agreement, the funding associated with the penalty specified in that Agreement would be returned to the Multilateral Fund by the country through the lead agency;

Verification under MYAs

- (iv) To invite bilateral and implementing agencies to include information on all controlled substances found during the regular course of a verification, irrespective of whether the controlled substance is covered by the Agreement for which the verification is being undertaken;
- (v) To request the Secretariat to present an analysis to the 85th meeting of the feasibility for and additional costs of broadening the terms of reference of verifications to include previously phased out controlled substances.

Additional, novel mechanisms to ensure sustained compliance

68. In addition to the observations on the current monitoring, reporting, verification and the regulatory framework summarized in paragraph 67 above, the Secretariat considered three additional mechanisms that to date have not been used under the Multilateral Fund: atmospheric monitoring, random sampling of products or equipment, and monitoring of raw materials needed for the use or production of controlled substances.

Atmospheric monitoring

69. Detection of illegal production of controlled substances is challenging as the entities undertaking such production are likely to have taken steps to conceal their activities. Illegal production facilities will not have licenses and quotas, and may be unknown to the Government authorities monitoring the production of controlled substances. Verifications of production facilities are unlikely to detect such illegal facilities as they are, in all likelihood, unknown. Atmospheric monitoring may be one mechanism to detect such unknown production.

70. Different approaches to atmospheric monitoring are possible. The simplest, and cheapest, is a one-off measurement campaign where gas canister samples are collected from select locations, and sending those canisters to a central laboratory for analysis (with an associated cost on the order of US \$10,000s). More comprehensive field campaigns could involve canister sampling with sampling from mobile platforms (e.g., gas chromatogram-mass spectrometers (GC-MS) mounted in vehicles or airplanes), combined with meteorological measurements and modelling (with associated costs on the order of US \$100,000s to several US \$ million). Such one-off campaigns could lead to the identification of the location of unknown production only in those cases where the one-off campaign coincided with the operation of the unknown production facilities.

71. A network of atmospheric monitoring stations is more appropriate if sustained atmospheric monitoring is desired. The complexity and cost of establishing and operating such a network will vary based on national circumstances. Depending on which substances (and how many) are to be detected, monitoring equipment can be off-the-shelf technology that is relatively easy to operate, maintain and calibrate (e.g., a

GC-MS with a cost on the order of US \$10,000s to US \$100,000) to research-grade equipment that requires specialized training to operate, maintain and calibrate (with costs on the order of US \$100,000s to US \$ millions). Co-locating the necessary monitoring equipment in an existing air quality monitoring station will minimize both maintenance and operating costs. The number of monitoring stations required will vary with a number of factors, including the size of the country and the distribution of production facilities across the country.

72. Given the complexity and expense of establishing an atmospheric monitoring network, efforts to do so would likely only make sense in a limited number of cases: where there are reasons to believe there may be substantial, unknown production; where there is availability of the raw materials necessary for such production; and large-scale industrial production of chemicals within which such production could take place. Any efforts to establish an atmospheric monitoring network should complement existing monitoring networks, including the Advanced Global Atmospheric Monitoring Network (AGAGE),²⁶ the observatories²⁷ under the Global Monitoring Division of the U.S. National Oceanic and Atmospheric Administration and associated observation sites,²⁸ build on existing protocols and methods, and ensure that observations are made available to the scientific research community.

Sampling of products or equipment

73. The two main uses of controlled substances are in refrigeration and air-conditioning (RAC) equipment and in foams. One mechanism that could be used to deter and detect the use of controlled substances that have been phased out is random testing of samples of RAC equipment, foams, and pre-blended polyol systems. The scope, complexity and cost of such an approach could vary substantially, depending on what controlled substance is to be detected, the type of product or equipment to be tested, the size and frequency of sampling, and other factors. Given the complexity and expense of such sampling and testing, such an approach would likely only be appropriate in a limited number of cases where Article 5 countries felt a need for strengthened enforcement and testing. The Secretariat would further note that not all Article 5 countries have laboratories with the equipment necessary to test samples.

Monitoring raw materials needed for the production of controlled substances

74. Another novel mechanism could be monitoring the raw materials needed for use or production of controlled substances. For example, the manufacture of polyurethane (PU) foams requires methylene diphenyl diisocyanate (MDI). Monitoring the sale of MDI, and tracking MDI sales with blowing agent use, can help identify anomalies in PU foam manufacturing. Such monitoring would likely only be appropriate for those Article 5 countries with significant PU foam manufacturing, that produce or import significant amounts of blowing agents (rather than exclusively importing blowing agents contained in pre-blended polyols), and that feel a need for an independent mechanism to monitor blowing agent use.

75. Similarly, to the best of the Secretariat's knowledge, anhydrous hydrogen fluoride (AHF) is required for the production of all controlled substances. Mechanisms could be considered to track AHF use in those countries that have fluorochemical production facilities. The complexity of such mechanisms would vary considerably by country. For a country that produces controlled substances and that has no fluorospar mining, a system to track imports of AHF could be considered, noting that AHF has a number of uses beyond the production of controlled substances, including for the production of pharmaceuticals and other products. For those countries that produce controlled substances and that have fluorospar mining, establishing a monitoring and tracking system would be considerably more complex. Tracking AHF use

²⁶ <https://agage.mit.edu/global-network>

²⁷ <https://www.esrl.noaa.gov/gmd/about/aboutgmd.html>

²⁸ <https://www.esrl.noaa.gov/gmd/dv/site/>

would likely only make sense for those countries with substantial capacity to produce controlled chemicals and the country feels the need for an independent mechanism to monitor such production.

Recommendation

76. The Executive Committee may wish:

- (a) To take note of the overview of current monitoring, reporting, verification and enforceable licensing and quota systems contained in document UNEP/OzL.Pro/ExCom/83/38; and
- (b) To consider whether or not to implement any of the observations summarized in paragraph 67 of the present document; and
- (c) To invite relevant Article 5 countries to consider the additional novel mechanisms contained in document UNEP/OzL.Pro/ExCom/83/38 to further enhance the sustainability of the phase-out of controlled substances, noting that such mechanisms would only be applicable in a limited number of cases.

Annex I

**SUMMARY OF RELEVANT DOCUMENTS PREPARED BY THE SENIOR MONITORING
AND EVALUATION OFFICER**

Title	Description	Key findings
<p>Executive Committee report on the evaluation of customs officers training and licensing system projects (UNEP/OzL.Pro.WG.1/25/6)</p>	<p>The report of the Executive Committee on the evaluation of customs officers training and licensing system projects was prepared in response to decision XIV/7, paragraph 6 of the Fourteenth Meeting of the Parties to the Montreal Protocol and presented to the 25th Meeting of the Open-ended Working Group (OEWG) in June 2005</p>	<p>The recommendations of the OEWG were: improving the involvement of customs, including the higher levels of hierarchy, in the ODS phase-out; amending and upgrading the legislation framework in those Article 5 countries where it is incomplete, and improving enforcement and regional cooperation; accelerating and assisting implementation of customs training, including regional activities, where appropriate; and amending training materials and contents and putting supporting information materials and identifiers to effective use</p>
<p>Desk study on the evaluation of the implementation of the CFC-production sector agreements (UNEP/OzL.Pro/ExCom/40/9)</p>	<p>The report describes the main features of the agreements, the modalities of their implementation, the results achieved so far and their verification. Additionally, issues for further analysis during field evaluation missions are identified</p>	<p>The phase-out planned under the agreements has been achieved and the funding has been provided as scheduled, except for China. Plants that are designed for production of both CFCs and HCFC-22 (swing plants) have not been dismantled, because they have been converted to HCFC-22 production. However, it must be assured that they will not be reconverted to CFC manufacture. Auditing of production volumes in swing plants designed to be able to produce both CFCs and HCFC-22 might be necessary, to ensure that no CFC is produced. In decommissioning CFC-production plants, key elements should be destroyed and this process be documented and verified. In order to avoid restarting CFC production at the same or other locations, information about the fate of equipment not destroyed should also be made available to the verification team</p>
<p>Report on the intermediate evaluation of CFC production sector phase-out agreements (UNEP/OzL.Pro/ExCom/42/12)</p>	<p>This report is a synthesis of reports of evaluation missions regarding CFC production sector phase-out agreements in three Article 5 countries (China, the Democratic People's Republic of Korea and India)</p>	<p>Due to the large number of plants, the sector approach adopted by the Executive Committee for these agreements has worked well. The quota systems adopted in China and India to gradually reduce CFC-production in exchange for compensations provided to the enterprises performed generally well. Policies regulating production and the institutional arrangements to implement them, as well as sales and foreign trade of CFCs and are in place in the three countries. There seems to be an adequate control of illegal production and trade. In several instances, small illegal production plants have been detected and dismantled in China, and in India, some quantities of illegally imported CFC were confiscated by customs and distributed to the CFC producers. Technical assistance has been allocated in each annual programme for India and China, and has normally been underspent. In India and China, the prices for CFC did not go up due to a lower demand created by the awareness-raising to end-users, which matched the speed of the phase-out process. The process of phase-out set in motion seems to be sustainable and on track to achieve the full elimination of CFC production planned</p>

Title	Description	Key findings
		for the end of 2009, supported by the Governments' power to impose significant penalties for any transgressions (decision 42/42)
Follow-up to decision 42/12(c) on the intermediate evaluation of CFC production sector phase-out agreements (UNEP/OzL.Pro/ExCom/43/9)	This report is in follow-up to decision 42/12(c): "To request the Government of India, in cooperation with the World Bank, to plan and verify allowable CFC production in India as so-called gross production, to review the calculations made to establish the baseline for the agreement, and to report to the 43 rd meeting on their findings"	At its 42 nd meeting the Executive Committee considered the report on the intermediate evaluation of CFC production sector phase-out agreements, which presented the findings and recommendations resulting from the evaluation missions to China, the Democratic People's Republic of Korea, and India in January 2004. The Secretariat received a report prepared by the Ozone Cell, Ministry of Environment and Forests Government of India and the World Bank for submission to the 43 rd meeting of the Executive Committee.
Desk study on the evaluation of customs officer training and licensing system projects (UNEP/OzL.Pro/ExCom/44/12)	The objective of this desk study is to identify the results and impacts of the implementation of customs training projects and the adoption of import licensing systems, and subsequently to identify evaluation issues for further analysis and prepare the field visits.	ODS import licensing and customs training activities were first funded as stand-alone and regional projects, but their rapid increase saw them included in the refrigerant management plan (RMP). Rigorous application of import licenses and the completion of phase-out projects to reduce demand are the most productive method of controlling international trade and reducing illegal trade. To overcome the implementation issues facing these projects, the evaluation recommended <i>inter alia</i> focusing on awareness-raising of customs officers regarding ODS issues and building a specialized customs team to deal with environmental problems, strengthening local/provincial environment authorities to actively support the control procedures, relying on technicians, university staff or governmental laboratories to assist customs in identifying suspicious shipments, and combining all environmental agreement training (e.g., Basel, Rotterdam, Stockholm) in one
Desk study on non-compliance with the freeze in consumption of CFCs, halons, methyl bromide and methyl chloroform (UNEP/OzL.Pro/ExCom/46/8)	The evaluation of methyl bromide projects comprised two stages, a desk study and a Field study, which considered in detail the four largest consuming sectors in Article 5 countries: horticulture (including strawberries and bananas), floriculture, tobacco and postharvest uses. The country case studies were summarized in four sub-sector papers, which form the basis of the synthesis report	In spite of the fact that overall aggregate consumption was usually below the baseline prior to the freeze, the available information pointed to some stockpiling (possibly even significant in a few cases) taking place prior to the freeze coming into effect, especially for CFCs. However, this was followed by a rapid reduction in consumption and for many countries in such a situation there was no persistent non-compliance. A similar trend may emerge with the subsequent reduction steps. Institutional weaknesses identified as possible cause for non-compliance could be a serious impediment to sustainable compliance for a limited number of countries. The role of UNEP's Compliance Assistance Programme, as well as that of the other implementing agencies, with regard to enhancing the institutional capacity of countries to address compliance issues needs further assessment. low-volume consuming (LVC) countries may constitute about 70 per cent of the number of Article 5 countries, but their share of non-compliance with the CFC freeze was disproportionately higher (decision 46/6)

Title	Description	Key findings
<p>Final evaluation report on cases of non-compliance (follow-up to decision 46/6) (UNEP/OzL.Pro/ExCom/50/9)</p>	<p>This synthesis report summarizes eight case studies on countries in past or present non-compliance with the freeze and/or reduction targets set for different ODS substances. It follows up on the desk study on non-compliance presented to the 46th meeting of the Executive Committee (UNEP/OzL.Pro/ExCom/46/6) and the resulting decision 46/6.</p>	<p>In each of the countries visited by the missions, there are still some specific problem areas and challenges ahead to achieve or maintain sustainable compliance. The following main causes were identified for non-compliance: Internal instability due to armed conflicts or political and economic transformation; late start of phase-out activities; delays in implementing phase-out projects and developing legal framework; and deficiencies in communication and cooperation with key stakeholders. Most of the countries covered by this report succeeded in returning to compliance with the freeze obligations, and some also with all ODS consumption reduction targets including those for 2005. One of the most important incentives for this achievement has been the commitment of meeting the targets set by the respective plan of action submitted to the Implementation Committee and approved by the Meeting of the Parties (decision 50/7)</p>
<p>Final report on the evaluation of CTC phase-out projects and agreements (UNEP/OzL.Pro/ExCom/51/12)</p>	<p>The evaluation focused on CTC used as process agents and on CTC production. It covers the first phase of the evaluation, a desk study presented at the 48th meeting and the case studies subsequently undertaken in China, the Democratic People's Republic of Korea, India, and Pakistan</p>	<p>Compliance was achieved for most Article 5 countries, which is an important achievement in view of the relatively late start of CTC projects and the challenging 85 per cent reduction step without an intermediate freeze. However, eight countries reported some excesses in consumption for 2005, the largest two being Mexico (61.4 ODP tonnes) and Pakistan (86.6 ODP tonnes). Important policy measures have included the installation of import controls (and sometimes outright bans as in China) and corresponding training of customs officials; the issuing of quotas to CTC producers in countries with CTC production; and the issuing in some cases of specific consumption or trading quotas. There are some sustainability issues in that, unlike other presently controlled substances, CTC production will continue and might further increase after the phase-out of controlled production and consumption in 2010. Furthermore, demand will progressively decline to a point where it will be lower than the minimum amount of CTC being co-produced. Selling CTC even at very low prices will still be more profitable than destroying it, with an ensuing risk of CTC being placed on the market without licenses. Such low prices could also result in illegal use of CTC by users, who see it as the best available process agent or solvent option. Hence, ongoing monitoring systems will be vital. Other sustainability issues concern the potential influence of decision XVIII/17 of the Meeting of the Parties, which accepted the reasoning that some apparent overproduction of CTC could be stockpiled for future feedstock use. This could lead to some leakages of CTC for controlled uses if stocks are not strictly controlled, monitored and verified (decision 51/11)</p>

Title	Description	Key findings
Desk study on the evaluation of management and monitoring of national phase-out plans (NPPs) (UNEP/OzL.Pro/ExCom/51/13)	The objective of this evaluation is to complement the evaluation of RMPs and NPPs in non-LVC countries (document UNEP/OzL.Pro/ExCom/48/12), which focused primarily on the refrigeration sector and was not able to analyse in depth the management, monitoring and verification aspects of the NPPs. The evaluation and the field visits: reviewed the indicators for assessing implementation delays and difficulties; and analysed the coordination between several implementing agencies (IAs) engaged in implementing a NPP	The phase-out programmes reviewed are, in general, on target. The evaluation raised the question of the cost-effectiveness of the project management unit (PMU) frameworks, in which the PMU can either be a sub-set of the national ozone unit (NOU) or an entirely separate entity working remotely. Therefore, it is essential to ensure that the capacity building, especially working with the private and informal sectors, is not confined to the PMU, but communicated on an on-going basis to the NOU. No lack of coordination or delays was reported between the agencies. The IAs need to assist the PMU and NOU in the development and implementation of the associated legislation and regulations, supported by capacity building, institutional strengthening, stakeholder participation and development of ownership. It is thus necessary to ensure that the NPP is mainstreamed into the national plans and policies of the country, which requires cooperation with other governmental agencies (decision 51/12)
Final report on the evaluation of terminal phase-out management plans (UNEP/OzL.Pro/ExCom/58/8)	This synthesis report summarizes the evaluation reports on the role and the effects of terminal phase-out management plans (TPMPs), which have been prepared in several LVC countries, and assesses the findings of a sample of country case studies carried out in eight LVC countries	Early CFC phase-out has generally been achieved through an efficient public-private partnership forum consisting of all stakeholders, a strict implementation of quota systems and the development of market conditions rather than through investment activities. The sustainability is ensured by the efficient operation and enforcement of the import licensing system, as well as continued monitoring and public awareness campaigns. Experience with the phase-out of CFCs can and should be used for the development of a strategy of HCFC phase-out. Although none of these countries covered by this sample have established a PMU, they are all in compliance with the TPMP agreement and the CFC phase-out targets. However, they would benefit from strengthening their monitoring to provide regular and reliable data on recovery and recycling (R&R) operations. Most countries benefited from the flexibility clause, which made it possible to shift resources from one activity to another if deemed necessary to achieve targets (decision 58/6)
Final evaluation report of multi-year agreement projects (UNEP/OzL.Pro/ExCom/69/12)	This report follows the recommendations of a previous desk study for the evaluation of multi-year agreements (MYAs) to further inquire into a series of issues related to the effectiveness of MYA activities and for lessons learned and good practices for the implementation of the HPMP. It is based on data collected during field visits to eight non-LVC countries between January and February 2013 and it focuses mainly on the refrigeration and foam sectors	The refrigeration training activities have contributed not only to promoting actual reduction in CFC consumption but also to building the credibility of government actions and environmental initiatives in general in the sector, creating favourable ground for future endeavours such as HPMP implementation. NPPs incorporate training in good servicing practices for refrigeration technicians, which is often accompanied by the procurement and distribution of servicing tools, either as a continuation of RMPs or as a distinctive component. A cause for concern is the undesirable market developments, such as the massive presence of low-quality CFC alternatives, which can damage the equipment and affect the attitude of the sector towards change. The existing recovery, recycling and reclamation equipment is successfully collecting and recycling HCFC-22, reducing the demand for HCFC

Title	Description	Key findings
		<p>imports. However, IAs and NOUs need to improve the logistics of transportation between refrigerant collection points and R&R centres, support the regulatory binding conditions for quality assurance and scope of coverage, as well as the economic model for a sustainable operation, including a system of incentives and stimulus. Sustainability would be ensured by the reinforcement of institutional strengthening activities. The evaluation found positive social and economical impacts of the CFC phase-out (decision 69/11)</p>

Annex II

SUMMARY OF CUSTOMS AND ENFORCEMENT UNEP OZONACTION TOOLS, PRODUCTS AND SERVICES

As part of CAP's work in assisting countries to comply with their HCFC phase-out commitments and sustaining compliance with prior targets, OzonAction provides support to strengthen national capacity for effective customs and trade controls. This is achieved through the development of a range of materials intended to support customs and enforcement officers in their work to implement national licensing systems for ozone-depleting substances, and future commitments on HFCs under the Montreal Protocol, to detect and prevent illegal trade in these chemicals, and to facilitate legal trade. Many of these materials are produced in cooperation with our partner organizations.

1. Publications and Guides

Training Manual for Customs Officers: Saving the Ozone Layer - Phasing out Ozone-Depleting Substances in Developing Countries - Third Edition

The *Training Manual for Customs Officers* provides the necessary guidance and information to effectively monitor and facilitate the legal trade in ozone depleting substances and to combat their illegal trade. It presents information on the international policy context and an overview of technical issues, including information on chemicals and products traded and how these may be smuggled. The manual is intended for use in conducting training programmes for Customs Officers, as well as serving as a stand-alone reference document. Now in its third edition, this version takes into account the developments in international trade and provides new material to reflect changes in the Montreal Protocol, Harmonized System codes, licensing systems and other relevant information since its original publication in 2001 and its second edition in 2008. The guide is available on the OzonAction website and has been distributed at relevant meetings (Published 2013).

Ozone-depleting substances smuggling and concealment case-study handbook

The Handbook, which provides information and guidance on commonly used methods of smuggling and concealment of ODS, is intended to promote cooperation between criminal justice agencies within borders and to strengthen the law enforcement response to the illegal trade in the chemicals controlled under the Montreal Protocol. This Handbook is targeted to enforcement officers and is particularly beneficial to Police, Customs and Border Security Officials. It provides technical information that will reinforce officers' understanding of ODS and assist with the recognition and detection of illegal trade in these chemicals. The Handbook was developed in cooperation with the INTERPOL Environmental Crime Programme. It is available on demand only (due to its enforcement-sensitive content) and has been distributed at relevant meetings (Published 2013).

Risk assessment of illegal trade in HCFCs

This report provides a summary of recent cases of illegal trade, and the policy measures in place to combat HCFC smuggling. By considering market conditions for HCFCs and drawing parallels with the context and methods used by smugglers which led to chlorofluorocarbon (CFC) smuggling, the report provides an analysis of the risks of HCFC smuggling becoming entrenched, and makes recommendations on how this illegal trade can be prevented. The report was developed in cooperation with the Environmental Investigation Agency. The guide is available on the OzonAction website and has been distributed at relevant meetings (Published 2011).

Informal Prior-Informed Consent (iPIC) Supporting compliance through prevention of illegal and unwanted trade in ozone-depleting substances

This short booklet briefly describes how the iPIC system works and its advantages. It provides some information on results and successes from iPIC and encourages countries that are not yet members to join and to begin to reap the benefits of this initiative. The booklet is available on the OzonAction website and has been distributed at relevant meetings (Published 2015).

Legislative and Policy Options to Control Hydrofluorocarbons

This booklet provides developing countries with a suite of different options that they may wish to consider, including both mandatory and voluntary approaches to developing, enacting and enforcing different legislative and policy measures to facilitate a smooth HFC phase-down process. This guide complements the previous OzonAction publication, HCFC Policy & Legislative Options: A Guide for Developing Countries (2010). The booklet is available on the OzonAction website (Published 2018).

Establishing an HCFC import quota system

This booklet provides the necessary information and practical guidance for developing countries to design and implement a workable and effective quota system that will contribute to ensuring the country's compliance with the Montreal Protocol HCFC phase-out schedule. The booklet is available on the OzonAction website and has been distributed at relevant meetings (Published 2012).

2. Fact sheets and Information Notes

UNEP's OzonAction continues to prepare fact sheets providing relevant information and describing the immediate and future challenges to be addressed by the different Parties. The following fact sheets and information notes are of specific interest to customs and enforcement officers, and NOUs:

Customs Poster: The updated Customs Poster provides concise information on ODS and alternatives and a short checklist of issues for customs officers to keep in mind when handling ODS shipments. (2016 update)

Customs Officer's Quick Tool for Screening ODS: A quick reference tool for customs and enforcement officers that provides access to the key information regarding ODS and their alternatives and relevant customs codes.

Refrigerant Designations: A fact sheet produced by ASHRAE in cooperation with UNEP OzonAction, which provides information on refrigerant designation and safety classification, the fact sheet is updated every 6 months to indicate the new refrigerants which are assigned "R" numbers *ASHRAE designations).

Harmonized System code factsheets:

- HS nomenclature (HS codes) for HCFCs and certain other ozone-depleting substances (post-Kigali update)
- Commonly traded HCFCs and mixtures containing HCFCs (post-Kigali update)
- Commonly used non-ODS substitute refrigerants (post-Kigali update)
- Common products and equipment containing or reliant on HCFCs
- HS codes for HFCs: Actions to take ahead of the of the new 2022 HS (*in production, with WCO*)

Free trade zones and trade in ODS: As part of international trade many shipments of ODS pass through Free Trade Zones (FTZ) and a lack of proper oversight and controls in such zones can create an environment where illegal trade in ODS can proliferate. This paper provides a brief overview of the subject.

The informal prior-informed consent (iPIC) mechanism: The iPIC mechanism is a voluntary and informal system of information exchange on intended trade between the authorities in importing and exporting countries that are responsible for issuing ODS trade licenses. This fact sheet gives an overview of how this informal mechanism operates and provides some interesting information on the results of the control and monitoring of ODS trade conducted through iPIC.

The Kigali Amendment to the Montreal Protocol: HFC phase-down: This short paper provides an overview of the Kigali Amendment and its consequences.

Kigali amendment fact-sheet series and poster: Following the adoption of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, UNEP's OzonAction prepared a series of fact sheets describing the immediate and future challenges to be addressed by the different Parties between now and until the Amendment comes into force. A timeline poster is also available.

All the fact sheets/briefs are available on the OzonAction website and have been distributed at relevant meetings.

3. Mobile applications, videos and web-based tools

In addition to the apps described in the refrigeration section above (What gas app and refrigerant identifier video app), the following products have been developed:

iPIC: The online iPIC system provides participating countries with real-time, 24-hour, 7-days-a-week personalized access to key licensing-system data in each of the 100 participating countries. The system provides a standardized and secured repository of iPIC data. Features of the online iPIC include the ability to search specific items of information; an interactive query and information sharing forum; the ability to easily and rapidly generate various reports and statistics; and the ability to update iPIC information with a simple click that will copy the information from a previous year. It is equipped with a FAQ section (which answers basic questions) and a Help section (which thoroughly explains how to use the online system); multi-lingual capability; and an interactive colour-coded map displaying country iPIC information sheet status. iPIC-online is accessible on an invitation-only basis (i.e. not open to the public). The platform is currently being upgraded and streamlined.

Combatting illegal trade in ODS: training video: This 26-minutes training video provides customs and enforcement officers with an overview of illegal trade in ODS, and shows specific cases and examples from around the world. It provides practical guidance and tips on identifying suspicious shipments and smuggled ODS. The video is available on demand only (due to its enforcement-sensitive content) and has been distributed at relevant meetings (Published 2014).

4. Online Training Tools

E-Learning Modules for Customs Officers: OzonAction and the World Customs Organization (WCO) jointly developed an e-learning course in 2009 devoted to the enforcement of the Montreal Protocol. The course has been updated several times. The course is based on the UNEP Training Manual for Customs and Enforcement Officers (Third Edition) and reflects WCO's expertise in developing and delivering online training to customs officers worldwide. The E-learning modules are hosted and disseminated through the WCO *CLIKC* platform. The e-Learning is accessible on an invitation-only basis to all customs officers and NOUs on request (it is hosted on a closed enforcement platform). Updates and maintenance are ongoing.

OzonAction Web pages: OzonAction hosts a specific customs and enforcement page with a range of materials intended to support customs and enforcement officers in their work to implement national licensing systems for ODS, to detect and prevent illegal trade in these chemicals, and to facilitate the legal trade.

5. Special services in cooperation with partners

World Customs Organization

UNEP and the World Customs Organization have had long-standing cooperation on the issues related to trade (and prevention of illegal trade) in ozone-depleting substances (ODS) controlled under the Montreal Protocol and their alternatives. This cooperation was formalized with an MOU signed in 2003 as a cooperation framework between the two agencies, and has led to specific concrete initiatives such as:

- Developing E-learning modules on the Montreal Protocol and ODS trade with dissemination through WCO *CLIKC* platform (see above)
- Cooperation on specific WCO operations:
 - The Sky Hole Patching Initiative on ozone-depleting substances and hazardous waste 2006 to 2009;
 - Sky-hole Patching Project II, in 2010: Customs from over 80 countries conducted a six-month global Project to monitor trade and fight ODS smuggling, with support from the WCO, UNEP and National Ozone Units (NOUs).
 - Ongoing operation on waste and ODS
- OzonAction representation at relevant meetings and workshops, including:
 - WCO Enforcement Committee,
 - Customs Cooperation Council,
 - Working Group on Commercial Fraud,
 - WCO Regional Intelligence Liaison Office (RILO) meetings,
- Participation of WCO HQ and RILO representatives at OzonAction workshops and training sessions.
- Cooperation on ECA and global ozone protection awards
- Survey/evaluation: comprehensive global assessment of customs training methodologies and infrastructure (Montreal Protocol), carried out in cooperation with the WCO
- Communication on issues of HS codes for ODS and alternatives, and other issues for joint fact sheets, expert review of OzonAction fact sheets and Customs Training Manual, and guidance to countries
- OzonAction information materials and tools, uploaded on the secure *WCO Environet* platform

Green Customs

OzonAction is a member of the Green Customs Initiative. This initiative, launched in 2004, is a partnership of international organizations cooperating to enhance the capacity of customs and other relevant border-control officers to monitor and facilitate the legal trade and to detect and prevent illegal trade in environmentally sensitive commodities covered by relevant trade-related Multilateral Environmental Agreements (MEAs) and international conventions. OzonAction (in cooperation with the Ozone Secretariat) provided a chapter on the Montreal Protocol and illegal trade in ODS to the Green Customs Guide.