



Watch out for illegal trade of HCFCs and HFCs:

Lessons learnt from the Global Montreal Protocol
Award for Customs and Enforcement Officers

© 2023 United Nations Environment Programme

ISBN: 978-92-807-4009-7

Job number: DEL/2507/NA

This publication may be reproduced in whole or in part and in any form for educational or non-profit services without special permission from the copyright holder, provided acknowledgement of the source is made. The United Nations Environment Programme would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale or any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme. Applications for such permission, with a statement of the purpose and extent of the reproduction, should be addressed to the Director, Communication Division, United Nations Environment Programme, P. O. Box 30552, Nairobi 00100, Kenya.

Disclaimers

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory or city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of a commercial company or product in this document does not imply endorsement by the United Nations Environment Programme or the authors. The use of information from this document for publicity or advertising is not permitted. Trademark names and symbols are used in an editorial fashion with no intention on infringement of trademark or copyright laws.

The views expressed in this publication are those of the authors and do not necessarily reflect the views of the United Nations Environment Programme. We regret any errors or omissions that may have been unwittingly made.

© Maps, photos and illustrations as specified

Suggested citation: United Nations Environment Programme (2023). *Watch out for illegal trade of HCFCs and HFCs: Lessons learnt from the Global Montreal Protocol Award for Customs and Enforcement Officers*. Paris, France.

Front and Back Cover: © Polish Customs

Acknowledgements

This document was produced in 2022 by the United Nations Environment Programme (UNEP), Law Division, OzonAction as part of UNEP's work programme under the Multilateral Fund for the Implementation of the Montreal Protocol.

The UNEP project team:

- Mr. James S. Curlin, Head of UNEP OzonAction
- Ms. Anne-Maria Fenner, Information Manager, OzonAction
- Mr. Halvart Koppen, Regional Network Coordinator, OzonAction

Researched and written by:

- Ms. Anna Kobylecka, Polish Customs Administration, Poland

Quality reviewed by:

- Dr. Gilbert Bankobeza, UNEP Ozone Secretariat
- Dr. Ezra Clark, UNEP OzonAction
- Mr. Benjamin Ojoleck, UNEP Law Division
- Mr. Roux Raath, World Customs Organization
- Mr. Adilson Teixeira, World Customs Organization
- Ms. Janet Macharia, Head of Gender and safeguards unit, UNEP
- Mr. Andrea Hinwood, Chief scientist UNEP

Editing and proofreading:

- Ms. Juliana Chaves Chaparro, UNEP OzonAction

English proofreading:

- Mr. Jean Paul Martial, Consultant for UNEP OzonAction

Layout and design:

- Ms. Katharine Mugridge, kmugridge.com

Review and referencing:

- Mr. Daniel Hopkins, Consultant for UNEP OzonAction

List of Abbreviations

A5 country	Article 5 country (developing country)
CAP	Compliance Assistance Programme (UNEP OzonAction)
CAS number	Chemical Abstract Service Number
CFC	Chlorofluorocarbon
CO₂	Carbon dioxide
CO₂eq	Carbon dioxide equivalent
CTC	Carbon tetrachloride
EC	European Commission
ECA	Europe and Central Asia
EU	European Union
F-gas	Fluorinated gas
Global Award	Global Montreal Protocol Award for Customs and Enforcement Officers (2017-2018)
GWP	Global Warming Potential
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
ODP	Ozone Depletion Potential
ODS	Ozone Depleting Substances
RILOs	WCO Regional Intelligence Liaison Offices
UNEP	United Nations Environment Programme
WCO	World Customs Organization

Table of Contents

ACKNOWLEDGEMENTS	III
LIST OF ABBREVIATIONS	IV
TABLE OF CONTENTS	V
LIST OF FIGURES.....	VI
LIST OF PHOTOS.....	VI
1. INTRODUCTION	1
2. GLOBAL MONTREAL PROTOCOL AWARD	2
2.1 THE MONTREAL PROTOCOL.....	2
2.2 THE GLOBAL MONTREAL PROTOCOL AWARD FOR CUSTOMS AND ENFORCEMENT OFFICERS.	5
2.2.1 Organisers.....	5
2.2.2 Awarded Actions	5
2.2.3 Awarding Process	6
3. SEIZURES OF CONTROLLED SUBSTANCES	11
3.1 OZONE DEPLETING SUBSTANCES SEIZURES	12
3.2 HFCs SEIZURES	29
3.2.1 Infringement of HFC Quota.....	32
3.2.2 Infringement of HFCs Labelling Requirements	35
3.2.3 Infringement of the Ban on Non-refillable Cylinders	39
3.3 GENERAL LEARNINGS ON SEIZURES CASES	49
4. IPIC CONSULTATIONS	60
5. SUMMARY OF LESSONS LEARNED	64
5.1 ENFORCEMENT OF THE MONTREAL PROTOCOL.....	64
5.2 IPIC CONSULTATIONS FOR MONITORING OF ODS AND HFCs	68
5.3 IDENTIFICATION OF ODS AND HFCs	71
5.4 SANCTIONS SYSTEMS AND DISPOSAL PRACTICES	79
5.5 RAISING AWARENESS AND BUILDING CAPACITIES ON THE MONTREAL PROTOCOL	86
6. SUMMARY OF CONCLUSIONS.....	92
REFERENCES	93
GLOSSARY OF TERMS	96
ANNEX 1.....	98

List of figures

Figure 2.1 HFC phase-down schedules. Source: (UNEP n.d.-b)	3
Figure 2.2 Montreal Protocol and SDGs. Source: (UNEP n.d.-b)	4
Figure 3.1 ODS phase-out schedule Source: (UNEP 2020e, p.42)	12
Figure 3.2 Number of ODS seizures per region	13
Figure 3.3 ODS quantities per region	13
Figure 3.4 Type of ODS seized	14
Figure 3.5 Quantities of ODS, number of cylinders and units per ODS type	14
Figure 3.6 ODS quantities/kg per type of illegal trade involved	15
Figure 3.7 Mislabeled ODS	16
Figure 3.8 Type of cylinder per ODS quantity/kg	25
Figure 3.9 Differentiated HFC phase-down schedules Source: (UNEP 2017a)	29
Figure 3.10 Number of HCF seizures	31
Figure 3.11 Type of HFC-related infringements	31
Figure 3.12 Number of HFC cylinders per type of infringement	31
Figure 3.13 Quantities/kg per HCF type	32
Figure 3.14 Indicative labelling for an air conditioner system	36
Figure 3.15 Number of HFC smuggling cases of non-refillable cylinders	42
Figure 3.16 HFC quantities and number of non-refillable cylinders	42
Figure 3.17 Quantities/kg of HFCs in non-refillable cylinders per country	42
Figure 3.18 HFC types in non-refillable cylinders	43
Figure 3.19 Smuggling of HFCs in non-refillable cylinders into Poland in 2018	43
Figure 3.20 Number of ODS and HFCs seizures	49
Figure 3.21 Quantities/kg of ODS and HFCs	49
Figure 3.22 Percentage of ODS and HFCs seizures and quantities per substance	50
Figure 3.23 Number of ODS and HFC cylinders and equipment items	50
Figure 3.24 Number of ODS seizures per region	50
Figure 3.25 ODS quantities/kg per region	50
Figure 3.26 Percentage of ODS and HFC quantities/kg per regions	51
Figure 3.27 Share of ODS and HFC quantities/kg seized per type of cylinders	51
Figure 3.28 Network for Africa seizures per country	52
Figure 3.29 Network for Asia and the Pacific seizures per country	53
Figure 3.30 Barrel seizure by Belarusian Customs	54
Figure 3.31 ECA Network seizures. Quantities/kg per type of substance per country	54
Figure 3.32 ECA Network seizures. Quantities/kg per substance	54
Figure 3.33 ECA Network seizures. Products and units per substance	55
Figure 3.34 Network seizures. Type of cylinders/number per substance	55
Figure 3.35 ECA Network regional awards. Number of seizures	56
Figure 3.36 ECA Network regional awards. Tonnage/MT of substances	56
Figure 3.37 ECA Network seizures. Global Award and ECA awards results	56
Figure 3.38 The EU member states seizures	57
Figure 3.39 Network for Latin America seizures	58
Figure 4.1 <i>iPIC consultations. Reason of rejection/number</i>	63
Figure 4.2 <i>Number of iPIC queries by substance</i>	63
Figure 5.1 Differentiated HFC phase-down and HCFC phase-out schedules Source: (UNEP 2017a)	66
Figure 5.2 Global Award cases involving ODS	72
Figure 5.3 Global Award cases involving HFCs	73
Figure 5.4 Safety Data Sheet	74
Figure 5.5 Penalties imposed	80
Figure 5.6 Level of fines for some of the cases	81
Figure 5.7 Disposal options	82

List of photos

Photo 2.1 Armenia	8
Photo 2.2 Belarus	8
Photo 2.3 Bosnia and Herzegovina	8
Photo 2.4 Bulgaria	8
Photo 2.5 Croatia	8
Photo 2.6 Estonia	8
Photo 2.7 Georgia	8
Photo 2.8 North Macedonia	8
Photo 2.9 Poland	8

Photo 2.10 Serbia	8
Photo 2.11 Spain	8
Photo 2.12 Türkiye	8
Photo 2.13 Mongolia	8
Photo 2.14 Argentina	9
Photo 2.15 Costa Rica	9
Photo 2.16 Dominican Republic	9
Photo 2.17 Honduras	9
Photo 2.18 Paraguay	9
Photo 2.19 Cambodia 1	9
Photo 2.20 Cambodia 2	9
Photo 2.21 Cambodia 3	9
Photo 2.22 Nigeria 1	9
Photo 2.23 Nigeria 2	9
Photo 2.24 Nigeria 3	9
Photo 2.25 Pakistan 1	9
Photo 2.26 Pakistan 2	9
Photo 2.27 Pakistan 3	9
Photo 2.28 Poland	10
Photo 2.29 Bosnia and Herzegovina 1	10
Photo 2.30 Bosnia and Herzegovina 2	10
Photo 2.31 Dominican Republic 1	10
Photo 2.32 Dominican Republic 2	10
Photo 2.33 Dominican Republic 3	10
Photo 2.34 Honduras 1	10
Photo 2.35 Honduras 2	10
Photo 2.36 Iran 1	10
Photo 2.37 Iran 2	10
Photo 2.38 DG Climate Action of the European Commission	10
Photo 3.1 Portable tank seized by the Polish Customs	11
Photo 3.2 Container seized by Polish Customs	11
Photo 3.3 Barrels seized by Mongolian Customs	12
Photo 3.4 Carbon tetrachloride seized by Georgian customs	15
Photo 3.5 Halon-2402 seized by Georgian customs	16
Photo 3.6 HCFC-22 seized by Costa Rican Custom	16
Photo 3.7 HCFC-22 seized by Paraguayan Customs	17
Photo 3.8 HCFC-22 seized by Paraguayan Customs	17
Photo 3.9 HCFC-22 seized by Argentinian Customs	17
Photo 3.10 CFC-12 seized by Dominican Customs	18
Photo 3.11 Refrigerant gas analyser results	18
Photo 3.12 HCFC-22 seized by Georgian Customs	18
Photo 3.13 HCFC-22 seized by Paraguayan Customs	18
Photo 3.14 ISO tank seized by Pakistani Customs	19
Photo 3.15 Seized ISO tanks pressure gauge	19
Photo 3.16 Results of analysis from refrigerant identifier	19
Photo 3.17 Barrels seized by Belarusian Customs 1	20
Photo 3.18 Barrels seized by Belarusian Customs 2	20
Photo 3.19 Non-refillable refrigerant cylinder seized by Sri Lanka Customs	21
Photo 3.20 Carton boxes of HCFC-22 seized by Greek Customs	22
Photo 3.21 Carton boxes of HCFC-22 seized by Greek Customs	23
Photo 3.22 Air-conditioning unit in Bosnia and Herzegovina	24
Photo 3.23 Seized air conditioners by Paraguayan Customs	24
Photo 3.24 Non-refillable cylinder	25
Photo 3.25 HCFC-141b barrels seized by the Mongolian Customs	26
Photo 3.26 Prohibited refrigerants 1	26
Photo 3.27 Prohibited refrigerants 2	27
Photo 3.28 Refrigerant barrels seized by Belarusian Customs	28
Photo 3.29 Refrigerant containers seized by Polish Customs 1	32
Photo 3.30 Refrigerant containers seized by Polish Customs 2	34
Photo 3.31 Non-refillable cylinder seized by Polish Customs Source: (UNEP 2021a)	35
Photo 3.32 Air conditioner in Polish Customs	36
Photo 3.33 Refillable cylinder with required labelling	36
Photo 3.34 Refrigerant cylinder lack of labelling 1	37
Photo 3.35 Refrigerant cylinder lack of labelling 2	37
Photo 3.36 Refrigerant cylinder lack of labelling 3	37
Photo 3.37 Refrigerant cylinder lack of labelling 4	37

Photo 3.38 Lack of labelling	38
Photo 3.39 Non-refillable refrigerant cylinder	39
Photo 3.40 Disposable cylinder	39
Photo 3.41 Non-disposable cylinder	39
Photo 3.42 Typical non-refillable cylinders 1	40
Photo 3.43 Typical non-refillable cylinders 2	40
Photo 3.44 Typical non-refillable cylinders 3	40
Photo 3.45 Typical non-refillable cylinders 4	40
Photo 3.46 Typical non-refillable cylinders labelling 1	40
Photo 3.47 Typical non-refillable cylinders labelling 2	40
Photo 3.48 Unlabelled non-refillable cylinder	41
Photo 3.49 Mis-labelled non-refillable cylinder	41
Photo 3.50 Valve of a non-refillable cylinder	41
Photo 3.51 Altered non-refillable cylinder	41
Photo 3.52 Illegal imports of refrigerant cylinders seized by Croatian Customs	44
Photo 3.53 Mislabelled non-refillable cylinders 1	44
Photo 3.54 Mislabelled non-refillable cylinders 2	44
Photo 3.55 Non-refillable cylinders in the truck among wooden planks	44
Photo 3.56 Non-refillable cylinders in the truck in reel of iron wire	44
Photo 3.57 Non-refillable cylinders in a passenger car's luggage compartment 1	45
Photo 3.58 Non-refillable cylinders in a passenger car's luggage compartment 2	45
Photo 3.59 Non-refillable cylinders in a passenger car's luggage compartment 3	45
Photo 3.60 Non-refillable cylinders in a passenger car's luggage compartment 4	45
Photo 3.61 Fake LPG installation	45
Photo 3.62 Pressure containers with HFCs hidden under chassis of vans	45
Photo 3.63 Other type of container 1	46
Photo 3.64 Other type of container 2	46
Photo 3.65 Non-refillable refrigerant cylinder	46
Photo 3.66 Photo of a non-refillable cylinder in an internet offer Source: (Koeppen 2019)	47
Photo 3.67 Refrigerant seizure by Polish Customs	48
Photo 3.68 Case seizure by Spanish Customs	49
Photo 3.69 2,040kg of HCFC-22 seized by Namibia Customs	52
Photo 3.70 190,4 kg HFC-404A and HFC-134a seized by Polish Customs	52
Photo 3.71 Equipment seized by Namibia Customs	52
Photo 3.72 HCFC-22 Cylinder seized by Namibia Customs	53
Photo 3.73 Cargo seizure by Namibia Customs	53
Photo 3.74 Application for an import licence	57
Photo 3.75 Refusal to issue an import licence	57
Photo 3.76 Refrigerants seized by Polish Customs	57
Photo 3.77 Equipment seized by Honduras Customs	58
Photo 3.78 Refrigerant seizure by Namibia Customs	58
Photo 5.1 Refrigerant seizure by Namibia Customs	65
Photo 5.2 Refrigerant seizure by Polish Customs	68
Photo 5.3 E-mail exchange 1	69
Photo 5.4 E-mail exchange 2	69
Photo 5.5 E-mail exchange 3	69
Photo 5.6 Non-refillable cylinder	71
Photo 5.7 Example of a packing list	75
Photo 5.8 Example of a R-134a non-refillable cylinder	76
Photo 5.9 Example of a R-404A non-refillable cylinder	76
Photo 5.10 A packing list of a seized HFCs by the Polish Customs	76
Photo 5.11 Mis-declared cylinder 1	77
Photo 5.12 Mis-declared cylinder 2	77
Photo 5.13 Unlabelled cylinder seized by Polish Customs	78
Photo 5.14 Car installations to smuggle HFCs	78
Photo 5.15 Training with the refrigeration identifiers 1	78
Photo 5.16 Training on sampling and analysing contents 1	78
Photo 5.17 Training with the refrigeration identifiers 2	78
Photo 5.18 Training on sampling and analysing contents 2	78
Photo 5.19 Nigerian authorities in destructing seized refrigerants	79
Photo 5.20 Rotary kiln incineration in Nigeria	83
Photo 5.21 Investigating the refrigerant exports	84
Photo 5.22 Regional Global Award ceremony in Asunción, Paraguay, 2019 Source: (UNEP n.d.-d)	86
Photo 5.23 Analysing refrigerants by Polish Customs	86

1. Introduction

This publication provides an analysis of the cases submitted in the context of the Global Montreal Protocol Award for Customs and Enforcement Officers. The Global Award was launched in 2018 by UNEP OzonAction, a branch of the United Nations Environment Programme (UNEP), which assists developing countries and economies in transition to achieve and sustain their compliance with the Montreal Protocol on Substances that Deplete the Ozone Layer. The award was launched in collaboration with the Ozone Secretariat and the World Customs Organization (WCO).

This Global Award is intended to raise awareness about the Montreal Protocol and to recognise customs and enforcement officials for their efforts in preventing and combating illicit traffic in Montreal Protocol and Kigali Amendment-regulated substances. Ozone-depleting substances (ODS) include hydrochlorofluorocarbons (HCFCs) and other compounds with a high Global Warming Potential (GWP), particularly hydrofluorocarbons (HFCs). HCFCs and HFCs are used in a variety of industrial and consumer applications, including air conditioner, refrigerators, and fire extinguishers. Because of their negative environmental impact, these substances are being phased down or phased out. (WCO 2022, p.129)

In accordance with the Montreal Protocol, HCFCs are subject to phase-out schedules that call for a steady decline in HCFC production and consumption until they are completely phased out. The entire phase-out target for developed countries was 2020, while the target for developing countries is 2030, with a 2.5% service tail allowed until 2040. (WCO 2022, p.129)

HFCs are covered by phase-down schedules – as stated in the Kigali Amendment – which means a gradual reduction of production and consumption of these substances until the agreed phase-down levels are reached. Production and imports of HFCs will be phase-down by 85% in developed countries between 2019 and 2036, and by 80% in developing countries between 2029 and 2045. By 2047, certain developing nations will attain a final decrease of 85%. (UNEP 2020e, p.14)

Some Montreal Protocol (MP) parties began gradually reducing HFCs ahead of the phase-down timelines. The European Union (EU) was the first to respond, enacting the first reauctioning step in 2015 and the second in 2018. (United Nations Environment Programme, Environmental Investigation Agency and European Commission 2011, p.23)

The cases submitted to the Global MP Award involved the successful prevention of illegal trade in controlled substances, either due to an Informal Prior-Informed Consent consultation (iPIC) carried out prior to issuing import/export licences or to a seizure of HCFCs, HFCs or equipment that contains or relies upon these substances.

The analysis of the cases provided a number of lessons learned, including best working practises and practical lessons for frontline officers, which can be used in enforcement activities under the Montreal Protocol.

Chapter 2 presents the Global PM Award, the awardees, and its findings. Chapter 3 provides a summary of the ODS and HFCs seizures. Chapter 4 includes a description of the iPIC consultations. Chapter 5 provides an overview of the lessons learned, including practical aspects of enforcement measures such as identification of HCFCs and HFCs, inspection of suspicious goods, sanctions, and disposal practices. It also identifies training, reporting, and communication needs. Chapter 6 draws some conclusions and proposes a course of action. The annex includes a glossary, country cases, and knowledge test for the reader.



2. Global Montreal Protocol Award

Customs and enforcement officers play a crucial role in monitoring and controlling trade in HCFCs and HFCs as well as helping countries to meet their Montreal Protocol commitments. The Global Award sought to recognise customs and enforcement officers for their efforts in preventing and combating illegal HCFC and HFC trade.

2.1 The Montreal Protocol

As a landmark multilateral environmental agreement, the Montreal Protocol on Substances that Deplete the Ozone Layer controls the production and consumption of over a hundred manufactured Ozone Depleting Substances (ODS). These compounds, when released into the atmosphere deplete the stratospheric ozone layer, which serves as a barrier against the sun's harmful ultraviolet rays, endangering all life on Earth. 198 countries, including all Member States of the United Nations, have ratified the Protocol since it was adopted on September 16, 1987. (United Nation Environment Programme [UNEP] n.d.-c; UNEP n.d.-b)

The Montreal Protocol enacts a phase-down in ODS consumption and production, with different timelines for developed and developing (referred to as "Article 5") countries. Each signatory state has responsibilities under this treaty, including the phase-out of specific categories of ODS, the control of ODS trade, the dissemination of data on an annual basis, and the establishment of national licencing systems for the control of ODS imports and exports. Both developed and developing countries have common but differentiated responsibilities. A binding, time-bound, and quantifiable set of responsibilities falls on both developing and developed countries; in fact, these responsibilities are equal but differentiated. (UNEP n.d.-b)

Control Measures (Article 2), Calculation of Control Levels (Article 3), Control of Trade with Non-Parties (Article 4), Special Situation of Developing Countries (Article 5), Data Reporting (Article 7), Non-compliance (Article 8), and Technical Assistance (Article 10) are just a few of the topics covered by the Protocol. Annexes A (CFCs and halons), B (other fully halogenated CFCs, carbon tetrachloride, methyl chloroform), C (HCFCs), E (methyl bromide), and F (HFCs) detail the substances that are subject to the treaty's regulations (HFCs). (UNEP n.d.-b)

To account for changing scientific, technical, and economic circumstances, the treaty is regularly evolving. The Meeting of the Parties serves as the treaty's governing body, with the Open-ended Working Group providing technical support during annual meetings. The Ozone Secretariat is based in the United Nations Environment Programme headquarters in Nairobi, Kenya, and provides support to the Parties. (UNEP n.d.-b)

Phase out of HCFCs – the Montreal Amendment

Hydrochlorofluorocarbons (HCFCs) are being phased out under the Montreal Protocol because of their depleting effects on the ozone layer despite their widespread use in the refrigeration, air conditioning, and foam applications. The most widely used HCFC is about 2,000 times more powerful than carbon dioxide in terms of global warming potential, making it both an ODS and a powerful greenhouse gas (GWP). Considering the positive effects on global warming, the Parties agreed in September 2007 to move up the date by which HCFCs would be phased out. The consumption of HCFCs has been decreasing in developed countries, and they will be totally phased out by 2020. As of 2013, developing countries have begun phasing out HCFCs, and they've committed to reducing its use progressively until they've phased out the substance entirely by 2030. (UNEP n.d.-b)

Article 5 nations are well underway with their HCFC phase outs, thanks to the Multilateral Fund's endorsement of their multi-stage HCFC Phase out Management Plans (HPMPs), investment projects, and capacity building initiatives. The Parties are urging all nations to support the selection of alternatives to HCFCs that meet other health, safety, and economic factors while also reducing negative environmental impacts, particularly climate impacts. This involves taking into account potential for global warming, energy use, and other variables essential to climate change. Refrigeration and air conditioning systems should have their refrigerants, equipment, servicing practices, recovery, recycling, and disposal methods optimised. (UNEP n.d.-b)

Phase down of HFCs – the Kigali Amendment

To aid in the timely phase out of CFCs and HCFCs, a new group of substances called hydrofluorocarbons (HFCs) was introduced as a non-ozone depleting substitute. Air conditioners, refrigerators, aerosols, foams, and other items now often use HFCs. These compounds do not contribute to ozone depletion in the stratosphere, although their GWPs (12–14,000) are still rather high. Total HFC emissions are increasing at a pace of 8% per year, and by 2050 they are expected to account for 7–19% of world CO₂ emissions. Therefore, efforts to limit global warming to 2 degrees Celsius this century are hindered by the uncontrolled increase in HFC emissions. In order to preserve the climate system, immediate action on HFCs is required. (UNEP n.d.-b)

At the 28th Meeting of the Parties to the Montreal Protocol, which took place on 15 October 2016, in Kigali, Rwanda, the Parties agreed to reduce phase down their use of HFCs. HFCs have been added to the list of controlled substances, and a schedule for their progressive decrease by 80-85 percent by the late 2040s has been adopted and ratified by the participating countries. Developed countries were predicted to make their first cuts in 2019. In 2024, and in some cases 2028, developing countries will freeze their HFC consumption. (UNEP n.d.-b)

The Parties have been negotiating this since 2009, and their agreement on the Kigali Amendment (Decision XXVIII/1 and Decision XXVIII/2) carries on the legacy of the Montreal Protocol. On 1 January 2019, the Kigali Amendment became legally binding for nations that have ratified it. (UNEP n.d.-b; UNEP 2016c)

As part of the Montreal Protocol's HCFC phase-out process, increasing the use of low-GWP, energy-efficient technology is the best method to achieve the HFC phase-down. The goal of the Montreal Protocol is to eliminate HCFCs; by taking this "smart approach," we can do that and reap the added benefits of increased energy efficiency and reduced CO2 emissions - a "climate co-benefit." (UNEP n.d.-b)

The Path from Kigali: HFC Phase-Down Timeline

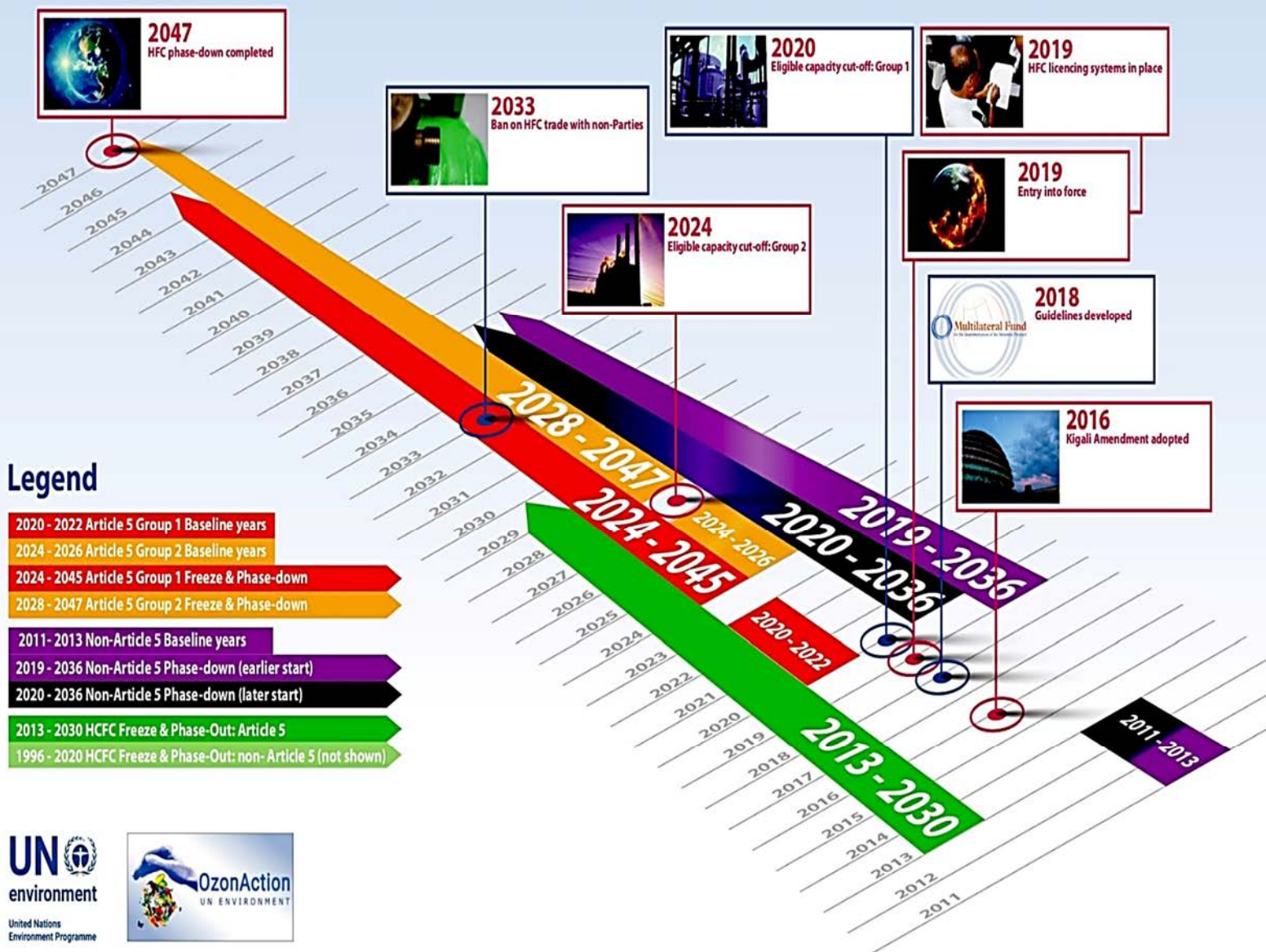


Figure 2.1 HFC phase-down schedules. Source: (UNEP n.d.-b)



Relevance of the Montreal Protocol

The ozone layer is expected to recover by the middle of this century if the Montreal Protocol is fully and consistently implemented. There would have been millions more cases of melanoma, various cancers, and cataracts by 2050 if this treaty hadn't been implemented. Example: It is estimated that the Montreal Protocol might prevent an annual average of two million cases of skin cancer by 2030. (UNEP n.d.-b)

To date, the signatories to the Protocol have phased out 98% of ODS worldwide, relative to 1990 levels. The Montreal Protocol is helping to maintain the global climate system because most of these substances are powerful greenhouse gases. It is projected that from 1990 to 2010, greenhouse gas emissions were decreased by the equivalent of 135 gigatons of CO₂, or 11 gigatons per year, according to the treaty's control measures. (UNEP n.d.-b)

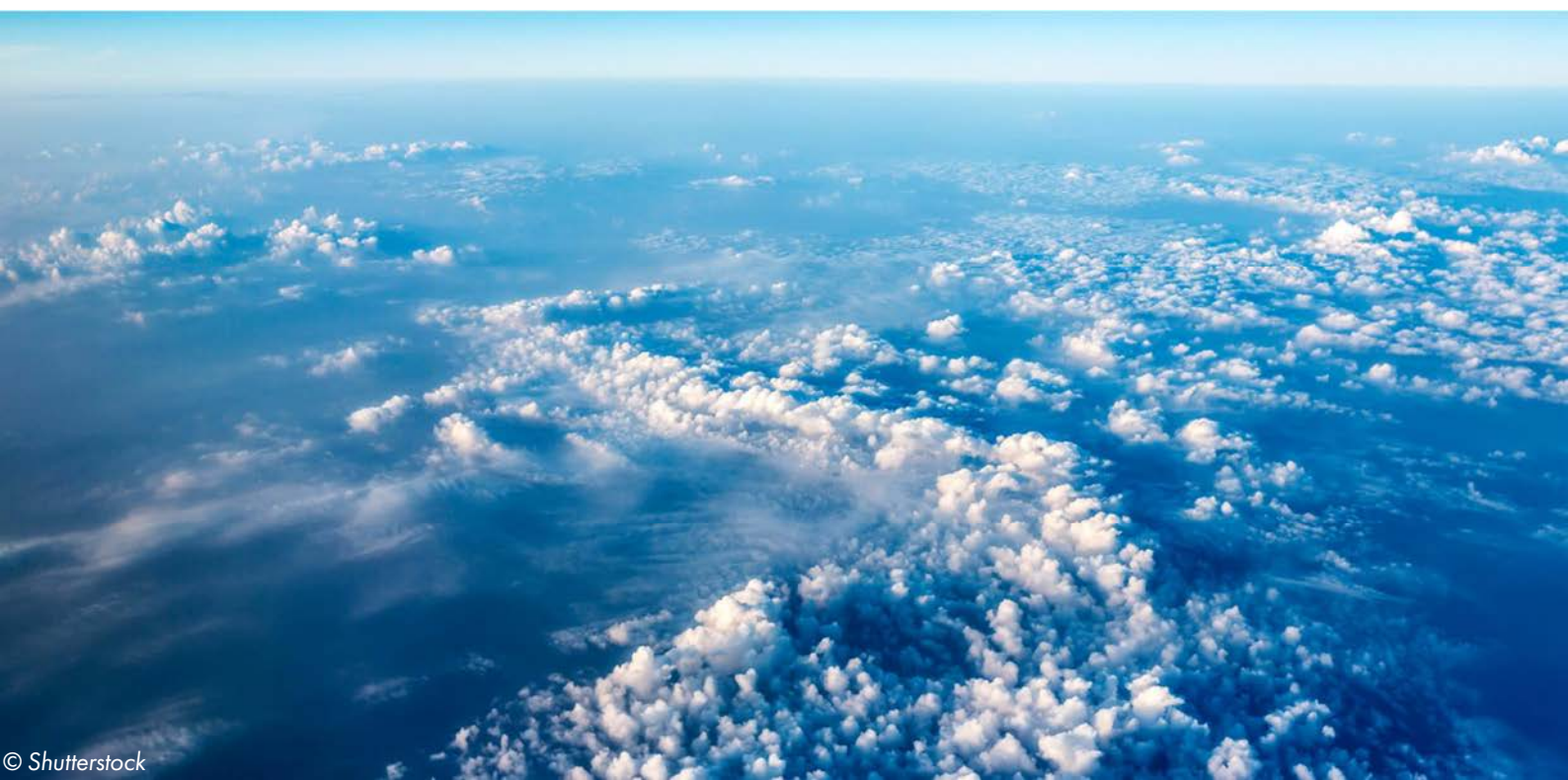
Actions to limit the use of HFCs under the Kigali Amendment to the Montreal Protocol are projected to prevent the emissions of up to 105 million tonnes of carbon dioxide equivalent of greenhouse gases, helping to avoid up to 0.5 degrees Celsius of global temperature rise by 2100. This is a truly unprecedented contribution to climate mitigation efforts and the single largest contribution the world has made towards keeping the global temperature rise "well below" 2 degrees Celsius. (UNEP n.d.-b)

The Montreal Protocol also contributes significantly to the achievement of the UN Sustainable Development Goals.

The Montreal Protocol is regarded as one of the most effective environmental agreements of all time for these reasons and more. What the signatories to the Protocol have accomplished since 1987 is unprecedented, and it continues to serve as an outstanding example of what effective international cooperation can accomplish. (UNEP n.d.-b)



Figure 2.2 Montreal Protocol and SDGs.
Source: (UNEP n.d.-b)



2.2 The Global Montreal Protocol Award for Customs and Enforcement Officers.

In 2018, UNEP OzonAction, in collaboration with the Ozone Secretariat and the World Customs Organization, launched the Global Montreal Protocol Award for Customs and Enforcement Officers. The initiative shows public recognition of customs and enforcement officers and organisations in the implementation of the Protocol.

2.2.1 Organisers

This award is one of the multiple activities that the three organisations undertake to support parties to the Montreal Protocol in meeting compliance with phase-out and phase-down schedules of controlled substances.

United Nations Environment Programme OzonAction

UNEP OzonAction, a branch of the United Nations Environment Programme (UNEP), builds the capacity of governments, in particular National Ozone Units (NOU), and the industry in developing countries to develop and enforce national policies to implement the Montreal Protocol. Its overall goal is to enable those countries to meet and sustain their compliance obligations under the treaty. (UNEP n.d.-a)

UNEP OzonAction's assistance is provided worldwide through a regional approach. Under the Compliance Assistance Programme (CAP), Regional Networks for Africa, Europe, and Central Asia, Latin America and the Caribbean, Asia and the Pacific, and West Asia provide support to NOUs, capacity building, and specific training activities for customs and enforcement officers. UNEP OzonAction provides guidance, tools, and awareness materials, as well as encouragement to prevent the illegal trade in controlled substances, which undermines the goals of the Montreal Protocol. (Green customs 2018, p. 57)

Ozone Secretariat

Information on how governments, organizations, and individuals may help safeguard the ozone layer is disseminated by the Ozone Secretariat, as well as data and information on the production and consumption of ozone depleting substances (ODSs). The Ozone Secretariat also organizes conferences and seminars for the Vienna Convention and the Montreal Protocol. (UNEP n.d.-a)

The Ozone Secretariat provides comprehensive information on various aspects of these two treaties, such as a Handbook for the Montreal Protocol and a Handbook for the Vienna Convention that contain the legal texts of the treaties, decisions of the MOP and COP, country profiles, and technical information and reports. (UNEP n.d.-a)

World Customs Organization

The World Customs Organization (WCO) assists its 184 member administrations by contributing to the harmonisation and simplification of customs systems and procedures. The WCO Harmonized Commodity Description and Coding System (HS) has been effectively applied to implement and enforce trade-related Multilateral Environmental Agreements (MEAs) such as the Montreal Protocol. (WCO n.d.-b)

The WCO is a key partner in a number of activities coordinated by UNEP aimed at raising the awareness of customs officers about the Montreal Protocol and other trade-related MEAs. The WCO provides assistance in international operations, analysis of trends, and the dissemination of strategic information, and helps combat customs-related crimes through the Customs Enforcement Network (CEN), Environet, and the network of Regional Intelligence Liaison Offices (RILOs). (WCO n.d.-a)

118 INDIVIDUALS AND 60 ORGANIZATIONS FROM 38 COUNTRIES RECEIVED THE GLOBAL MONTREAL PROTOCOL AWARD FOR CUSTOMS AND ENFORCEMENT OFFICERS.

2.2.2 Awarded Actions

The prevention of illegal trade in HCFCs and HFCs is key to the success of the Montreal Protocol and the Kigali amendment. In the context of the Global PM Award, eligible enforcement actions included successful iPIC consultations or the detection of illegal shipments and the subsequent seizure or rejection of HCFCs and HFCs products and equipment.

What substances need to be controlled?

HCFCs and HFCs are controlled under the Montreal Protocol due to their negative impact on the ozone layer or their high contribution to global warming. The Montreal Protocol and its Kigali amendment provide phase-out and phasedown schedules for controlled substances. Several Ozone Depleting Substances (ODS) such as chlorofluorocarbons (CFCs), halons, methyl bromide, and carbon tetrachloride have already been phased out. HCFCs are being phased out as indicated in the introduction. For developed countries, the complete phase-out deadline was 2020, whereas for developing countries (Article 5) it is 2030, with a 2.5% service tail allowed until 2040. (Multilateral Fund for the Implementation of the Montreal Protocol n.d., p.11)

HFCs with high Global Warming Potential (GWP) are being phased down under the Kigali Amendment that entered into force in 2019.

HCFCs and HFCs are commonly used as refrigerants in air conditioning, refrigeration and heat pump equipment and as foam blowing agents. Due to the phase-out and phase-down schedules, traders in HCFCs and HFCs require import/export licenses. Substances contained in products and equipment are not controlled under the Montreal Protocol, but many countries have independently introduced controls on imports and exports of certain products and equipment that contain or rely on controlled substances to reduce their demand. (UNEP 2013b, p. XI; .5; 6)

The elimination and reduction of HCFCs and HFCs stimulate illegal trade as there is an ongoing demand for these substances due to their widespread use, long equipment lifetime, and the high costs of replacement or retrofitting HCFCs and HFCs to meet the Montreal Protocol targets. In order to prevent illegal trade in HCFCs and HFCs, parties are encouraged to use the Informal Prior Informed Consent (iPIC) mechanism and detect illegal shipments, which requires active involvement of enforcement and customs officers. (UNEP 2021)

Which actions are awarded?

The Global PM Award recognize customs and enforcement actions including iPIC consultations and seizures. The cases awarded are analysed in this publication with the aim of drafting trends, extracting lessons learned and inspiring further action among Customs and enforcement officers worldwide.

iPIC consultations

The iPIC mechanism has been designed to exchange information between importing and exporting countries on the intended trade in controlled substances. The exchange of information prior to the shipment of controlled substances helps facilitate the legal trade and prevent illegal and unwanted trade. (UNEP 2020e, p.67)

The iPIC consultations were applied by 11 countries and the European Commission on behalf of four member states resulting in preventing 47 cases of illegal trade, including more than 2,000 metric tonnes (MT) of ODS. The cases showed that iPIC consultations facilitate the exchange of information to clarify the status of intended shipments. (UNEP 2019b, p.19)

Seizures

The seizures reported in the context of the Global Award involved HCFCs and HFCs. The HCFC seizures took place between 2009 and 2018, while the HFC seizures were enforced in 2018.

24 countries reported 587 seizures of HCFCs and HFCs, which involved 255,904 kg of substances as well as 19,992 cylinders and 27,944 items of equipment. (UNEP 2019b, p.113)

91% of the cases involved HFCs, but 53% of the seized amounts of substances were ODS. The cases showed that illegal trade in ODS continues and that the different phase-out and phase-down schedules encouraged illegal trade. (UNEP 2019b)

2.2.3 Awarding Process

Eligible nominees were customs and enforcement officers or their respective organisations who successfully prevented illegal trade in HCFCs and HFCs as well as products and equipment.

The nomination, including a detailed description of the case, evidence, and photographs were submitted to UNEP OzonAction. The nominations were reviewed and verified by an expert panel. The Global Award was endorsed jointly by UNEP OzonAction, the Ozone Secretariat, the Multilateral Fund Secretariat (MFL), and the WCO. Representatives of all organisations signed the award certificates.

Medals and certificates were awarded to 118 individuals and 60 organisations from 38 countries and regions:



Network for Asia and the Pacific

For iPIC consultations:

- Bangladesh, China, Singapore

For seizures actions:

- Cambodia, Mongolia, Pakistan, Sri Lanka

For both iPIC consultations and seizures:

- Islamic Republic of Iran

Network for Europe and Central Asia

For iPIC consultations:

- Estonia, Lithuania, North Macedonia, the Russian Federation, Serbia and DG Climate Action of the European Commission

For seizures:

- Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Greece, Poland, Spain, Türkiye

For iPIC consultations and seizures:

- Belarus

Network for Latin America and the Caribbean:

For iPIC consultations:

- Belize, Colombia

For seizures:

- Argentina, Costa Rica, Dominican Republic, Honduras, Paraguay

Network for Africa:

for seizures:

- Namibia, Nigeria, Rwanda

Network for West Asia:

for iPIC consultations:

- The United Arab Emirates

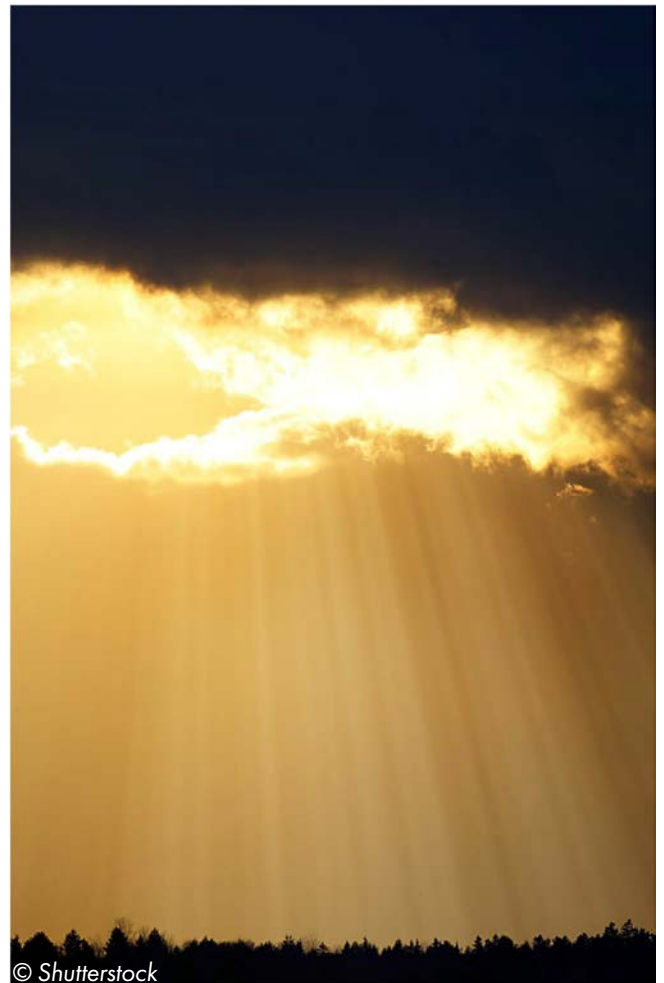
for seizures:

- Jordan

UNEP OzonAction, the Ozone Secretariat, and the World Customs Organization congratulate all the winners and their respective administrations for the successful enforcement actions that helped to prevent illegal trade in controlled substances. Those actions contributed to meeting the Montreal Protocol objectives of protecting human health and the environment. The dedication of those who compiled the iPIC and seizure information and submitted the nominations also deserves special acknowledgement and gratitude.

The nominees for the Global Award received medals and certificates during regional or national ceremonies.

Regional ceremonies took place in Mongolia, Paraguay, and Ukraine. Participants of the regional ceremonies included national Montreal Protocol officers, customs and enforcement officers, and experts from UNEP OzonAction, the Ozone Secretariat, the WCO, the Multilateral Fund Secretariat, implementing agencies, bilateral partners, and international organizations. During regional meetings, the winners shared detailed information about their cases with other participants to inspire action among them.



Photos from the regional ceremony for Europe and Central Asia in Kiev, Ukraine of representatives of UNEP OzonAction, the Ozone Secretariat, the WCO and the awardees of:



© UNEP

Photo 2.1 Armenia



© UNEP

Photo 2.2 Belarus



© UNEP

Photo 2.3 Bosnia and Herzegovina



© UNEP

Photo 2.4 Bulgaria



© UNEP

Photo 2.5 Croatia



© UNEP

Photo 2.6 Estonia



© UNEP

Photo 2.7 Georgia



© UNEP

Photo 2.8 North Macedonia



© UNEP

Photo 2.9 Poland



© UNEP

Photo 2.10 Serbia



© UNEP

Photo 2.11 Spain



© UNEP

Photo 2.12 Türkiye

Regional ceremony in Mongolia



© UNEP

Photo 2.13 Mongolia

Regional ceremony in Asunción, Paraguay



© UNEP

Photo 2.14 Argentina



© UNEP

Photo 2.15 Costa Rica



© UNEP

Photo 2.16 Dominican Republic



© UNEP

Photo 2.17 Honduras



© UNEP

Photo 2.18 Paraguay

National ceremonies took place in Cambodia, the Dominican Republic, Iran, Jordan, Namibia, Nigeria, Poland, Pakistan, Rwanda, Singapore, and the United Arab Emirates (see photos below). The ceremonies provided recognition to the awardees and contributed to raising awareness of the country's commitments under the Montreal Protocol.



© UNEP

Photo 2.19 Cambodia 1



© UNEP

Photo 2.20 Cambodia 2



© UNEP

Photo 2.21 Cambodia 3



© UNEP

Photo 2.22 Nigeria 1



© UNEP

Photo 2.23 Nigeria 2



© UNEP

Photo 2.24 Nigeria 3



© UNEP

Photo 2.25 Pakistan 1



© UNEP

Photo 2.26 Pakistan 2



© UNEP

Photo 2.27 Pakistan 3



© UNEP

Photo 2.28 Poland

Photos of the awardees from:



© UNEP

Photo 2.29 Bosnia and Herzegovina 1



© UNEP

Photo 2.30 Bosnia and Herzegovina 2



© UNEP

Photo 2.31 Dominican Republic 1



© UNEP

Photo 2.32 Dominican Republic 2



© UNEP

Photo 2.33 Dominican Republic 3



© UNEP

Photo 2.34 Honduras 1



© UNEP

Photo 2.35 Honduras 2



© UNEP

Photo 2.36 Iran 1



© UNEP

Photo 2.37 Iran 2



© UNEP

Photo 2.38 DG Climate Action of the European Commission

3. Seizures of Controlled Substances

The seizures reported in the context of the Global Award involved HCFCs and HFCs.¹

24 countries reported 587 seizures of HCFC and HFCs (255,904 kg of substances contained in 19,992 cylinders and 27,944 equipment items).

The HCFC seizures took place between 2009 and 2018, while the HFC seizures were enforced in 2018 following the Kigali Amendment created in 2016.

The table below summarises the cases submitted to the Global PM Award with differentiation between Ozone Depleting Substances (ODS) and HFCs, substances with high Global Warming Potential (GWP).

RESULTS OF GLOBAL AWARD SEIZURES		
ODS cases	24 countries reported Global Award seizures	HFC cases
21 countries	12% of parties to the Montreal Protocol	5 countries
Quantity of seized substances		
136,474 kg equals 26 ODP tonnes, which would fit in 7 ISO tanks	 <p>© Polish Customs Photo 3.1 Portable tank seized by the Polish Customs</p>	119,424 kg equals 238,987 tonnes of CO ₂ eq, which would fit in 6 ISO tanks
Number of cylinders		
14,197 cylinders would fit in 17 20 ft containers	 <p>© Polish Customs Photo 3.2 Container seized by Polish Customs</p>	5,794 cylinders would fit in 7 20 ft containers

¹ The figures in this chapter (3) are based on data from Global Montreal Protocol Award for Customs and Enforcement Officers publication (UNEP 2019b)

3.1 Ozone Depleting Substances Seizures

Preventing illegal trade in ODS helps to enforce national legislation and the trade provisions of the Montreal Protocol. The ODS seizures reported in the context of the Global Award were enforced between 2009 and 2018 and showed that illegal trade in ODS continues.

ODS phase-out

All parties to the Montreal Protocol must eliminate the production and consumption of ODS. This concerns various sectors such as manufacturing, servicing, end-users, and trade. Countries need to monitor and control legal trade and prevent illegal trade. The Montreal Protocol has set a phaseout timetable for all major ODS, including halons, CFCs, and HCFCs. As shown in the table on the right, the global HCFC phase-out schedule is the following:

ODS	Developed countries reductions	Developing countries reductions
HCFCs	35% by 2004	10% by 2015
	75% by 2010	35% by 2020
	90% by 2015	67.5% by 2025
	Total phase-out by	
	2020	2030

Figure 3.1 ODS phase-out schedule
Source: (UNEP 2020e, p.42)

53% OF THE SEIZED AMOUNT OF SUBSTANCES INVOLVED ODS. 80% OF THE ODS WERE MIS-DECLARED AND 60% OF THE ODS WERE TRADED IN NON-REFILLABLE CYLINDERS.

ODS seizures

The ODS seizures were enforced between 2009 and 2018. However, 75% of the seizures took place between 2016 and 2018. 21 countries reported 50 seizures of ODS. 80% of the seized amount of ODS was detected in developing countries.

The cases involved 136,474 kg of ODS, as well as 14,197 refrigerant cylinders and 27,715 products or equipment items.

Most of the cases reported in the context of the Global Award involved mis-declaration of ODS, both in terms of the number of cases as well as in regard to the ODS quantity seized. In such cases the illegal ODS were declared as HFCs and in one case as a non-ODS substance.

86% of the ODS that were mis-declared were actually mislabelled, which involved either mislabelling of ODS containers or their packages. There were also smuggling cases in which the ODS were neither declared to customs and concealed. There were also cases in which the ODS were not declared to customs but concealed in legal cargo.

Over 60% of the illegally traded ODS was transported in non-refillable cylinders weighing 13.6 kg. However, a significant portion of the seized ODS was also transported in large containers, such as ISO tanks or 250-kg containers. Small containers of 0.3 kg or 0.5 kg were also involved in illegal ODS trade.

Almost 40% of the ODS cases involved equipment, mostly air conditioners, but also other types of equipment such as used milk tank units and condensers were detected. The equipment seizures concerned equipment that contained HCFC-22, but the amount of ODS involved in these cases was not reported. The following sections describe a number of ODS cases demonstrating methods for the illegal ODS trade and lessons learned.



© Mongolian Customs

Photo 3.3 Barrels seized by Mongolian Customs

Number of ODS seizures per region

The Global Award reviewed ODS seizures cases in:

- Africa: Namibia, Nigeria, and Rwanda
- Asia and the Pacific: Islamic Republic of Iran, Mongolia, Pakistan, and Sri Lanka
- West Asia: Jordan
- Europe and Central Asia (ECA): Armenia, Belarus, Bosnia and Herzegovina, Georgia, and Türkiye, in the EU by: Croatia, Greece, and Spain
- Latin America and the Caribbean: Argentina, Costa Rica, the Dominican Republic, Honduras, and Paraguay

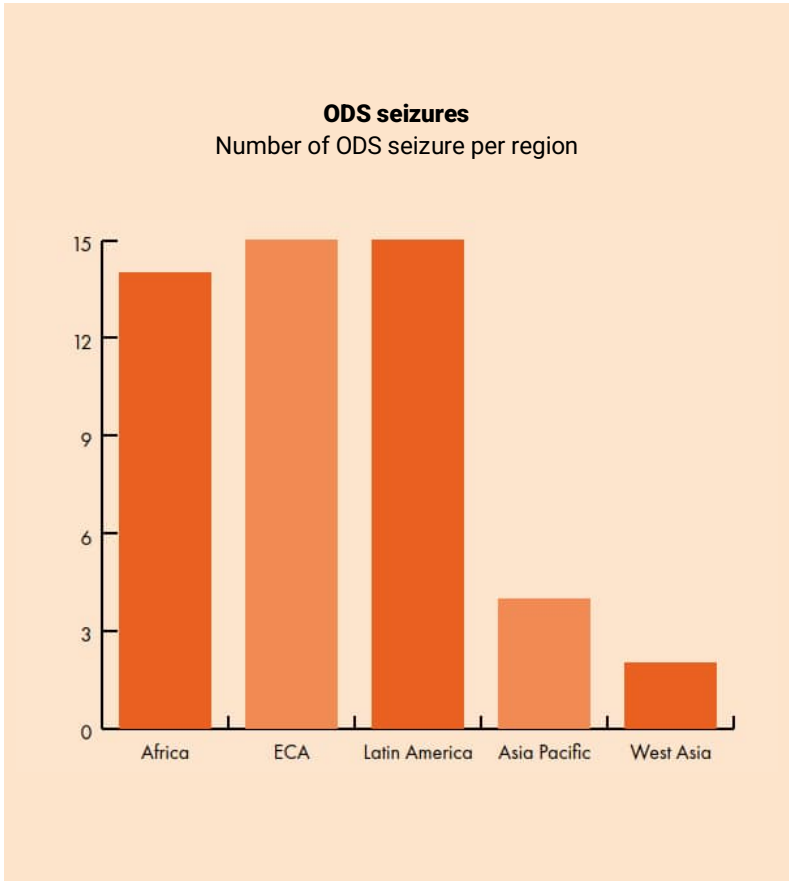


Figure 3.2 Number of ODS seizures per region

Quantities of ODS seized per region

The largest quantity of illegal ODS was seized in the ECA region. The countries of the Network for Africa reported seizures, mostly of equipment, with no information on the quantity of ODS contained in the equipment. The Networks for Asia and the Pacific and Latin America reported similar quantities of ODS seized. The quantity of ODS involved in the West Asia cases was not reported.

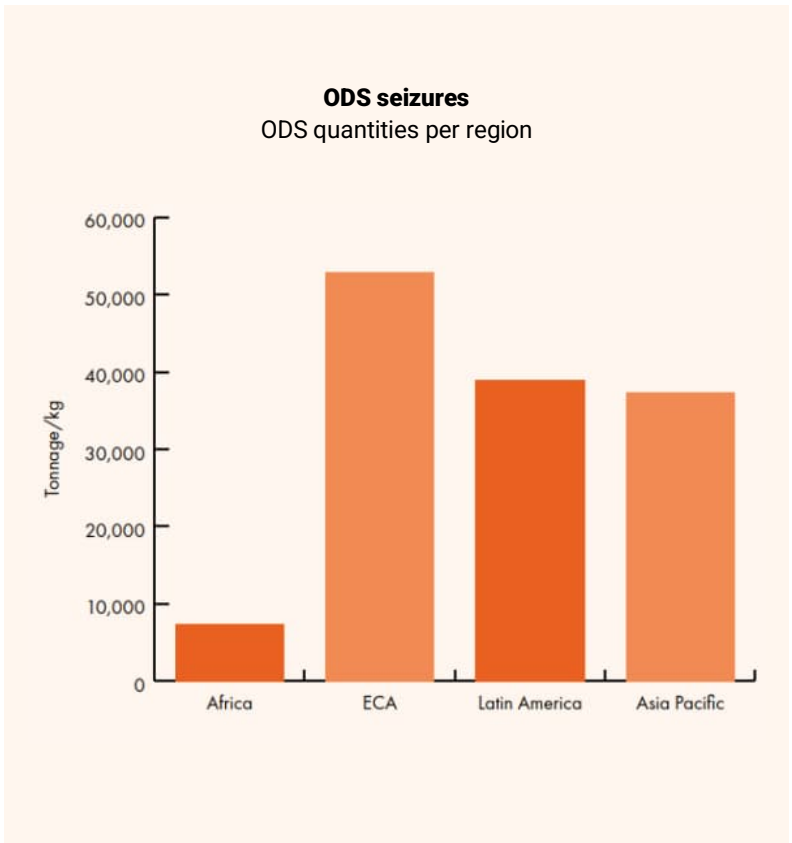


Figure 3.3 ODS quantities per region

Quantities of the seized substances by ODS type

As shown in the chart on the right, the biggest percentage of the seized ODS involved HCFC-22. The seizures of this refrigerant represented 72% of the entire quantity of ODS.

HCFC-141b represented 12% and CFC-12 represented 11% of the total quantity of ODS. The remaining substances included small quantities of other ODS such as CFC-113, CTC, Halon 2402 and HCFC-409A, which represented 5% of the seized amount of ODS.

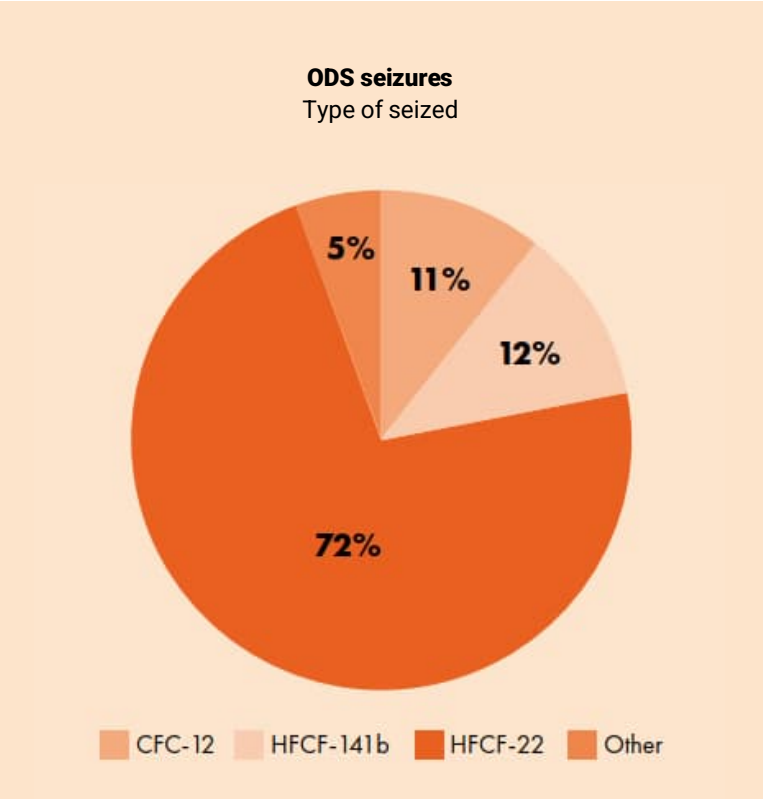


Figure 3.4 Type of ODS seized

Quantities of ODS, number of cylinders and units by type of ODS

- Illegal trade in ODS concerned mostly HCFC-22. 98,829 kg of this refrigerant were seized.
- 15,711 kg of HCFC-141b and 14,467 kg of CFC-12 were detected. Small quantities of other types of ODS, such as CFC-113, CTC, Halon-2402, and HCFC-409A were also seized.
- Illegal ODS were transported and/or stored in cylinders, which also involved large containers. 14,197 cylinders with ODS were seized.
- The ODS cases involved 27,715 pieces of equipment, which all contained HCFC-22. The amount of ODS involved in the seizures of the ODS-based equipment was unknown.

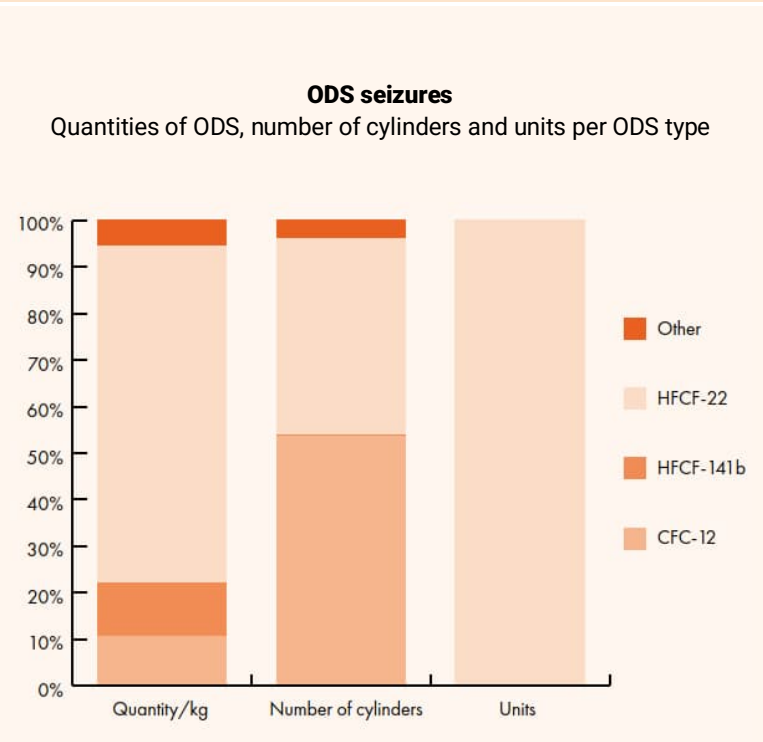


Figure 3.5 Quantities of ODS, number of cylinders and units per ODS type

Illegal trade

The methods used for illegal trade in ODS identified in the past included various modus operandi, such as: mis-declaration as HFCs or other non-controlled substances, mis-declaration as used (recycled, reclaimed) substances, concealment and double layering, diverting from transshipment points, under-invoicing, transit through free trade zones, as well as declaration as “products” or “equipment”.

The cases reported in the context of the Global Award demonstrated two main methods for illegal ODS trade: mis-declaration of ODS as HFCs and lack of declaration of ODS to customs. There were also a few cases in which ODS were declared to customs, but there was no import licence for them.

ODS seizures

ODS tonnage seized per type of illegal trade involved

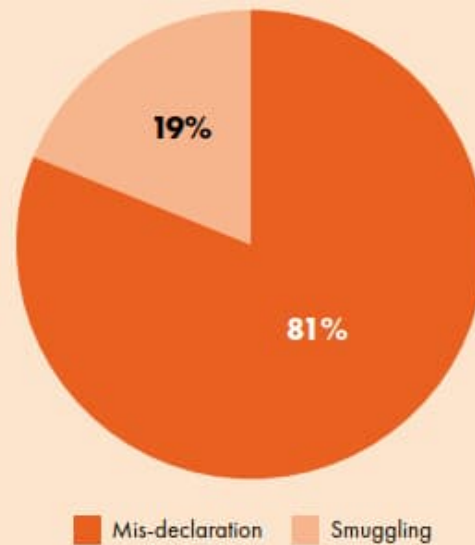


Figure 3.6 ODS quantities/kg per type of illegal trade involved

With regard to the weight of the seized ODS, the percentage of the mis-declared ODS represented almost 81%. 19% of the ODS were not declared to customs. Some of the undeclared ODS were concealed among legal goods. This type of illegal trade accounted for 14% of the total amount of ODS.

REAL EXAMPLES**Georgian case – Banned import**

The Georgia Customs Service discovered an unauthorised import attempt of a glass jar containing 1.6 kg of carbon tetrachloride (CTC) at the Customs Clearance Zone “Tbilisi Airport.” CTC was mentioned in the supporting documents, and the jar was labelled appropriately.

CTC imports into Georgia are prohibited. The imported CTC did not have an import licence.

An administrative process as well as a judicial lawsuit, were started. The CTC had to pay a fine.

Importation of glass jars containing carbon tetrachloride into Georgia is prohibited.



Photo 3.4 Carbon tetrachloride seized by Georgian customs

Source: (UNEP 2019b, p.52)

Mis-declaration

Providing false information to customs as a deliberate attempt to mislead customs in order to avoid specific measures such as confiscation of goods due to an import ban, or the need for an import or export licence may be done by misdescription of goods, including false or incomplete declaration of quantity of goods, or not mentioning the goods in the customs declaration. Mis-declaration may involve misclassification of goods, including a false declaration with regard to the physical description or properties of the goods. In such cases, the goods may also be mislabelled in order to mislead customs during physical inspection.

Mis-declaration of ODS

As indicated, 81% of the ODS were mis-declared, including ODS that were actually mislabelled, which represented 70% of the total ODS quantity. In most cases, substance testing identified mislabelling of ODS.

Mislabelling as HFCs or other noncontrolled substances was detected in 13 cases. Most of the mislabelled ODS was HCFC-22, which was mislabelled as HFC-134a or HFC-410A.

The table on the right shows the ODS substance and the type of non-ODS substance that was declared in the shipment documents, on the cylinder, or the packaging. Examples below show some of the cases where mis-declaration of the ODS was involved.

Some real examples are listed below.

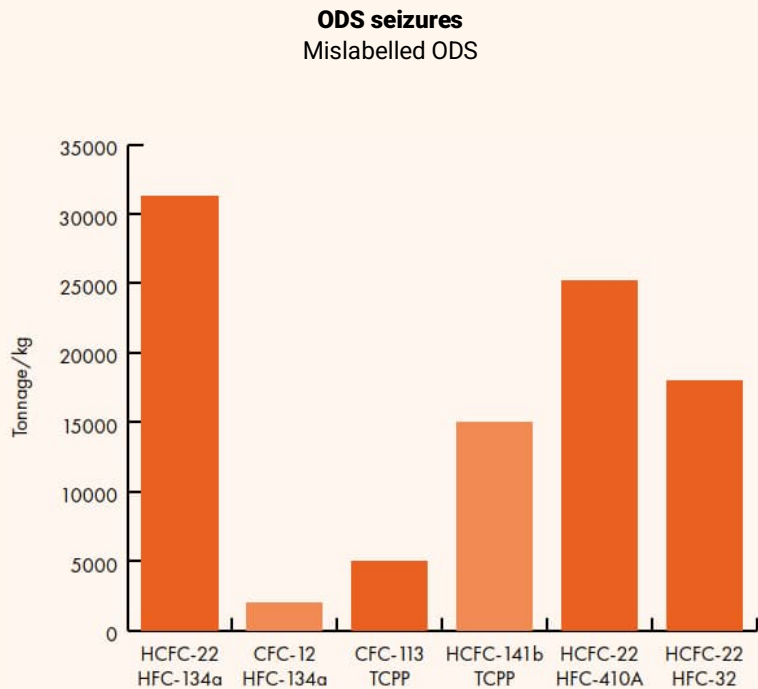


Figure 3.7 Mislabelled ODS

Georgian case – Mis-declaration of halon-2402 as HCFC-114B2

Georgia Customs Service identified an unlawful import attempt of one plastic cylinder labelled refrigerant 114B2 in 2018. The shipping documents evaluated as part of the Customs Risk Management Framework revealed that the consignment included 10 kg of halon-2402 rather than refrigerant 114B2. Halon imports into Georgia are prohibited. The driver lacked an import licence for halon-2402. The contents of the cylinder were not examined. An administrative process and a legal lawsuit have been launched.



© Georgian Customs

Photo 3.5 Halon-2402 seized by Georgian customs

Source: (UNEP 2019b, p.53)

Costa Rican case – Mis-declaration of HCFC-22 as HFC 134a

An unlawful import of 600 cylinders of HCFC-22 into Costa Rica in 2012 and a subsequent attempted illegal export of part of the HCFC-22 with the use of an incorrect tariff code was detected by customs in 2014. The company was able to sell 188 cylinders of HCFC-22 to the local market, but the remaining 412 cylinders containing 5,603 kg of HCFC-22 were seized.

The NOU has previously taught Customs to identify unlawful ODS trafficking. The initial illicit import of 600 HCFC-22 cylinders was discovered using post-control techniques.



© Costa Rican Customs

Photo 3.6 HCFC-22 seized by Costa Rican Custom

Source: (UNEP 2019b, p.37)

Paraguayan case – Mis-declaration of HCFC-22 as HFC 134a

In 2010, a firm imported 1,150 R-134a 13.6-kilogramme cylinders. However, upon the physical examination and verification of the contents of the cylinders, it was discovered that 90% of the refrigerant gas combination was HCFC-22 gas. This was confirmed by testing all of the samples.

The cylinders were returned to the transit nation. An officer accompanied the shipment to the border. The NOU of the country was informed about the shipment.

Source: (UNEP 2019b, pp.89; 90)



© Paraguayan Customs

Photo 3.7 HCFC-22 seized by Paraguayan Customs

Georgian case – Mis-declaration of HCFC-22 as HFC-417a (retrofit for HCFC-22)

The shipping paperwork for two 13.6-kg refrigerant cylinders confirmed the presence of HFC-417a, a retrofit for HCFC-22. A physical examination of the shipment showed R-22 cylinders. The cylinder's contents were examined, and it was discovered that it contained HCFC-22.

Source: (UNEP 2019b, pp.52; 55)



© Georgian Customs

Photo 3.8 HCFC-22 seized by Paraguayan Customs

Argentinian case – Labelling of cylinders with ODS to indicate HFC-134a content

In 2009, customs discovered 1,150 cylinders carrying 15,640 kg of HCFC-22 labelled as HFC-134a. A governmental laboratory evaluated samples of the cylinder content. The study revealed that the cylinders contained HCFC-22.

Source: (UNEP 2019b, pp.20; 21)



© Argentinian Customs

Photo 3.9 HCFC-22 seized by Argentinian Customs

Dominican case – Labelling cylinders with ODS to indicate HFC-134a content

In 2017, an illicit trade involving 2,010 kg of CFC-12 in 6,700 cylinders labelled as R-134a was discovered at Multimodal Caucedo Port in the Dominican Republic. The instance was found by NOU personnel, who used a refrigerant gas analyser to evaluate the contents of the cylinders. (UNEP 2019b, p.49)



© Dominican Customs

Photo 3.10 CFC-12 seized by Dominican Customs



© Dominican Customs

Photo 3.11 Refrigerant gas analyser results

Georgian case – Mis-labelled packages that contained ODS

Two cylinders of HCFC-22 mis-declared as HFC-404A and packed in a cardboard box labelled HFC-404A were detected by customs in 2018 (UNEP 2019b, p.55).



© Georgian Customs

Photo 3.12 HCFC-22 seized by Georgian Customs



© Georgian Customs

Photo 3.13 HCFC-22 seized by Paraguayan Customs

Pakistani case – Mis-labelled ISO tank

Customs officials at the Karachi International Container Terminal received information that an ISO tank carrying 18,000 kg of HCFC-22 will be trafficked into Pakistan. The ISO tank was labelled as flammable with a UN 3252 sticker indicating that it contained HFC-32. The customs officer, who had attended Montreal Protocol Training for Customs on ODS Trade Control, took various measures to resolve the shipment's uncertainties.

- Scanning to see whether it had liquid refrigerant revealed that the ISO tank held two-thirds liquid.
- Removing the ISO tank's seal since it was highly likely that the ISO tank did not include HFC-32 considering the:
 - The ISO tank had not been HFC-32 classified or authorised. Other refrigerant names were included on the ISO tank plate, but not HFC-32.
 - The pressure and temperature values on the gauges did not correspond to the HFC-32 pressure temperature chart.

Further analysis found that the ISO tank's temperature and pressure indicators matched HCFC-22. The original results have to be confirmed by testing the material with a refrigerant identification. In the presence of customs authorities, a sample from the ISO tank was pulled into a pre-vacuumed disposable cylinder, sealed, and delivered to the laboratory for testing. The identification revealed that the sample was entirely composed of HCFC-22. A print of the outcome was used as evidence. Customs officers seized the ISO tank after final confirmation, and a report was filed to the NOU for further action. When reported to the Global Award, the case was in progress. The pictures below show the labelling indicating HFC-32 and the pressure temperature, which is typical for HCFC-22, not HFC-32.

Source: (UNEP 2019b, p.83)



© Pakistani Customs

Photo 3.14 ISO tank seized by Pakistani Customs



© Pakistani Customs

Photo 3.15 Seized ISO tanks pressure gauge

Successful enforcement:

- use of pressure-temperature test
- previous training for customs officers led to the detection of mislabelled ODS

Analysis of the refrigerants

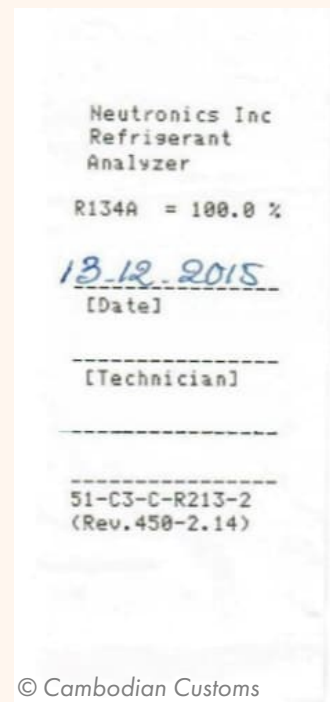
In the context of the Global Award, a chemical analysis of refrigerants was conducted in the case of 21 seizures. In eight cases, the analysis of the substances confirmed mislabelling of ODS. In some cases, it also helped to clarify the content of some shipments in order to take relevant enforcement measures.

Cambodian case – Analysis of the refrigerant

In Cambodia, HFCs are not controlled under national legislation. Because of the incidence rates of mislabelled refrigerants in the area, the Government of Cambodia has decided to limit the import and export of HFCs with importers voluntarily. Importers must apply for an HFC import or export licence from the Ministry of Environment's National Ozone Unit. For taxes and record reasons, the importer is required to disclose the import or export of any form of HFCs and blends.

In December 2015, during a routine check, an undeclared import of HFC-134a was detected. It was transported in an international passenger bus. 564 cylinders, labelled as HFC-134a were detected. The refrigerants were tested for ODS or HFC. Following confirmation of the R-134a content, the importer was fined. The importer additionally charged customs duty and value-added tax before the refrigerant cylinders were released into the local market.

Source: (UNEP 2019b, p.34)



© Cambodian Customs

Photo 3.16 Results of analysis from refrigerant identifier

Jordan case – Analysis of the refrigerant

Several cargoes of air conditioners came to Jordan in 2017 and 2018. The equipment was charged with HCFC-22, according to the shipping documentation. The import of HCFC-22-containing air conditioners into Jordan is prohibited.

According to the shipping paperwork, air conditioners were charged with HCFC-22 in one of the incidents. The package was ordered to be re-exported. However, an examination of the refrigerant charge revealed that the air conditioners may have been filled with HFC-410A, which may have been legitimately imported. As a result, the re-export and seizure were both cancelled. There was no legal action, and no penalties were imposed.

Source: (UNEP 2019b, pp.69; 70)

Belarusian case – Declaring and mislabelling ODS as non-ODS

In 2016, a truck with 80 barrels (250 kg apiece) was examined at the Belarus-Lithuania border. The chemicals were reported as "tris (2-chloropropyl) phosphate (TCP), which is non-ODS, according to the shipping paperwork and paper labels on the drums. The customs laboratory took samples and analysed them. The study found that 60 barrels had 15,000 kg of HCFC-141b and 20 drums contained 5,000 kilograms of CFC-113, both of which were ODS. Since January 1, 2013, importing ODS into Belarus has been prohibited. The drums were temporarily held at customs. A criminal investigation has been launched.

According to the shipment paperwork, the importer was established in Belarus, and the consignor of the products was an Irish corporation. The case was probed with the assistance of officials from Belarus, Lithuania, and Ireland, as well as the European Commission (EC). The importer and the transportation business both denied any participation in unlawful activity.

Source: (UNEP 2019b, p.23)

Belarus approached the European Commission regarding the Irish consignor and Lithuanian transport businesses and inquired about the feasibility of returning the confiscated items to Lithuania. The EC warned the enterprises that they were not registered in the ODS import/export licencing system and, as a result, lacked an export licence.

On the Irish company record, the addresses of the company officials and the secretary were listed as being outside Ireland. The competent Irish authorities stated that the Irish consignor was registered in Ireland in 2010 and that it sought a voluntary strike-off from the Irish register of businesses in 2017 before being liquidated.

The criminal case was halted in February 2019 because the individual to be accused could not be identified. At the time of reporting the case in the framework of the Global Award, no decision had been made about the seized items.

Source: (UNEP 2019b, pp.23; 24)



© Belarusian Customs

Photo 3.17 Barrels seized by Belarusian Customs 1



© Belarusian Customs

Photo 3.18 Barrels seized by Belarusian Customs 2

Enforcement:

- detection of 20,000 kg of mislabelled ODS
- international cooperation

Challenges:

- identification of the person to be charged

Smuggling

Smuggling cases reported in the context of the Global Award involved small quantities of ODS transported in trucks and private cars via the land borders. This type of illegal trade was detected in 7 cases, in which 190 kg of ODS were seized.

The ODS were smuggled in 14 non-refillable cylinders. Smugglers did not have import licences. Analysis of the cylinder contents confirmed that the cylinders contained ODS. Fines were applied in these cases. The ODS were either seized or re-exported. Three other smuggling cases involved larger quantities of undeclared ODS. The ODS were concealed among legitimate goods. The detection of the illegal trade resulted from the analysis of shipment papers and physical control. In one case scanning the containers led to detection of cylindrical shapes in a container that was not declared to customs with such a content. Two cases were brought to court, and administrative fines were administered. One case resulted in the destruction of the ODS.

Sri Lankan case – Lack of declaration of ODS

In 2018, Sri Lankan customs captured 564 non-refillable refrigerant cylinders, each carrying 13.6 kg of HCFC-22 - a total of 7,670 kg. The shipment was delivered by sea transport. The import had not been declared, and the shipping documentation was inaccurate. Other legal items were used to conceal the refrigerant cylinders. The cylinders of refrigerant had been labelled HCFC-22. The use of refrigerant identifiers revealed the presence of HCFC-22 in the cylinders.

The confiscated cylinders were re-exported to the loading port at the expense of the consignee. The re-export was watched up until the loading site, but it was not reconfirmed with the local authorities. Since Sri Lankan law prohibits the imposition of penalties on the consignee, neither fines nor legal proceedings were imposed.

Source: (UNEP 2019, p.108)



© Sri Lankan Customs

Photo 3.19 Non-refillable refrigerant cylinder seized by Sri Lanka Customs

Turkish case – Lack of declaration of ODS

In December 2016, a Turkish importer tried to import two freight containers containing refrigerant cylinders into the country. The shipment was delivered by sea. The refrigerant was declared as HFC-410a, which is not an ODS and did not need an import licence at the time. The first freight container was physically inspected, and 220 cylinders labelled HFC-410a were discovered at the front. Behind the cylinders were 925 non-refillable cylinders labelled HCFC-22. They were sent in cardboard cartons labelled HFC-410a. The second container was concealed in the same way. 230 HFC-410a cylinders were positioned in front. Behind the cylinders were 927 non-refillable cylinders labelled HCFC-22. They were also packed in HFC-410a-labelled cardboard cartons. A sample of cylinders was tested at a laboratory to ensure that the cylinders labelled HCFC-22 contained HCFC-22. Customs inspectors seized 1,852 non-refillable refrigerant cylinders containing 13.6 kg of HCFC-22.

Source: (UNEP 2019b, p.111)

Greek case – Lack of declaration of ODS

In 2016, the Greek customs, in collaboration with the Central Port Authority of the Hellenic Coast Guard in Piraeus, discovered and confiscated 598 non-refillable cylinders of HCFC-22 holding in a non-refillable cylinder a total of 6,864 kg in a free zone. The Coast Guard was informed about a suspicious 40ft freight container that potentially contained explosives. The container was investigated using the Coast Guard's X-ray technology, which showed cylindrical forms hidden beneath clothing boxes in the freight container's rear.

Physical investigation revealed non-refillable HCFC-22 refrigerant cylinders concealed under 186 carton boxes. The cylinders were forgeries. They were labelled with the name of a well-known refrigerant manufacturer. The shipping paperwork only mentioned clothing, while the invoice provided with the customs clearance referred to the refrigerant cylinders as "shop equipment."

The General Chemical State Laboratory used gas chromatography to analyse the contents of the refrigerant cylinders. The findings revealed the presence of HCFC-22 in the cylinders.

Source: (UNEP 2019b, p.58)



© Greek Customs

Photo 3.20 Carton boxes of HCFC-22 seized by Greek Customs

Infringements:

- lack of declaration of ODS to customs and concealment in legal cargo
- import of ODS out of quota, import of banned non-refillable cylinders
- intellectual property rights infringement

Successful enforcement:

- shipment scanning revealed undeclared cargo of HCFC-22
- physical inspection
- use of gas chromatography to analyse the content
- cooperation of enforcement authorities

Follow-up enforcement:

- A judicial lawsuit and criminal prosecution were launched
- penalties for smuggling and intellectual property rights violation
- destruction by absorption in accordance with EU regulations by a registered and qualified waste treatment centre

Source: (UNEP 2019b, p.58)

Iranian case – Lack of declaration of ODS

In 2017, Iranian customs authorities found 806 non-refillable refrigerant cylinders, each holding 13.6 kg of CFC-12 - a total of 10,961.6 kg. The CFC-12 cylinders were disguised underneath 144 HFC-134a cylinders in a freight container. A refrigerant identifier was used to analyse representative samples of CFC-12 and HFC-134a cylinders. The examination revealed that the refrigerants were pure CFC-12 and HFC-134a.

Only HFC-134a refrigerant was declared in the shipping paperwork, yet the freight container was filled with 72 cartons carrying two HFC-134a cylinders each and 403 cartons having two CFC-12 cylinders each.

Iran allows the import of non-refillable cylinders, while CFC and HFC cylinders were all confiscated. When the case was reported to UNEP, the goods were under the surveillance of customs pending disposal or destruction.



© Greek Customs

Photo 3.21 Carton boxes of HCFC-22 seized by Greek Customs

Source: (UNEP 2019b, p.66)

Follow-up enforcement actions:

- court case resulting in administrative fines and seizure of goods
- importer included in 'red channel' for physical inspection of shipments
- all refrigerant gases in 'red channel' for physical controls and analysis by refrigerants granted to the customs
- administration by NOU
- sharing information about the case with NOU Iran
- sharing information with the customs agency of the exporting country
- NOU of the exporting nation providing a list among all registered exports to Iran in response to NOU Iran's request and active use of the iPIC system in the case

Source: (UNEP 2019b, p.58)

EQUIPMENT

Among the Global Award cases, 19 seizures involved ODS-based equipment, which represented 38% of all ODS cases. Illegal trade in equipment that contained ODS involved 27,715 items. Only in one case, the amount of ODS was reported. Yet it was reported that the equipment used HCFC-22. Countries that reported ODS-based equipment seizures acted because of import bans on HCFC-22 equipment existing in their countries. There were various ways of finalising the cases, such as seizure of the goods, re-export with no penalty applied, issuance of a warning without penalty, application of fines, and converting some of the systems to use alternative refrigerants like HFCs and giving them to training facilities or other public organisations (see Chapter 4.5).

Source: (UNEP 2019b, p.64)

Bosnian – Herzegovinian case

In 2016, following the NOU request, three air-conditioning (AC) unit importers in Bosnia and Herzegovina were investigated. The import of HCFC-22-containing air conditioners is prohibited. The infringement was detected after releasing the banned goods. The release of the banned AC took place because the existing ban was not enforced at the time of customs clearance. Part of the AC was already sold on the market, but 180 AC units that contained 124 kg of HCFC were seized. The seized ACs were re-exported. Two court cases were initiated, and fines were ordered.



© Customs of Bosnia and Herzegovina

Source: (UNEP 2019b, p.29)

Photo 3.22 Air-conditioning unit in Bosnia and Herzegovina

Follow-up enforcement:

- instructions sent to customs officers

Paraguayan case

On 25 March 2015, 27,000 split system air conditioners (AC) were declared with dubious documents testifying that the equipment worked with R-410A. The verification of the documents established that the equipment actually operated with the refrigerant gas HCFC-22. The documents were verified, and it was discovered that the equipment used the refrigerant gas HCFC-22. As of March 1, 2015, such equipment was subject to a progressive schedule of restrictions on importing air-conditioning equipment with a cooling capacity of 24,000 BTU/h or its equivalent in Kilowatt hours. Fines were ordered. The equipment was released prior to the competent authority's appeal against the court decision.



© Paraguayan Customs

Source: (UNEP 2019b, p.90)

Photo 3.23 Seized air conditioners by Paraguayan Customs

Successful enforcement:

- carrying out inspection right after the coming into force of the new measures
- verification of the accompanying documentation to confirm the features of the equipment

Namibian case

In 2015 and 2016, several shipments of HCFC-22 and other HCFC-containing air conditioners, rotary compressors, and 358 refrigerant gas cylinders landed in Namibia. The import of HCFC-22-containing air conditioners and cylinders into Namibia is prohibited. The air conditioners and cylinders were not re-exported to their original countries. There was no legal action taken nor penalties imposed.

Source: (UNEP 2019b, p.74)

Rwandan case

In the period between 2016-2018, several shipments of HCFC-22-containing air conditioners and refrigerant gas cylinders arrived in Rwanda. The import of HCFC-22-containing air conditioners and cylinders into Rwanda is prohibited. The air conditioners and cylinders were re-exported to their original countries of origin. There was no legal action taken nor penalties imposed.

Source: (UNEP 2019b, p.99)

Cylinders and containers

Non-refillable cylinders of 13.6 kg and 11.9 kg were used for illegal trade, representing 62% of the seized quantity of ODS. Illegal trade in non-refillable cylinders involved 6,297 non-refillable cylinders detected in 15 seizures (48% of cases where cylinders were used for illegal trade). In most cases, 13.6 kg of non-refillable cylinders were used. Non-refillable cylinders were used mostly for the illegal trade of HCFC-22.

Small containers (0.5 kg and 0.3 kg) involved 7,100 containers. In some cases, the type of cylinders was not reported, and accordingly, they were considered under category 'other'.

ODS seizures

Type of cylinders per ODS quantity/kg

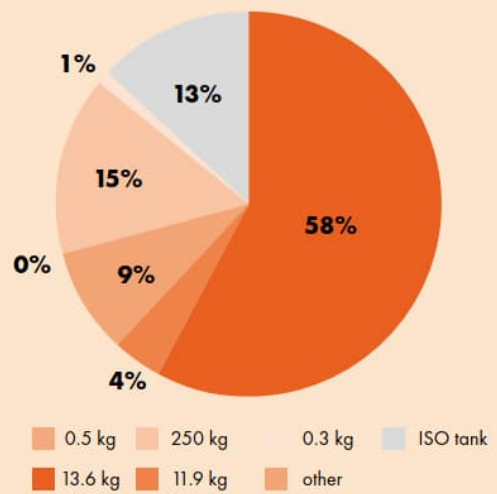


Figure 3.8 Type of cylinder per ODS quantity/kg

Highlights

- Non-refillable cylinders were used for illegal ODS trade.
- In most cases, HCFC-22 was illegally traded in non-refillable cylinders.



© Namibian Customs

Photo 3.24 Non-refillable cylinder

OTHER ODS SEIZURES

Mongolian case – Post release controls

In 2014, a Mongolian company imported HCFC-141b under a fraudulent declaration. The use of HCFC-141b has been prohibited since 2012. Ten barrels of HCFC-141b, totalling 2,370 kg, were illegally imported and managed to be sold to other local enterprises that utilise HCFC-141b for industrial applications.

During an enforcement operation in 2015, a customs inspector discovered HCFC-141b and seized three cylinders from one of the buyer's warehouses. Since the cylinder details were recorded, the detection was achievable. The customs officer conducted an inquiry, which revealed that the HCFC-141b was imported using a fraudulent declaration.

A criminal prosecution was filed against the importer for false declaration and unlawful import of ODS, but the prosecutor dismissed it.

Source: (UNEP 2019b, p.71)



Photo 3.25 HCFC-141b barrels seized by the Mongolian Customs

Infringements:

- import of ODS with false declaration as non-ODS

Successful enforcement:

- identification of the cylinders during control at the importer's company

Follow-up enforcement:

- importing and utilising businesses have a 'red' line in the risk assessment system

Source: (UNEP 2019b, p.72)

Spanish case – Joint operations on the market

In the context of the Global Award, Spain provided information about four operations against illegal trade of ODS. The operations were carried out by the Environmental Protection Service (SEPRONA) of the Spanish Guardia Civil, a department with expertise in combating environmental crime, in collaboration with the Prosecutor General's Office's Public Prosecutor on the Environment.



Photo 3.26 Prohibited refrigerants 1

Source: (UNEP 2019b, p.101)

The operations were directed at:

- unauthorised export of recovered refrigerants
- the use of forbidden refrigerants in livestock farms
- emissions of greenhouse gases from recycling facilities for end-of-life vehicles
- Unlawful disposal of electronic and toxic waste, contamination of the land, and illicit discharge of ozone-depleting and global warming refrigerants

The controls revealed infringement of waste management regulations, mislabelling of equipment with the indication of HFC, which used CFC-12 or HFCF-22, abnormalities in recycling processes, and illicit emissions of 1,620 kg of HFC- 134a. Some of the investigations and/or court proceedings were in progress at the time of reporting the case in the context of the Global Award.

The operations resulted in the seizure of 4 cylinders, 203 units, 198 kg of HFCF-409A and 6 kg of an unknown substance.

Source: (UNEP 2019b, pp.101; 102)



© Spanish Customs

Photo 3.27 Prohibited refrigerants 2

Successful enforcement:

- detection of several forms of violations, including unlawful export of recovered refrigerant and abnormalities in recycling processes, as well as unlawful emissions.

Source: (UNEP 2019b, p.102)

ODS SEIZURES: CONCLUSIONS



© Belarusian Customs

Photo 3.28 Refrigerant barrels seized by Belarusian Customs

- HCFC-22 was the most often illegally traded ODS
- illegal trade in ODS involved smuggling and mis-declaration as HFCs
- 70% of the seized amount of ODS was mislabelled, which involved mostly HCFC-22 mislabelled as HFC-134a or HFC-410A
- 62% of the seized amount of ODS involved non-refillable cylinders
- inspections at the national level uncovered inconsistencies in recycling activities and illicit emissions of regulated substances
- detection of a case related to intellectual property rights infringement

Successful enforcement

- various types of controls, such as documentary and physical checks, x-ray scanning, taking samples, and pressure-temperature tests
- taking samples and chemical analysis that helped to confirm mis-declaration
- post-control actions that led to further seizures
- joint inspections of enforcement authorities
- use of risk analysis
- use of knowledge acquired during training
- international cooperation
- exchange of information with NOUs

Challenges

- banned goods released and sold on the market due to customs officers' lack of knowledge of the existing ban
- application of effective sanctions and enforcement practices
- sharing information about the seizures

Lessons learned

- take samples to identify possible mis-declaration of ODS
- apply different types of controls, including post controls and in-country inspections
- provide training and instructions to enforcement officers, including training on the methods of identification of traded substances
- carry out joint inspections with concerned enforcement authorities
- use risk analysis, red listing of operators, and goods for future inspection
- consider putting a ban on non-refillable cylinders
- consider most effective sanctions and disposal methods
- consider carrying out special operations to fight environmental crime
- share seizure data with other countries via CEN and Environet and also in bilateral contacts
- report data on illegal trade to the Ozone Secretariat

3.2 HFCs Seizures

The Kigali Amendment adds the HFC phase-down to the Montreal Protocol. For most developing countries (Article 5 Group 1), the HFC freeze starts in 2024 at the baseline level. For comparison, the EU introduced the HFC freeze in 2015 and a 37% reduction below the baseline in 2018, which triggered significant illegal trade that was evidenced by the Global Award cases.

Kigali Amendment

The Kigali Amendment, which entered into force on 1 January 2019, added hydrofluorocarbons (HFCs) to the list of substances controlled by the Montreal Protocol. HFCs are greenhouse gases that have a strong global warming effect. They are used in a range of industrial applications as substitutes for ODS, and their emissions are rising strongly. The Amendment introduces control measures for HFC production and consumption and extends the licencing system and reporting obligations to HFCs. (UNEP 2017b)

As shown in the figure below, the Amendment provides for different HFC phase-down schedules.

Most developing countries are expected to achieve the HFC freeze in 2024, a 10% reduction in 2029, and a final reduction of 80% below the baseline in 2045. Some Article 5 countries will achieve a 10% reduction in 2032 and a final reduction of 85% in 2047. (UNEP 2017a)

Most developed countries are expected to reduce their HFC consumption by 10% in 2019 and by 85% in 2036. Some non-Article 5 parties have different baseline calculations and different initial phasedown steps from the main group of non-Article 5 parties (i.e., a 5% reduction starting in 2020). (UNEP 2017a)

THE IMPLEMENTATION OF THE KIGALI AMENDMENT CAN AVOID UP TO 0.5 °C OF GLOBAL WARMING BY THE END OF THIS CENTURY. IT WILL CONTRIBUTE TO THE GOALS OF THE PARIS AGREEMENT WHICH IS EXPECTED TO LIMIT GLOBAL WARMING TO 2 DEGREES BY 2100. (UNEP n.d.-b)

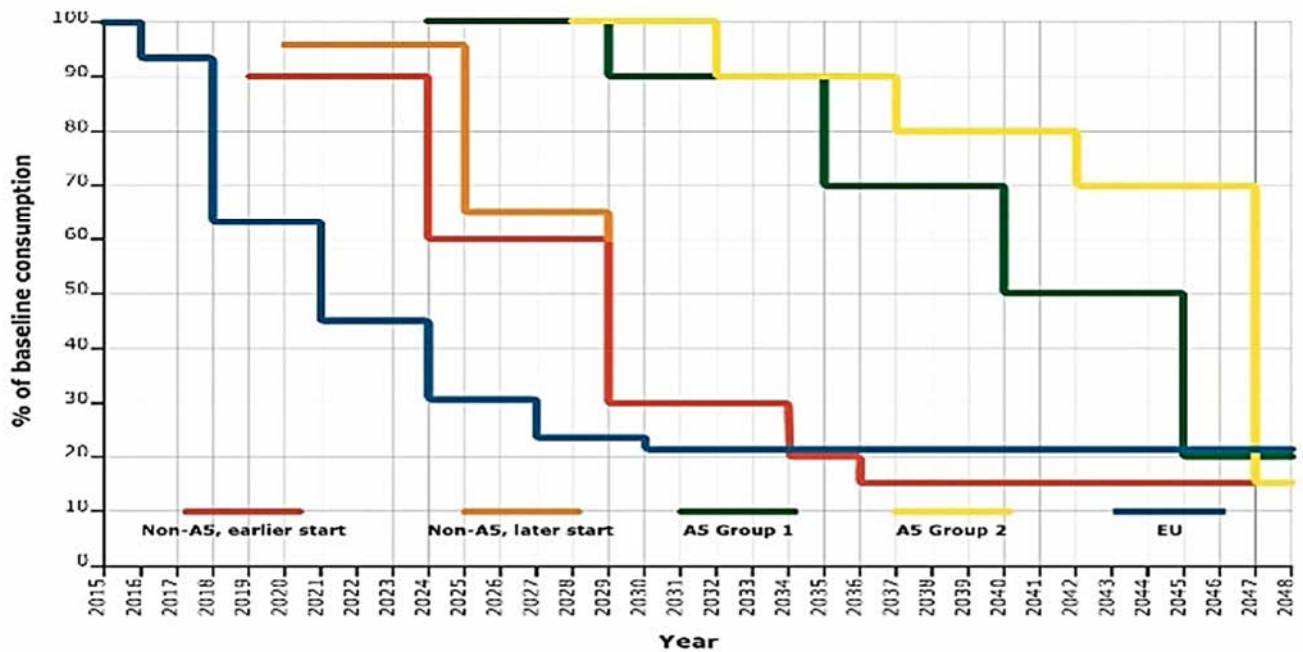


Figure 3.9 Differentiated HFC phase-down schedules
Source: (UNEP 2017a)

91% OF THE GLOBAL AWARD SEIZURES INVOLVED HFCs. ALMOST ALL OF THE SEIZURES WERE MADE UNDER THE EU F-GAS LEGISLATION WHICH INTRODUCED THE HFC PHASE-DOWN IN THE EU AS OF 2015 AND A MAJOR REDUCTION STEP OF 37% BELOW THE BASELINE IN 2018.

European F-gas legislation

The EU implements the Montreal Protocol through its own legislation. With respect to HFCs, Regulation (EU) No 517/2014 on fluorinated greenhouse gases (the EU F-gas Regulation) introduced a phase-down of HFCs that started in 2015, targeting a 37% reduction below the baseline in 2018-2020 and a final reduction of 79% by 2030. (European Commission n.d.)

Interim reduction steps apply roughly every three years. The reduction covers not only bulk HFCs – which are subject to the quota scheme – but, since 2017, all HFCs imported in pre-charged products and equipment have been included in the quota scheme. (European Commission n.d.)

The EU F-gas legislation includes a number of legal acts that implement the F-gas Regulation and cover certain specific aspects of HFCs trade, such as the format of labelling for products and equipment containing F-gases. The F-gas legislation applies uniformly throughout the EU. The measures on HFCs that are enforced by the EU customs involve, in particular, the quota and labelling requirements, as well as bans on certain products and equipment. (European Commission n.d.)

Highlights

HFC seizures that were reported by four EU member states in the context of the Global Award were made in 2018 under the EU F-gas legislation, prior to the entry into force of the Kigali Amendment. The seizures showed infringements of the quota and labelling requirements as well as smuggling of banned non-refillable cylinders. The different types of infringement are described in the separate sections that follow.

The HFC seizures reported in the context of the Global Award included 119,424 kg of HFCs and 5,794 cylinders. Ninety-one percent of the seizures and 47% of the quantities seized involved HFCs. Four EU member states – Bulgaria, Croatia, Greece, and Poland – reported 533 HFC seizures.



HFC seizures

The HFC seizures were made mainly by four EU member states that reported 533 seizures of 111,999 kg of HFCs. Cambodia reported 1 case of 7,425 kg of HFC-134a related to the lack of compliance with the reporting import and export scheme for HFCs.

Due to the fact that all but one of the HFC seizures concerned the EU, these cases are further described and analysed. Poland informed about 425 HFC seizures. Bulgaria reported 78 cases, Croatia 25 cases, and Greece 5 cases.

Three types of infringement

Poland detected infringements of the EU F-gas legislation concerning the quota scheme, labelling of products that contain F-gases, and smuggling of non-refillable cylinders.

Bulgaria, Croatia, and Greece reported HFC cases involving the smuggling of non-refillable cylinders.

- 46% of the seized quantity resulted from the detection of the quota infringements.
- 41% of the seized HFCs did not have compliant labelling.
- 13% of the HFCs were smuggled in banned non-refillable cylinders.

Cylinders

The HFC cases reported in the context of the Global Award involved only bulk gases.

72% of cylinders with HFCs were not labelled as required by the EU F-gas legislation.

28% of the seized cylinders were non-refillable cylinders banned in the EU that were smuggled via the EU's external land borders.

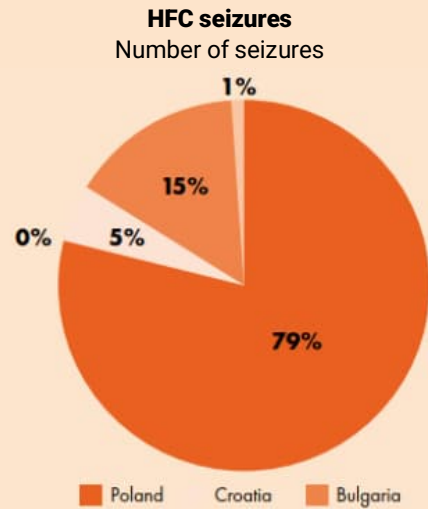


Figure 3.10 Number of HCF seizures

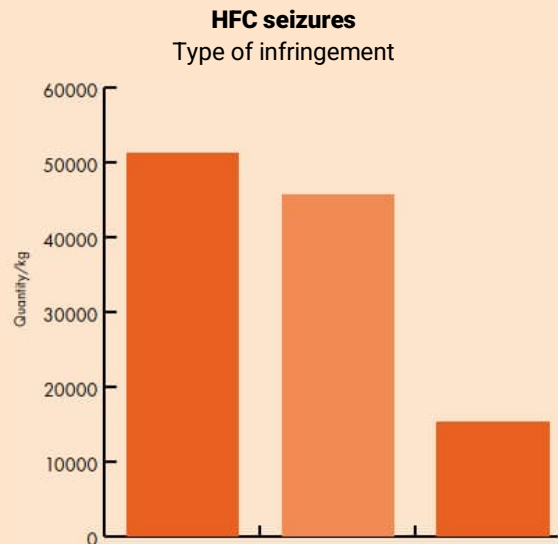


Figure 3.11 Type of HFC-related infringements

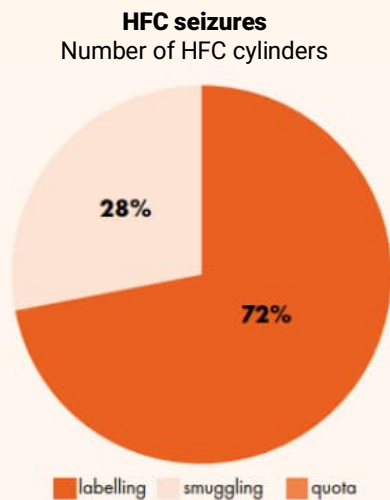


Figure 3.12 Number of HFC cylinders per type of infringement

Type of HFCs seized

HFC-134a was the main type of illegally traded HFCs. It represented 37% of the seized HFCs.

Other types of HFCs involved such refrigerants as HFC-404A (23%), HFC-407C (20%), and HFC-410A (19%).

Small quantities of HFC-507C and HFC-125 were also seized.

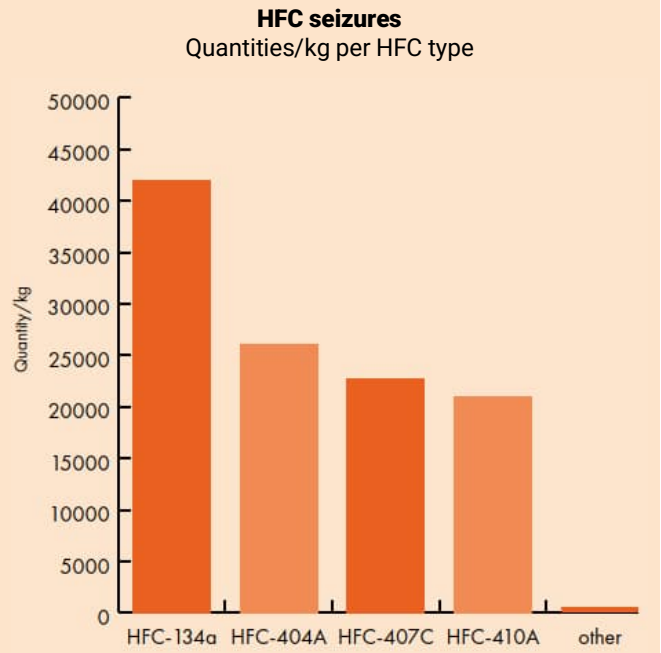


Figure 3.13 Quantities/kg per HCF type

Highlights

Cases related to quota involved the biggest amount of illegal HFCs, yet fighting smuggling was important to show the consistent approach to enforcement on HFCs. Labelling infringements also proved to be an important aspect of enforcement on HFCs.

Lessons learned

Combined measures – a ban on certain equipment and products since 2007, inclusion of HFCs in pre-charged equipment in the quota system in 2017 and a significant 37% reduction step scheduled for 2018 stimulated illegal trade in HFCs in the EU in 2018. Customs played a key role in the detection of infringements.

3.2.1 Infringement of HFC Quota

Import quota for controlled substances allows limiting and controlling the quantity of legal imports – either according to the Montreal Protocol schedules or according to advanced schedules set by the importing country. The Global PM Award cases involved 5 cases of non-compliance with the EU HFC quota scheme.

46% OF THE HFC QUANTITIES IN THE GLOBAL AWARD INFRINGED THE EU QUOTA REQUIREMENTS.



© Polish Customs

Photo 3.29 Refrigerant containers seized by Polish Customs 1

Quota regime

A licencing system for the import and export of controlled substances is a mandatory measure for countries who ratified the Montreal Protocol. Import quotas may support monitoring and control of trade. Establishing a quota system for controlled substances means that the country's competent authority manages the quota system based on the phasedown or phase-out schedule. The competent authority makes the list of importers eligible for quota, calculates the quotas for particular importers, publishes the quotas, and issues the permits, if a permit system has been established. (UNEP 2018a, p.16)

Article 5 countries will establish HFC quota systems to meet the first control measure under the Kigali Amendment – the freeze of the HFC consumption at the baseline level respectively in 2024 (group 1 countries) and 2028 (group 2 countries). Thus, the lessons learned from the EU experience will be highly relevant for them. (UNEP 2018a, p.17)

EU quota system

As of 1 January 2015, the EU freeze and phase-down policy reduced bulk HFC supply to 37% below the baseline in 2018. Further, the phase-down schedule provides for a reduction of 55% in 2021, 69% in 2024, 76% in 2027, and 79% in 2030. The system does not ban the import or placing on the market of any particular HFC; instead, it limits the total supply of all HFCs in the EU based on the total tonnes of CO₂eq. (UNEP 2018a, p.18)

The EU specified the maximum quantity of HFCs expressed in tonnes of CO₂eq that may be imported each year based on the baseline. Each year, the European Commission (EC) selects importers entitled for quota. Importers have to be registered. The EU F-gas legislation provides for customs authorities to have access to the registry of eligible importers. Customs need to check if the import of bulk HFCs and HFCs pre-charged in equipment is done only by the registered importers. (UNEP 2018a, p.18)



© Shutterstock

WHAT CUSTOMS OFFICERS NEED TO KNOW ABOUT HFC QUOTA SYSTEM IN THE EU

EU F-gas legislation:

- applies to F-gases, but the phase-down concerns HFCs
- HFCs placed on the EU market are subject to a quota; customs procedure of release for free circulation is considered placing HFCs on the market
- a quota is required for producers and importers placing at least 100 tonnes of CO₂eq of HFCs in bulk on the market in a calendar year, HFCs pre-charged in refrigeration, air-conditioning, and heat pump equipment are also covered by the quota and require a declaration of conformity stating that the pre-charged HFCs are covered by the quota
- HFCs used for certain purposes, e.g., feedstock applications or imported into the EU for destruction, are exempt from the quota
- obtaining a licence, i.e., registration in the F-gas Portal & HFC Licencing System (the registry), is mandatory for companies to receive a quota, importers of equipment pre-charged with HFCs and all other companies that have to report on F-gas related activities, such as EU production and export of gases, stocks, destruction, and other

Practicalities:

- HFCs have specific 10-digit TARIC codes (that comprise of HS code and 4 additional digits used in the EU to show trade measures for imported and exported goods)
- bulk F-gases are the F-gases that have not been integrated into any equipment
- bulk F-gases are usually transported and/or stored in gas cylinders or ISO tank containers
- quota is calculated annually
- quota is expressed in tonnes of CO₂eq
- the amount in tonnes of CO₂eq is the mass of F-gas multiplied by the GWP of that F-gas
- the higher the GWP of a refrigerant, the higher the amount of CO₂eq for a given number of kilograms, and the higher the quota required
- names of eligible importers can be checked by customs officers in the system managed by the EC (the F-gas Portal & HFC Licencing System)

Source: (European Commission n.d.)

A POLISH CASE

In 2018, the Polish customs detected five shipments, including 51,180 kg of HFCs, which were declared for release for free circulation by importers that were not registered and had no quota for 2018. The infringements were detected by risk profiling that involved selecting shipments on the basis of customs codes. Four cases were appealed against in court. In one case, the HFCs were released for free circulation by an eligible importer.

The following capacity building activities supported the detection of the quota abuse by customs:

- providing training about the EU quota rules

- providing customs officers with access to the registry of eligible importers
- raising awareness about practical tools such as the F-gas calculator that enables the determination of the corresponding tonnes of CO₂ eq based on the GWP value of the imported amount of HFCs
- providing training on the identification of HFCs, including the use of gas analysers, and raising awareness that the identification of imported substances is crucial as the future modus operandi for quota infringements may include mis-declaration of HFCs as non-controlled substances or declaration as HFCs of lower GWP.

Source: (UNEP 2019b, p.93)

Lessons learned

- Training customs officers on the quota system rules as well as, where applicable, providing them with access to the licencing system provides useful support in effective implementation of the import quota system.

Infringement of HFC quotas



© Polish Customs

Photo 3.30 Refrigerant containers seized by Polish Customs 2

Main findings:

- quota infringements concerned large quantities of HFCs per one shipment
- detection of quota infringements required the active involvement of customs authorities

Successful enforcement

- providing access to the register of eligible importers for frontline officers
- raising awareness and training frontline officers about the quota requirements
- effectiveness of risk profiling

Challenges

- effectiveness of sanctions
- providing a sufficient number of gas analysers

Lessons learned - Quota infringements undermine phase-down goals

- consider giving frontline officers access to the register of eligible importers
- involve risk profiling in targeting HFC shipments
- provide training on the identification of HFCs
- provide tools that enable to determine the imported tonnes of CO₂ eq
- provide gas analysers to enable the identification of imported HFCs

Frontline officers should be aware of the quota requirements

3.2.2 Infringement of HFCs Labelling Requirements

Labelling containers with controlled substances allows customs, environmental inspectors, or refrigerant users to make a preliminary identification of the contents. It is, therefore, an important element of the legislation that aims at the phase-out or phase-down of controlled substances. The Global Award cases showed the lack of compliance with labelling requirements for imported HFCs. (UNEP 2018a, p.26)

41% OF THE HFCS REPORTED TO THE GLOBAL PM AWARD WERE SEIZED BECAUSE OF NON-COMPLIANT LABELLING.

Labelling

The purpose of labelling containers, cylinders, and equipment that contain gases is to give the carrier and the user of the gases clear, indelible, and concise information about the type of gas, the hazards of the gas and some safety advice on how to handle them. The major disadvantage of labelling is that it is considered an additional administrative burden for the producers, importers, and exporters. (UNEP 2018a, p.26)

The parties to the Montreal Protocol did not establish a common, globally accepted labelling system for ODS. Similarly, there are no provisions for HFCs.

The principal advantage of labelling forbidden substances for law enforcement purposes is that it allows for a rapid first identification of the substance. If the regulations allow it, identifying the producer and nation of origin may also be possible, which can be incredibly useful for assessing the risk of illegal trafficking. As a result, the design of the label for illegal substances is an important component of the regulation aimed at eliminating and reducing banned substances. (WCO 2022, p.135)

Labelling by itself is not enough for the identification of substances. A detailed identification of a shipment's content requires the examination of its documentation, such as the producer's leaflets and data sheets, or/and customs documents. In some cases, it is necessary to identify the chemical composition using portable refrigerant identifiers or laboratory-based analysis such as infrared spectroscopy or gas chromatography. (UNEP 2018a, p.26)

Labelling alone cannot prevent illegal trade. Labels can be easily replaced with false ones, thus, provisions on labelling

include also requirements for its indelibility as well as the requirements related to specific places where the label should be placed. (UNEP 2018a, p.26)

Article 5 countries are encouraged to establish labelling requirements for refrigerant cylinders, to ensure safe transport and handling, reduce health and safety risks, and prevent illegal trade. For that purpose, UNEP OzonAction has published a technical brief on labelling refrigerant cylinders, available online at: www.unep.org/ozonaction/resources/toolkits-manuals-and-guides/labelling-refrigerant-cylinders-why-set-national-legislation. (UNEP 2021a)

The lessons learned from the enforcement of labelling requirements in the EU will be useful for those Article 5 countries that have such requirements in place or are planning to introduce them.

EU F-gas labelling requirements

Products and equipment that contain, or whose functioning relies upon, F-gases and are placed on the EU market must be labelled. The label must provide a reference that the product or equipment contains F-gases, the accepted industry name for the F-gases concerned or, if no such name is available, the chemical name, and the quantity expressed in weight and in CO₂eq of F-gases or the quantity of F-gases for which the equipment is designed, as well as the GWP of those gases. It has to be durable and clearly readable. (UNEP 2021a)

Highlights

Six HFC shipments of refillable cylinders were reported in the context of the Global Award were not labelled according to the EU F-gas legislation. Also, the seized non-refillable cylinders did not comply with the EU F-gas labelling requirements.



© Polish Customs

Photo 3.31 Non-refillable cylinder seized by Polish Customs
Source: (UNEP 2021a)

WHAT CUSTOMS OFFICERS IN THE EU NEED TO KNOW ABOUT HFC LABELLING REQUIREMENTS

EU F-gas legislation

The EU F-gas legislation requires the labelling of products and equipment that contain, or whose functioning relies on, F-gases. The requirements apply to:

- refrigeration equipment
- air-conditioning equipment
- heat pumps
- fire protection equipment
- electrical switchgear
- aerosol dispensers that contain fluorinated greenhouse gases, with the exception of metered dose inhalers for the delivery of pharmaceutical ingredients
- all fluorinated greenhouse containers
- organic rankine cycles

Practicalities

Air conditioners need labelling with all of the information required by the F-gas legislation, not only the indication of the type of HFC



© Polish Customs

Photo 3.32 Air conditioner in Polish Customs

The label should contain the following information:

- 1) a remark indicating the product or equipment includes F-gases or that its functionality relies on those gases
- 2) the recognised industrial classification for the F-gases in question, or the chemical name if no such classification is available
- 3) the quantity expressed in weight and in CO₂eq of F-gases contained in the product or equipment, or the quantity of F-gases for which the equipment is designed, and the GWP of those gases

Indicative labelling for an air conditioner system containing 8 kg of R-410A might be as follows:

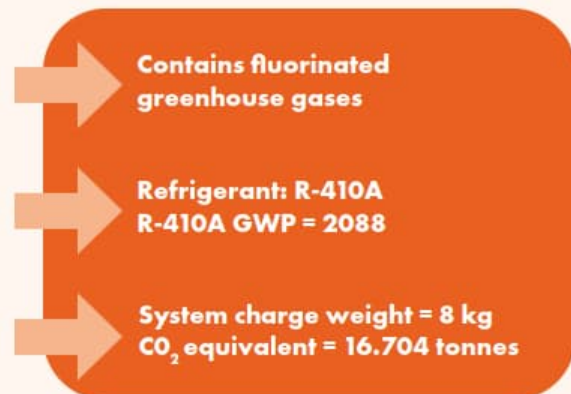


Figure 3.14 Indicative labelling for an air conditioner system

The label should be clearly readable and indelible and should be placed either:

- adjacent to the service ports for charging or recovering the F-gas or
- on that part of the product or equipment that contains the F-gas

Refillable cylinder which label contains the information as required by the F-gas legislation



© Polish Customs

Photo 3.33 Refillable cylinder with required labelling

NON-COMPLIANCE WITH THE F-GASES LABELLING REQUIREMENTS MAY INVOLVE:

Lack of Labelling

No labelling on the cylinder indicating the content. Labelling on the packaging indicates that it contains refrigerant, yet there is no information on its type.

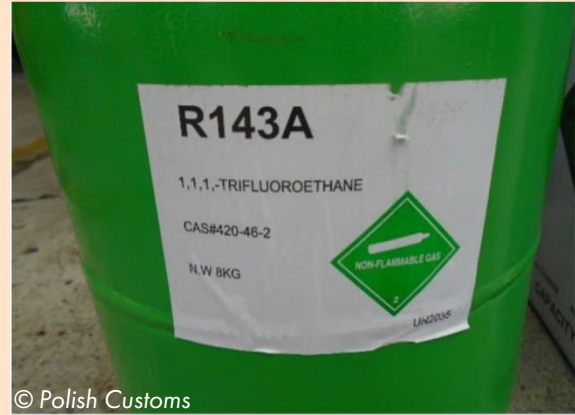


© Polish Customs

Photo 3.34 Refrigerant cylinder lack of labelling 1

Doubts Related to Indelibility of Labelling

The label should be designed to remain securely in place under typical operating circumstances for the duration of the time during which it contains refrigerants. (UNEP 2021a, p.15)



© Polish Customs

Photo 3.35 Refrigerant cylinder lack of labelling 2

Incomplete labelling with regard to:

- reference that the cylinder contains F-gases, the quantity expressed in weight and in CO₂eq, GWP of the F-gas

Labelling of the cylinder includes only the industry name of the F-gas



© Polish Customs

Photo 3.36 Refrigerant cylinder lack of labelling 3

Labelling of the cylinder lacks the GWP of the refrigerant



© Polish Customs

Photo 3.37 Refrigerant cylinder lack of labelling 4

Polish case

Polish customs discovered six HFC shipments totalling 3,800 cylinders that were not labelled in accordance with EU F-gas regulations. There were 28,800 kg of HFC-134a and 16,800 kg of HFC-410A implicated in the instances. Before being allowed for free circulation, the cylinders were labelled following the F-gas regulations.

Source: UNEP 2019b, p.94

Successful enforcement:

- efficient targeting of consignments on the basis of the customs codes
- training of customs officers on the EU labelling requirements

Infringement of HFC labelling requirements



© Polish Customs

Photo 3.38 Lack of labelling

Main findings

- inspection of compliance with the labelling requirements at the time of customs procedures is effective and contributes to ensuring compliance with the labelling requirements for the bulk HFCs, product, and equipment on the market.

Successful enforcement

- training of frontline officers on the labelling requirements

Challenges

- lack of awareness among importers of the labelling requirements
- ensuring a balance between trade facilitation and controls

Lessons learned

Labelling requirements help the identification of gases and contribute to the safety of products and equipment

- coordinate controls at the border and on the market
- ensure cooperation of all concerned enforcement agencies
- train customs officers on the labelling requirements
- increase awareness of importers

Frontline officers should be aware of labelling requirements for cylinders containing controlled substances



© Shutterstock

3.2.3 Infringement of the Ban on Non-refillable Cylinders

Banning the import and use of non-refillable or disposable cylinders prevents emissions and illegal trade. The EU has banned the sale of non-refillable cylinders, and some developing countries have or will prohibit the sale of such cylinders. The Global Award cases have demonstrated the use of non-refillable cylinders for illegal trade in HFCs. (UNEP 2013b, p.69)



© Polish Customs

Photo 3.39 Non-refillable refrigerant cylinder

87% OF THE HFC GLOBAL AWARD SEIZURES INVOLVED SMUGGLING OF HFCs IN NON-REFILLABLE CYLINDERS.

Non-refillable (disposable) containers

The term “non-refillable” container is often used interchangeably to refer to a disposable container. The terms refer to a container that was originally designed not to be refilled. Such containers always have only one valve, whereas refillable cylinders may sometimes contain two valves. Nonrefillable containers are usually lighter than refillable ones, their construction is less substantial, requiring less material. The typical capacity of such a container is 13.6 kg, though much smaller containers having a capacity of 1 kg or less may also be used. (UNEP 2018a, p.29)

A non-refillable container is specifically manufactured as a portable container charged with refrigerant, sold, used for servicing equipment, and then discarded. The used disposable containers that are easily discarded increase the volume of waste. They either produce scrap material or end up on landfills or dumping sites. They usually contain some amount of refrigerant, which is then emitted into the atmosphere in landfills. Disposable containers may be used by persons who are not certified refrigeration technicians and thus may not be able to manage the refrigerant properly, which in turn may lead to uncontrolled emissions. (UNEP 2018a, p.29)

Ban on non-refillable containers

A ban on disposable containers aims to ensure that emissions to the atmosphere from HFCs remaining in used containers will be eliminated (UNEP 2018a, p.29). Non-refillable cylinders need to be disposed of, while refillable cylinders are reused and avoid disposal. Cylinders require a take-back and refill scheme, which helps to monitor the movement and use of ODS/HFCs in the country. This makes the smuggling of refillable cylinders more difficult.

In 2007, the EU prohibited the sale of non-refillable containers on the market (European Parliament and Council 2014b). Increasingly, Article 5 countries either have already banned (e.g., North Macedonia and Türkiye) or are planning to ban the import or placing on the market of non-refillable cylinders mainly to reduce refrigerant emissions from empty cylinders and to discourage illegal trade through the introduction of take-back and re-fill schemes (UNEP 2018a, p.30). The lessons learned from banning non-refillable cylinders in the EU and the challenge of preventing the inflow of illegal disposable cylinders will help Article 5 countries planning to introduce similar bans in the future.

The pictures below show a typical non-refillable (disposable) and a refillable (non-disposable) cylinder used for transportation or storage of ODS/HFCs.

Non-refillable (disposable) cylinder



© Polish Customs

Photo 3.40 Disposable cylinder

Refillable (non-disposable) cylinder



© Polish Customs

Photo 3.41 Non-disposable cylinder

WHAT CUSTOMS OFFICERS NEED TO KNOW ABOUT THE BAN OF NON-REFILLABLE CYLINDERS

The customs officers need to be able to differentiate between non-refillable containers and refillable containers. The differentiation should be based on the definition of a non-refillable cylinder provided by legislation and also on the basis of typical design features of non-refillable cylinders.

Typical design features of non-refillable cylinders

Arched design, rounded edges



© Polish Customs

Photo 3.42 Typical non-refillable cylinders 1

Wide opening for valve access



© Polish Customs

Photo 3.43 Typical non-refillable cylinders 2

No footing



© Polish Customs

Photo 3.44 Typical non-refillable cylinders 3

No collar



© Polish Customs

Photo 3.45 Typical non-refillable cylinders 4

Labelling 'non-reusable' or 'equipped with a non-refillable valve'



© Polish Customs

Photo 3.46 Typical non-refillable cylinders labelling 1



© Polish Customs

Photo 3.47 Typical non-refillable cylinders labelling 2

WHAT CUSTOMS OFFICERS NEED TO KNOW ABOUT THE BAN OF NON-REFILLABLE CYLINDERS

Definition of non-refillable cylinders in the EU

- A “non-refillable container” means a container that cannot be refilled without being adapted for that purpose or is placed on the market without provision having been made for its return for refilling.
- A “container” means a product that is designed primarily for transporting or storing F-gases.

Source: (European Parliament and Council 2014a)

Design of a non-refillable cylinder is not enough to determine if it is covered by the prohibition. Identification of the content is needed due to the lack of labelling

Identification can be done on the basis of the labelling which indicates the type of gas, e.g. R-410A, R-134a

Unlabelled non-refillable cylinder



Photo 3.48 Unlabelled non-refillable cylinder

Non-refillable cylinder with indication of the type of the HFC content



Photo 3.49 Mis-labelled non-refillable cylinder

- A non-refillable container cannot be refilled without being adapted for that purpose

Valve that does not allow for re-filling



Photo 3.50 Valve of a non-refillable cylinder

An altered non-refillable cylinder with an additional valve



Photo 3.51 Altered non-refillable cylinder

- The 511 HFC seizures of non-refillable cylinders reported in the context of the Global Award involved 1,436 cylinders that contained 14,346 kg of HFCs. All of the seizures took place in 2018.

Seizures of HFCs in non-refillable cylinders

Four EU member states - Bulgaria, Croatia, Greece, and Poland reported HFC seizures of non-refillable cylinders. The EU customs authorities seized the shipments of such cylinders because they infringed on the ban on placing on the market of HFC non-refillable cylinders. The HFCs were smuggled. They were not declared to customs. They did not have shipment papers or import licenses.

As shown in the chart on the right, almost 80% of the seizures were made in Poland, followed by Bulgaria (15%), Croatia (5%), and Greece (1%). The Polish customs took measures that resulted in the detection of 414 smuggling attempts. Bulgaria reported 78 seizures, Croatia informed about 25 cases and Greece about 5 cases.

HFC seizures
Number of HFC smuggling cases of non-refillable cylinders

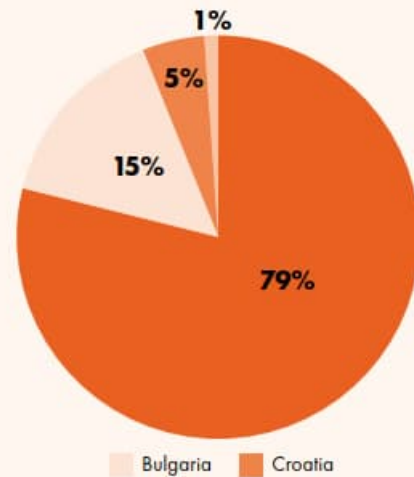


Figure 3.15 Number of HFC smuggling cases of non-refillable cylinders

The following table presents the HFC quantities and the number of non-refillable cylinders:

Country	Number of cylinders	Quantities/kg
Bulgaria	497	2,169
Croatia	263	1,942
Greece	39	432
Poland	637	9,803

Figure 3.16 HFC quantities and number of non-refillable cylinders

HFC seizures
Quantities/kg of HFCs in non-refillable cylinders per country

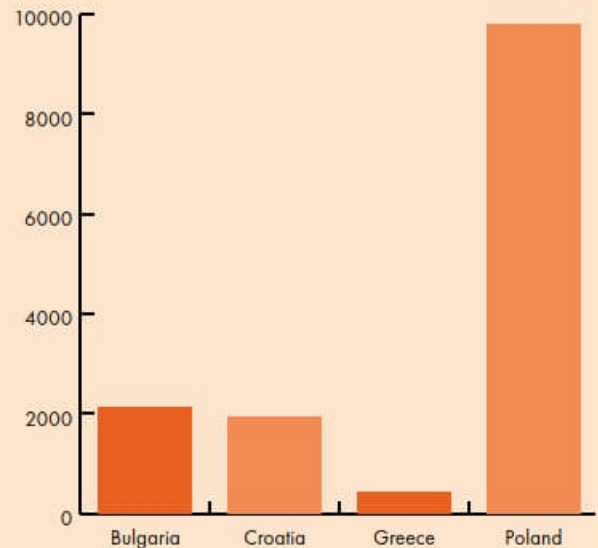


Figure 3.17 Quantities/kg of HFCs in non-refillable cylinders per country

The largest number of non-refillable cylinders and of HFCs were seized by Poland. Bulgaria seized a significant number of cylinders, yet the quantity of the HFCs was not reported.

Different disposal options for the seized HFCs were applied: Bulgaria and Greece intended destruction, Croatia auctioned and re-exported the HFCs, Poland ordered the re-export of the seized HFCs. All countries imposed fines.

Types of HFCs

The smuggling of non-refillable cylinders involved, in particular, HFC-134a and HFC-404A. The amount of these refrigerants equalled to 79% and 15% respectively.

Other types of HFCs are also smuggled, such as HFC-410A, HFC-407C, HFC-125, and HFC-507.

The quantity of the seized HFCs equalled to 27,640 tonnes of CO₂eq.

HFC seizures
HFC types in non-refillable cylinders

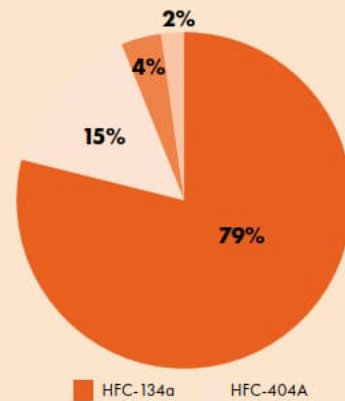


Figure 3.18 HFC types in non-refillable cylinders

- Smuggling of HFCs in non-refillable cylinders was detected at the EU external land borders.

Polish case

The smuggling of HFCs in non-refillable cylinders into Poland in 2018 took place in the period from March to August, i.e., in the period of a high summer demand for refrigerants. Non-refillable cylinders were smuggled in from the neighbouring countries that do not have a ban on HFC non-refillable cylinders.

HFC seizures

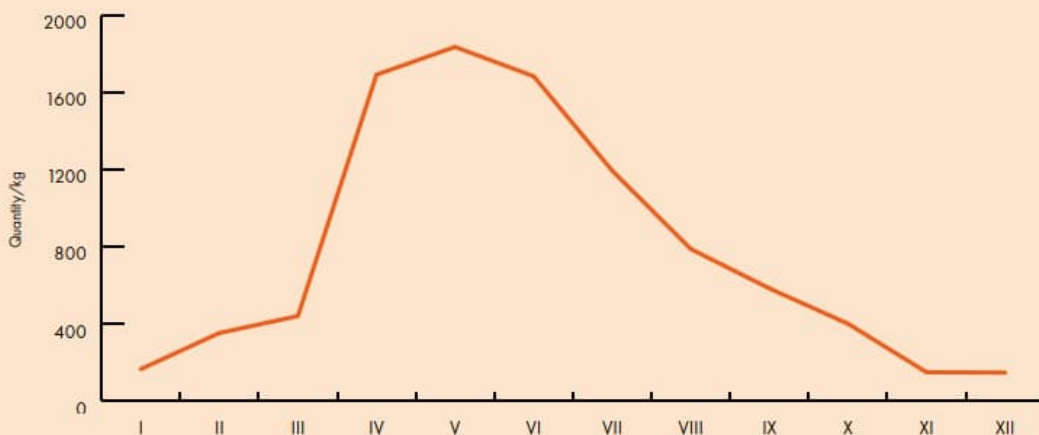


Figure 3.19 Smuggling of HFCs in non-refillable cylinders into Poland in 2018

- The smuggling of non-refillable cylinders with HFCs was detected in private cars and buses

Bulgarian case

The Bulgarian Customs Agency recorded 78 instances of illicit refrigerants being detected and seized at customs checkpoints. In all, 497 non-refillable cylinders of various types and sizes were confiscated. R134a and R404a were the most often seized refrigerants.

Regarding non-declared goods, the cylinders were carried in trucks or private automobiles without or with inaccurate shipping paperwork. They were assumed to have been loaded in a neighbouring non-EU nation and were bound for the EU. The shipments were found in various circumstances by regular inspections, risk profiling and intelligence, evaluation of shipping paperwork, and/or physical investigation. The refrigerant cylinder contents were not examined. The seizures recorded in the context of the Global Award were the most significant in terms of the amount found per customs officer.

Source: (UNEP 2019b, p.32)

Croatian case

The Croatian Customs Service discovered unlawful imports of refrigerant cylinders across border crossing points.

An investigation of a private family property near the border with Bosnia and Herzegovina concluded with the confiscation of 104 cylinders holding 1,383 kg of HFCs and 27 kg of HCFC-22.

Source: (UNEP 2019b, pp.40; 45; 46)



© Croatian Customs

Photo 3.52 Illegal imports of refrigerant cylinders seized by Croatian Customs

Mislabelling of non-refillable cylinders with HFCs as substances not covered by the ban

A private vehicle examination resulted in the confiscation of two refrigerant cylinders holding 13.6 kg of R134a each. They were brought in without shipping paperwork or an import permit. The cylinders were discovered in a car's luggage compartment, with paper labels that said, "Balloon time - helium balloon kits." However, after removing the labels, another label was revealed, which was displayed on the cylinder and indicated the existence of R134a. Because helium is often inhaled to change one's voice, such mislabelling might well have resulted in health risks. If R134a is inhaled, it may cause lethargy and liver damage.

Source: (UNEP 2019b, p.39)



© Croatian Customs

Photo 3.53 Mislabelled non-refillable cylinders 1



© Croatian Customs

Photo 3.54 Mislabelled non-refillable cylinders 2

- Non-refillable cylinders were either concealed or not concealed in trucks and passenger cars crossing the EU land borders.



© Croatian Customs

Photo 3.55 Non-refillable cylinders in the truck among wooden planks



© Croatian Customs

Photo 3.56 Non-refillable cylinders in the truck in reel of iron wire



© Croatian Customs

Photo 3.57 Non-refillable cylinders in a passenger car's luggage compartment 1



© Croatian Customs

Photo 3.58 Non-refillable cylinders in a passenger car's luggage compartment 2



© Croatian Customs

Photo 3.59 Non-refillable cylinders in a passenger car's luggage compartment 3



© Croatian Customs

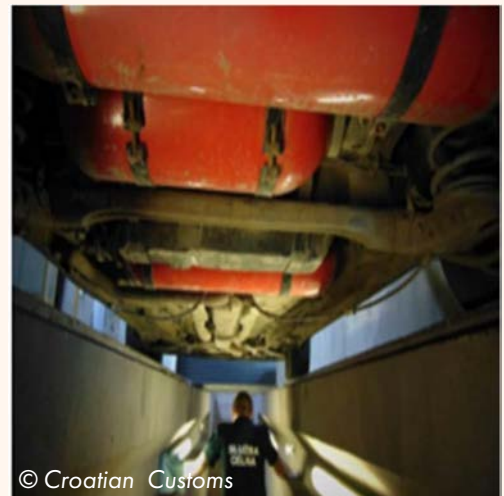
Photo 3.60 Non-refillable cylinders in a passenger car's luggage compartment 4

- Some creative smuggling schemes were detected, e.g., private cars running on normal gasoline but equipped with an additional tank for liquefied petroleum gas, which contained HFCs instead.



© Croatian Customs

Photo 3.61 Fake LPG installation



© Croatian Customs

Photo 3.62 Pressure containers with HFCs hidden under chassis of vans



© Croatian Customs

Photo 3.63 Other type of container 1



© Croatian Customs

Photo 3.64 Other type of container 2

Polish case

The Polish customs detected 403 smuggling cases of nonrefillable cylinders that included 9,803 kg of HFCs. The cases involved 637 non-refillable cylinders which were smuggled in relatively small numbers and transported in vehicles entering Poland via the eastern land border.

11 smuggling attempts also involved other types of containers. These were modified LPG installations and pressure containers hidden under the chassis of vans. The cases involved 873 kg of HFCs. The smuggled HFCs were re-exported, and administrative fines for smuggling were applied.

Successful enforcement:

- raising awareness of customs officers about the HFC illegal trade
- providing training on how to identify non-refillable cylinders and how to use refrigerant identifiers

Infringement of the ban on non-refillable cylinders



© Croatian Customs

Photo 3.65 Non-refillable refrigerant cylinder

Main findings:

- smuggling of HFCs in banned, non-refillable cylinders detected at the EU external land borders
- smuggling from countries where the ban on non-refillable cylinders does not exist
- illegal trade during a period of high market demand
- smuggling of small HFC quantities in private cars and buses but also in bigger numbers (up to 50 cylinders) in trucks
- in most cases, re-export of seized HFCs was ordered, increasing the risk that the goods were illegally imported later or through another entry point

Successful enforcement

- increasing the awareness of frontline officers about the existing bans
- consistent checks at the land borders
- building the knowledge and skills of customs officers on how to identify non-refillable cylinders and use gas identifiers
- collecting seizure data that allowed for reporting a significant number of seizures and planning future enforcement actions

Challenges

- ensuring appropriate level of enforcement
- effectiveness of penalties
- disposal of the seized HFCs

Lessons learned**Non-refillable cylinders facilitate illegal trade.**

On the other hand, the ban on non-refillable cylinders triggers illegal trade and requires monitoring and enforcement.

- consider adopting a ban on non-refillable cylinders as a policy option
- observe availability and price of controlled substances in the market and in neighbouring countries to determine the risk of illegal trade
- make inland inspections
- consider most effective sanctions and disposal methods

Banning the import and placing on the market of non-refillable cylinders helps preventing illegal trade, allows for better monitoring of the movements and use of HFCs in the country, and protects the environment

Illegal refrigerant trade on the Internet

There were no seizures reported to the Global Award related to offering illegal refrigerants on the Internet. However, illegal refrigerants were and continue to be offered on many well-known Internet platforms. Most of these offers relate to non-refillable cylinders, which are banned in the EU and some developing countries.

A non-refillable container can be defined as one which cannot be refilled or which has been placed on the market without provisions for take-back and refilling. According to the EU F-gas legislation, a container which in principle, could be refilled, but has been placed on the market without provisions for take-back and refilling, is considered a non-refillable cylinder, and thus its placement on the market is banned (European Parliament and Council 2014b). This often applies to refrigerant containers sold via Internet platforms.

What is more, in most countries, it is not allowed to sell refrigerants to the general public. In certain cases, it can be assumed that online offers concern non-refillable cylinders due to the fact that the photos of refrigerant cylinders provided on the internet offers show non-refillable cylinders. (UNEP 2016a)

Often, cybercrime is not dealt with by customs authorities. Some countries are working with the Internet platforms to prevent such offers from appearing. However, the situation becomes more complex when these offers are placed outside the country. In the past, Spain and Romania reported legal action being taken against criminals offering illegal refrigerants on the Internet. (UNEP 2016a, pp.10-12)



Refillable Cylinder R404a Refrigerant Gas Single Valve for EU Market

FOB Reference Price: [View & Edit Product Details](#)

\$45.00 - \$80.00 / Pieces | 800 Piece/Pieces (Min. Order)

Lead Time:

Quantity(Pieces)	1 - 800	801 - 1600	>1600
Est. Time(days)	40	35	Negotiable

[Contact Supplier](#)

[Chat Now!](#)

Photo 3.66 Photo of a non-refillable cylinder in an internet offer
Source: (Koeppen 2019)

COOPERATION OF ENFORCEMENT AND CUSTOMS AUTHORITIES IS NECESSARY TO PREVENT IMPORT AND ELIMINATION FROM THE MARKET OF BANNED NON-REFILLABLE CYLINDERS.

Summary of HFC seizures



© Croatian Customs

Photo 3.67 Refrigerant seizure by Polish Customs

Main findings

- HFC infringements involved only bulk gases, no equipment containing or relying on HFCs was involved in illegal trade
- in terms of the seized quantity of HFCs, the most significant cases related to quota abuse, yet in terms of the number of HFC cases, the high rate of smuggling proved the shortage of HFCs on the market following a major reduction step of 37% in 2018

Successful enforcement

- enforcement measures that resulted in 533 seizures
- detection of 111,999 kg of HFCs (equalling to 228,370 tonnes of CO₂eq) infringing the requirements

Challenges

- providing adequate training to enforcement officers
- equipping enforcement officers with a sufficient number of gas analysers
- coordinating enforcement actions and cooperation of all concerned services
- collection of seizure data to plan the most effective enforcement measures
- lack of reporting the cases to the WCO CEN or to the Ozone Secretariat

Lessons learned

Significant phase-down steps stimulate illegal trade

- prepare in advance for significant reduction steps through capacity building activities
- provide training to frontline officers on the identification of refrigerants and the use of gas analysers, and ensure equipping frontline officers with gas analysers
- take into account illegal trade in non-refillable cylinders
- plan and coordinate enforcement actions
- collect seizure data that help plan further enforcement and risk analysis
- share seizure data with other countries via the WCO's CEN, the regional RILO networks, Environet and through bilateral contacts
- report seizures and illegal trade to the Ozone Secretariat, who will publicise the information on its website and inform the Meeting of the Parties to the Montreal Protocol as required under Decision XIV/7, paragraph 7 of the Parties

3.3 General Learnings on Seizures Cases



© Spanish Customs

Photo 3.68 Case seizure by Spanish Customs

12% OF MONTREAL PROTOCOL PARTIES REPORTED CASES IN THE CONTEXT OF THE GLOBAL AWARD.

24 countries reported 587 seizures of 255,904 kg of ODS and HFCs

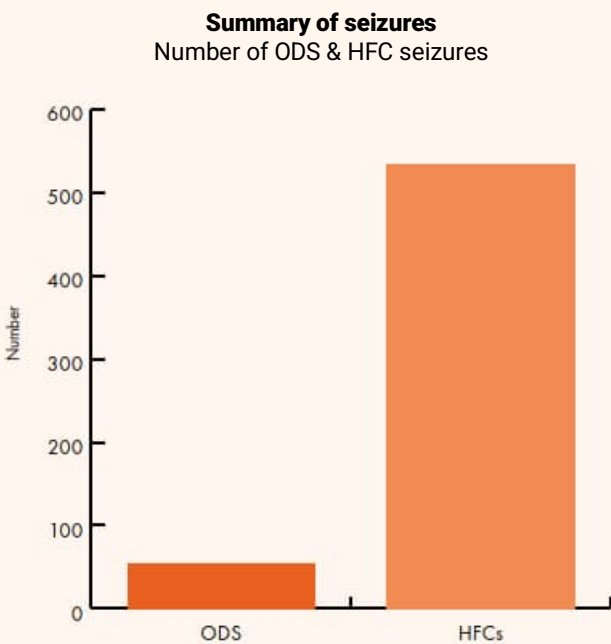


Figure 3.20 Number of ODS and HFCs seizures

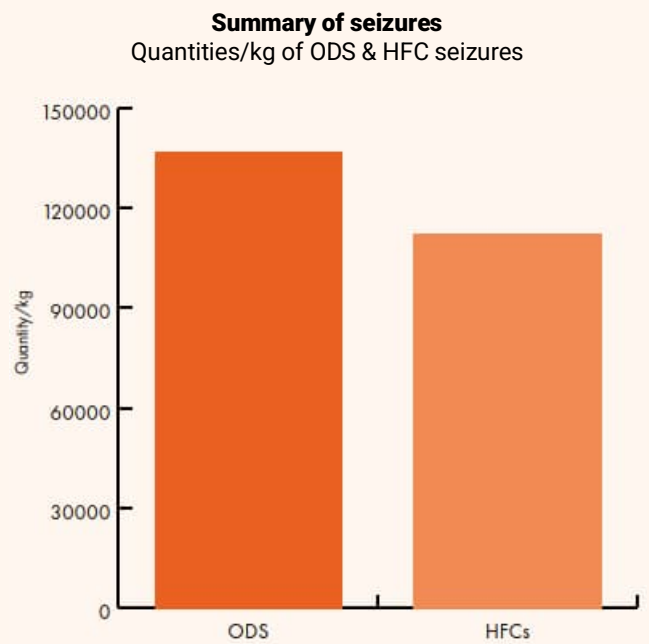


Figure 3.21 Quantities/kg of ODS and HFCs

50 cases involved 136,474 kg of ODS. 534 cases involved 119,424 kg of HFCs.

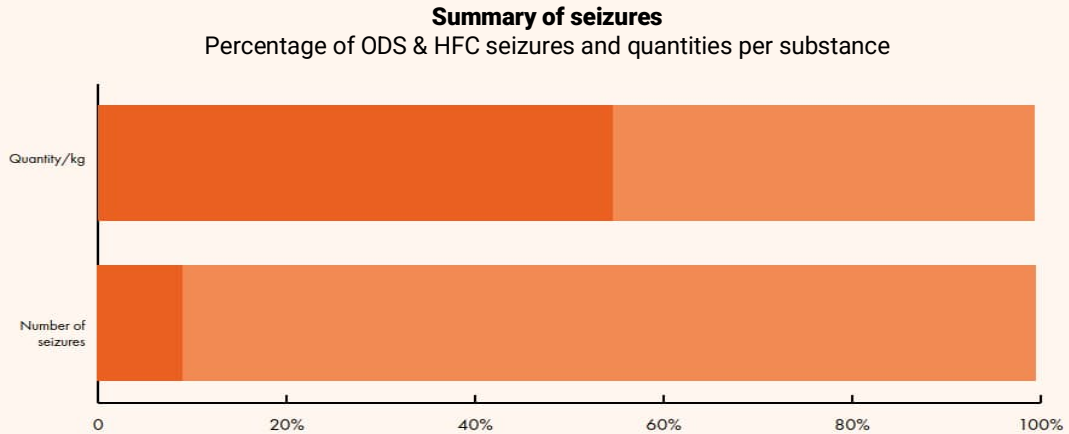


Figure 3.22 Percentage of ODS and HFCs seizures and quantities per substance

91% of seizures involved HFCs but 53% of the quantity of substances were ODS

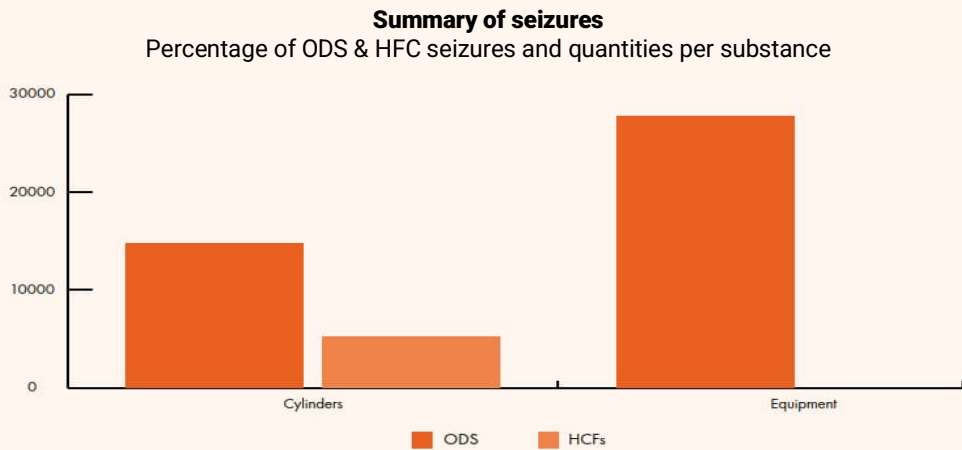


Figure 3.23 Number of ODS and HFC cylinders and equipment items

The ODS seizures included 14,197 cylinders and 27,715 items of equipment. HFC seizures involved 5,794 cylinders. There were no seizures of HFC-based equipment.

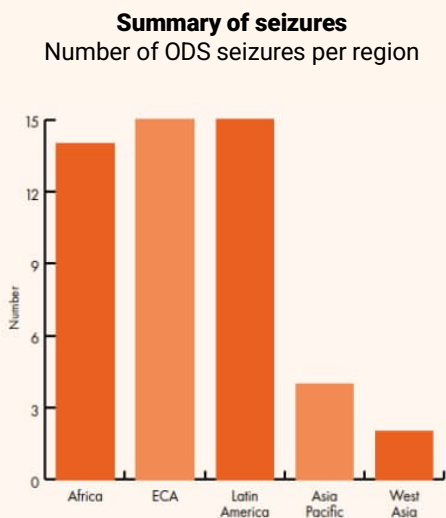


Figure 3.24 Number of ODS seizures per region

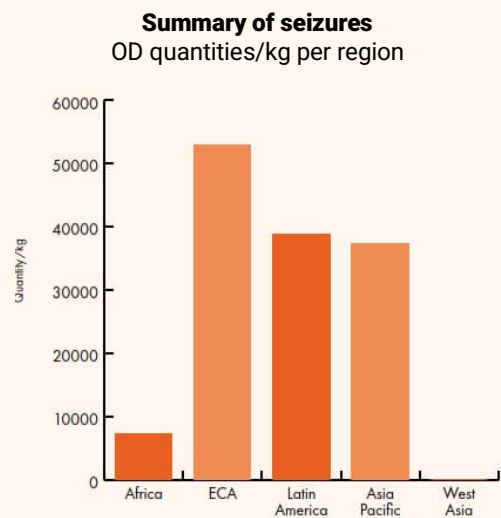


Figure 3.25 ODS quantities/kg per region

- Each of the Africa, Europe / Central Asia and Latin America regions reported between 14-15 seizures. In terms of ODS quantities, 52.893 MT of ODS were seized in Europe / Central Asia, 38.893 MT in Latin America, 37.343 MT in Asia-Pacific, and 7.344 MT in Africa.

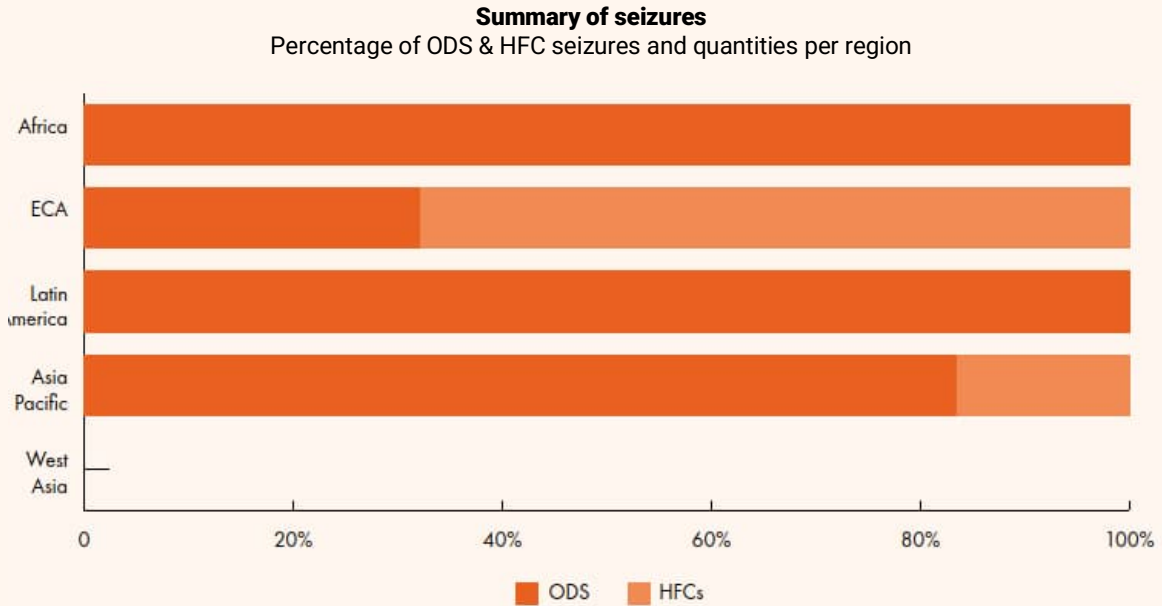


Figure 3.26 Percentage of ODS and HFC quantities/kg per regions

- HFC seizures were reported in Asia Pacific and Europe / Central Asia, where they represented 19% respectively 68% of the seized substances.

Highlights

Cases reported in the context of the Global Award showed that non-refillable cylinders are used for illegal trade in ODS and HFCs

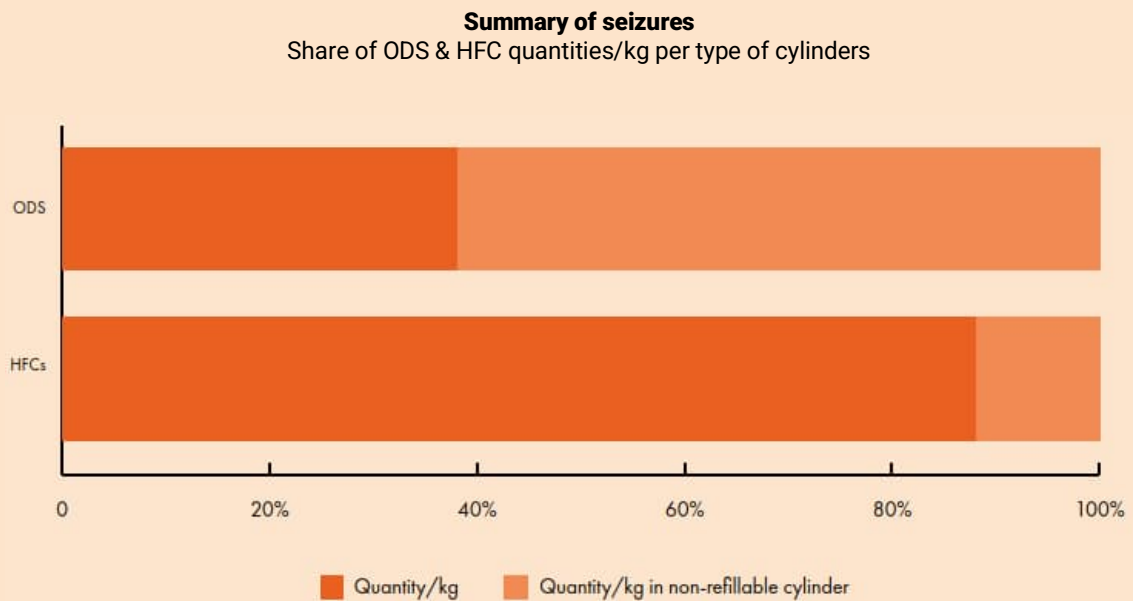


Figure 3.27 Share of ODS and HFC quantities/kg seized per type of cylinders

- Non-refillable cylinders were used for illegal trade in ODS and in HFCs.
- Non-refillable cylinders were used for 62% of the ODS quantity and 48% of ODS cases and 13% of the HFC quantity and 96% of HFC cases.

Seizure by Namibia 150 cylinders



© Namibian Customs

Photo 3.69 2,040kg of HCFC-22 seized by Namibia Customs

Seizure by Poland 14 cylinders



© Polish Customs

Photo 3.70 190,4 kg HFC-404A and HFC-134a seized by Polish Customs



© Namibian Customs

Photo 3.71 Equipment seized by Namibia Customs

Out of the 54 countries that belong to the Networks for Africa,

3 countries reported in total 14 seizures in the context of the Global Award. 8 cases were reported by Namibia, 1 case by Nigeria and 5 cases by Rwanda.

The seizures took place in the period between 2013 and 2018, and they involved 7,344 kg of ODS (3,909 kg of HCFC, 1,495 CFC-12, and 1,939 of other ODS), 462 cylinders, and 401 items of equipment. The seizures of equipment constituted 25% of the total number of seizures.

Country	Quantities /kg	Cylinders	Items
Namibia	5,644.9	358	296
Nigeria	1,495.2	89	-
Rwanda	204	15	105

Figure 3.28 Network for Africa seizures per country

AFRICA

Key findings:

Import of ODS and banned equipment

The cases involved mainly non-refillable cylinders and units, such as air conditioners and rotary compressors containing HCFC-22 or CFC-12. Import of these substances as well as equipment that contains these substances is prohibited. The cylinders and equipment containing R-22 were re-exported. No court cases were initiated, and no fines were applied.

Source: (UNEP 2019b, p.74)

Namibian case – Lack of permit

In 2015, customs in Namibia discovered a shipment of 150 cylinders of HCFC-22. It was a forbidden product under the Namibian Customs and Excise Act of 1998. The cylinders had been delivered by road transport. The cargo was confiscated, but no penalties were imposed; however, the declarant and importer were issued severe warnings for failing to obtain an import permit.

Source: (UNEP 2019b, p.74)



© Namibian Customs

Photo 3.72 HCFC-22 Cylinder seized by Namibia Customs



© Namibian Customs

Photo 3.73 Cargo seizure by Namibia Customs

ASIA AND THE PACIFIC

Key findings:

Mis-declaration and mislabelling of ODS

- The quantity of seized HCFC-22 amounted to 57% of the illegally traded substances in the region. The seized CFC-12 represented 24% and HFC-134a represented 17% of the quantity of substances.

Asia and the Pacific Network countries - Cambodia, Iran, Mongolia, Pakistan, and Sri Lanka reported 5 cases. The seizures took place in the period between 2015-2018.

The cases involved 44,768 kg of ODS as well as 1,920 cylinders and 126 items of equipment.

84% of the illegal trade involved a lack of declaration or a false declaration to customs. Part of the substances were hidden behind legal and declared cargo. The illegal ODS were mis-declared as HFC substances (see Chapter 2.1).

Country	Quantities/kg	Cylinders
Cambodia	7,425 (HFC-134a)	546
Iran	10,962 (CFC-12)	806
Mongolia	711 (HCFC-141b)	3
Pakistan	18,000 (HCFC-22)	1
Sri Lanka	7,670 (HCFC-22)	564

Figure 3.29 Network for Asia and the Pacific seizures per country

WEST ASIA

From the West Asia Network, which comprises 12 member countries, Jordan reported 5 cases. 2 cases related to the import of banned equipment.

Jordanian case

Several shipments of air conditioners came to Jordan in 2017 and 2018. The equipment was charged with HCFC-22, according to the shipping documentation. The seizures were the outcome of routine check-ups, and there were no efforts to conceal the goods. The import of HCFC-22-containing air conditioners into Jordan is prohibited.

Source: (UNEP 2019b, p.69)

EUROPE AND CENTRAL ASIA



© Belarusian Customs

Figure 3.30 Barrel seizure by Belarusian Customs

The Network for Europe and Central Asia (ECA) includes 11 developing countries. The ECA Network includes 7 countries with economies in transition (CEIT) The EU countries are major trade partners in the region. The following countries: Armenia, Belarus, Bosnia and Herzegovina, Georgia, Türkiye and the EU countries - Bulgaria, Croatia, Poland, and Spain reported cases in the context of the Global Award.

The ECA region reported 15 ODS seizures. The cases involved seizures of 52,894 kg of ODS, 2,949 cylinders, and 180 items of equipment. 533 seizures of HFCs involved 5,248 cylinders containing 111,999 kg of HFCs.

The HFC seizures corresponded to 97% of the total number of seizures in the ECA region and 91% of the total number of cases. The amount of seized HFCs represented 68% of the quantity of substances seized in the region (see previous section 2.2.)

Key findings:

- Illegal ODS trade and a new challenge of illegal HFC trade

Country	Quantities of ODS/kg	Quantities of HFCs/kg
Armenia	318	-
Belarus	20,000	-
Bulgaria	-	2,115
Bosnia and Herzegovina	124	-
Croatia	27.2	1,942
Greece	6,864	432
Georgia	175	-
Poland	-	107,456
Spain	198	-
Türkiye	25,187	-

Figure 3.31 ECA Network seizures. Quantities/kg per type of substance per country

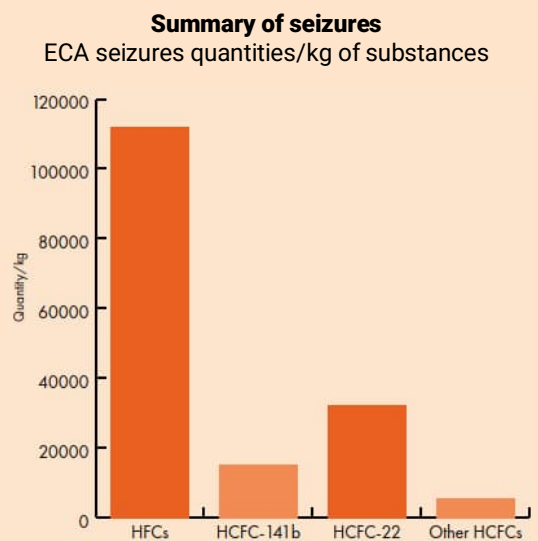


Figure 3.32 ECA Network seizures. Quantities/kg per substance

The biggest quantity of ODS was seized in Türkiye (48%), followed by Belarus (38%) and Greece (13%). HCFC-22 represented 61% of the amount of seized ODS. It was followed by HCFC-141b (28%). Other ODS involved CFC-113, CTC and Halon 2402.

Summary of seizures
ECA seizures
Number of cylinders and units per substance

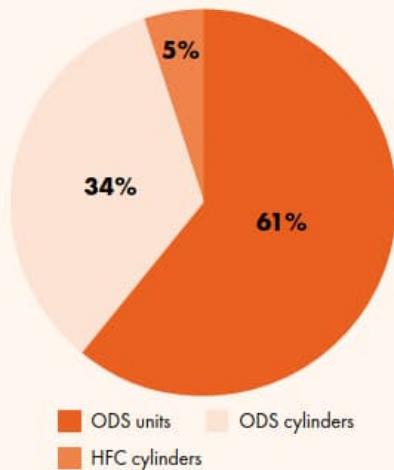


Figure 3.33 ECA Network seizures. Products and units per substance

Summary of seizures
ECA seizures
Type of cylinders/number per substance

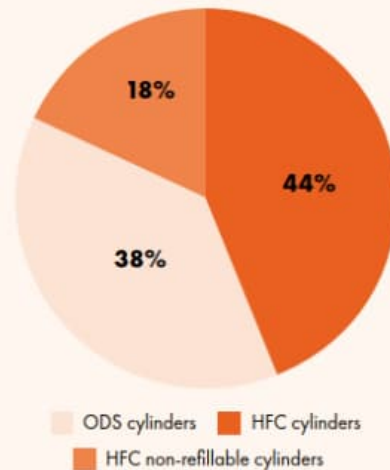


Figure 3.34 Network seizures. Type of cylinders/number per substance

- ECA seizures involved 383 pieces of ODS-based equipment and 7,811 cylinders. 61% of the cylinders were HFC, cylinders and 34% were ODS cylinders. 18 % of the seized cylinders were non-refillable cylinders with HCF content.
- A new challenge has emerged in the ECA region with HFCs. There are several reasons for illegal trade in ODS/HFCs in the ECA region, some of which were evidenced by the Global Award cases, such as:

Reasons for illegal trade

- The reduced amount of legally available substances due to import bans/quotas and the fact that the available amount of recycled chemicals may not satisfy the demand.
- Differentiated phase-out/phase-down schedules for controlled substances in neighbouring countries may encourage the illegal cross-border trade, e.g., a chemical already banned or restricted in one country (expensive) but still allowed in another country (cheap).
- High profitability of illegal trade combined with low risk of detection and generally small penalties for offenders

Evidence from the Global Award cases

- 533 HFC seizures in the EU countries that had a major reduction phase-down step in 2018.
- 522 HFC smuggling cases in the EU countries neighbouring with countries of the ECA region with different HFC phase-down schedules.
- In 78% of the cases, re-export of illegal HFCs was ordered, which involved a risk of subsequent illegal trade. In 2018, refrigerant prices in the EU were several times higher than in neighbouring countries.

Lessons learned:

- Be aware of HCFC phase-out and HFC phase-down schedules in neighbouring countries
- Observe changes in availability and price of ODS/HFCs in the national market as well as in neighbouring countries

The Global Award findings can be compared with data reported in the past in the framework of ECA regional awards since 2009.

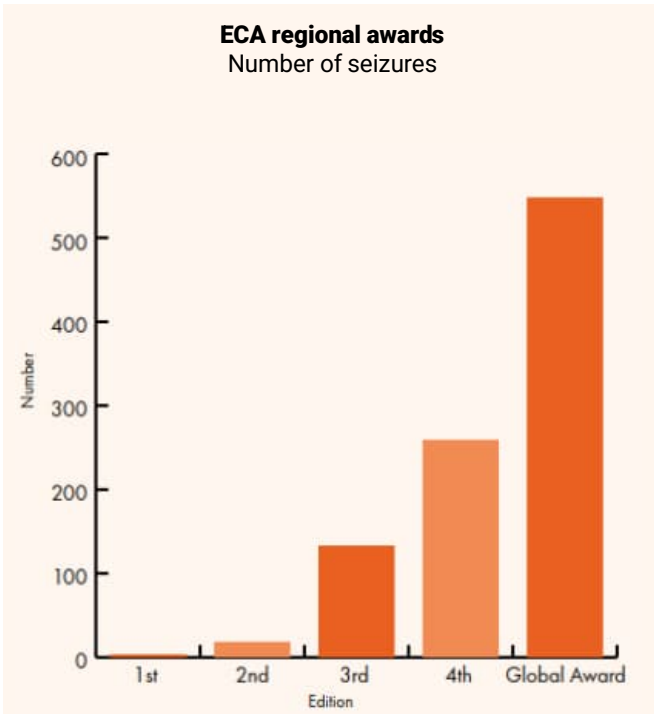


Figure 3.35 ECA Network regional awards. Number of seizures

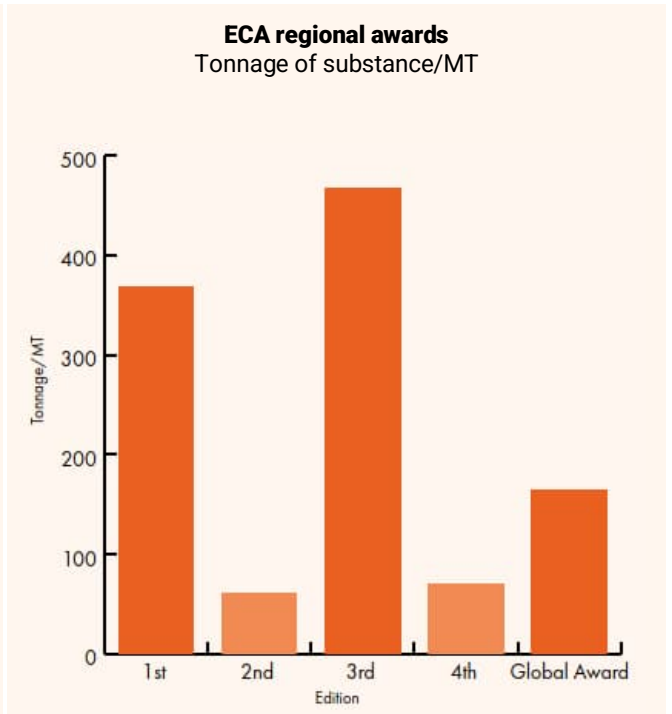


Figure 3.36 ECA Network regional awards. Tonnage/MT of substances

Compared with the previous editions of the award, the number of cases in the ECA increased mainly due to the 425 seizures reported by Poland in 2018.

The tonnage of the ECA region seizures reported in the context of the Global Award was higher than for the previous regional award edition due to the increase in HFC seizures. The number and tonnage of ODS seizures dropped, yet the tonnage of ODS seized remained quite significant.

In total, the ECA region reported 960 seizures that involved 1,130 MT of substances.

Global Award and ECA awards			
Number of seizures	Amount of substances/MT	Number of cylinders seized	Number of items seized
960	1,130	30,964	18,020

Figure 3.37 ECA Network seizures. Global Award and ECA awards results

The ECA countries decided to launch the 5th edition of the regional ECA award (2019-2020). National Montreal Protocol officers confirmed the effectiveness of these award schemes to raise awareness of the customs/enforcement community concerning the Montreal Protocol and the risk of illegal trade in controlled substances. Furthermore, the award scheme helps to gather data on the magnitude of illegal trade, smuggling schemes, and penalties applied to enhance international cooperation as well as exchange of intelligence. Moreover, the public reporting on seizures and the results of court cases works as a disincentive for potential smugglers.

Armenian case – ODS in declared legal cargo

In 2017, an Armenian firm imported a container containing 400 cans, each containing 500 millilitres of carbon tetrachloride (CTC). The Armenian Customs Service examined the shipping documents and discovered CTC among the reported products. The importing of CTC is prohibited. The importer applied for an import licence after learning of the prohibition on such imports. In the end, it was decided not to grant the request.

400 CTC cans were confiscated. Since Armenia lacks a CTC destruction facility, the importer was required to transport the CTC back to the nation of origin. The CTC was kept at the customs warehouse at the time of reporting the case on the subject of the Global Award. There was no legal action or sanctions imposed, as there was no concealment, and the CTC cans were adequately declared in the shipping documentation.

Source: (UNEP 2019b, p.22)

Unofficial translation of the correspondence between the importer and the Ministry of the Nature Protection of the Republic of Armenia

Application for an import licence

APPLICATION

would like to import from the People's Republic of China 400 units of 500 ml cylinders of carbon tetrachloride, Customs Code 29031400, which is not a waste. Enclosed find the invoice, shipping documents and CMR. © Armenian Customs

Photo 3.74 Application for an import licence

Refusal to issue an import licence

With reference to your letter of 18 May 2017 on the import of carbon tetrachloride CCL₄, costume code 290314000 0 please be advised that the product is included in the Government Resolution N 90-N "On Approving the List of Substances Banned or Limited for Transportation through the Customs Territory of the Republic of Armenia, Forms of Import/Export Licenses and Applications, Setting Specification for Provision of Licenses" of 5 February 2015, Annex 1 "List of Ozone Depleting Substances and Products Containing them, the Import of which to the Customs Territory of the EEU and Export from the Customs Territory of the EEU is Banned", therefore the import of the product to the Republic of Armenia is banned. © Armenian Customs

Photo 3.75 Refusal to issue an import licence

THE EUROPEAN UNION



© Polish Customs

Photo 3.76 Refrigerants seized by Polish Customs

The EU is an economic and political union of 27 countries. It operates a single market that allows free movement of goods between member states (in 2018, the EU involved one more member state – the United Kingdom). The cases were reported by five EU member states – Bulgaria, Croatia, Greece, Poland, and Spain. The EU reported 3 ODS seizures of 7,089 kg of substances, including 603 cylinders and 203 pieces of equipment containing unknown refrigerant, as well as 533 seizures of 111,999 kg of HFCs. 5,248 HFC cylinders were seized. The main challenge for the EU has proven to be the illegal trade in HFCs due to the EU phase-down schedule (see Chapter 2.2).

Country	Number of seizures	Quantities of ODS /kg	Quantities of HFCs/kg
Bulgaria	78	-	2,115
Croatia	25	27.2	1,942
Greece	5	6,864	432
Poland	425	-	107,456
Spain	2	198	-

Figure 3.38 The EU member states seizures

Key findings:

- Illegal HFC trade stimulated by a major phase-down step

WEST ASIA



© Honduran Customs

Photo 3.77 Equipment seized by Honduras Customs

Out of 33 members of the Latin America and Caribbean Network, five countries reported ODS cases in the context of the Global Award.

The reporting countries included Argentina, Costa Rica, and the Dominican Republic, that reported one case each, as well as Paraguay with three seizures and Honduras with nine cases.

The amount of the seized substances involved 38,893 kg of ODS. (See section 2.1)

Key findings:

- Mis-declaration and mislabelling of ODS and equipment

Country	Number of seizures	Quantities of ODS /kg	Number of cylinders	Items of equipment
Argentina	1	15,640	1,150	-
Costa Rica	1	5,603	412	-
Dominican Republic	1	2,010	6,700	-
Honduras	9	unknown	-	34
Paraguay	3	15,640	1,150	27,000

Figure 3.39 Network for Latin America seizures

- HCFC-22 constituted 91% of the seized ODS in the region. 9,412 cylinders, and 27,034 items of equipment were detected. The seized equipment contained HFCF-22.

Honduran case – Retrofitting of ODS and donating to public institutions

Multiple cargoes of second-hand milk tanks and other kinds of air conditioners arrived in Honduras between 2015 and 2018. The illicit goods were seized. Some confiscated systems were converted to alternative refrigerants, such as hydrocarbons, and given to training facilities or other public organisations. As a result, no re-export was ordered. To authenticate illicit goods, the NOU collaborated closely with customs.

Source: (UNEP 2019b, p.64)

Summary of seizures



© Namibian Customs

Photo 3.78 Refrigerant seizure by Namibia Customs

Main findings:

- illegal trade in ODS and HFCs is motivated by phase-down and phase-out schedules
- mis-declaration and mislabelling as non-controlled substances has been used for ODS
- non-refillable cylinders have been used for illegal trade in ODS and HFCs

Successful enforcement:

- detection of 587 cases of illegal trade and preventing illegal trade of 255,904 kg ODS/HFCs
- making use of knowledge acquired during trainings by enforcement officers
- gaining new knowledge, understanding, and experience on the illegal trade in ODS and HFCs
- collecting information that can be used for future enforcement

Challenges:

- in certain cases, lack of knowledge of enforcement officers on the existing bans
- effectiveness of penalties and disposal practices
- few instances of cooperation with other countries in order to monitor illegal trade in ODS and HFCs
- lack of reporting of the seizures to the Ozone Secretariat and the WCO CEN

Lessons learned

- raise awareness among enforcement officers about the goals and objectives of the Montreal Protocol and the intermediate steps to achieve the goals
- consider introducing a ban on non-refillable cylinders
- ensure capacity building well in advance of the intermediate steps
- provide training to enforcement officers
- ensure availability of tools and devices, such as gas identifiers to enforcement officers
- use risk analysis
- carry out joint control actions
- cooperate with other countries to establish links to illegal activities
- report information on the Secretariat and the WCO CEN
- report enforcement-related information to the WCO RILO



4. iPIC Consultations

iPIC consultations have been effective in facilitating the exchange of information between licencing offices prior to the shipments of controlled substances. They helped to clarify the status of intended shipments, which has resulted in preventing illegal trade. 47 iPIC consultations were reported in the context of the Global Award.²

**IPIC CONSULTATIONS
REPORTED FOR THE GLOBAL
AWARD PREVENTED 47 ILLEGAL
SHIPMENTS INCLUDING MORE
THAN 2,000 TONNES OF ODS.**

iPIC consultations

Trade in controlled substances requires mandatory export and import licences. National licencing authorities, in order to permit trade – import or export of controlled substances – need to verify the authorization of such trade. This involves ensuring that import and export permits are allocated only to registered and authorised traders, that the intended trade is within the allocated export/import quotas and that it complies with international and national law. (UNEP 2020e)

iPIC consultations can prevent illegal trade by identifying cases of potential non-compliance prior to the shipment of controlled substances. This involves comparing import and export data in bilateral consultations between the involved countries. Consultations are carried out by national Montreal Protocol units, which, in case of data discrepancies, can prevent illegal trade. (UNEP 2021b)

Typically, data discrepancies involve:

- intended shipment by an unauthorised entity – lack of registration of importer or exporter
- lack of import or export licence
- attempted import of substances banned in the recipient country
- irregularities related to the licences, e.g., wrong licence numbers

- lack of awareness by exporters or importers of the existing bans or export or import requirements
- shipment above the allocated export/ import quota
- inconsistencies between the export licence and the import licence e.g., name of the exporter, substance, quantity, quality (virgin, recycled), validity, etc.

Besides preventing illegal trade in particular cases, the national authority can analyse the reasons for discrepancies in import and export data in order to identify and strengthen the domestic import and export licencing system. (UNEP 2021b)

This mechanism has proven to be successful, and every year, iPIC consultations prevent numerous cases of illegal trade. It also acts as a disincentive or deterrent for potential smugglers. (UNEP 2021b)

An iPIC consultation usually consists of an exchange of emails. A case can be consulted within a day or two. UNEP OzonAction's regional coordinators provide assistance and support to follow-up on specific cases, as required. (UNEP 2013b, pp.99; 100)

More information on iPIC is available from the UNEP OzonAction website at:

www.unep.org/ozonaction/resources/factsheet/new-ipic-platform

www.unep.org/ozonaction/resources/report/informalprior-informed-consent-ipic-mechanism-2021-annual-report

The iPIC consultations reported for the Global Award prevented illegal of 2,000,629 kg of ODS trade between 11 countries. 5 iPIC consultations involved the European Union. The European Commission is the authorised body issuing ODS import and export licences on behalf of the EU member states. Estonia and Lithuania assisted in solving a complex iPIC consultation between the EU (the Netherlands) and Belize concerning an intended HCFC-22 export to a vessel under the Belize flag located in the harbour of Tallinn, Estonia. (UNEP 2019b)

² The figures in this chapter (4) are based on data from Global Montreal Protocol Award for Customs and Enforcement Officers publication (UNEP 2019b)

DETAILS OF THE IPIC CONSULTATIONS SHOWED KEY FINDINGS

LACK OF CORRESPONDING EXPORT OR IMPORT LICENCE

Countries involved	Description	Findings
China - Iran	Consultation related to a shipment of 31,280 kg of HCFC-22 resulted in rejecting the shipment by Iran.	absence of valid import licence
Serbia - China	Rejection of a request for an import licence by Serbia for 2,230.4 kg of HCFC-22.	absence of a request for an export licence in the exporting country
EU (France) - China	Consultation between the EU and China related to an import of 4, 910 kg of HCFC-142 for feedstock use. The issuance of the export licence was refused.	the importer is unaware of the trade.
Serbia - EU (Italy)	Following consultations between Serbia and the EU, a permit request to import 900 kg of HCFC-123 from the EU (via Italy and Croatia) to Serbia was denied. The HCFC-123 would have been present in 1,000 kg of NAF P IV, which comprises 90% HCFC-123. In fire extinguishers, NAF P IV is used to substitute Halon 1211. The EU stated that it had not received an import licence request. As a result, Serbia did not grant the import permit.	absence of a request for an export licence in the exporting country

DISCREPANCIES BETWEEN EXPORT AND IMPORT LICENCE

Countries involved	Description	Findings
China - Bangladesh	Consultations between China and Bangladesh resulted in the rejection of 7 shipments in 2018 of 65, 960 kg of HCFC-22.	<ul style="list-style-type: none"> ■ wrong licence number ■ fake licences ■ no valid import licence
China - Colombia	The discrepancy of the entities for the shipment's export and import licences from China to Colombia for 4,704 kg of HCFC-22 was confirmed in consultation.	the exporter is not the same as the entity listed on the import license.
Singapore - EU (United Kingdom)	The discrepancy in the volume of substance was confirmed in consultation between Singapore and the EU. It concluded with the denial of a permit application for the import of 3,000 kg of recycled Halon-1301.	doubling the 1,5 MT quantity of the permitted export from the EU

IMPORTER OR EXPORTER NOT REGISTERED/AUTHORIZED

Countries involved	Description	Findings
Belarus - China	A licence request for the transport of 30,000 kg of HCFC-22 was denied.	exporter not registered in the recipient's country registers
Serbia - China	A licence request for the transport of 2,230.4 kg of HCFC-22 was denied.	exporter not registered in the recipient's country registers

Source: (UNEP 2019b, pp.4-6; 13; 15-17)

REJECTION BY IMPORTING COUNTRY WITHOUT JUSTIFICATION

Countries involved	Description	Reason for rejection
China - United Arab Emirates	China initiated numerous iPIC consultations in 2017 and 2018 with the United Arab Emirates, rejecting 11 imports in 2017 and 20 imports in 2018. This prevented 596,614 kg and 1,251,375.2 kg in 2018 (in total 1,820,992.20 kg of HCFC-22).	The reasons for rejection were not indicated

United Arab Emirates case

The United Arab Emirates is a key trading centre for business and industry in the area, and it receives a significant number of licence applications. The majority of licence applications concern Chinese exports to the United Arab Emirates, which benefit from cheap costs for ozone-depleting compounds and alternatives, as well as China's supply capacity. The high number of denied licence applications was due to the strict enforcement of the licencing and the quota system, as well as some importers' lack of understanding of the licencing and quota system.

REJECTION OF EXPORT TO VESSEL BECAUSE OF UNREASONABLE AMOUNTS AND NO QUOTA

Countries involved	Description	Reason for rejection
EU (Netherlands) Belize (vessel) supported by Estonia and Lithuania	A consultation involving the EU and Belize concerned a request for an export licence for a vessel under Belizean flag (territory of Belize) in an Estonian harbour. A licensee was requested to fill newly installed HCFC-22 refrigeration system produced in Lithuania. Further investigations were hampered because the vessel left the EU without a functioning cooling system.	The EU exporter requested too high an amount of HCFC-22 to refill the new refrigeration system. The consultations confirmed that an export of 21,142 kg of HCFC-22 from the EU to Belize was illegal. The EU did not issue export licences, while Belize did not issue import licences.

BAN IN THE IMPORTING COUNTRY

Countries involved	Description	Findings
EU (Germany) - Singapore	Rejection of an import licence from the EU to Singapore of 1 kg of HCFC-22.	ban on import of HCFCs even for laboratory and analytical use
EU (Germany) - North Macedonia	Consultation related to the import of 5 kg CTC into North Macedonia resulted in the rejection of an export licence request.	ban on export, except for laboratory use
China - Russia	Consultation that involved an import into Russia of 15,504 kg of HCFC-22 resulted in the rejection of an export licence request by China.	ban on import of HCFC-22

iPIC consultations reported in the context of the Global Award took place in the period between 2016 and 2018. The reasons for rejection were presented in chart 3.1. In most of the cases, the reason for rejection was indicated. 5 rejections resulted from discrepancies between import and export licences. In 2 cases the importer/exporter was not registered/authorized. A ban in the importing country and a lack of licence were involved 3 times each. The case of rejection of export to the vessel because of unreasonable amounts and no quota involved 3 consultations.

Source: (UNEP 2019b, p.9)

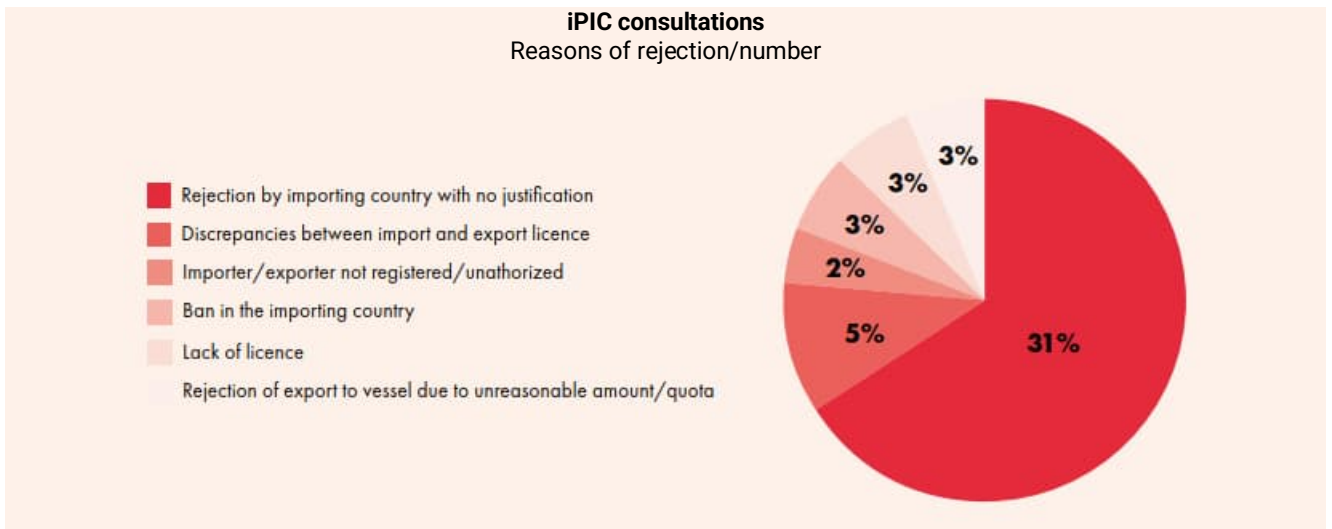


Figure 4.1 iPIC consultations. Reason of rejection/number

The HCFC-22 related consultations involved 30 queries, which represented 64% of the cases. They concerned 98% of the quantity of the substances involved (1,367,468 kg). For other ODS, there were 13 queries for HCFC-141b, which represented 28% of the consultations. The remaining 5 cases of iPIC consultations concerned other types of ODS, i.e., HCFC-142, Halon-1301, R-406, and CTC.

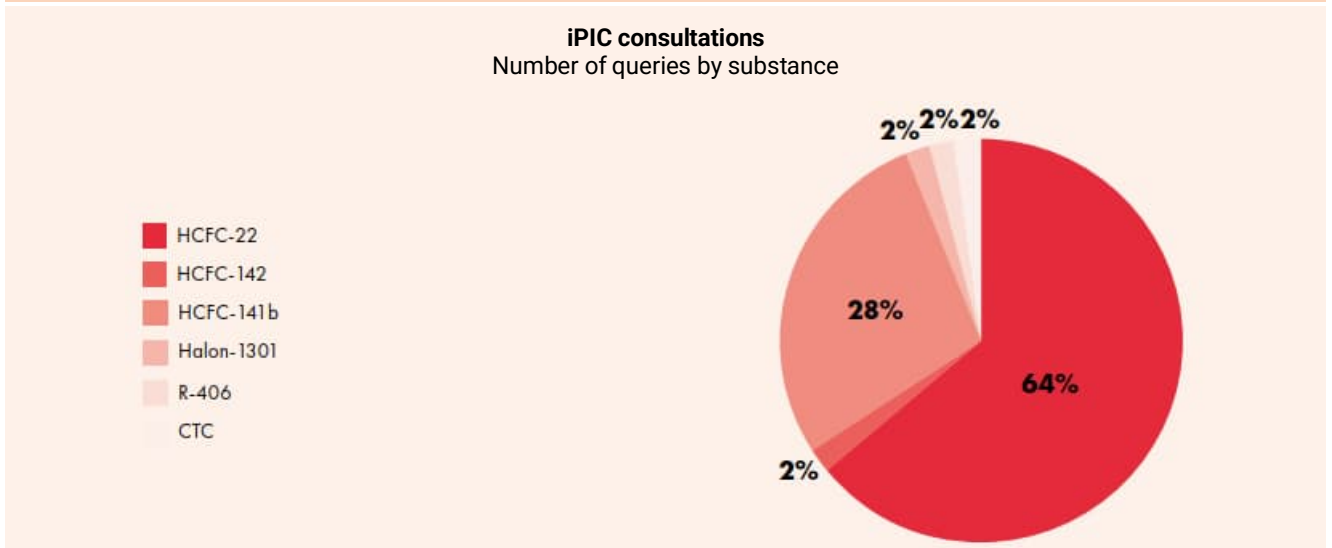


Figure 4.2 Number of iPIC queries by substance

iPIC CONSULTATIONS		
Conclusions:	Successful enforcement	Challenges
<ul style="list-style-type: none"> ■ iPIC queries concerned only ODS 	<ul style="list-style-type: none"> ■ Prevention of 2,000 tonnes of ODS 	<ul style="list-style-type: none"> ■ 7% of the parties reported involvement in iPIC consultations
Lessons learned		
<ul style="list-style-type: none"> ■ The future challenges related to the implementation of the Kigali Amendment on the phase-down of HFCs will require sharing information on trade in HFCs. 		

5. Summary of Lessons Learned

The analysis of the Global PM Award cases aims to show the main findings and lessons learned to be shared by parties in view of reaching HCFC phaseout and HCF phase-down targets.³

Enforcement of the Montreal Protocol

12% of the 196 parties to the Montreal Protocol reported either successful iPIC consultations or seizures.

Lessons learned from the Global Award do not show the full complexity of the implementation and enforcement challenges, nor do they show the volume of illegal trade. However, a number of conclusions and hints for enforcement officers can provide valuable information for the prevention of illegal trade in controlled substances under the Montreal Protocol. The analysis of ODS/HFC seizures is aimed at highlighting best working practices, drawing conclusions from the enforcement actions, and providing practical hints for frontline enforcement officers.

Lessons learned

The previous sections provided a detailed report of the cases reported in the context of the Global Award. The cases were organised by key fields such as ODS and HFC seizures and iPIC consultations. Each section was followed by a summary of the key findings to provide recommendations.

This section aims to share observations, evidence, and lessons learned from the cases reported in the context of the Global Award to contribute to the enforcement of the Montreal Protocol as well as to country-specific provisions and policies. It summarises lessons learned from the Global Award in relation to:

- The goals and objectives of the Montreal Protocol
- Areas to be strengthened
- Practical hints for frontline enforcement officers
- Roles and interactions of the parties concerned

PM Goals and objectives

Developing countries (Article 5 parties) and developed countries (non-Article 5 parties) have differentiated HFC phase-down and HCFC phase-out schedules to follow. Countries have chosen different approaches to comply with provisions of the Montreal Protocol.

Areas requiring more efforts

The Global Award cases show that the following activities and areas need to be strengthened for a more effective control and monitoring of ODS/HFCs trade:

- Use of iPIC mechanism
- Monitoring of illegal trade and tracking shipments
- Identification of substances controlled under the Montreal Protocol
- Sanctions and disposal practices
- Reporting and publicising of illegal trade and related court cases
- Regional cooperation and information exchange

Roles and interactions

Effective cooperation among national (especially neighbouring countries), regional, and international enforcement agencies, as well as communication with the Ozone Secretariat, the WCO, trade partners, and other transit countries, contributes to the success of the Montreal Protocol. Cooperation between national ozone and customs focal points is also crucial in this respect.

5.1 Enforcement of the Montreal Protocol

The Montreal Protocol defines the HFC phase-down and HCFC phase-out targets. Parties choose the means by which to achieve them. Setting up and managing import/export licencing systems is a mandatory element. Parties might adopt additional measures such as introducing import quotas and import bans on certain chemicals or products and equipment that contain controlled substances.

The seizures and iPIC consultations reported to the Global Award took place on the basis of the national legislation to implement the countries' commitments to the Montreal Protocol as parties. The analysis of the reported cases allowed for the conclusions that are presented in the following sections.

³ The figures in this chapter (5) are based on data from Global Montreal Protocol Award for Customs and Enforcement Officers publication (UNEP 2019)



© Namibian Customs

Photo 5.1 Refrigerant seizure by Namibia Customs

OPERATING THE IMPORT/EXPORT LICENCING SYSTEM FOR ODS

Breaches of legislation involved:

- irregularities related to import/export permits such as lack of permits
- trade in ODS by unauthorised importers/exporters
- breaches of import bans.

Modus operandi for illegal trade in ODS involved:

- mis-declaration of ODS
- smuggling

Efficient enforcement involved:

- applying iPIC mechanism prior to issuing import/export licences (see Chapter 3)
- applying various means of controls – documentary and physical, control before and after release of goods, control of imported goods, and controls on the market
- applying risk analysis in relation to a possible mis-declaration
- cooperation between customs and other national authorities through sharing information to enhance risk analysis
- providing enforcement officers with training, including training on how to identify ODS

OPERATING THE IMPORT/EXPORT LICENCING SYSTEM FOR HFCs

Since 2015 the EU and its member states have established an HFC import/export licencing system and follow an accelerated HFC phase-down schedule as stipulated in the EU F-gas regulation. The 37% reduction below baseline in 2018 triggered illegal trade, as evidenced by the 533 HFC seizures reported to the Global Award, including 425 cases reported by Poland alone.

Breaches of legislation involved:

- HFC import/export quota (see Chapter 2.2.1)
- Mandatory labelling of HFC containers (see Chapter 2.2.2)
- Import ban for non-refillable cylinders (see Chapter 2.2.3)

Modus operandi for illegal trade in HFCs

involved:

- attempts of importation of HFCs not covered by the quota
- smuggling of HFCs in non-refillable cylinders from non-EU member states mainly in private vehicles. In non-EU countries, non-refillable cylinders are not banned, and the EU F-gas regulation does not apply, thus there is no shortage in HFCs and prices are significantly lower
- large-scale smuggling in trucks
- imports of HFC containers not labelled as required by the EU F-gas legislation

Efficient enforcement involved:

- Political/management decision to prioritise combating illegal trade in HFCs
- Raising awareness and engaging enforcement officers in the detection of illegal trade
- Providing training and tools such as checklists, refrigerant identifiers, and access to the import quota system
- Risk profiling involving the use of HFCs customs codes and names of eligible importers

To therefore:

- Adjust national legislation to facilitate legal trade and to build capacity to prevent illegal trade well in advance of major reduction steps:
 - Ratifying the Kigali Amendment and adopting HFC import/export licencing systems
 - Introducing mandatory reporting requirement for importers and wholesalers on HFCs
 - Adopting new WCO HS codes for HFCs that are expected to enter into force in 2022 and considering additional digits to allow the monitoring of HFC trade and the reporting of more reliable HFC data
 - Providing training to enforcement officers prior to major reduction steps

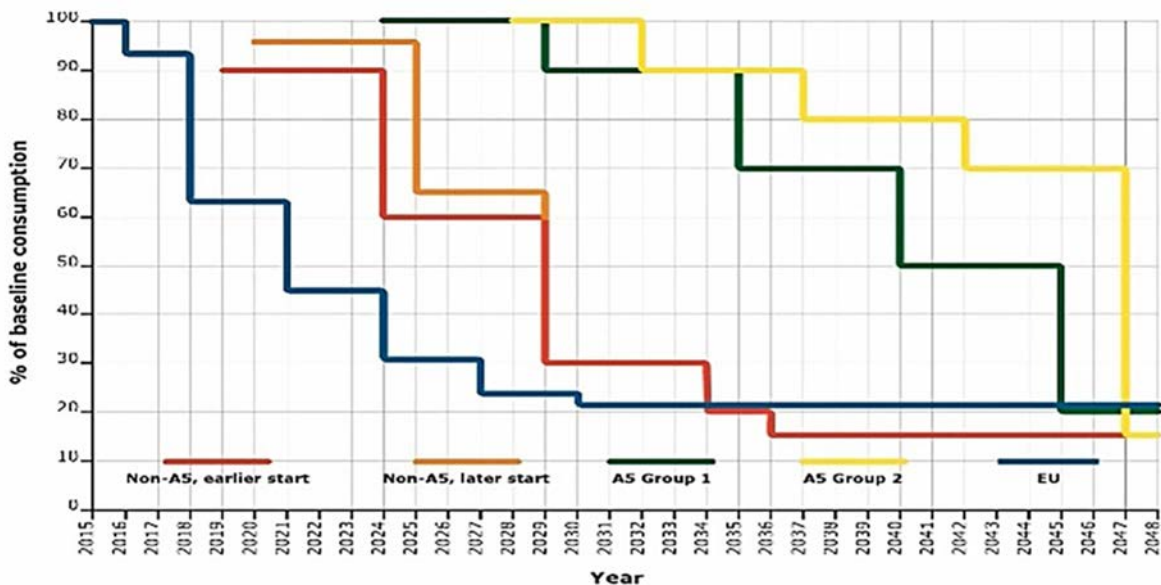


Figure 5.1 Differentiated HFC phase-down and HCFC phase-out schedules
Source: (UNEP 2017a)

Lessons learned

■ Legislative solutions and capacity building activities should precede major reductions steps

Countries that follow later reduction steps could benefit from the experience of the countries that have already achieved similar reductions.

The cases of HFC illegal trade reported in the EU under the Global Award were triggered by the 37% HFC reduction below baseline in 2018 in accordance with the EU F-gas regulation. This reduction step had been accompanied by import bans on certain products and equipment since 2007, the introduction of the quota regime for HFCs in 2015, and the inclusion of HFCs in pre-charged equipment in the quota regime in 2017.

A similar reduction step of 35% below baseline was scheduled for HCFCs in Article 5 countries between 2020 and 2021. The HCFC seizures reported under the Global Award provide evidence of the level of illegal HCFC trade during the 10% reduction step.

The further reduction to 35% below baseline might further increase the risk of illegal HCFC trade.

The ODS seizures reported under the Global Award illustrate that 80% of them involved mis-declaration as HFCs since HFC trade is currently not restricted in most developing countries. It would be beneficial for these countries to start monitoring HFC trade as soon as possible, e.g., by introducing mandatory HFC import/export licencing systems or reporting by importers/ wholesalers.

This could be done in advance of the Montreal Protocol requirements, e.g., prior to the ratification of the Kigali Amendment to allow the monitoring of ODS and HFC trade.

MEASURES ON CYLINDERS, PRODUCTS AND EQUIPMENT CONTAINING OR RELYING ON ODS

- 38% of ODS cases related to equipment that contains or relies upon controlled substances. Apart from one case, the quantity of ODS contained in the equipment was not reported.
- 75% of the detected units involved in such cases were mis-declared.
- 62% of the seized amount of ODS was traded in non-refillable cylinders. Over half of these ODS were mis-declared in customs documents.

Efficient enforcement involved:

- Review of the accompanying documentation, physical control of shipments, and post control of shipments that were released to the market by customs

Thus,

- Consider banning the import of HCFC-containing or reliant equipment that requires HCFCs for servicing during its lifetime, as this could hamper the Montreal Protocol's phase-out of HCFCs.
- Consider banning the import of non-refillable cylinders for ODS trade

MEASURES ON CYLINDERS, PRODUCTS AND EQUIPMENT CONTAINING OR RELYING ON HFCs

- 72% of the seized cylinders were not labelled as required by the legislation.
- 28% of the illegally traded HFC cylinders were non-refillable cylinders. Non-refillable cylinders were detected in attempts at smuggling.
- The seized HFCs traded in non-refillable cylinders represented 13% of the quantity of seized HFCs.

Efficient enforcement involved:

- Engaging enforcement officers in detection of illegal trade and providing them with training and tools such as gas analysers

Thus,

- Consider banning the import of non-refillable cylinders for HFCs trade

Lessons learned

- The labelling of cylinders, products, and equipment is an important factor that helps identify refrigerants that are contained in them. Along with the changes to cylinder colours (described in the following section), labelling is an important means of identifying the cylinder contents.
- The low level of compliance with the labelling requirements in the EU shows that it is necessary to raise awareness among importers.

5.2 IPIC Consultations for Monitoring of ODS and HFCs

Controlling and monitoring the trade of ODS and HFCs can be supported by iPIC consultations. Consignments of re-exported ODS and HFCs as well as suspicious consignments should be monitored closely and tracked to the final destination.

iPIC consultations

The 47 iPIC consultations that were reported under the Global Award revealed a range of irregularities such as lack of corresponding export or import licences, discrepancies between export and import licences, importer or exporter not registered/authorized or the export company not being aware of the intended trade.

They also triggered international investigations, such as in the case of intended export to vessels under foreign flags, to verify reasonable amounts of refrigerants for servicing refrigeration systems on vessels. The export to vessels under foreign flags requires export and import licences.

The following examples of the iPIC consultations reported in the context of the Global Award show the informal yet efficient aspect of the iPIC exchanges.



© Polish Customs

Photo 5.2 Refrigerant seizure by Polish Customs

Following the IPIC consultation between Belarus and China, Belarus did not issue an import licence, and thus prevented the illegal trade of 30,000 kg of HCFC-22.

04.05.2016, 09:12

© Belarusian Customs

The exporter
our I/E system.

is not registered in

From:
Date: 2016-05-03 21:43
To:
Subject: Imports of ODS

Please let us know if we can issue a license to import 30 tonnes of ODS R22 from China with the participation of companies

BUYER NAME:

EXPORTER NAME:

MANUFACTURER NAME:

Photo 5.3 E-mail exchange 1

Exchange of e-mails between Belarus and China (some elements of the messages removed)

Following the IPIC consultation between Serbia and China, Serbia did not issue an import licence, and thus prevented the illegal trade of 2,230.40 kg of HCFC-22.

Exchange of e-mails between Serbia and China (some elements of the messages removed)

From: <@.rs>
Date: 2018-03-26 14:19
To: <@.cn>
CC:
Subject: RE: Import of R-22_Serbia

© Belarusian Customs

Thank you very much for information. In that case we will not issue the import permit.

From: <@.cn>
Sent: 26 March 2018 05:13
To: <@.rs>
Cc:
Subject: Re: Import of R-22_Serbia

" " is not registered in our I/E system, so we cannot issue the permit to the company.

From: <@.rs>
Date: 2018-03-23 18:21
To: <@.cn>
Subject: Import of R-22_Serbia

I would like to inform you that company from Serbia " " has applied for import 2230,40 kg R-22 from China. Exporter is company " ". We will issue import license. Would you be so kind to inform us if you issued export license.

Photo 5.4 E-mail exchange 2

Following the IPIC consultation between the European Commission and North Macedonia, the European Commission did not issue an export licence, and thus prevented the illegal trade of 5 kg of CTC.

Exchange of e-mails between the EC and North Macedonia (some elements of the messages removed)

Од: @.eu
Датум: 04/07/2017 11:55
До: <@.mk>
Примерод до:
Наслов: RE: Export of CTC from Germany to Macedonia

© European Customs

Thank you for your response. Following your information that you do not consider the trade acceptable we will not issue the export licence for CTC.

From: <@.mk>
Sent: Tuesday, July 04, 2017 5:11 AM
To: (CI/IMA)
Cc:
Subject: Export of CTC from Germany to Macedonia

Thank you very much for the information regarding CTC export in Macedonia. This is to inform you that in accordance to the Order prohibiting the production and trade of ozone depleting substances as well as products containing ozone depleting substances (Official Gazette of the Republic of Macedonia no. 92/10) the import of CTC is prohibited. The mentioned Order does not foresee exemption for laboratory and analytical uses.

Photo 5.5 E-mail exchange 3

GLOBAL AWARD HIGHLIGHTS

The iPIC scheme proved to be effective in preventing illegal trade and enforcing import/export licencing systems. The 47 reported iPIC consultations prevented the illegal trade of more than 2,000 tonnes of ODS. It also proved to be efficient, as shown in the examples, in which the queries were answered within a couple of days.

Lessons learned

- If all parties applied iPIC prior to issuing export and import licences, illegal trade could be significantly prevented.
- The link to the iPIC platform is: www.ozonaction.org/ipic/login

Monitoring ODS and HFC trade requires close coordination between countries of origin, transit, and destination to track shipments, in particular, those that were not allowed to enter the destination country, shipments being sent back to the country of origin, or shipments that have been auctioned to third parties.

As described in the section to follow on sanctions and disposal methods, the cases reported under the Global Award showed that the main method of dealing with illegal ODS/HFC trade was to send the shipment back to the country of origin. In most cases, the shipments sent back to the country of origin were not monitored/tracked until they arrived at their final destination, thus increasing the risk that the substances remain in the illegal channels and that they enter the country illegally through another entry point or at another point in time.

Monitoring ODS and HFCs under operations with reduced trade restrictions

The seizures reported under the Global Award did not relate to illegal trade under procedures with reduced or no trade restrictions, such as transit, operations in free trade zones, or trans-shipment.

Polish case

During the award ceremony for the ECA region in Kiev, Ukraine, in 2019, Poland presented cases of HFC transshipments to another EU country in 2019. The operations involved non-refillable cylinders, which are banned in the EU, importers suspected of a lack of quota, and changing the mode of transport. The suspicious HFCs were moved between different vessels.

Customs informed the country of destination about the suspicious shipments. To avoid deviating from the planned shipment route, the goods were admitted for transshipment through Poland only upon presentation of a confirmation of the transportation arrangements for the shipments. An inspection of the shipments was undertaken in the country of destination and resulted in a seizure.



Decision XIX/12 states “...that parties wishing to improve implementation and enforcement of their licencing systems in order to combat illegal trade more effectively *may consider implementing domestically on a voluntary basis monitoring transit movements including those passing through duty-free zones.*” (UNEP 2020e, p.338)

In general, fraud related to transit operations involves unreasonable shipping routes, fictitious destinations, and false documents, passing through transit ports and free-trade zones where customs procedures are more relaxed but also just changing the means of transport.

National legislation allowing the monitoring/tracking of transit operations can reduce the risk of illegal shipments and enforce trade provisions.

Lessons learned

- International cooperation, communication, and information exchange are necessary in case of suspicious consignments



© Polish Customs

Photo 5.6 Non-refillable cylinder

5.3 Identification of ODS and HFCs

The correct identification of ODS and HFCs is crucial for enforcement. In most cases, the control begins with the determination of the customs tariff classification. Suspicious cases require the identification and/or analysis of the composition of the substances.

HS coding system

Goods must be classified for customs purposes. Each separate product is assigned a particular classification code. The code determines the duties applicable, how the goods are treated for statistical purposes, if any additional documents are required, and if the import or export of the goods is restricted or prohibited. (UNEP 2019c)

The WCO's harmonised system (HS) coding system is an internationally standardised system of names and numbers to classify traded goods. It is the basis for customs tariffs and internal trade statistics. HS codes are also used for ODS and HFCs and for products and equipment containing or relying on them. (UNEP 2019c)

ODS classification

The HS classification for ODS specifies 6-digit individual HS codes to the five most commonly used HCFCs as well as other ODS (UNEP 2016b). They can be found in UNEP OzonAction's factsheet on "HS Codes for HCFCs and Certain Other ODS" available at:

www.unenvironment.org/ozonaction/resources/factsheet/hs-nomenclature-hs-codes-hcfc-and-certain-other-ozone-depleting-substances



© Shutterstock

GLOBAL AWARD CASES INVOLVED THE FOLLOWING ODS:

ASHRAE Designation	Chemical name	Formula	HS code	Number of seizures	Quantity seized %
HCFC-22	Chlorodifluoromethane	CHClF ₂	2903.71	38	72%
HCFC-141b	Dichlorodifluoromethane	CH ₂ ClCF ₂	2903.73	2	12%
CFC-12	Dichlorodifluoromethane	CF ₂ Cl ₂	2903.77	3	11%
CFC-113	Trichlorotrifluoroethanes	C ₂ F ₃ Cl ₃	2903.77	1	4%
HCFC-409A	(Containing HCFC-22, HCFC-42b, HCFC-124)	blend	3824.74	2	1%
Halon-2402	Dibromotetrafluoroethanes	C ₂ F ₄ Br ₂	2903.76	1	0%
CTC	Carbon tetrachloride	CCl ₄	2903.14	2	

Figure 5.2 Global Award cases involving ODS

Note: The production and consumption of several virgin ODS have already been banned in all developing (Article 5) and developed countries, including CFC, halon, carbon tetrachloride, and methyl bromide. Only used (recovered, recycled, reclaimed) ODS can be traded if not banned by national legislation. There are exemptions for virgin substances, including methyl bromide used for quarantine and pre-shipment (QPS) uses or chemicals used for feedstock use. In case of doubt, it is recommended to consult the NOU officer or Montreal Protocol focal point. (UNEP 2013b, pp. 29; 30)

HFCs classification

Following the request from the parties to the Montreal Protocol, the WCO agreed to revise the Harmonised System codes by adding new subheadings for HFCs (under heading 29.03) and HFC mixtures (under heading 38.27). The New subheadings for HFCs under heading 29.03 are structured on the basis of importance in international trade and environmental impacts to assist parties in implementing the Kigali Amendment. (UNEP 2013b, p.64)

The amended HS Nomenclature, which was adopted in June 2019, will enter into force on 1 January 2022. Contracting parties are currently revising relevant legislation and regulation to adjust national tariffs and statistical nomenclatures in time to accomplish the legislative and regulatory formalities required for the amendment of their tariff/statistic nomenclatures. (UNEP 2019c)

Information on the HS codes for HFCs can be found in UNEP OzonAction's factsheet and it is available at:

<https://www.unep.org/ozonaction/resources/factsheet/hs-codes-hfcs-advice-countries-advance-2022-hs-code-update>

Highlights

The HFC seizures under the Global Award were reported by the EU member states. The EU Customs use 10-digit TARIC codes for HFCs and mixtures. TARIC codes build on the 6-digit HS codes. Adding two digits results into an 8-digit Combined Nomenclature (CN) code, and adding another 2 digits into a 10-digit TARIC code (UNEP 2013b, pp.64-68). The detailed TARIC codes allow for the differentiation of ODS and HFCs, as well as the automatic calculation of CO₂-equivalent tonnes of imported and exported substances in the future (UNEP 2018a, p.27). They will be used for quantity management of ODS/HFCs in the European Union Single Window for Customs.

SEIZURES REPORTED UNDER GLOBAL AWARD INVOLVED THE FOLLOWING HFCs:

ASHRAE Designation	Chemical name	Formula	HS code	Additional 4 digits resulting in TARIC code	Number of seizures	Quantity seized %
HFC-134a (GWP 1,430)	1,1,1,2-tetrafluoroethane	CH ₂ FCF ₃	2903 39	26 90	357	37%
HFC-404a (GWP 3,921.60)	(containing 52% of 1,1,1-trifluoroethane (HFC-143a), 44% of pentafluoroethane (HFC-125) and 4% of 1,1,1,2-tetrafluoroethane (HFC-134a))	blend	3824 78	20 10	58	23%
HFC-407C (GWP 1,773.85)	(containing 52% of 1,1,1,2-tetrafluoroethane (HFC-134a), 25% of pentafluoroethane (HFC-125) and 23% of difluoromethane (HFC-32))	blend	3824 78	40 20	8	20%
HFC-410A (GWP 2,087.50)	R410A (containing 50% of pentafluoroethane (HFC-125) and 50% of difluoromethane (HFC-32))	blend	3824 78	30 10	14	19%
HFC-507C (GWP 3,985)	R507A (containing 50% of pentafluoroethane (HFC-125) and 50% of 1,1,1-trifluoroethane (HFC-143a))	blend	3824 78	10 10	14	1% (HFC-507C and HFC-125)
HFC-125 (GWP 3,500)	Pentafluoroethane	CHF ₂ CF ₃	2903 39	24 10	1	

Figure 5.3 Global Award cases involving HFCs

HS codes for HFCs will enter into force on 1 January 2022, whereas HFC baselines for Article 5 Group 1 countries will be calculated based on the 2020-2022 production and consumption data reported to the Ozone Secretariat under Article 7 of the Protocol. To facilitate monitoring of international movement of HFCs by customs prior to 2022, it is recommended to add temporary digits to the current HS codes to allow distinguishing main HFCs and blends, and to introduce mandatory reporting by importers / wholesalers and HFC import / export licensing requirements even prior to the ratification of the Kigali Amendment. (UNEP 2019c)

A number of elements other than a customs code can give the enforcement authorities indications of how to target consignments for control. Some of this information can be found in the customs declaration as well as accompanying documentation, and it involves: HS code, product description, import/exporter information, country of origin, cylinder type and information about non-refillable cylinders.

RISK PROFILING AND DOCUMENTARY CONTROL

Data element	Tips for carrying out ODS/HFCs related controls																								
<p>HS Code</p> <p>Customs can use a HS code to target goods. HS codes are declared by importers/ exporters in customs declarations. Customs need to be watchful about possible mis-declaration, misdescription or misclassification of declared goods.</p>	<p>Refer to UNEP factsheets for ODS and HFCs</p> <p>www.unenvironment.org/ozonaction/resources/factsheet/hs-nomenclature-hs-codes-hcfc-and-certain-other-ozone-depleting-substances</p> <p>www.unep.org/ozonaction/resources/factsheet/hs-codes-hfcs-advice-countries-advance-2022-hs-code-update</p>																								
<p>Product description</p> <p>Goods description might be used to identify the goods. It can also be used to supplement the information needed for the identification of goods where the HS code is not sufficient on its own to identify the consignment or has been mis-declared. This may also be used to identify what measures apply to given substances and mixtures.</p>	<p>Provide enforcement officers with relevant information on the traded substances such as commercial names for ODS/HFCs and their characteristics, e.g.:</p> <table border="1" data-bbox="579 831 1463 1149"> <thead> <tr> <th>Refrigerant</th> <th>Type</th> <th>ODS</th> <th>HFC</th> </tr> </thead> <tbody> <tr> <td>R-22</td> <td>HCFC</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>R-134a</td> <td>HFC Blend</td> <td>NO</td> <td>YES</td> </tr> <tr> <td>R-404A</td> <td>HFC Blend</td> <td>NO</td> <td>YES</td> </tr> <tr> <td>R-407A</td> <td>HFC Blend</td> <td>NO</td> <td>YES</td> </tr> <tr> <td>R-410A</td> <td>HFC Blend</td> <td>NO</td> <td>YES</td> </tr> </tbody> </table> <p><i>Figure 5.4 Safety Data Sheet</i></p> <p>Advise that Customs should pay attention to Safety Data Sheets to ensure technical specifications and a CAS Number.</p>	Refrigerant	Type	ODS	HFC	R-22	HCFC	YES	NO	R-134a	HFC Blend	NO	YES	R-404A	HFC Blend	NO	YES	R-407A	HFC Blend	NO	YES	R-410A	HFC Blend	NO	YES
Refrigerant	Type	ODS	HFC																						
R-22	HCFC	YES	NO																						
R-134a	HFC Blend	NO	YES																						
R-404A	HFC Blend	NO	YES																						
R-407A	HFC Blend	NO	YES																						
R-410A	HFC Blend	NO	YES																						
<p>Importer/exporter</p> <p>The importer/exporter name or other details related to importer/exporter can be used to target operators with a known history of supplying illegal ODS/HFCs. These details can also be used to target operators that are not eligible for the import/export of ODS/HFCs.</p>	<p>Consider granting Customs officers access to the database of eligible importers/exporters and providing intelligence on importers/exporters who have a history of illegal trade.</p>																								
<p>Country of origin/dispatch/ export</p> <p>The country of origin / dispatch / export is an element that can be used to target or exclude goods from specific countries.</p> <p>It can be used in situations when there are known trade patterns for given goods.</p>	<p>Information can be provided by the NOU or based on available data from the Ozone Secretariat Website on Country Profiles www.ozone.unep.org/countries</p>																								

Cylinder type and packaging can be used to target consignments for control

Information contained in shipment papers, commercial documents, and customs declaration might refer to the cylinder types and packaging. Photos in commercial documents, company websites, and internet platforms might also provide hints concerning the cylinder types of a certain manufacturer. Last but not least, the physical inspection of the cylinders and packaging allows verification and should include checking that all information on the cylinder is consistent (chemical name, trade name, UN number, CAS Number, etc.) and matches the information in the accompanying documentation. Beware of external signs of tampering, rust, paper label transfer (glued on the cylinder), or repaint work. The design of the cylinder indicates whether it is a non-refillable or refillable cylinder.

Non-refillable cylinders

HS codes for different cylinder types can provide an indication of the type of container; e.g., for empty, non-refillable cylinders, the following codes apply:

7311 00 (Containers of iron or steel, for compressed or liquefied gas)

7611 00 (Aluminium reservoirs, tanks, vats, and similar containers with a capacity of more than 300 l for any material (other than compressed or liquefied gas), not fitted with mechanical or thermal equipment, whether lined or heat-insulated (excl. containers specifically constructed or equipped for one or more modes of transport).

7613 00 (Aluminium containers for compressed or liquefied gas).

The ban on non-refillable cylinders is a useful measure to reduce emissions and allow better monitoring of the trade in refillable cylinders. However, it requires a strong enforcement of the ban. Knowledge of the typical weight of non-refillable cylinders used for different types of substances may be useful during the ODS and HFC documentary checks for example, the packing list shown below concerns a shipment of non-refillable cylinders of HFC-410A in 11.3 kg cylinders, HFC-507A in 11.3 kg cylinders, and HFC-404A in 10.9 kg cylinders. (UNEP 2018a, p.29)

Marks	Quantities & Descriptions	Pkg.	G.W. (kgs)	N.W. (kgs)
	MIXED REFRIGERANT GAS (R410A) 500CYLINDERS	25B	(11.3KG) 7700.00KGS	5650.00KGS
	MIXED REFRIGERANT GAS (R507) 240CYLINDERS	25B	(11.3KG) 3552.00KGS	2712.00KGS
	MIXED REFRIGERANT GAS (R404A) 400CYLINDERS	24B	(10.9KG) 5760.00KGS	4360.00KGS

Photo 5.7 Example of a packing list © Polish Customs

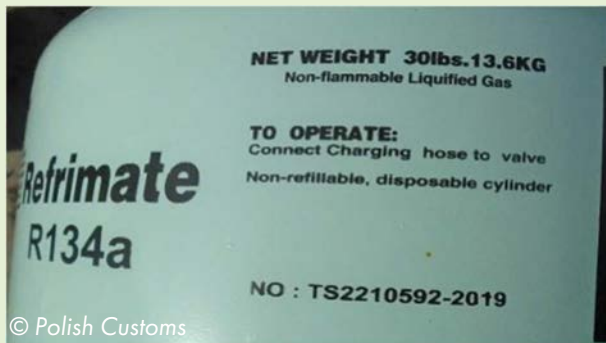
EXAMPLES OF TYPICAL WEIGHT OF NON-REFILLABLE CYLINDERS BY HFC TYPE

HFC-134a

13.6 kg

HFC-410A

11.3 kg



© Polish Customs

Photo 5.8 Example of a R-134a non-refillable cylinder



© Polish Customs

Photo 5.9 Example of a R-404A non-refillable cylinder

NO.	PRODUCT DESCRIPTION	PACKING	QUANTITY	GROSS WEIGHT
1	REFRIGERANT R-134A Appearance: Colorless & Clearness Purity %(m/m): ≥99.8 Water content %(ppm by weight): ≤ 20 Acidity (ppm by weight) ≤ 0.1 Evaporation Residue (ppm by weight): ≤100	400 CYLINDERS 30lb cylinder with 13.6kg net weights per cylinder.	5440 KGS	6640 KGS
2	REFRIGERANT R-404A Appearance: Colorless & Clearness Purity %(m/m): ≥99.8 Water content %(ppm by weight): ≤ 20 R125:R143A:R134A=44%:52%:4%	300 CYLINDERS 24lb cylinder with 10.9kg net weights per cylinder.	3270KGS	4320 KGS
3	REFRIGERANT R-407C Appearance: Colorless & Clearness Purity %(m/m): ≥99.8 Water content %(ppm by weight): ≤ 20 R125:R32:R134A=25%:23%:52%	150 CYLINDERS 25lb cylinder with 11.3kg net weights per cylinder.	1695 KGS	2220 KGS
4	REFRIGERANT R-410A Appearance: Colorless & Clearness Purity %(m/m): ≥99.8 Water content %(ppm by weight): ≤ 20 R125:R32=50%:50%	100 CYLINDERS 25lb cylinder with 11.3kg net weights per cylinder.	1130 KGS	1530 KGS
5	REFRIGERANT R-507 Appearance: Colorless & Clearness Purity %(m/m): ≥99.8 Water content %(ppm by weight): ≤ 20 R125:R143A=50%:50%	200 CYLINDERS 25lb cylinder with 11.3kg net weights per cylinder.	2260 KGS	2960 KGS

© Polish Customs

Photo 5.10 A packing list of a seized HFCs by the Polish Customs

A packing list of a seizure of 25,000 kg of HFCs detected by the Polish customs. Part of the HFCs were in non-refillable cylinders. The packing list shows the typical weight of non-refillable cylinders: R-134a -13.6 kg, R-404A-10.9 kg, R-407C - 11.3 kg, R-410A – 11.3 kg, R-507A -11.3 kg.

PHYSICAL CONTROLS OF ODS/HFCs SHIPMENTS

Physical controls aim to verify if the goods correspond to the shipment papers. They involve inspection of the shipment content and, if needed, the composition of goods and labelling. It is necessary to reduce risks to the health and safety of officers, and if required, they should wear and use protective clothing and equipment such as (non-exhaustive list): masks, gloves, and protective goggles. If officers think that their equipment and/or skills are not sufficient to protect them, they must stop the physical control and call upon experts.

From 2020 on, all refrigerant cylinders will have the same paint colour - a light green/grey, called "silk grey" (RAL 70444). The colour assignments will continue for product labels and cartons (UNEP 2020d).

The factsheet "*Refrigerant Cylinder Colours: What has changed*" is available on OzonAction's website: <https://wedocs.unep.org/20.500.11822/32200>

Cylinder colours have been a widely used and useful means for preliminary/initial refrigerant identification for customs and enforcement officers and NOUs. The principal method of cylinder identification now is the container labelling and markings. Cylinder colours can no longer be relied on as a means to identify the type of refrigerant in a container. This means that doubts/suspicious of mislabelling or counterfeiting of refrigerants should be verified using a refrigerant identifier (see the UNEP OzonAction refrigerant identifier video series for guidance available online at: <https://wedocs.unep.org/20.500.11822/27134>). (UNEP 2020d; UNEP 2018b)

The recently updated UNEP OzonAction smartphone application "*WhatGas?*" can also provide useful information in this regard. Just search for "*WhatGas?*" in the Google and Apple stores, or use the QR code below. *WhatGas?* is also available online at: <https://wedocs.unep.org/20.500.11822/32125>. (UNEP 2020f)

For suspicious cases, chemical analysis is needed to identify the contents of refrigerant cylinders

Identification of ODS and HFCs by analysing the substance
Identification of gases contained in pressurised cylinders may be done by trained customs officers using refrigerant identifiers (also called gas analysers).

Highlights - Chemical analysis of refrigerants

Chemical analysis was conducted in the case of 21 seizures under the Global Award. In 8 cases, the analysis of the refrigerants confirmed mislabelling of ODS.

The identification was performed by customs officers at the border using refrigerant identifiers as well as by laboratories, including customs laboratories.

The examples below show some of the Global Award cases where refrigerant identifiers were used to identify the content of cylinders

Identification of possible mis-declaration



© Polish Customs

Photo 5.11 Mis-declared cylinder 1



© Polish Customs

Photo 5.12 Mis-declared cylinder 2

Labelling 'Propane' (in Russian). There was a suspicion of smuggling of HFCs in mislabelled cylinders due to a large number of HFC smuggling cases via the Polish eastern border. The identification proved that HFC-410A was the content of 2 cylinders labelled in this way.

Identification of the content of nonlabelled cylinders

HFC-410A was the identified content of an unlabelled cylinder smuggled into Poland.



© Polish Customs

Photo 5.13 Unlabelled cylinder seized by Polish Customs

In 2018, the Polish customs detected 7 cases in which liquid petroleum gas (LPG) installations were used for the smuggling of HFCs. It was necessary to identify the content of the containers. The identification proved the presence of R-134a. (See Chapter 2.2.3)



© Polish Customs

Photo 5.14 Car installations to smuggle HFCs

POLISH CASE – FOCUSED TRAINING OF CUSTOMS OFFICERS

Following the detection of several smuggling cases of HFCs in non-refillable cylinders in April 2018, Poland conducted five half-day training workshops for customs officers from all customs offices, which are responsible for the controls at the external EU land and sea borders. The training covered the use of refrigerant identifiers and explained the necessary safety measures, such as using personal protective equipment. Customs officers received an overview of EU F-gas legislation as well as relevant national legislation during the trainings. The trainings were carried out in cooperation with a national NGO.

Training on the use of refrigeration identifiers for customs officers at the EU external land borders



© Polish Customs

Photo 5.15 Training with the refrigeration identifiers 1

Training on sampling and analysing the contents of ISO tanks for customs officers at the sea borders



© Polish Customs

Photo 5.16 Training on sampling and analysing contents 1



© Polish Customs

Photo 5.17 Training with the refrigeration identifiers 2



© Polish Customs

Photo 5.18 Training on sampling and analysing contents 2

The training focused on the use of identifiers. Due to the existing EU ban on the use of non-refillable cylinders for HFCs, it was also shown how to differentiate between refillable and non-refillable cylinders.

During the training it was demonstrated how to take a sample from an ISO container.

The characteristics of the refrigerant substances, as well as their various identifiers, such as chemical and trade names, CAS and UN numbers, were described. Legislative aspects and the information that should be checked in the documentation accompanying the shipments of refrigerants were also part of the trainings.

Lessons learned

- Training customs officers on how to use gas analysers is an effective way of taking enforcement measures to prevent outright smuggling and identify refrigerants when there are doubts and the case is likely to go to court.

5.4 Sanctions Systems and Disposal Practices

Imposing sanctions and publicising the seizures, court cases, and penalties aim to raise awareness and discourage illegal trade. Disposal practices must prevent subsequent illegal trade and ensure environmentally sound disposal of seized refrigerants. The seizures reported to the Global Award showed that 85% of illegal shipments were re-exported or their re-exporting was considered. The majority of re-exported shipments were not monitored.



Photo 5.19 Nigerian authorities in destructing seized refrigerants

Sanctions

Sanctions were imposed because of the breach of Montreal Protocol-related national legislation. In many cases, it translated into penalties for breaching customs law. In most cases, relatively moderate administrative fines were applied. In 5% of the detected cases, no penalties were applied. The import of the illegal goods was not allowed, and they were re-exported/sent back to the country of origin.

Disposal practices

Overall, including cases where penalties and fines were

applied, in 75% of the cases, the illegal ODS / HFCs were re-exported or sent back to the country of origin, often without tracking the shipment to its final destination.

Two countries reported that re-export followed the auctioning of illegal substances to third countries. In such cases, information exchange with third-party pre-approval is crucial to ensuring that the auctioned refrigerants can be shipped legally to the destination countries. The shipment should be tracked until it arrived at its final destination. The following section provides details of the sanctions applied and disposal practices.

LEGAL BASIS FOR SANCTIONS

Breach of legislation related to the Montreal Protocol

Paraguayan case

On 25 March 2015, 27,000 air-conditioning split systems were seized, with suspicious documents indicating that the equipment worked with R-410A. Following verification of the documents, it was established that the equipment actually operated with HCFC-22. The import of such air-conditioners was banned as of 1 March 2015 (see Chapter 2.2.1). Fines were ordered accordingly. The shipment was released by court order. The government filed an appeal against the court order, but the shipment had previously been purposefully released. (UNEP 2019b, p.90)

Lessons learned

- National legislation should include penalties for breaches of Montreal Protocol-related laws.

BREACH OF CUSTOMS LAW

Polish case

In 411 cases, the attempted smuggling of HFCs, primarily in banned non-refillable cylinders, led in the imposition of fines due to a lack of customs declaration.

TYPE OF SANCTIONS IMPOSED

Penalties

Fines were the most often reported type of penalty. This measure was applied to 92% of the seizures. The level of fines was not analysed in detail as the data provided to the Global Award were not comparable (the cases took place between 2009-2018; not all submissions provided such information).

In 12 cases (3% of the seizures), no fines were imposed, the goods were re-exported or sent back to the country of origin, and in two cases, warnings were issued. In two seizures no penalty was applied as it was not possible to identify the offender, and in one case because the customs law does not allow for imposing penalties on the consignee. For the rest of the cases, the investigations were still ongoing, or following investigations, it was established that no offence was committed (in the chart on the right they are considered under category 'other'). In a number of cases, fines were also related also to customs offences.

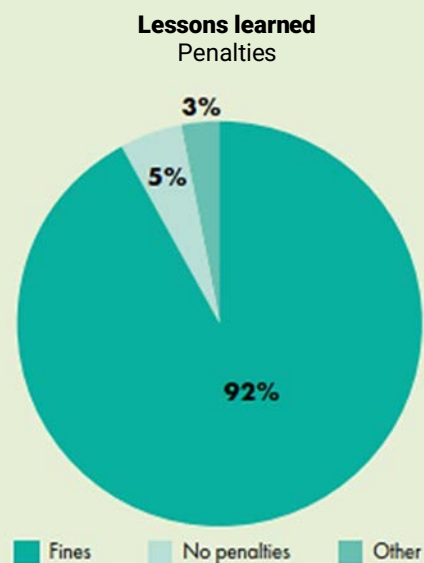


Figure 5.5 Penalties imposed

LEVEL OF FINES		
Country	Amount of illegal substances	Level of fine as reported to the Global Award
Argentina (2009)	15,640 kg HCFC-22 (1,150 cylinders)	38,114 USD
Bosnia and Herzegovina (2016)	import of banned AC units	A conditional fine of 1,000 EUR is to be paid if a similar breach occurs within a year.
Bulgaria (2018)	per HFC cylinder of 13.6 kg (smuggling)	220-250 EUR
Cambodia (2015)	7,425 kg of HFC-134a	15,000 USD
Croatia (2018)	per HFC cylinder of 13.6 kg (smuggling)	50 - 1,500 EUR
Croatia (2018)	104 cylinders of different types of refrigerants (detected in a private property)	2,000 EUR
Dominican Republic (2017)	2,010 kg of CFC-12 (6,700 cylinders)	3,684 USD
Georgia (2018)	per HCFC-22 cylinder of 13.6 kg	90 – 150 USD
Greece (2016)	7,296.5 kg of HCFC-22 (598 cylinders) and an IPR infringement	6,000 EUR
Greece (2018)	per HFC cylinder (smuggling)	150-255 EUR
Poland (2018)	per HFC cylinder of 13.6 kg (smuggling)	150 EUR
Türkiye (2016)	25,187 kg of HCFC-22 (1,852 cylinders)	app. 230,000 EUR

Figure 5.6 Level of fines for some of the cases

Source: (UNEP 2019b, pp.20; 29; 32; 34; 35; 49; 52; 57; 58; 111)

Spanish case – court cases

Operation Cheiro against the use of prohibited refrigerants in livestock farms (2017)

More than 180 examinations of refrigeration systems, milk tanks, and compressors in Zamora area cattle farms revealed that many of the outdated systems utilised forbidden ozone-depleting refrigerants, had fraudulent labelling, and had not been recorded in the Industry Registry. A Spanish contractor (service firm) invoiced the farmers as if they had changed the refrigerants, despite the fact that they had not. The contractor confirmed that the installations had been modified to use alternative refrigerants while continuing to use illegal refrigerants. Several milk tanks and compressors were found to contain CFC-12 or HCFC-22 refrigerants, despite labelling that stated HFC-424A. A portion of the HCFC-22 refrigerated tanks was for sale. Three people have been detained and charged with fraud. A judicial measure has been taken. This includes crimes against collective security for the marketing of ozone-depleting gases.

Source: (UNEP 2019b, p.102)

DISPOSAL PRACTICES

As illustrated in the chart below, in 75% of the cases the actual disposal option was re-export/sending back to countries of origin or transit.

Five shipments were reported to have been destroyed. However, when reporting the cases to the Global Award, 81 shipments were pending destruction. In the chart below, these cases are included in the category 'pending in customs warehouse'. There were also cases in progress. The goods were also stored in customs warehouses pending court or administrative decisions. In 5 cases, the substances were auctioned and re-exported. A number of cases were considered to fall under the category 'other'. These cases involved cases in which the goods were released, or the actual follow-up actions were not reported.

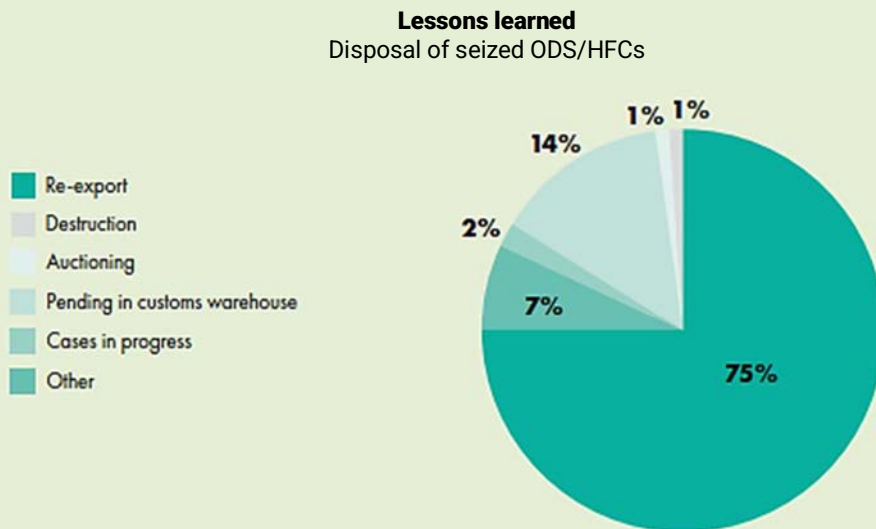


Figure 5.7 Disposal options

Note

Sending back illegal ODS/HFCs is possible, but with the risk that the goods could be illegally reimported later and possibly through another border checkpoint. The tracking of the shipment back to the country of origin/transit, as well as prior coordination and information exchange with the authorities in those countries, are crucial procedures.

Destruction is an option for contaminated waste and mixtures that cannot easily be reclaimed or for chemicals that cannot be used legally anymore, such as CFCs. Destruction has considerable costs and impacts on the environment in terms of energy use and CO₂ emissions, but it prevents ODS/HFC emissions.

Auctioning is not yet widely used but has the potential to avoid sending back the illegal shipment with the risk of subsequent illegal trade and to avoid the costly destruction where the seized ODS/HFC can still be legally used – in the country or in third countries. Successful auctioning should be done at realistic prices, to authorised buyers/traders only, with prior confirmation by third countries that the trade would be legal and acceptable, e.g., that an import license will be issued, and with tracking the shipment to the final destination. It generates income while avoiding destruction expenses, and it avoids new manufacture for legitimate applications, making it environmentally friendly.

Venting and temporary storage at customs warehouses are not considered disposal options. Most national legislation bans the venting of ODS and will eventually ban the venting of HFCs.

Temporary storage adds costs to the final disposal option.

Please refer to UNEP OzonAction's factsheet on how to deal with seized ODS/HFCs:

www.unenvironment.org/ozonaction/resources/factsheet/dealing-seized-ods-options-article-5-countries

Source: (UNEP 2020b)

RETURNING DISALLOWED REFRIGERANTS (75% OF REPORTED CASES)

Returning the disallowed refrigerants was reported in 442 illegal shipments, accounting for 75% of the cases. Re-export entailed returning these items to both the country of origin as well as to the transit country.

Paraguayan case	Sri Lankan case
<p>Illegally imported 1,150 cylinders of mislabelled HCFC-22 were returned to the transit country. The officer accompanied the shipment up to the border. The NOU of this country was informed. It is unknown what happened to the goods in the country of transit or whether they were eventually sent back to the country of origin.</p>	<p>The re-export of 7,670 kg of HCFC-22 was monitored up to the loading point (shipped on board), but not re-confirmed with the authorities, and it is unknown what happened to the goods after that.</p>
Bosnian - Herzegovinian case	Pakistani case
<p>Following an investigation of three importers of air conditioning (AC) units, it was established that 950 AC units were imported from a country in Eastern Europe. R-22 was present in 230 of the AC. The total charge of the AC was 158.7 kg of R-22. An investigation was ordered by the NOU.</p> <p>The importer was unaware of an import ban. At the time of investigation, 50 AC units with R22 had already been sold in the country, while the other 180 AC units with R22 had been re-exported.</p>	<p>In response to a court order to reexport 18,000 kilogrammes of illegally traded, mislabelled HCFC-22, customs officials were concerned that the same consignment may enter Pakistan again. Therefore, customs expected to file an appeal with the Supreme Court. Unknown are the outcome of the appeal and the ruling of the Supreme Court.</p>

Polish case

Out of the 110,676 kg of HFCs involved in 414 smuggling cases reported within the context of the Global Award, 27 kg of HFCs were destroyed, and the remaining substances were re-exported.

Lessons learned

- Re-exported shipments should be monitored and the appropriate authorities should be notified.
- The legality of the re-export should be confirmed with the importing country's authorities and the shipment should be tracked to its final destination
- The collection of comprehensive information and the publicising of conclusive case studies is needed

Source: (UNEP 2019b, pp.29; 83; 89; 93)

DESTRUCTION OR EXPORT FOR DESTRUCTION OF SEIZED REFRIGERANTS (0.8 % OF REPORTED CASES)

Five countries reported destruction as the way of disposing of the seized refrigerants. In one case, the refrigerants were shipped to another country for destruction. The export of seized refrigerants for destruction needs to follow the procedures of the Basel Convention on Hazardous Waste and its Disposal procedures for transboundary movement of waste.

Nigerian case

Nigeria reported the destruction of 1,495.2 kg of CFC-12 utilising the country's existing rotary kiln incineration technology.



© Nigerian Customs

Photo 5.20 Rotary kiln incineration in Nigeria

Source: (UNEP 2019b, p. 80)

Spanish case

Illegal export instead of costly destruction

In 2016, a criminal organisation shipped 5,130 kg of used HCFC-22 from Spain to Panama. A Spanish waste management company arranged for the delivery via maritime transport. The import company was located in a Panamanian industrial area. The investigations culminated in the collapse of the organised criminal group and the indictment of nine people in Spain for illicit HCFC-22 trafficking. A legal action was taken, and it is continuing.

The examination also uncovered violations inside the Spanish waste management company involving the discharge of 9,753 kg of HCFC-22-containing refrigerant waste. The formal process, in accordance with the legislation, would have been for the Spanish waste management company to transfer the waste between two Spanish cities and then export it for destruction to a waste treatment facility in France. The examination discovered a deviation from the established protocol as well as illicit waste exportation from Spain to Panama. In Panama, no HCFC waste was discovered.



© Spanish Customs

Photo 5.21 Investigating the refrigerant exports

Source: (UNEP 2019b, pp.101-103)

Illegal venting of ODS and F-gases

In September 2016, it was discovered that two owners of a recycling company had illegally discharged ozone-depleting and global warming refrigerants into the atmosphere while handling electronic and toxic waste without authorization, including hundreds of end-of-life refrigerators. They pleaded guilty and were sentenced to two years of imprisonment, three years of suspension from working in the recycling industry, and a daily fine to be paid over an eight-month period. Since July 2013, illicit activity has been ongoing. As a consequence of the investigation, 600 electrical products were seized, including 203 refrigerators. The examination also revealed that more than 40 kg of mercury compounds were unlawfully discharged into the soil, as well as the illicit emission of CFC refrigerants R-11 and R-12 into the sky. Other dangerous compounds discovered in the enterprise's facilities included lead, cadmium, and zinc.

In January 2015, the representative of the Public Prosecutor's Office for the Protection of the Environment in Soria revealed significant volumes of electronic waste, as well as other dangerous compounds, in the recycling company's facilities. The Environmental Unit of the Civil Guard (SEPRONA) discovered that the company was permitted to recycle non-dangerous waste, but not all electrical or hazardous waste. The investigation was supported scientifically by the Public Prosecutor's Office's technical department. This ruling by Soria's Criminal Court Number One is only one in a long line of similar verdicts by Spanish courts concerning the unlawful emission of CFCs into the environment.

Lessons learned

- due to the risk of smuggling back into the country or to third countries, any illegal shipment transported back to the country of origin should be tracked to the final destination and relevant authorities in transit and destination countries should be notified prior to the shipping.
- regional cooperation and information exchange are crucial to ensure that illegal refrigerants are not to illegally traded
- it is necessary to collect evidence, including relevant scientific reports, to be used in court proceedings
- due to the high cost of destruction, including the transportation of illegally traded controlled substances to the destruction facility, especially if the quantity involved is relatively small, destruction should not be the first option in disposing of the illegally traded substances

AUCTIONING OF SEIZED REFRIGERANTS (0.8 % OF REPORTED CASES)

Two countries reported the auctioning of the seized refrigerants and the following re-export as the disposal option. Croatia and Türkiye reported the auctioning of the seized refrigerants. Re-export followed auctioning. Bulgaria also intended to auction the seized refrigerants.

There has been anecdotal evidence that the auctioning of seized refrigerants was not always successful and, in at least one case, led to the illegal trade of auctioned refrigerants exported to third parties. The destination country was not informed ahead of time of the re-export taking place. Thus, the destination country did not issue an import license.

Turkish case

The auction sale of 25,187 kg of HCFC-22 required that the refrigerants be re-exported. The buyer was responsible for re-export expenses. 1,847 of the seized non-refillable cylinders were exported. Customs documents confirmed that the goods left Türkiye and reached the import country. (UNEP 2019b, p.111)

Lessons learned

- Consider auctioning seized refrigerants instead of destroying them when they can still be legally used, but apply safeguards such as iPIC consultations prior to auctioning, auctioning only to authorised companies, tracking the shipment to its final destination, and informing the relevant authorities in transit and destination countries prior to shipment.
- regional cooperation and information exchange are crucial

The unsuccessful cases of auctioning, as evidenced by the Global Award cases, led to the elaboration of a checklist for successful auctioning by the ECA network (UNEP 2020a).

The checklist on “Auctioning of Seized Refrigerants – How to Get it Right – Europe and Central Asia Network” is available at <https://www.unep.org/ozonaction/resources/factsheet/checklist-auctioning-seized-refrigerants-how-get-it-right>.

LONG-TERM STORAGE OF SEIZED REFRIGERANTS (14% OF REPORTED CASES)

A number of countries reported the storage of goods in customs warehouses for the time of finalising administrative and court cases as well as the auctioning or readiness of the importer to handle the goods. This was the case for 84 seizures. Storage often takes place over lengthy periods of time, and it is not considered a disposal option.

Iranian case

In a case of illegal trade in 10,961 kg of CFC-12, the refrigerants were under the surveillance of customs, pending procedures since the products could not be returned due to customs legislation prohibiting re-export. (UNEP 2019b, p.66)

Lessons learned

- the key objective in disposing of ODS and HFCs is to ensure they are removed from illegal channels of commerce
- any shipment of ODS/HFCs should be tracked to the final destination, and relevant authorities in transit as well as destination countries should be informed prior to the shipment
- regional cooperation and information exchange are crucial

Publicising the cases of successful enforcement actions can serve as a deterrent for potential illegal trade in ODS and HFCs

SOME OF THE GLOBAL AWARD CASES

Official press release

Belarussian case - Official press release of the Customs Service of Belarus

Detection of 80 drums (250 kg each) of substances mislabelled as non-ODS as “tris (2-chloropropyl) phosphate (TCPP). Samples revealed that 60 barrels included 15,000 kg of HCFC-141b, and 20 drums contained 5,000 kg of CFC-113, both of which are Montreal Protocol-controlled ozone-depleting substances. (UNEP 2019b, p.23)

UNEP website

Follow the UNEP's website for the latest news at:

www.unenvironment.org/news-and-stories/story/environmental-authorities-and-customs-join-forces-against-environmental

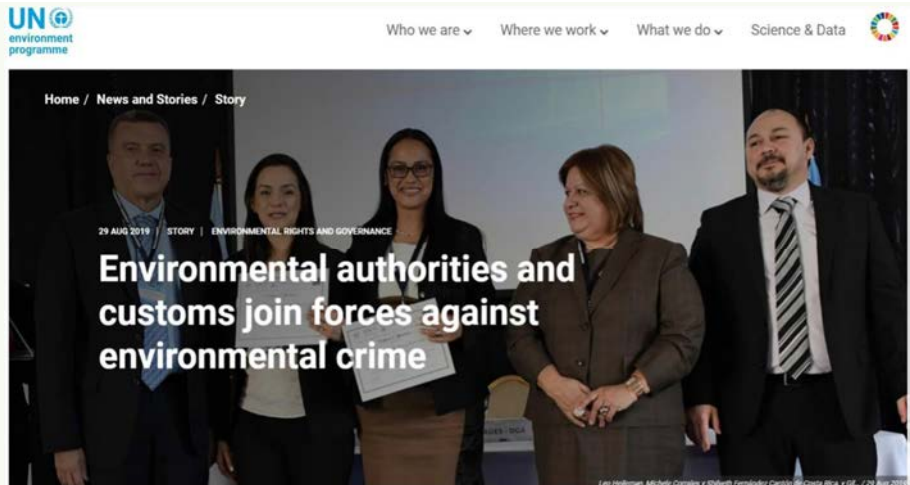


Photo 5.22 Regional Global Award ceremony in Asunción, Paraguay, 2019
Source: (UNEP n.d.-d)

5.5 Raising Awareness and Building Capacities on the Montreal Protocol

The exchange of information on illegal trade and raising awareness are key to implementing the Montreal Protocol. Campaigns to raise awareness and build capacities for customs and enforcement officers require updated information on the means and practices in illegal trade of controlled substances under this treaty. Information on seizures, trends, and on-going trafficking routes/strategies allows one to assess the situation and cross-check data to prevent illegal trade and strengthen enforcement. At the time of the submission of nominations for the Global Award, none of the submitted cases of seizures had been reported to the Ozone Secretariat or to the WCO CEN. Since then, only a few cases have been reported.

Reporting of illegal ODS and HFC trade to the Ozone Secretariat

According to Decision XIV/7, parties to the Protocol are encouraged to report to the Ozone Secretariat information on illegal trade. It is recommended to provide such data on a regular basis. The Ozone Secretariat informs the parties accordingly. Parties should be aware of the level of illegal trade in order to make informed policy decisions and provide appropriate funding to developing countries to initiate enforcement action. (UNEP 2020e, p.333)

Information on cases of illegal trade reported to the Secretariat is available on the Ozone Secretariat's website at:

www.ozone.unep.org/countries/additional-reported-information/illegal-trade



© Polish Customs

Photo 5.23 Analysing refrigerants by Polish Customs

Data submitted to the Ozone Secretariat are crucial to assessing compliance with the agreed phase-out and phase-down schedules. The data also serve as the basis for identifying any problems with reaching the goals and planning future activities.

Only a small percentage of the 198 parties reported seizures under the Global Award. Moreover, out of the 24 countries that participated in the Global Award scheme, six countries – Argentina, Armenia, Bulgaria, Georgia, Poland, and Spain reported the Global Award cases to the Ozone Secretariat.

BESIDES THE REPORTING MECHANISMS OF THE MONTREAL PROTOCOL, THERE ARE OTHER SYSTEMS IN PLACE FOR THE COLLECTION, EXCHANGE, AND ANALYSIS OF ENFORCEMENT-RELATED DATA ON ILLEGAL TRADE IN ODS AND HFCs.

WCO communication tools: Customs Enforcement Network (CEN)

The CEN allows the input of non-nominal data and information on customs-related offences, including information on illegal trade in environmentally sensitive commodities such as ODS or HFCs. The data serve intelligence purposes and enhance global profiling at the strategic, tactical, and operational levels. (Green Customs 2018, p.93)

Pakistani case

The seizure of 18,000 kg of HCFC-22 was shared with the CEN users by the WCO Secretariat. The CEN users were provided with information about effective enforcement actions taken by the Pakistan customs. (UNEP 2019, p.83)

Regional Intelligence Liaison Offices (RILOs)

The primary users of the CEN are the RILOs. Each of the eleven RILO network offices helps to exchange information between the WCO and member administrations. (WCO n.d.-c)

RILOs carry out analyses of the CEN data, which help to design and implement intelligence-led regional and global operations such as Operation Demeter. ODS were included in the scope of Operation Demeter V, which was carried out in 2019. Twenty-seven cases related to ODS were reported by 6 member countries. ODS seizures involved 8,031 kg of substances. Input of ODS/HFCs cases from the Demeter V Operation increased the number of CEN cases in this category in comparison with the seizure data of 2018. However, the number of ODS/HFC cases in CEN remains small. In the period between 2018 and 2019, 80 cases involving 8,667 kg of substances were reported to CEN. (WCO 2019)

For more information on RILO activities in different regions, refer to the website:

http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/enforcement-and-compliance/tools-and-instruments/rilo/rilo-brochure_en.pdf?db=web

CENcomm

To supplement the intelligence gathering of customs, the WCO developed the CENcomm application. CENcomm allows for the exchange and dissemination of information during special border enforcement operations. CENcomm also hosts a number of specific long-term projects, such as ENVIRONET. (UNEP 2013a, p.43)

ENVIRONET

ENVIRONET is a secure, real-time global communication tool for information exchange and cooperation. It is possible to share best practices and exchange information on seizures, and possible on-going trafficking. Environet provides downloadable training materials, identification guides, manuals, and other background information related to the enforcement of MEAs. (Green Customs 2018, p.85)

NOUs is encouraged to report data to the Ozone Secretariat. Customs should exchange information and intelligence with other countries (NOUs, customs, RILO, NCPs) and participate in award schemes similar to the Global Award and WCO operations such as Demeter.

For access and administrative issues use e-mail: environet@wcoomd.org and for technical issues assistance use e-mail: cis@wcoomd.org.

COMMUNICATION AND EXCHANGE OF INFORMATION BETWEEN PARTIES IS KEY TO PREVENTING ILLEGAL TRADE IN ODS/HFCs. IT SHOULD ENSURE THAT TRADE IS MONITORED AND CONTROLLED AT ALL POINTS PRIOR TO THE SHIPMENT TAKING PLACE, AS WELL AS AVOIDING THAT ILLEGAL SHIPMENTS ARE DIVERTED. INTERNATIONAL, REGIONAL AND NATIONAL COOPERATION BETWEEN INSTITUTIONS IS NEEDED.

Communication to prevent illegal trade

Cooperation between enforcement authorities of countries of export, transshipment, and import is required to ensure that trade in ODS/HFCs is done only by eligible entities and avoid the diversion of shipments that are sent back to the country of origin/production. In this context, promoting iPIC aims to prevent illegal trade in controlled substances prior to the shipment taking place by conducting bilateral consultations on compliance with licencing requirements. Interactions between parties are necessary for monitoring the export of auctioned seized substances as well as substances that are sent back to the country of origin/production or that are exported for destruction. (UNEP 2013b, p.99)

Multilateral co-operation

Communication and exchange of information between countries should ensure that information about common smuggling schemes, routes, and other intelligence concerning the illegal trade is more widely available (UNEP 2013b, p.99). For the Kigali Amendment to be implemented in the future, there must be increased regional collaboration and information exchange regarding HFC shipments.

Polish case

Encouraging co-operation

In 2018, Poland initiated cooperation within an EU Project Group of representatives of customs and F-gas competent authorities. The group's operational objectives are to support the effective implementation of the F-gas legislation and exchange best working practices and administrative procedures.

Source: (UNEP 2019b, p.93)

Cooperation of national authorities

National efforts should focus on coordinated intelligence gathering, information exchange, training among partners, and the provision of refrigerant identifiers. National training workshops for enforcement officers should be carried out regularly as part of capacity building activities. Support in everyday work is also an important part of such cooperation. (UNEP 2013b, p.98)

Dominican case	Joint inspections by customs and NOU	In the Dominican Republic, it is common practice for customs and NOU to conduct joint examinations of all shipments comprising substances established by the Montreal Protocol, as well as pre-blended polyols and RAC equipment, due to the technicalities involved in the illicit trade of ODS and appliances containing or depending on them.
Bosnian - Herzegovinian case	Providing instructions to customs	Following the discovery of instances in which banned goods were placed on the market, customs officials received instructions.
Pakistani case	Successfully making use of previous training	An illegal trade of 18,000 kg of HCFC-22 was found by a customs agent who had gone through the Montreal Protocol Training for Customs on ODS Trade Control.
Costa Rican case	Providing training to customs by NOU	The detection of 600 cylinders, each containing 13.6 kg of HCFC-22 refrigerant, followed training provided by the NOU to customs on how to detect illegal ODS trade.

Source: (UNEP 2019b, pp.37; 49; 83)

Promoting the inclusion of gender and diversity among customs and enforcement officers

Women are frequently left behind in male-dominated sectors such as customs and enforcement when it comes to opportunities for training and capacity building, as well as leadership roles (Neuhauser 2018). Discriminatory practices and sexual harassment may also go unnoticed, and this is against UN principles. UNEP thus has a mandate to promote discussions on women in leadership roles in environmental governance; and this is also in line with UNEA Resolution 4/17 which was adopted by the United Nations Environment Assembly on 15 March 2019. The resolution calls for '*Promoting gender equality and the human rights and empowerment of women and girls in environmental governance*'. (UNEP 2019d)

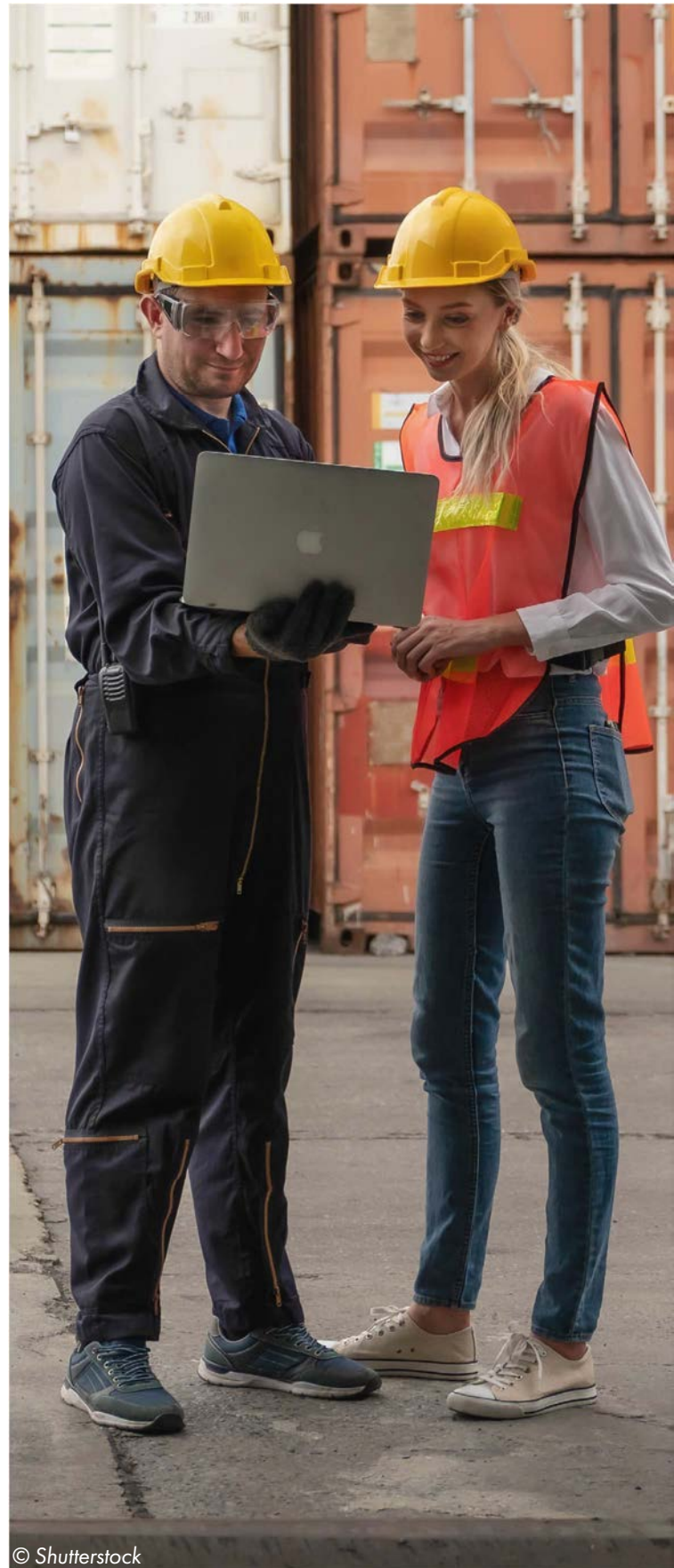
UNEP is subsequently working to fully implement this resolution and assist Member States in achieving SDG 5 in the context of the environment.

It is crucial to note that the Montreal Protocol also supports gender equality in its endeavours, and thus this publication offers an opportunity to raise this important point. Because the relationship between individuals and the planet is intrinsic, addressing environmental conservation and protection also necessitates consideration of the human dimension. As articulated in UNEP's flagship report GEO 6:

Gender

"A gender approach redefines the environmental situation through the lens of social relationships and their reflection in human-environment interactions, instead of defining the state of the environment primarily in its physical or ecological forms. Gender analysis reveals that while systemic environmental problems typically manifest in physical landscapes and ecosystems, the state of the environment can only be explained by examining social, cultural, and economic systems and arrangements. Those structures are 'gendered'; they are shaped by socially constructed roles and relationships between women and men." (UNEP 2019a, p.81).

The table below also highlights gender commitments by the Montreal Protocol which also warrant mention / discussion.



Multilateral Fund (MLF) / Montreal Protocol

84th meeting of the Executive Committee, Montreal, 16-20 December 2019

Operational policy on gender mainstreaming for Multilateral Fund-supported projects (Decision 84/92)

"The Executive Committee approved the operational policy on gender mainstreaming for Multilateral Fund supported projects. It affirmed the importance of gender mainstreaming in Multilateral Fund-supported projects and requested bilaterals and IAs apply this policy throughout the project cycle, beginning with projects proposed for consideration at the 85th meeting; and to provide, when available, gender-relevant information in reports on ongoing projects approved prior to the 85th meeting. The Secretariat was requested to review the implementation of this policy and to prepare a report for consideration at the 89th meeting."

(Multilateral Fund for the Implementation of the Montreal Protocol 2019b)

Development of Gender mainstreaming guides to assist agencies submitting proposals

As mentioned in Decision 84/92, bilateral and implementing agencies are required to apply the policy throughout the project cycle, beginning with projects submitted to the 85th meeting, and to provide, when available, gender-relevant information in reports on ongoing projects approved prior to the 85th meeting.

The Secretariat has included in all the guides developed by the Secretariat to assist agencies in submitting their project proposals, e.g., tranches of HCFC phase-out management plans (HPMPs), new stages of HPMPs, and institutional strengthening projects, a component on the implementation of the gender policy. For guides developed by the Secretariat, kindly refer to the link:

<http://www.multilateralfund.org/Our%20Work/countries/Guides%20prepared%20by%20the%20Secretariat/Forms/AllItems.aspx>

Guiding principles as articulated in UNEP/OzL.Pro/ExCom/84/75: Annex Operational policy on gender mainstreaming for multilateral fund-supported projects

"5. Strategies, policies, procedures, guidelines and criteria established by the Executive Committee should support gender equality and women's empowerment and be developed in accordance with the gender policies of bilateral and implementing agencies;

6. A gender-sensitive approach should be applied in the design and implementation of Multilateral Fund-supported projects; and

7. Bilateral and implementing agencies' existing gender policies and their experience implementing these policies can be used to identify entry points to promote gender equality and women's empowerment in all Multilateral Fund-supported projects implemented by them."

(Multilateral Fund for the Implementation of the Montreal Protocol 2019a)

Additionally, in its publication on 'Gender in Ozone Treaties' published in 2019, UNEP's Ozone Secretariat recommended the introduction of "a "Gender Award" under the Ozone Awards to incentivize parties to advance gender equality in their projects" (UNEP 2019b, p.4). This is a good practice and should be replicated across all other awards. The publication also recommended that Parties should:

"1 b. Consider dedicating a proportion of the budget to facilitate the participation of women, in particular women from Article 5 (developing) countries, in the work of the treaties. This could include funding for training in multilateral diplomacy and policy development, as well as for scholarships to encourage women to pursue further education in relevant scientific and technical disciplines;"

"1 c. Monitoring and evaluation of the impact of this encouragement." (UNEP 2019d, p.3)

AWARENESS BY ENFORCEMENT OFFICERS OF MONTREAL PROTOCOL PROVISIONS AS WELL AS ABOUT NATIONAL LEGISLATION IS CRUCIAL FOR AN EFFECTIVE PREVENTION OF ILLEGAL TRADE IN ODS/HFCs.

Training of enforcement officers

Enforcement officers should be aware of the Montreal Protocol's provisions and goals, as well as national legislation, their specific enforcement agency's internal procedures, and cooperation agreements with other concerned national enforcement agencies. The cases reported to the Global Award demonstrated that trainings for customs and enforcement officers should provide knowledge about the Montreal Protocol, practical information about controlled substances, and illegal trade schemes, including: provisions of the Montreal Protocol.

The existing prohibitions and restrictions

- the system of classification of ODS/HFCs
- information about substances
- extensive training related to the introduction of updated HS codes
- previous investigations, including modus operandi, seizures, convictions, penalties, and fines
- reference materials (manuals, guides, instructions for controls).

The national-related part of the training should provide specific knowledge and information:

- when and how to contact other relevant agencies or competent authorities and the scope of information to be exchanged
- what national systems, databases can be used for enforcement
- purposes
- risk analysis issues
- how to use non-intrusive inspection (x-rays, detection cameras)
- information on most common concealment methods
- information on how to get in contact with national experts
- how to document the control in a way that is usable for internal use and the collection of seizure data, and/or for further investigations carried out by other authorities.

Practical knowledge and experience on how to control ODS/HFCs should involve providing knowledge of health and safety measures, and practical training on how to operate gas analysers. The Global Award cases proved the effectiveness and need of training for enforcement officers.

Tools that can be used for the purpose of trainings include:

1. UNEP OzonAction customs training manual: www.unenvironment.org/ozonaction/resources/publication/training-manual-customs-and-enforcement-officers-3rd-edition-saving-ozone
2. Customs / enforcement section at the UNEP OzonAction website: www.unenvironment.org/ozonaction/what-we-do/customs-and-enforcement
3. Montreal Protocol training at WCO CLIKC online training platform (www.wcoomd.org or <http://clikc.wcoomd.org/>)
Customs officers should contact the WCO's national focal point in their country to register for the course and access the e-learning module.

The training of enforcement officers should adopt a gender-equal approach, where both male and female custom officers are offered training opportunities.

Normalising women in customs is essential for contributing to closing of the global gender gap, which is now predicted to take over 100 years.

A useful publication entitled a '*Compendium on Gender Equality and Diversity in Customs*' can be used for training in order to promote gender engagement and fight unconscious biases (WCO 2020). It is published by the World Customs Organisation:

<https://www.wcoomd.org/en/topics/capacity-building/activities-and-programmes/gender-equality.aspx>

The compendium highlights how customs and border control in many countries handle gender equality and diversity well, and hence some of these best practices are worthy of replication in other countries. Advocating for some of these practices and perhaps looking into future awards in this category is highly recommended as this supports SDG 5 as we are in the SDG Decade for Action. (WCO 2020)

6. Summary of Conclusions

The Global Award provided a number of key messages and lessons to be learned by enforcement officers:

PREVENTING AND FIGHTING ILLEGAL TRADE IN ODS AND HFCs

iPIC consultations are an effective way of preventing illegal shipments

- use iPIC mechanism for all ODS shipments, but in view of the HFCs phase-down, also for HFCs shipments as well as products and equipment

Illegal trade in HCFCs, products, and equipment involves mis-declaration and smuggling

Illegal trade in HFCs involves abuse of quotas, noncompliance with labelling requirements, and smuggling

- apply all types of controls, including those based on risk profiling involving risk indicators relevant for ODS/HFCs, but also random checks, joint controls, inland inspections, and operations against illegal activities involving ODS/HFCs
- invest in customs resources, including training and equipment such as gas identifiers
- track shipments back to the country of origin/transit, exports of auctioned chemicals to third parties, and exports for destruction until the final destination, inform relevant countries prior to the shipment, and ensure close regional cooperation and information exchange
- collect comprehensive data on illegal trade and share information on seizures with the Ozone Secretariat, WCO CEN, which helps to assess achievement of the Montreal Protocol goals and provide strategic analysis to help prevent illegal trade, and informs the Meeting of Parties

POLICY ISSUES

Increased illegal trade follows major reduction steps

- provide enforcement officers with the relevant knowledge and skills needed to be prepared for the new challenges, also in parallel with ODS phase-out schedules
- convey the political message that illegal trade in environmentally sensitive goods and chemicals should be one of the priorities to protect human life on Earth
- monitor and control trade of HFCs in view of the Kigali Amendment, apply the new HS codes to HFCs and their blends starting in 2022, which assist in collecting data on HFCs and monitoring trade in these substances and use additional national codes prior to 2022 to differentiate between different HFCs
- raise awareness about the new methods of illegal trade involving HFCs
- consider establishing HFC licensing system as soon as possible, even prior to Kigali Amendment ratification, as it would help importing countries enforce their import licensing systems and improve monitor HFC trade

The various phasing-out/phasing-down timelines for regulated substances encourage the illegal flow of substances that have previously been banned, restricted, or made prohibitively expensive into neighbouring countries where they are still available and more affordable.

- get engaged in multilateral operations, in particular regional cooperation of customs and enforcement officers, to share intelligence and best practices for efficient monitoring of trade and prevention of illegal trade

References

- European Commission (n.d.). *F-Gas Portal & HFC Licensing System: Quota Allocation, Authorisation and Reporting* | Climate Action. Available at: https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases/f-gas-portal-hfc-licensing-system-quota-allocation-authorisation-and-reporting_en. (Accessed: January 7 2023)
- European Parliament and Council (2014a). *Annex III of Regulation (EU) no 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006*. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0517&from=EN>. (Accessed 07 January 2023)
- European Parliament and Council (2014b). *Article 2 of Regulation (EU) no 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006*. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0517&from=EN>. (Accessed 07 January 2023)
- Green Customs (2018). *Green Customs Guide to Multilateral Environmental Agreements* (2018). Available at: <https://www.greencustoms.org/resources>. (Accessed: 17 November 2022).
- Koepfen, H. (2019). *Global Montreal Protocol Award for Customs and Enforcement Officers* [PowerPoint presentation]. RILO ECE Meeting of National Contact Points, Poznan (Poland), 11-12 June 2019
- Multilateral Fund for the Implementation of the Montreal Protocol (2019a). *Report - 84th meeting of the Executive Committee, Montreal (Canada), 16-20 December 2019*. Available at: <http://www.multilateralfund.org/84/default.aspx>. (Accessed 22 November 2022)
- Multilateral Fund for the Implementation of the Montreal Protocol (2019b). *Summary- 84th meeting of the Executive Committee, Montreal (Canada), 16-20 December 2019*. Available at: <http://www.multilateralfund.org/84/default.aspx>. (Accessed 22 November 2022)
- Multilateral Fund for the Implementation of the Montreal Protocol (n.d.). *Guides prepared by the Secretariat*. Available at: <http://www.multilateralfund.org/Our%20Work/countries/Guides%20prepared%20by%20the%20Secretariat/Forms/AllItems.aspx>. (Accessed 18 November 2022)
- Neuhauser, A. (2018). *Border Patrol Has a Problem with Women Current and past agents recount stories of harassment and unfair working conditions*. US New and World Reports. Available at: <https://www.usnews.com/news/the-report/articles/2018-08-03/for-women-border-patrol-is-a-hostile-place-to-work>. (Accessed 18 November 2022)
- United Nations Environment Programme (2013a). *Enforcement Strategies for Combatting the Illegal Trade in HCFCs and Methyl Bromide*. Available at: <https://wedocs.unep.org/20.500.11822/30436>. (Accessed: 7 January 2023)
- United Nations Environment Programme (2013b). *Training Manual for Customs and Enforcement Officers Third Edition: Saving the Ozone Layer: Phasing Out Ozone Depleting Substances in Developing Countries*. Available at: <https://wedocs.unep.org/20.500.11822/26931>. (Accessed: 17 November 2022).
- United Nations Environment Programme (2013c). *UNEP Guide for National Ozone Officers*. Available at: <https://wedocs.unep.org/20.500.11822/28221>. (Accessed: 07 January 2023)
- United Nations Environment Programme (2016a). *ECA Ozone Protection Award for Customs and Enforcement Officers (4th edition) - Award ceremony in Ashgabat, Turkmenistan, 25 May 2016: Report of Seizures and Informal Prior-informed Consent (iPIC) Consultation*. Available at: <https://wedocs.unep.org/20.500.11822/26555>. (Accessed: 7 January 2023)
- United Nations Environment Programme (2016b). *HS Nomenclature (HS Codes) for HCFCs and Certain Other Ozone Depleting Substances: Post-Kigali Update* | OzonAction Fact Sheet. Available at: <https://wedocs.unep.org/20.500.11822/28339> (Accessed: 17 November 2022).

United Nations Environment Programme (2016c). *The Kigali Amendment to the Montreal Protocol: HFC Phase-down*. Available at: <https://wedocs.unep.org/20.500.11822/26589> (Accessed: 18 November 2022)

United Nations Environment Programme (2017a). *HFC Baselines and Phase-down Timetable* | OzonAction Kigali Fact Sheet 5. Available at: <https://wedocs.unep.org/20.500.11822/26842>. (Accessed: 18 November 2022)

United Nations Environment Programme (2017b). *Next Steps: Legislation and Administration* | OzonAction Kigali Fact Sheet No. 7. Available at: <https://wedocs.unep.org/20.500.11822/26798>. (Accessed: 7 January 2023)

United Nations Environment Programme (2018a). *Legislative and Policy Options to Control Hydrofluorocarbons*. Available at: <https://wedocs.unep.org/20.500.11822/26450>. (Accessed: 18 November 2022)

United Nations Environment Programme (2018b). *Refrigerant Identifier Video Series: Guidance on how to identify refrigerants using a refrigerant identifier*. Available at: <https://wedocs.unep.org/20.500.11822/27134>. (Accessed: 07 January 2023)

United Nations Environment Programme (2019a). *Global Environment Outlook (GEO-6)*. Available at: <https://www.unep.org/resources/global-environment-outlook-6>. (Accessed: 07 January 2023)

United Nations Environment Programme (2019b). *Global Montreal Protocol Award for Customs and Enforcement Officers*. Available at: <https://wedocs.unep.org/20.500.11822/30375>. (Accessed: 29 December 2022)

United Nations Environment Programme (2019c). *HS Codes for HFCs: Advice for countries in Advance of the 2022 HS Code Update* | OzonAction Policy Brief. Available at: <https://wedocs.unep.org/20.500.11822/29244>. (Accessed: 17 November 2022)

United Nations Environment Programme (2019d). *Ozone Secretariat: Gender in the ozone treaties*. Available at: <https://ozone.unep.org/sites/default/files/2019-08/OEWG-41-gender-in-the-ozone-treaties.pdf>. (Accessed 18 November 2022)

United Nations Environment Programme (2019e). *United Nations Environment Assembly Resolution 4/17. Promoting gender equality and the human rights and empowerment of women and girls in environmental governance*. Available at: <https://wedocs.unep.org/bitstream/handle/20.500.11822/28481/English.pdf?sequence=3&isAllowed=y>. (Accessed 18 November 2022)

United Nations Environmental Programme (2020a). *Checklist on Auctioning of Seized Refrigerants - How to Get it Right* | OzonAction. Available at: <https://www.unep.org/ozonaction/resources/factsheet/checklist-auctioning-seized-refrigerants-how-get-it-right>. (Accessed: 07 January 2023)

United Nations Environment Programme (2020b). *Dealing with Seized ODS Option for Article 5 Countries* | OzonAction Factsheet. Available at: <https://www.unep.org/ozonaction/resources/factsheet/dealing-seized-ods-options-article-5-countries>. (Accessed: 07 January 2023)

United Nations Environmental Programme (2020c). *Handbook for the Montreal Protocol on Substances that Deplete the Ozone 14th ed.* Available at: <https://ozone.unep.org/treaties/montreal-protocol>. (Accessed 29 December 2022)

United Nations Environment Programme (2020d). *Refrigerant Cylinder Colours - What Has Changed?* | OzonAction Factsheet. Available at: <https://wedocs.unep.org/20.500.11822/32200>. (Accessed: 17 November 2022)

United Nations Environment Programme (2020e). *The New iPIC Platform: The Updated Informal Prior Informed Consent Platform Can Assist You in Montreal Protocol Implementation*. Available at: <https://wedocs.unep.org/20.500.11822/31484>. (Accessed: 22 November 2022)

United Nations Environment Programme (2020f). *WhatGas? Refrigerant Information Application*. Available at: <https://wedocs.unep.org/20.500.11822/32125>. (Accessed: 17 November 2022)

United Nations Environment Programme (2021a). *Labelling Refrigerant Cylinders: Why Set Up National Legislation on Labelling Refrigerant Cylinders?*. Available at: <https://wedocs.unep.org/20.500.11822/35350>. (Accessed: 21 November 2022)

United Nations Environment Programme (2021b). *The Informal Prior-Informed Consent (iPIC) Mechanism - 2021 Annual Report* | OzonAction. Available at: <https://wedocs.unep.org/20.500.11822/35349>. (Accessed: 22 November 2022)

United Nations Environmental Programme (n.d.-a). *About* | OzonAction. Available at: <https://ozone.unep.org/about>. (Accessed: 07 January 2023)

United Nations Environmental Programme (n.d.-b). *About the Montreal Protocol* | OzonAction. Available at: <https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol>. (Accessed: 29 December 2022)

United Nations Environmental Programme (n.d.-c). *All ratifications* | Ozone Secretariat. Available at: <https://ozone.unep.org/all-ratifications>. (Accessed: 29 December 2022)

United Nations Environmental Programme (n.d.-d). *Environmental authorities and customs join forces against environmental crime*. Available at: <https://www.unep.org/news-and-stories/story/environmental-authorities-and-customs-join-forces-against-environmental>. (Accessed: 07 January 2023)

United Nations Environment Programme, Environmental Investigation Agency and European Commission (2011). *Risk Assessment on Illegal Trade in HCFCs*. Available at: <https://wedocs.unep.org/20.500.11822/28217>. (Accessed: 7 January 2023)

World Customs Organization (2019). *Customs successfully target environmentally sensitive goods during Operation DEMETER V*. Available at: <https://www.wcoomd.org/en/media/newsroom/2019/december/customs-successfully-target-environmentally-sensitive-goods-during-operation-demeter-v.aspx>. (Accessed: 07 January 2023).

World Customs Organization (2020). *Gender Equality and Diversity in Customs Compendium*. Available at: <http://www.wcoomd.org/en/topics/capacity-building/activities-and-programmes/gender-equality.aspx>. (Accessed 22 November 2022)

World Customs Organization (2022). *Enforcement and Compliance - Illicit Trade Report 2021*. Available at: <https://www.wcoomd.org/en/topics/enforcement-and-compliance/resources/publications.aspx>. (Accessed 10 January 2023)

World Customs Organization (n.d.-a). *Customs Enforcement Network Communication Platform (CENcomm)*. Available at: <http://www.wcoomd.org/en/topics/enforcement-and-compliance/instruments-and-tools/cen-suite/cencomm.aspx>. (Accessed: 17 November 2022).

World Customs Organization (n.d.-b). *Membership*. Available at: <https://www.wcoomd.org/en/about-us/wco-members/membership.aspx>. (Accessed: 29 December 2022)

World Customs Organization (n.d.-c). *Regional Intelligence Liaison Offices (RILO)*. Available at: <https://www.wcoomd.org/en/topics/enforcement-and-compliance/activities-and-programmes/intelligence-and-risk-management-programme/rilo.aspx>. (Accessed: 07 January 2023)

Glossary of Terms

Article 5 countries (A5 countries): Developing countries falling under Article 5(1) of the Montreal Protocol. They have specific phase-out and phase-down schedules and receive financial assistance from the Multilateral Fund for the Implementation of the Montreal Protocol.

Carbon dioxide: Ozone-layer and climate friendly gas that is naturally present in the atmosphere. It is used as a refrigerant and in fire extinguishing applications and has a global warming potential (GWP) of 1.0.

Carbon dioxide equivalent tonnes (CO₂eq.t.): The amount of carbon dioxide that, when measured over a certain time frame, is equivalent to a specific amount of greenhouse gases in terms of their global warming potential.

Chemical Abstract Service (CAS) Number: Chemical identification number provided by the United States Chemical Abstracts Service. The CAS registry number is specific for single chemicals and for some mixtures. It contains from five to nine digits separated into three groups by hyphens. For example, the CAS No. for CFC-12 is 75-71-8.

Controlled substances: Chemicals in pure form or in mixes that are classified in Annexes A, B, C, E, and F of the Montreal Protocol.

Combined Nomenclature (CN): EU's eight-digit system of classification of goods for customs purposes, comprising the WCO harmonized system (HS) codes with further EU-specific subdivisions.

Essential use: Exempted use of a controlled substance that is allowed because it is necessary either for health, safety, or the functioning of society and no acceptable alternative is available.

EU F-gas legislation: EU legislation adopted to control emissions of F-gases by the EU, i.e.: Directive 2006/40/EC on mobile air conditioning (MAC) systems and Regulation (EU) No 517/2014 on fluorinated greenhouse gases and its implementing regulations.

Exempted uses: Exempted usage of restricted substances includes feedstock usage, quarantine and pre-shipment use of methyl bromide, experimental and scientific uses, crucial and essential uses, and process agent use. Some exempted uses require prior approval by the Meeting of the Parties. Parties need to report on exempted uses each year.

Feedstock: Raw material to supply or fuel a machine or industrial process and which fully be transformed during the process.

Fluorinated gases (F-gases): Fluorinated gases include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆). They are potent, manmade greenhouse gases.

Free trade zone: Area within a country where usual trade barriers are reduced. For example, tariffs and quotas may be lifted with the intention of attracting business.

Global warming potential (GWP): The ratio of global warming induced by a certain amount of substance to global warming caused by the same mass of carbon dioxide. As a result, carbon dioxide has a GWP of 1.

Harmonized Commodity Description and Coding System (HS codes): A multipurpose international nomenclature devised by the World Customs Organization for the classification of products imported and exported. It consists of around 5,000 commodity categories, each of which is recognised by a six-digit code. More than 200 countries adopted the system as the foundation for their Customs tariffs and the collection of international trade statistics.

Hydrochlorofluorocarbons (HCFCs): Substances with a lesser ozone-depleting potential than chlorofluorocarbons (CFCs) but a high global warming risk that are regulated under the Montreal Protocol. They are prohibited in developed countries and are being phased out in developing countries.

Hydrofluorocarbons (HFCs): Montreal Protocol-controlled greenhouse gas emissions, as replacements for CFCs and HCFCs, they are extensively employed because they do not deplete the ozone layer. In accordance with the Kigali Amendment to the Montreal Protocol, they are currently subject to a phase-down.

Informal Prior-Informed Consent consultation (iPIC): A method for the voluntary and informal exchange of information between trading partners regarding planned commerce in controlled substances and blends, prior to the issuance of import/export licences. Kigali Amendment: Latest amendment to the Montreal Protocol adopted in 2016 and entered into force in 2019. It adds high-global warming HFCs to the group of controlled substances and defines differentiated phase-down schedules for different groups of countries.

Licensing system: National system under which trade in controlled substances requires export and import licenses prior to the shipment. It is mandatory under the Montreal Protocol and covers pure substances and blends, as well as virgin, used, recovered, recycled, reclaimed, and contaminated substances.

Montreal Protocol on Substances that Deplete the Ozone Layer: Protocol to the Vienna Convention, signed in 1987, which commits parties to the Montreal Protocol to take concrete measures to protect the ozone layer and the climate by freezing, reducing and/or eliminating production and consumption of controlled substances.

National Ozone Unit (NOU): Government unit that is responsible for the implementation of the Montreal Protocol at national level. It serves as the operational focal point and often as the licensing entity.

Source: (UNEP 2021a, p.13; UNEP 2013c, pp.67; 128;129)

Non-Article 5 country: Parties to the Montreal Protocol that are not Article 5 countries (developed countries) and that contribute to the Multilateral Fund for the Implementation of the Montreal Protocol.

Ozone depleting potential (ODP): Value reflecting the effect of an ozone-depleting substance on the stratospheric ozone layer (per unit mass of gas) relative to CFC-11 (ODP = 1.0). The estimated ODP values of all restricted compounds are provided in the Annexes of the Montreal Protocol.

ODP-tonnes, ODP-weighted tonnes: ODP-weighted data are calculated by multiplying the amount of a regulated ozone-depleting substance in tonnes or kilogrammes by the substance's ODP value. This method can be used to convert tonnes of mass from metric to ODP tonnes. This reveals how severely the ozone layer was harmed, compared to CFC-1

Ozone-depleting substance (ODS): Leaking chemicals with an ODP greater than zero, depleting the stratospheric ozone layer. Substances now being phased out and those that have been banned (such as chlorofluorocarbons, halons, carbon tetrachloride, and methyl bromide) are all subject to control under the Montreal Protocol. (hydrochlorofluorocarbons). Different groups of countries follow differentiated phase-out schedules.

Ozone Secretariat: Secretariat administering the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer. It is monitoring the compliance of the parties, including data reporting, the establishment of an operational import/ export licencing system, and the phase-out/phase-down of the production of controlled substances' consumption. It also organised the meetings of the parties and the meetings of the implementation committee.

Party to the Montreal Protocol: A country for which the Montreal Protocol and its amendments have entered into force as a result of ratification. Parties must comply with the provisions of the Montreal Protocol and relevant amendments, including annual data reporting, the establishment of import/export licencing systems, and the phase-out and phase-down schedules for the production and consumption of controlled substances.

Phase-down: Gradual reduction of production and consumption of a controlled substance. Developed countries will phase-down their production and imports of HFCs 85% below baseline by 2036, while developing countries will phase-down HFCs 80%-85% below baseline by 2045/2047.

Phase-out: Gradual reduction of production and consumption of a controlled substance which ultimately leads to complete elimination of production and consumption.

Quota system: System of managing the import quota for controlled substances, i.e. the maximum quantity of controlled substances that may be imported each year by the country based on the limits set by the Montreal Protocol or the country's policy, if more advanced. It includes also the allocation of quota to individual importers.

Reclaimed substances: Used substances that have been recovered and cleaned to a quality comparable to virgin substances. Used, recycled, and reclaimed substances, imported or exported, must be reported but are excluded from a Party's annual consumption calculations.

Recovered substances: Used substances that were collected from machinery, equipment, and containment vessels.

Recycled substances: Recovered substances which have been cleared through filters and drying. Recycled refrigerants can be recharged into the same equipment or into equipment belonging to the same owner.

TARIC: Ten-digit code used in the EU to classify goods that must be used in customs and statistical declarations. The first 6 digits build upon the HS. The next two numbers give further subdivisions of goods, i.e., the Combined Nomenclature (CN) subheadings. The last 2 numbers – the TARIC code – are added so that all EU countries' rules and tariffs are covered.

Trans-shipment: Refers to the transfer of a shipment from one carrier, or more commonly, from one vessel to another. Trans-shipments can be used to hide the identity of the port or country of origin. It is different from a transit procedure, which allows goods to move under customs control from the customs office of departure to the customs office of final destination.

Trade name: Names given to refrigerants for commercial purposes. Trade names are indicated on the product packaging and/or transaction/manifest papers. Refrigerants are often sold by companies under commercial trade names rather than the chemical names of the HCFCs or HFCs.

UN number: A four-digit code used to classify several types of hazardous products and substances in shipping, such as explosives, flammable liquids, toxic substances, etc.

Source: (UNEP 2021a, pp.13; 43; UNEP 2013c, p.131)

Annex 1

TEST YOURSELF on the different sections! Please mark only one reply

CHAPTER 1: TEST YOURSELF!

INSTRUCTION: Please select one answer only

1. What does the Montreal Protocol control and monitor?	A. Transboundary movement of chemicals in general	B. Trade in substances that pollute the environment	C. Trade in substances that deplete the ozone layer and high-global warming hydrofluorocarbons (HFCs)
2. What substances destroy the ozone layer?	A. Persistent Organic Pollutants (POPs)	B. zone-depleting substances (ODS)	C. Fluorinated greenhouse gases (F-gases)
3. For which of the international agreements the Ozone Secretariat is responsible?	A. The Montreal Protocol on Substances that Deplete the Ozone Layer	B. The Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer	C. The Vienna Convention for the Protection of the Ozone Layer
4. What is the main task of UNEP OzonAction?	A. Assisting developing countries to comply with the provisions of the Montreal Protocol	B. Providing training to enforcement officers about the Montreal Protocol	C. Raising awareness of enforcement officers about the Montreal Protocol
5. Which organization primarily supports customs administrations in enforcement of the Multilateral Environmental Agreements (MEAs) such as the Montreal Protocol?	A. World Trade Organization (WTO)	B. World Customs Organization (WCO)	C. World Health Organization (WHO)

CHAPTER 2:

SECTION 2.1: TEST YOURSELF!

INSTRUCTION: Please select one answer only

1. How does the Montreal Protocol regulate trade in controlled substances?	A. By introducing import quotas on controlled substances	B. By setting schedules for gradual reduction and/or elimination of controlled substances	C. By setting import bans on controlled substances
2. What substances have already been phased out by the Montreal Protocol?	A. Chlorofluorocarbons (CFCs), methyl bromide, halons	B. Hydrochlorofluorocarbons (HCFCs), chlorofluorocarbons (CFCs)	C. Hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs)
3. Based on the results of the Global Award, what was the main method of illegal trade in ODS?	A. Diverting from transshipment points	B. Mis-declaration / mislabelling of ODS	C. Lack of declaration to customs
4. Based on the results of the Global Award, which ODS was most often mislabelled?	A. HCFC-22	B. CFC-12	C. HCFC-141b
5. Based on the results of the Global Award, in most of the cases, how the illegal ODS were traded?	A. In ISO tanks	B. In barrels	C. In small containers (disposable cylinders and cans)

SECTION 2.2: TEST YOURSELF!

1. What does HFC stand for?	A. Hydrofluorocarbon	B. Hydrochlorofluorocarbon	C. Hydrofluoroolefin
2. What substances have become controlled substances under the Kigali Amendment?	A. HFCs	B. HCFCs	C. HFOs
3. When are developing countries group 1 and 2 expected to achieve the final HFC reduction steps of 80% and 85% below baseline respectively?	A. by 2045 / 2047	B. by 2036 / 2038	C. by 2028 / 2030
4. What HFC reduction step triggered illegal trade in the EU in 2018 as evidenced by the number of HFC seizures?	A. From 0% to 7% below baseline	B. From 7% to 37% below baseline	C. From 37% to 65% below baseline

SECTION 2.2.1: TEST YOURSELF!

1. Which instrument is mandatory under the Montreal Protocol?	A. Import quotas for controlled substances	B. Import bans for ODS / HFC based products and equipment	C. Import / export licensing systems for ODS / HFCs
2. How HFC quotas are expressed?	A. In CO2 equivalent tonnes	B. In kilograms (kg)	C. HFOs
3. Based on the results of the Global Award, what helped to identify the infringement of the HFC quota?	A. Providing customs officers with gas analysers	B. Cooperation with the competent authority	C. Giving selected customs officers access to the register of eligible importers and their quotas





SECTION 2.2.2: TEST YOURSELF!

1. In the context of enforcement, what is the main advantage of labelling requirements for ODS/HFCs and products and equipment containing or relying on ODS/HFCs?	A. Product information for consumers and end-users including safety warnings	B. Identification of bulk substances, equipment and products by enforcement officers	C. Identification of the producer and country of origin
2. What is NOT required by the EU F-gas legislation related to labelling?	A. Labelling should include the quantity in kg and in CO2 equivalent tonnes, and the GWP of the F-gases	B. Labelling should include name of the manufacture	C. Labelling should be durable
3. Based on the results of the Global Award, what information required by the EU F-gas legislation was often missing in the labelling of HFC cylinders?	A. Indication that cylinders contained F-gases, trade name, quantity in kg and in CO2 equivalent tonnes, and GWP of the F-gases	B. Information about hazards and safety warnings	C. Name of the producer and the country of origin

SECTION 2.2.3: TEST YOURSELF!

<p>1. Based on the results of the Global Award, what stimulates illegal trade?</p>	<p>A. Significant reduction steps of controlled substances, differentiated phase-out / phase-down schedules, high price differences between countries and low risk of being caught combined with low fines / penalties</p>	<p>B. Significant reduction steps of controlled substances</p>	<p>C. Differentiated phase-out / phase-down schedules</p>
<p>2. Based on the results of the Global Award, what percentage of the illegal ODS were traded in disposable (non-refillable cylinders)?</p>	<p>A. 10%</p>	<p>B. 30%</p>	<p>C. 60%</p>
<p>3. At which point in time and by whom customs authorities should be made aware of upcoming HFC reduction steps?</p>	<p>A. Once there is evidence of increased level of illegal trade to be informed by the competent authority</p>	<p>B. At least a year prior to the next HFC reduction step to be informed by the competent authority to initiate early action by customs</p>	<p>C. Once there are indications of increased level of illegal trade to be informed by industry and NGOs</p>

SECTION 2.3: TEST YOURSELF!

<p>1. What is the risk associated with the use of non-refillable (disposable) cylinders?</p>	<p>A. Risk of uncontrolled emissions of ODS / HFCs from used cylinders and illegal trade</p>	<p>B. Waste management of used cylinders adding to the waste stream</p>	<p>C. Risk of bursting due to high temperatures</p>
<p>2. What is the typical filling weight of a non-refillable cylinder?</p>	<p>A. 13.6 kg</p>	<p>B. 12 kg</p>	<p>C. 15.2 kg</p>
<p>3. Based on the results of the Global Award, which EU-wide ban on products or equipment containing or relying on HFCs was most often infringed?</p>	<p>A. Ban on fire protection equipment that contains PFCs or HFC-23</p>	<p>B. Ban on non-refillable (disposable) cylinders</p>	<p>C. Ban on mobile air-conditioning equipment that contain HFCs with GWP of 150 or more</p>
<p>4. Which is a refillable (non-disposable) cylinder?</p>	<p>A. </p>	<p>B. </p>	<p>C. </p>
<p>4. What indicates that the packaging may contain a non-refillable cylinder?</p>	<p>A. Valve that does not allow for re-filling</p>	<p>B. Colour of the cylinder</p>	<p>C. Cardboard packaging</p>
<p></p>			

CHAPTER 3: TEST YOURSELF!

INSTRUCTION: Please select one answer only

1. What is a mandatory measure for parties to the Montreal Protocol?	A. Import bans for controlled substances	B. Import quotas for controlled substances	C. Import/export licensing systems for ODS and HFCs
2. What does iPIC stand for?	A. Voluntary and informal Prior Informed Consent for substances controlled under the Montreal Protocol	B. Mandatory Prior Informed Consent for chemicals controlled under the Rotterdam Convention	C. Internet Platform for Identification of Chemicals
3. What can iPIC be used for?	A. To report production and consumption of controlled substances to the Ozone Secretariat	B. To confirm the legitimacy of intended trade in controlled substances between the trade partners prior to issuing the mandatory export / import licenses	C. To share data about illegal trade with the WCO

CHAPTER 4:**SECTION 4.1: TEST YOURSELF!**

INSTRUCTION: Please select one answer only

1. What does the phase-out and phase down of controlled substances involve?	A. Phase-out or phase down of production and consumption of controlled substances by the freeze date	B. Gradual reduction of production and consumption of controlled substances starting with the freeze at the baseline level until complete phase-out of ODS or until the agreed phase-down level for HFCs	C. Ban on the use of ODS / HFCs in equipment
2. What is the primary aim of import bans on certain equipment containing or relying on ODS/ HFCs?	A. To reduce the demand for ODS/HFCs for servicing the equipment	B. To prevent illegal trade of such equipment	C. To comply with the requirements of the Montreal Protocol
3. What is the meaning of an import ban for certain controlled substances or equipment containing / relying on them?	A. Complete prohibition of the use of these substances / equipment	B. Complete prohibition of imports of these substances / equipment	C. Complete prohibition of imports of these substances / equipment starting with the phase-out date for these substances

SECTION 4.2: TEST YOURSELF!

INSTRUCTION: Please select one answer only

1. What does an iPIC consultation involve?	A. Request for mutual administrative assistance	B. Formal request for information that has to be answered within the time limit specified by the code of administrative proceedings	C. Informal communication between the licensing authorities of two trade partners prior to issuing the import / export licenses
2. What an iPIC consultation may clarify prior to the shipment of controlled substances?	A. Attempted trade of substances banned in the destination country, by a non-authorized importer, or without import licence / quotas	B. Customs tariff classification of controlled substances in the destination country	C. Identification of controlled substances to be shipped

3. What can a booking confirmation for a vessel be used for?

BOOKING CONFIRMATION

DATE: 23.05.2019 INTENDED VESSEL/VOYAGE: ER 8 / 14
 BOOKING NO: 260764 PLACE OF LOADING: GDANSK / CY
 JOB ORDER: PORT OF LOADING: DCT GDANSK
 BOOKING PARTY: YES CARGO CUT OFF AT PORT OF LOADING:
 T/S PORT: 27.05.2019 CUT OFF - DOCUMENT: 25.05.2019 10:00
 T/S PORT ETS: 27.05.2019 DATE OF LOADING: 27.05.2019
 OCEAN VESSEL
 PORT OF DISCHARGE: KLAPEDA / CY
 ETA POD: 28.05.2019
 PLACE OF DELIVERY: KLAPEDA

No	Type	Weight	Commodity	Container no	Pick up from
1	WGP	25 900 KG	REFRIGERANT	CSNH...AM	DCT GDANSK

A. For statistical purposes

B. To monitor compliance of shipments when re-export of ODS/HFCs was ordered in order to communicate with the country of destination

C. To monitor compliance of shipments when re-export of ODS/HFCs was ordered

SECTION 4.3: TEST YOURSELF!

1. Which is the HS code for HCFC-22 (will change with the 2022 revision of tariff codes)?

A. HS 2903.71

B. HS 2903.39

C. HS 2903.14

2. Which is the HS code for HFC-134a (will change with the 2022 revision of tariff codes)?

A. HS 2903.39

B. HS 3824.78

C. HS 3824.19

3. Which refrigerant is not HFC?

A.



B.



C.



4. When using a gas identifier what safety measures are not necessary?

A. Goggles and gloves

B. Ventilated room

C. Face mask



5. What should be checked in case of the below bill of lading for an HFC import?

A. Import licence and quota

B. Certificate of origin

C. Invoice

Particulars furnished by the Merchant	
Quantity and Kind of Packages	Description of Goods
2800 KGS	"SHIPPER'S LOAD COUNT & SEAL" R134A IN 2800KGS NET ISOTANK UN NO. 3159 CLASS NO. 2.2 PI NO. TT19280-10

SECTION 4.4: TEST YOURSELF!

INSTRUCTION: Please select one answer only

1. Which is the environmentally and economically preferable disposal method for seized ODS / HFCs?	A. Long term storage at the customs warehouse	B. Auctioning to a licensed importer and deducting the quantity from the importer's allowance, if import of ODS / HFCs is not banned and local authorities agree to the import	C. Destruction of the seized ODS / HFCs through an authorized facility in the country or abroad
2. What disposal method for seized ODS / HFCs might trigger subsequent illegal trade?	A. Sending back the seized ODS / HFC to the country of origin and tracking the shipment to the border to ensure that the illegal goods leave the country's territory	B. Long term storage at the customs warehouse	C. Auctioning to a licensed importer and deducting the quantity from the importer's allowance, if import of ODS / HFCs is not banned and local authorities agree to the import
3. Based on the results of the Global Award, what was the most frequent disposal method for illegal ODS/HFCs, products and equipment?	A. Auctioning to a licensed importer in the country or abroad	B. Long term storage at the customs warehouse	C. Sending the shipment back to the country of origin without monitoring the shipment to the final destination and without informing local authorities in the country of origin

SECTION 4.5: TEST YOURSELF!

1. Based on Decision XIV/7 of the Meeting of the Parties, where should data on illegal trade in controlled substances and products / equipment containing or relying on them be reported to?	A. Ozone Secretariat	B. WCO's Customs Enforcement Network (CEN)	C. WCO's Environet
2. What is the ENVIRONET?	A. A smartphone application containing information about environmentally sensitive goods	B. A secure platform for information exchange on illegal trade in environmentally sensitive goods coordinated by the WCO	C. A roster of environmental experts specialized on Multilateral Environmental Agreements
3. Where could customs share information on illegal ODS / HFC trade?	A. WCO's Customs Enforcement Network (CEN) and Environet	B. Ozone Secretariat and WCO's Customs Enforcement Network (CEN)	C. Ozone Secretariat and WCO's Environet

ANSWERS TO 'TEST YOURSELF' SECTION

	1	2	3	4	5
SECTION	ANSWERS				
1	C	B	B	A	B
2.1	B	A	B	A	C
2.2	A	A	A	B	-
2.2.1	C	A	C	-	-
2.2.2	B	B	A	-	-
2.2.3	A	A	B	B	A
2.3	A	C	B	-	-
3	C	A	B	-	-
4.1	A	B	B	-	-
4.2	C	A	B	-	-
4.3	A	B	B	C	A
4.4	B	A	C	-	-
4.5	A	B	a	-	-



This publication describes lessons learned from the Global Montreal Protocol Award for customs and enforcement officers which was launched in 2018 by UNEP OzonAction, the Ozone Secretariat and the World Customs Organization. The national cases presented provide good lessons in preventing the illegal trade of controlled substances in the context of phase-down and phase-out goals of the Montreal Protocol and the Kigali Amendment - key to the protection of human health and the planet.



United Nations Avenue, Gigiri
P.O. Box 30552,
00100 Nairobi, Kenya
Tel. +254 20 762 1234
unep-publications@un.org www.unep.org