UNITED NATIONS

UNEP

UNEP/OzL.Pro.WG.1/46/4

Montreal Protocol on Substances that Deplete the Ozone Layer

Distr.: General
3 May 2024

Original: English

Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer
Forty-sixth meeting
Montreal, Canada, 8–12 July 2024
Item 9 of the provisional agenda*

Strengthening Montreal Protocol institutions, including combating illegal trade (decision XXXV/12 and UNEP/OzL.Pro.35/12, para. 188)

Compilation of information provided by parties on illegal trade practices and approaches taken by national authorities to identify and address such cases

Note by the Secretariat

I. Introduction

1. The present note has been prepared in accordance with paragraph 2 of decision XXXV/12 on further strengthening Montreal Protocol institutions, including for combating illegal trade.

2. In that decision, the Thirty-Fifth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer recalled decisions XIV/7, XXXI/3 and XXXIV/8 and, in paragraph 1, encouraged parties to facilitate the exchange of information on best practices to prevent illegal trade of controlled substances and to inform the Secretariat of practices used by entities attempting unauthorized imports of controlled substances that might include the mislabelling of containers of controlled substances or misreporting of controlled substances on customs declarations. In paragraph 2 of the decision, the Secretariat was requested to provide, before the forty-sixth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol and on an annual basis thereafter, a compilation of information provided by parties pursuant to paragraph 1 of decision XXXV/12 and decision XXXIV/8.

3. In preparing the present note, the Secretariat considered all cases of illegal trade reported by parties on a voluntary basis in response to the following decisions:

(a) Decision XIV/7, in which parties highlighted the importance of actions aimed at improving the monitoring of trade in ozone-depleting substances and preventing illegal trade in those substances for their timely and smooth phase-out according to the agreed schedules, and requested the Secretariat to collect any information on illegal trade received from the parties and disseminate it to all parties;

(b) Paragraph 5 of decision XXXI/3, in which parties were encouraged to take action to discover and prevent the illegal production, import, export and consumption of controlled substances by, among other things, reporting fully proved cases of illegal trade in controlled substances to the

* UNEP/OzL.Pro.WG.1/46/1.

Secretariat, including information on how significant cases had been addressed and, to parties' best knowledge, the causes of such illegal production, in order to facilitate an exchange of information;

(c) Paragraph 3 of decision XXXIV/8, in which all parties were encouraged to facilitate the exchange of information to prevent the illegal trade of controlled substances by reporting to the Secretariat fully proved cases of illegal trade and, to the extent that parties were able to do so, providing additional information about illegal trade situations.

4. All the reports of illegal trade received by the Secretariat as at the date of this note have been made available in the online database of illegal trade cases.[1] Cases submitted since the Thirty-Fifth Meeting of the Parties are also complied in information note UNEP/OzL.Pro.WG.1/46/INF/3 for the attention of the parties, and cases reported between May and October 2023 were included in the relevant information note prepared for the Thirty-Fifth Meeting of the Parties.[2]

5. Following the discussion at the workshop on institutional strengthening and additional information solicited through decision XXXV/12, the Secretariat modified the template for the collection of cases of illegal trade, providing specific guidance on completing the form. The additional 154 cases reported provide more, and more consistent, details on illegal trade in controlled substances.

6. The present compilation builds on the similar note prepared by the Secretariat for consideration at the workshop on strengthening of the effective implementation and enforcement of the Montreal Protocol and at the forty-fifth meeting of the Open-ended Working Group.[3] It covers all 713 cases reported by parties to date.

7. Section II provides a compilation of the reported cases of illegal trade according to the number of cases reported, parties that reported them, substances commonly involved in illegal trade, means by which illegal trade is conducted, methods of detection of illegal trade instances, penalties applied, and means used to dispose of seized substances. In addition, information discerned from new cases reported by the parties since May 2023 is specifically highlighted.

8. Section III summarizes the most pertinent information provided by parties on enforcement practices and approaches taken by national authorities to identify and address cases of illegal trade.

II. Compilation of reported cases of illegal trade

A. Number of cases reported

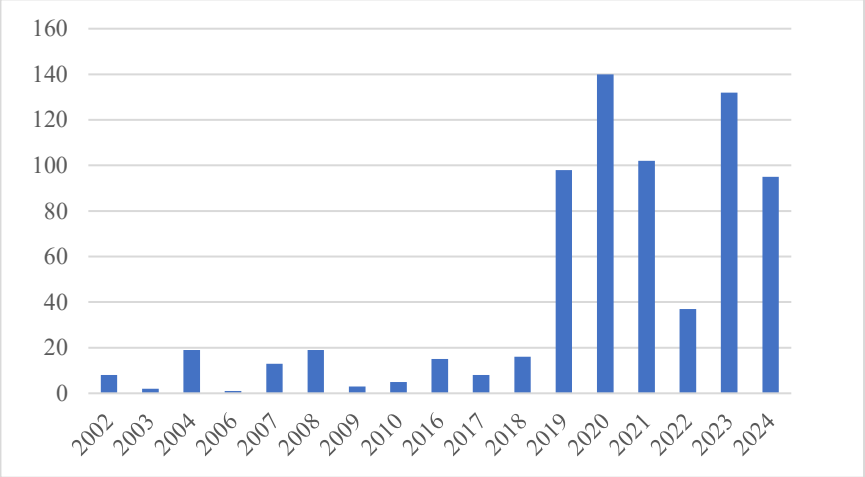
9. As at 30 April 2024, the database of illegal trade in substances controlled under the Montreal Protocol consisted of 713 cases. The previous note on illegal trade cases covered 559 cases, reported over the period 2002–2023. During the period from May 2023 to April 2024, parties reported, on a voluntary basis, 154 new cases of illegal trade in controlled substances. Figure 1 shows the number of cases reported each year from 2002 to 2024, with the data for 2024 covering only the period up until 30 April.

[1] https://ozone.unep.org/countries/additional-reported-information/illegal-trade.

[2] UNEP/OzL.Pro.35/INF/7. In line with previous practice, all cases reported by parties since the Thirty-Fourth Meeting of the Parties were compiled as an information note for the consideration of the Thirty-Fifth Meeting of the Parties.

[3] UNEP/OzL.Pro/Workshop.11/2/Add.1–UNEP/OzL.Pro.WG.1/45/5/Add.1.

Figure 1
Number of cases reported, by year



B. Parties that reported cases of illegal trade

10. Since May 2023, in response to decision XXXV/12, eight parties have submitted information on, and cases of, illegal trade. In response to reminders sent by the Secretariat (on 29 August 2023 and 29 February 2024), an additional 12 parties indicated that they did not have any cases of illegal trade to report.

11. In total, since the first cases reported in 2002, the following 49 parties to the Montreal Protocol have reported cases of illegal trade: Angola, Argentina, Armenia, Australia, Belgium, Bulgaria, Burkina Faso, China, Colombia, Croatia, Cyprus, Czechia, Democratic Republic of the Congo, Denmark, Estonia, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Japan, Kenya, Kyrgyzstan, Libya, Lithuania, Mexico, Micronesia (Federated States of), Namibia, Netherlands (Kingdom of the), Nigeria, North Macedonia, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Romania, Seychelles, Singapore, Spain, Sri Lanka, Thailand, Türkiye, Turkmenistan, United Kingdom of Great Britain and Northern Ireland, United States of America, Uzbekistan.

12. Of those 49 parties, 26 are parties operating under paragraph 1 of Article 5 of the Protocol (Article 5 parties), while the remaining 23 are non-Article 5 parties. The geographical distribution of all the reported cases, and specifically of the new cases, is shown in table 1.

Table 1
Geographical distribution of reported cases

United Nations geographical region	*Number of cases reported up to April 2024*	*New cases reported between May 2023 and April 2024*
African States	27	1
Asia-Pacific States	68	11
Eastern European States	420	47
Latin American and Caribbean States	14	5
Western European and other States	184	90
Total	**713**	**154**

13. In addition, two parties reported a total of 12 cases of illegal production and consumption pursuant to paragraph 5 (d) of decision XXXI/3. Those cases are not included in the present note, but the two submissions are available on the Secretariat's website.[4]

14. Ten parties reported 80 per cent of the 713 cases reported to date, as summarized in table 2. Three parties reported more than 80 per cent of the 154 new cases.

[4] https://ozone.unep.org/countries/additional-reported-information/illegal-trade.

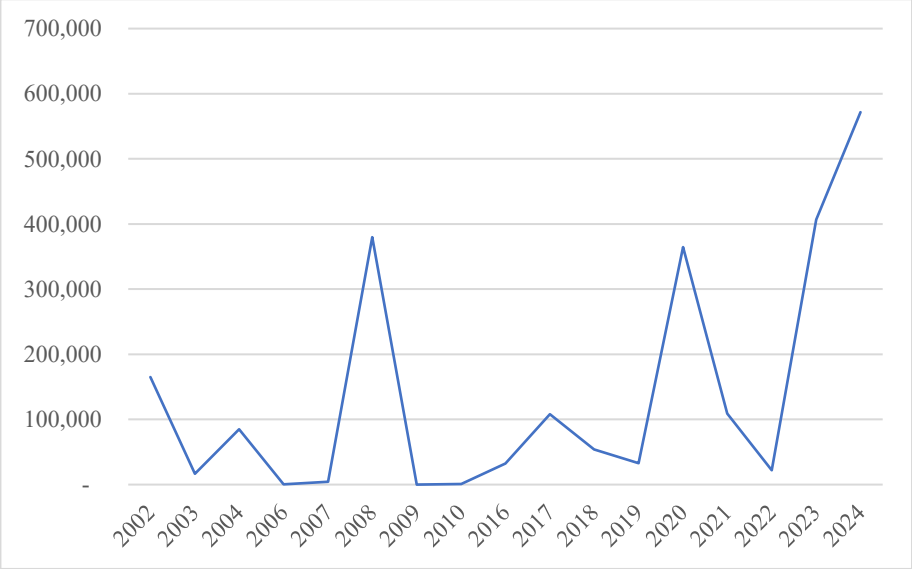
Table 2
Parties that account for most of the reported cases

Party	*Number of cases*
Bulgaria	233
Lithuania	116
United States of America	78
Poland	42
Italy	34
Spain	19
China	16
France	16
Uzbekistan	12
Netherlands (Kingdom of the)	11
Total	**577**

C. Substances traded and volumes

15. About 150 different substances are mentioned in the reported cases. The data available from the reported cases indicate that the total weight of substances involved in illegal trade is approximately 3 million kg.[5] The weight of substances in the 154 newly reported cases is around 1.2 million kg. Figure 2 shows the distribution of these substances' volume by year over the period 2002–2024.

Figure 2
Volume of illegal trade in kg per year over the period 2002–2024



[5] In the previous note, the total weight was 1,780,986 kg (1,780.99 metric tons).

16. Table 3 shows the substances most frequently involved in the reported cases of illegal trade.

Table 3
Most common substances[a] traded illegally, by number of cases reported, weight and percentage of total weight[b]

Substance	*Number of reported cases*	*Total weight of substance in kg*	*Percentage of substance weight in total[c]*
HFCs (not specified)	21	369 423	16
HFC-134a	266	375 491	16
R-404A	167	203 571	9
HCFC-22	102	383 639	17
R-410A	100	301 908	13
CFC-12	55	345 135	15
R-407C	34	56 010	2
HFC-32	22	32 446	1
R-507A	9	105 854	5
HFC-125	9	56 593	2
CFC-11	7	63 077	3
HFC-23	7	5 123	0.22

[a] All pure substances are indicated by their chemical type, such as HCFC or HFC, and blends/mixtures are identified by their designation using the "R" prefix.

[b] Not all substances in the reported cases are assigned a specific weight, so the numbers for weight are approximate.

[c] See para. 14 above.

17. In the 154 newly reported cases, the most frequently mentioned substances are HFC-134a (in 45 cases), R-410A (in 46 cases), R-404A (in 23 cases), R-407C (in 13 cases) and HCFC-22 (in 11 cases).

18. Of the total 713 cases of illegal trade, 37 cases explicitly mentioned the illegal export of controlled substances. Although the Protocol itself does not impose control measures on equipment containing controlled substances, in approximately 30 cases the illegal trade reported by parties concerned equipment (such as refrigerators, air conditioners or fire extinguishers) containing controlled substances. Of the 154 new cases, 7 related to export and 3 mentioned equipment charged with a controlled substance.

D. Methods of illegal trade

19. In 39 of the 713 reported cases (6 per cent), no information was provided on the details of the illegal trade. In the remaining 674 cases, the methods most frequently mentioned, which are not mutually exclusive and often overlap, were the following:

(a) Lack of a licence, a quota or registration was mentioned in 148 reported cases (21 per cent), where an importer or exporter failed to show or comply with the compulsory paperwork authorizing trade in the substances in question.

(b) Misdeclaration was cited in 111 reported cases (16 per cent), where importers/exporters provided false, incomplete or no information about the actual content of the shipment to the competent customs authorities (whether intentionally or unintentionally).

(c) The term "smuggling" is used to identify cases where illegally transported controlled substances were intercepted but the means of illegal trade was not clearly mentioned. This accounts for 178 cases (25 per cent).

(d) Trading in and smuggling in non-refillable/disposable cylinders was found in 241 cases (34 per cent).

(e) Concealment was mentioned in 113 cases (16 per cent), referring to situations where cylinders containing controlled substances were hidden inside legitimate shipments, personal luggage or vehicles to avoid detection.

(f) Mislabelling was cited in 35 instances of reported illegal trade (5 per cent), understood as cases where false customs codes, chemical names and other markings, including colour coding, were used on cylinders containing controlled substances in an attempt to avoid or mislead the inspection process.

20. For the 154 newly reported cases, the most common methods of illegal trade involved lack of proper documentation such as a licence, registration or quota (87 cases), concealment (39 cases), smuggling in non-refillable cylinders (36 cases), misdeclaration (10 cases) and mislabelling (5 cases).

E. Common means of detection

21. In 158 of the 713 reported cases (22 per cent), the way the illegal trade was detected could not be discerned. In the remaining 555 cases, the most commonly mentioned means of detecting illegal trade were the following (with some overlap between cases owing to the combination of methods):

(a) Customs inspections, including document inspection, risk-profiling, physical inspection of shipments and random checks, detected 494 cases (69 per cent of the total). In this category, random checks, particularly at land borders, are mentioned in 245 cases (34 per cent of all reported cases).

(b) Investigation and special law enforcement operations were the detection method in 25 cases of illegal trade (4 per cent).

(c) Tip-offs from informants and intelligence from other agencies were mentioned in 14 cases (2 per cent).

(d) Detection of illegal trade through data monitoring and analysis for discrepancies was indicated in 5 reported cases. One case mentioned detection using the informal prior informed consent (iPIC) procedure.

(e) Detection using identifiers was mentioned in 13 cases (2 per cent).

(f) Post-clearance audit was mentioned as the process in which illegal trade was identified in 4 cases.

22. For the 154 newly reported cases, the most common detection methods include various types of document and shipment inspections (102 cases), including random checks (36 cases). The detection method was listed as “unknown” in 16 cases.

F. Enforcement actions and penalties imposed in reported cases of illegal trade

23. Based on all the reported cases, the most common enforcement measures[6] (bearing in mind that measures are not applied exclusively and their use can overlap in the handling of one instance of violation) were the following:

(a) Seizure or temporary deprivation of goods[7] – of controlled substances that have been imported or exported illegally, as an initial measure to prevent goods from entering the market – was reported in 160 cases, while confiscation – permanent removal from possession[8] – resulted from legal proceedings in 377 cases.

(b) A monetary fine was imposed in 170 cases, ranging from $25 (for the illegal import of 36 kg of HFC-134a and CFC-12 into an Article 5 party through concealment) to $12,700 (for the illegal import of 544 kg of HCFC-22 into another Article 5 party without a licence and through misdeclaration) and $40,000 (for the illegal import of 22,900 kg of HCFC-22 into a non-Article 5 party through misdeclaration and mislabelling).[9]

[6] For the purpose of the present note, these terms are used based on the cases reported. It is recognized, however, that their legal definitions may vary from country to country.

[7] UNODC, *Manual on International Cooperation for the Purposes of Confiscation of Proceeds of Crime* (United Nations publication, UNODC, 2020), which derived the definition from the United Nations Convention against Transnational Organized Crime.

[8] Ibid.

[9] In many instances, monetary fines are imposed in conjunction with other forms of penalties such as storage, re-exportation and destruction; thus, the total financial burden on the offender can vary significantly from case to case.

(c) Actions taken pursuant to administrative proceedings were mentioned in 292 cases (41 per cent). In addition to monetary fines and confiscation, those actions included suspension and revocation of licences, allowance or registration (7 5 cases); denied entry or export (73 cases); re-exportation to the exporting country (87 cases); storage/destruction at the offender's cost (12 cases); warning and notification (9 cases); and a mandate to adhere to import/export labelling requirements before goods were released to the owner or for free circulation (14 cases).

(d) Criminal charges were filed against individuals and companies involved in illegal trade in 29 cases, with legal consequences ranging from confiscation, fines and suspension or revocation of a business licence to arrests in 14 instances and imprisonment in 4 instances.

(e) "Ongoing" investigation, prosecution and legal proceedings were mentioned in 38 of the cases reported, and in 38 other cases it was not possible to discern the details of any enforcement actions taken or measures applied.

24. In the 154 new cases, the most common enforcement actions and penalties applied were confiscation (53 cases), denied entry and export and immediate re-export (77 cases), fines (also involving immediate administrative consequences such as mandates to comply) (14 cases) and warnings (10 cases).

G. Disposal and handling of detained substances

25. In terms of what happens to seized and confiscated substances, the cases reported to the Secretariat revealed the following:

(a) In 270 reported cases, such information was not provided.

(b) Destruction was indicated in 237 cases.

(c) Re-export to the country of origin was mentioned in 82 cases.

(d) In 24 cases, the appropriated substances were given back or auctioned off to importers and counted against their quotas.

(e) Storage on the customs premises was mentioned in 10 cases.

(f) Release into free circulation on the domestic market once the importing requirements were complied with was mentioned in 7 cases.

(g) In other cases, handling included sending the substance to recycling, donating it to naval services and releasing it back to the importer once the conditions for legal import were met.

26. In the 154 new cases, the most common options for disposal were re-export back to exporting countries (56 cases), destruction (39 cases) and returning the substance to the owner following compliance (10 cases). The disposal method was not indicated in 42 cases.

III. Specific information on approaches to addressing and combating illegal trade reported by parties

27. The illegal trade details provided in the submitted cases highlight compliance and regulatory challenges associated with trade in controlled substances. They include the absence of necessary quotas, the absence of import and export licences, prevalent smuggling activities and frequent discovery of non-refillable cylinders during roadside inspections, mislabelling and shipment errors, all of which point to the need for better supply chain stakeholder awareness, enhanced oversight and stricter enforcement to curb illegal trade.

28. National authorities employ various methods to detect, address and prevent illegal trade in controlled substances. The notable strategies are listed in the following paragraphs:

(a) Methods based on the inspection of documents or shipments, including random on-site checks, are the most frequently used approach. Such methods capitalize on the effectiveness of having routine and targeted scrutiny and an element of unpredictability in enforcement strategies. This is aided by technological and intelligence tools such as refrigerant identifiers, risk profiling and building and strengthening intelligence network, which can significantly enhance the effectiveness of detection and enforcement efforts. Collaboration with customs is paramount.

(b) Automated information monitoring systems allow the competent authorities to compare real time data to identify discrepancies, which can lead to the detection of unauthorized transactions. One party reported improvement in the electronic HFC import screening process, which now automatically rejects non-compliant submissions. In a few cases, illegal trade was detected by comparing data from multiple sources, including the data on trade origin and destination compiled annually by the Secretariat and shared with relevant parties, with their actual reported data. Discrepancies may indicate unauthorized trade. Notably, in one case, the use of the iPIC procedure led to prevention of an illegal transaction.

(c) One party that did not have cases of illegal trade to report mentioned that its licensing system also extended to transit operations, which they suggested was a relevant approach to combating illegal trade as it helped national authorities identify substances and equipment containing them temporarily stored in customs facilities. The national ozone office could then inform the counterpart in the destination country, using also the iPIC procedure, to determine the validity of the transit trade.

(d) Another party indicated that making information on national implementation and data on controlled substances publicly available had helped provide transparency, enhance monitoring of compliance with licensing and quota allocation and potentially deter illegal activities. The information included, for instance, calculated HFC production and consumption, overall production and consumption licence and quota usage and entity-specific licence and quota balances, and chemical-specific data on HFCs produced, imported, exported and destroyed,[10] as well as a list of administrative consequences and cases of illegal activities in that respect.[11]

(e) Joint enforcement operations or market surveillance approaches involving multiple authorities such as customs, environmental enforcement and regulatory departments boost regulatory enforcement and cooperation and collaboration among stakeholders. One party reported the formation of an inter-agency task force on illegal trade, led by the national ozone authority. The party reported a number of case studies where illegal trade was detected and intercepted through the work of the task force.

(f) Details from all reported cases also show a range of post-detection actions employed by authorities to prosecute illegal trade, ranging from immediate interventions, such as seizure, denial of entry, re-export or mandates to comply with regulatory requirements (e.g. licensing or labelling), to longer-term consequences, such as confiscation, imposition of fines or administrative and criminal penalties imposed on offenders (usually a combination of several penalties). This demonstrates a context-based, proactive and comprehensive approach to enforcement by parties to the Montreal Protocol. In many cases, the authorities give a mandate for destruction of controlled substances (including HFCs) according to laws and guidelines, which points to efforts to remove them permanently from the market.

(g) Various disposal methods, including auctioning the seized substances against quota and release to the offender after compliance, indicate a tailored approach to each situation. There is, however, a preference for removing illegal substances from the domestic market, either through destruction or re-export to the country of origin.

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[10] United States Environmental Protection Agency, “HFC Data Hub”. Available at https://www.epa.gov/climate-hfcs-reduction/hfc-data-hub.

[11] Trakref, “Navigating the 2024 EPA Phasedown: Insights into the AIM Act and HFC Allocation Challenges”. Available at https://www.epa.gov/climate-hfcs-reduction/administrative-consequences-under-hfc-allocation-rule.