

OzoNews

A fortnightly electronic news update on ozone and climate protection and the implementation of the Montreal Protocol brought to you by OzonAction

Volume XXIV | 30 March 2024

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GLOBAL

1. Kigali Amendment latest ratifications
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Congratulations to the latest countries which have ratified the Kigali Amendment:

[Djibouti, 8 Mar 2024](#)

[Guatemala, 11 January 2024](#)

At the Twenty-Eighth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, held in Kigali from 10 to 15 October 2016, the Parties adopted, in accordance with the procedure laid down in paragraph 4 of article 9 of the 1985 Vienna Convention for the Protection of the Ozone Layer, a further amendment to the Montreal Protocol as set out in Annex I to the report of the Twenty-Eighth Meeting of the Parties (Decision XXVIII/1).



Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Status of Ratification 15 October 2016 to [date](#).

[United Nations Treaty Collection](#)

Image: UN Treaty Collection website

2. Executive Committee Primer – 2024 - An introduction to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol



INTRODUCTION

This Primer is intended to provide new members of the Executive Committee with a guide to the workings of the Multilateral Fund and its Committee. It is updated after the last meeting of each calendar year in preparation for new members who will join the following year. The Primer contains the following:

Section 1 provides basic background information on the Multilateral Fund, its aims, and key concepts that underpin its activities. It outlines the key elements of the Multilateral Fund with brief descriptions of their different roles, and includes an explanation of the interactions among them and their role in terms of the provision of advice to the Executive Committee.

Section 2 describes how the Multilateral Fund operates from financial planning, project review and approval, to project monitoring and evaluation of completed projects. It also explains the operational policy on gender mainstreaming.

Section 3 describes the functions of the Executive Committee and conduct of its meetings. It furthermore guides the new Committee members through the meeting process with an agenda item-by-agenda item explanation. A brief background on each agenda item is provided and the matters and type of actions that the Committee may wish to take are discussed.

Appendix 1 provides the Terms of reference of the Executive Committee.

Appendix 2 provides the Rules of procedure for meetings of the Executive Committee.
Appendix 3 includes the details of logistic arrangements for Executive Committee meetings.
Appendix 4 lists reference information.

It should be noted that comprehensive information on the policies and procedures of the Executive Committee is found in Policies, Procedures, Criteria and Guidelines of the Multilateral Fund, a document that is updated after each Executive Committee meeting. Two supplements containing relevant decisions and agreements relating to multi-year phase-out plans and projects are also available: HCFC phase-out management plans and HCFC production phase-out management plans (HPMPs and HPPMPs) relating to HCFC phase-out; and Phase-out plans and projects relating to other ozone-depleting substances (ODS) phase-out. 1*

The Directory of the Multilateral Fund, which includes contact details of Executive Committee members, the Secretariat, bilateral and implementing agencies and the Treasurer, is available from the Secretariat.

Notes to the 2024 edition of the Primer

The Kigali Amendment that was adopted in October 2016, and that entered into force in January 2019, added HFCs, greenhouse gases that do not damage the ozone layer, to the list of substances controlled by the Montreal Protocol. This Primer currently uses the term “controlled substances” to refer to all substances controlled under the Montreal Protocol, while the term “ODS” is used to refer to controlled substances that deplete the ozone layer.

*1 Policy documents are available at <http://multilateralfund.org/Our%20Work/policy/default.aspx>

[The Multilateral Fund for the Implementation of the Montreal Protocol, 22 March 2024](#)

Image: UNMLF

3. OzonAction: Celebrating International Women's Day, 8 March 2024

Today [8 March], on the occasion of **International Women's Day (IWD)**, UNEP OzonAction would like to express our best wishes and sincere thanks to all our female colleagues working in National Ozone Units for your leadership, outstanding dedication, great intellectual input, and tireless work on the Montreal Protocol! This treaty is often referred to as the most successful multilateral environmental agreement to date, and both women and men take equal credit in making this amazing achievement possible. OzonAction is extremely proud of all the female **Ozone Officers, Assistant Ozone Officers, technical experts, and support staff**, as well the women in national stakeholder groups and partner organizations, notably those in the **refrigeration, air conditioning, and customs**. Through your work, you are providing girls and young women who are interested in pursuing careers

in environmental protection with a role model by showing them that there are successful women in Montreal Protocol fields – you are indirectly investing in their future. [...]



- [Miruza Mohamed: A Woman Behind the Maldives' Environmental Transformation](#)
- [Samira de Gobert: Leading Change in Environmental Communication and Women's Empowerment](#)
- [Colleen Keyworth - From Family Roots to Industry Beacon: Leading Advocate for Women in HVACR](#)
- [Laura López: Impulsando la implementación del Protocolo de Montreal y la equidad de género en Guatemala](#)
- [Marta Pizano: A trailblazer's path from research to global policy](#)
- [Liazzat Rabbiosi: A Woman Facilitating International Environmental Policy-making](#)
- [Cecilia Mercado: Breaking Barriers-A legacy of environmental leadership and empowerment](#)
- [Sarah Nakanyika: A Woman Leading Cooling Advancement in Zambia](#)
- [Yvette Gauthe Boko: Une femme forte à la tête du Bureau national de l'ozone au Bénin](#)

International Women's Day 2024 - OzonAction [website](#)

See also >>> [International Women's Day 2024, UNEP, Ozone Secretariat](#)

4. Call for proposals for innovation projects in the Cooling sector

The Climate and Clean Air Coalition (CCAC) has launched a call for proposals seeking solutions to pressing challenges for short-lived climate pollutant mitigation in the cooling sector. This call aims to bridge critical information, implementation, and finance gaps in the sector to create enabling environments for SLCP mitigation. Solutions supported by this call are expected to help sector stakeholders and governments implement and scale up mitigation action in line with the CCAC's [2030 objectives](#).

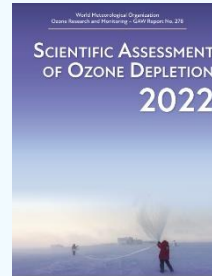
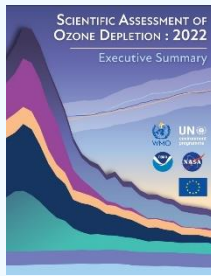
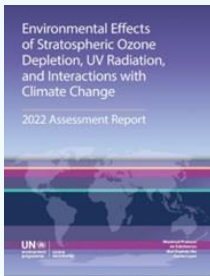
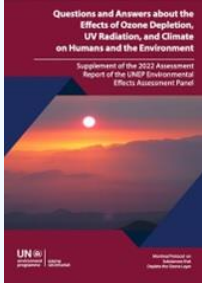


The call is open for 8 weeks, closing on 30, April 2024

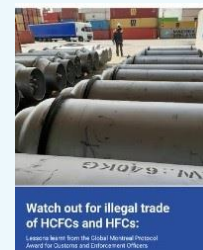
- Focus areas in the HFCs/Cooling and more information can be found [here](#)
- Focus areas of other SLCP-emitting sectors can be found [here](#)

[The Climate and Clean Air Coalition \(CCAC\), 4 March 2024](#)

Image: CCAC



Watch out for Illegal Trade of HCFCs and HFCs: Lessons learnt from the Global Montreal Protocol Award for Customs and Enforcement Officers. 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. 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).



UNEP OzonAction, ASHRAE, April 2023 Fact sheet: [Update on New Refrigerants Designations and Safety Classifications](#). The purpose of this fact sheet is to provide an update on ASHRAE standards for refrigerants and to introduce the new refrigerants that have been awarded an «R» number over the last few years and introduced into the international market.



Sustainable cold chains: Virtual Exhibition - The virtual exhibition for sustainable cold chains aims to highlight the critical role of cold chains in ensuring food safety and security, access to vaccines, reducing global warming and preventing ozone layer depletion.

The exhibition showcases commercially available cold chain technologies for food and vaccines, mainly targeting applications and equipment with refrigeration and cooling cycles that use ozone and climate-friendly refrigerants and have enhanced energy efficiency characteristics. It also aims to promote game-changing and systemic approaches, relevant initiatives, and not-in-kind solutions to cold chains

These technologies and approaches directly contribute to meeting national obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer including its Kigali Amendment and the Paris Agreement on Climate Change. Sustainable cold chain contributes to the achievement of many [Sustainable Development Goals](#).

The exhibition is ongoing and continuously updated with submissions accepted on a rolling basis. The partners of the exhibition will continue promoting the exhibition at all relevant events throughout 2022 and beyond.

Click [here](#) for more information / submit a nomination >>>

Image: Sustainable cold chains website



Categories



1 exhibits
On site post-harvesting
and/or precooling
applications



6 exhibits
Storage of product, e.g.
large warehouses /
Distribution centers



0 exhibits
Storage on board ships,
aircraft, and containers



4 exhibits
Food processing plants



1 exhibits
Transport (large and
smaller trucks, smaller
containers)



8 exhibits
Supermarkets (wholesale
markets & Retailers)



1 exhibits
Food services
(Restaurants, cafes,
tourism facilities, etc)



2 exhibits
Vaccines and other
pharmaceutical
products



0 exhibits
Game-changing and
systemic approaches

Vanuatu's Case Study on Integrating ODS/HFC Module into the National Single Window System - The National Single Window is a centralized system that links all relevant government approving authorities and acts as a 'one-stop-shop' where importers and exporters may submit applications electronically including information and all required paperwork to support the application and approval process. [Read/Download the Factsheet](#)



Recognition of Prior Learning Scheme for Refrigeration and Air-Conditioning Servicing Technicians in Mongolia - The Recognition of Prior Learning (RPL) process can help those in the industry acquire a formal qualification that matches their knowledge and skills and thereby contributes to improving their employability, mobility, and lifelong learning. RPL can make a significant contribution to providing the relevant learning framework necessary for the present and ongoing maintenance of a quality workforce, especially in the RAC servicing sector. In Mongolia, the RPL process has been rolled out in over 30 TVET trades in the construction, mining, and other sectors, including apparel and culinary etc. Mongolia initiated the RPL scheme for RAC servicing technicians as part of their implementation of the HPMP in cooperation with various national stakeholders. [Read/ Download the Factsheet](#)



AFRICA

5. Phasing out Hydrofluorocarbons – Mauritius

Environmental protection and international agreements - Most hydrofluorocarbons (HFCs), commonly used in refrigeration, air conditioning and manufacturing, have a high global warming potential.



Recognizing the urgency of mitigating their impact, the development of the Kigali Implementation Plan (KIP) represents a crucial stride towards the gradual reduction of HFCs. This sentiment was echoed by Kavi Ramano, Minister of Environment, Solid Waste Management, and Climate Change, during the opening ceremony of a KIP workshop held in Port-Louis on March 14.

Mauritius has been committed to phasing out ozone-depleting substances since 1992, including chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), in alignment with the Montreal Protocol. The country is poised to ratify the Kigali Amendment in 2019, underscoring its dedication to international efforts aimed at curbing HFC emissions.

Through collaboration with local and international partners, significant strides have been made to deploy alternative technologies and embrace sustainable practices, especially in the refrigeration and air conditioning sector.

Minister Ramano highlighted that the 2016 Kigali Amendment to the Montreal Protocol serves as a global roadmap for reducing HFC levels. Targets include a 10% reduction by 2029, 30% by 2035, 50% by 2040, and 80% by 2045, with production and consumption set to be frozen from 2024 onward. These measures signify a concerted effort to address the adverse impacts of HFCs and pave the way towards a more sustainable future.

[Capmad, 22 March 2024](#)

Image: Wikipedia

6. Trainings in Green Cooling – Mali

More than just training: Mali's refrigeration technicians are committed to combating the climate crisis and protecting the environment.



The low level of knowledge of refrigeration and air conditioning stakeholders in Mali about fluorinated gases and natural refrigerants such as hydrocarbons, as well as the growing demand for refrigeration and air conditioning equipment, motivated the project "[Ozone and Climate friendly Cooling in West and Central Africa \(ROCA\)](#)" to organize ten training sessions on the safe handling of natural refrigerants. The training sessions took place from 24 October to 08 December 2023 at the Ecole Centrale pour l'Industrie, le Commerce et l'Administration (ECICA) in Bamako.

This growing demand is undoubtedly contributing to increased energy requirements and greater use of refrigerant gases, most of which are harmful to the environment and contribute to global warming. As a result, these training sessions are a great help in supporting the Malian government's efforts to combat the climate crisis, protect the environment and implement the strategic axes of the Kigali Amendment and Mali's Nationally Determined Contributions (NDC).

167 new specialists

Consequently, to ensure that Mali does not remain adrift and a repository of synthetic refrigerants such as hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs), the ROCA project plans to set up a pool of competent trainers in refrigeration and air conditioning. The aim is to promote the widespread use of natural refrigerants such as Propane - R290, or Isobutane - R600a.

Thus, this training approach allows to put in place experts in refrigeration and air conditioning in Mali that lay the groundwork in a sector that suffers from a lack of specialists. These training sessions enabled 167 people - a total of 25 women and 142 men - to be trained in the handling of hydrocarbon fluids, energy efficiency in refrigeration and

in the installation of refrigeration and air conditioning appliances that work with natural refrigerant gases.

Women power

Involving women in the training will contribute to the wider dissemination of natural gas refrigeration appliances, as women form part of the driving force behind development and play an important role in the transmission and application of information.

In the words of one participant: "These training courses will enable us women in refrigeration and air conditioning to compete with men in a profession they think is theirs. Well, they're wrong, because we women are more dedicated, and we are capable of fully exercising this profession of refrigeration. And we're proud of it! "

Following these training sessions, Mali now has experts who are able to install air conditioners that work with natural refrigerants, and training pools in the refrigeration and air conditioning sector.

[Green Cooling Initiative, 19 March 2024](#)

Image: Green Cooling Initiative | The trainers and some participants in front of training equipment that has been purchased by ROCA.

ASIA AND THE PACIFIC

7. Cabinet nod to phase down hydrofluorocarbon imports - Sri Lanka

The Cabinet has approved a plan to gradually reduce the hydrofluorocarbon (HFC) imports, through an annual import quota system starting this year.



This move aligns with the country's obligations under the Kigali Amendment of the Montreal Protocol.

HFCs are a group of synthetic gases primarily used for cooling and refrigeration. Many HFCs are very powerful, short-lived climate pollutants, with an average atmospheric lifetime of 15 years. Though HFCs currently represent around 2 percent of total greenhouse gases, their impact on global warming can be hundreds to thousands of times greater than that of carbon dioxide per unit of mass.

President Ranil Wickremesinghe, in his capacity as the Environment Minister, sought the approval of the Cabinet of Ministers to meet the legal obligation related to the Kigali Amendment of the Montreal Alliance, by limiting the importation and consumption of pure HFC and products containing HFC to Sri Lanka, on a phased basis. Sri Lanka ratified the Kigali Amendment of the Montreal Protocol on the phase down of HFC, in 2018.

Accordingly, Sri Lanka is legally bound to restrict the import, export, trade, and consumption of HFC, on a phased basis, from the beginning of this year.

Under the Montreal Protocol, the average total quantity of HFC-based refrigerants imported to Sri Lanka during the 2020 to 2022 period is to be considered as a baseline for the HFC quota given to Sri Lanka. "The importers will be allowed to import refrigerants of the HFC series beyond 2024 in proportion to the quantity of refrigerants belonging to the HFC series imported in the years 2020, 2021 and 2022 and accordingly, those HFC importers will only be entitled to a quota for HFC imports," the Environment Ministry stated in a notice.

The Government Information Department said that the import quota system would ensure no adverse effects on the HFC consuming sectors such as agriculture, fishing, health, tourism, transport, industry, housing, and construction.

[Daily Mirror, 21 March 2024](#)

Image: Wikipedia

NORTH AMERICA

8. EPA reaches settlement with Resonac America for illegal import of super climate pollutant at Port of Los Angeles



WASHINGTON – March 21, 2024, the U.S. Environmental Protection Agency announced a settlement with Resonac America Inc. to address the company's illegal import of hydrofluorocarbons (HFCs) at the Port of Los Angeles on four occasions in 2023 and 2024. Resonac America, which is a subsidiary of the Tokyo-based Resonac Corporation, will pay a penalty of \$416,003 and destroy 1,693 pounds of HFCs to resolve EPA's allegations of violations.



"EPA continues to prioritize enforcement against companies that illegally import refrigerants that damage our climate and imperil future generations," said David M. Uhlmann, Assistant Administrator for EPA's Office of Enforcement and Compliance Assurance. "This case is the largest penalty imposed to date for importing super-polluting HFCs as part of EPA's National Enforcement and Compliance Initiative on Mitigating Climate Change—and the first to require the company to destroy the HFCs."

"HFCs are a powerful climate pollutant, so it's imperative that companies importing them into our nation do so in strict accordance with environmental laws," said EPA Pacific Southwest Regional Administrator Martha Guzman. "This is the latest in a series of EPA HFC enforcement efforts nationwide, which send a clear message that the federal government is vigilantly monitoring imports of HFCs and will hold illegal actors accountable."

On three separate occasions – in October, November and December 2023 – Resonac America imported a total of 6,208 pounds of illegal HFCs into the United States at the Port of Los Angeles. These imports violated the prohibition on importing bulk regulated substances into the United States without possessing sufficient consumption or application-specific allowances at the time of import. Resonac America also failed to give EPA the required notice of planned shipments of HFCs for the 2023 shipments and a February 2024 shipment, as well as failed to timely submit reports to the EPA with information on HFCs that the company imported in the first and second quarters of 2023.

Resonac America imported HFC-23 which is a potent greenhouse gas with a 100-year global warming potential of 14,800. This enforcement action prevented approximately 6,208 pounds, or 2.816 metric tons, of illegal HFCs from being imported into the U.S. If released into the atmosphere, these HFCs are the equivalent of 41,676.8 metric tons of CO₂, or the same amount of CO₂ produced from powering 8,225 homes with electricity for a year.

HFCs are a super climate pollutant with global warming potentials hundreds to thousands of times higher than CO₂. For this reason, pursuant to the Montreal Protocol and its Kigali Amendment, production and imports of HFCs are being phased down 85% from historical levels by developed countries by 2036. EPA has made it a national enforcement and compliance priority to address the illegal import of HFCs under the current phasedown and has settled numerous cases over the last several months with companies regarding HFC imports.

The Kigali Amendment to the Montreal Protocol, adopted in 2016, is a global agreement to phase down HFCs by 2036 for the United States and other developed countries, and is expected to avoid up to 0.5°C of global warming by 2100.

In response to the Kigali Amendment, Congress passed the bipartisan American Innovation and Manufacturing Act of 2020 (AIM Act), requiring the United States to phase down HFC production and consumption by 85% by 2036. Since January 2022, EPA and CBP have denied entry to approximately 81 shipments of illegal HFCs. Under EPA's HFC phasedown regulations, importers must expend allowances to import HFCs. Illegal imports of HFCs undermine the phasedown, disadvantage companies who follow the rules, and contribute to global warming.

[The U.S. Environmental Protection Agency, ECHO, 21 March 2024](#)

Image: USEPA ECHO

9. ASHRAE Committee Chair Expects '2025 or Later' for Approval of Higher R290 Charge for Heat Pumps in U.S.

It will most likely not be until "2025 or later" before an ASHRAE standards committee approves the use of up to 4.9kg (10.9lbs) of flammable (A3)



refrigerants like propane (R290) in outdoor (indirect) heat pumps and air conditioners in the U.S., according to the committee's chair.

"This is not going to be a quick process," said Jim VerShaw, chair of ASHRAE's SSPC (Standing Standard Project Committee) 15.2 and Chief Engineer, Residential HVAC for Trane Technologies. SPCC 15.2 oversees ASHRAE's 15.2-2022 Safety Standard for Refrigeration Systems in Residential Applications. The proposed amendment to increase in the charge limit for A3 and A2 (less flammable) refrigerants falls under "Addendum E."

The Proposed Addendum E, in an advisory public review draft, completed a 45-day public review period on September 18, 2023. If approved by ASHRAE, the charge limit would also need to be endorsed by UL under its 60335-2-40 standard, and then by the U.S. Environmental Protection Agency (EPA). Existing regulation in the U.S. only permits 114g (0.3lb) of propane in fixed or non-fixed heat pump and AC units (including outdoors).

On January 21, SPCC 15.2 met in Chicago prior to the start of the AHR Expo 2024 and did a "public review" of Addendum E, said VerShaw. It was decided that studies and tests on indirect HVAC systems using these refrigerants were needed to support an increase in charge. The Committee formed a working group, which developed a "work statement" to do computational fluid dynamics and verification testing with Xudong Wang, Vice President of Research at the Air-Conditioning, Heating and Refrigeration Institute (AHRI), leading that effort.

At an online meeting of SPCC 15.2 on March 1, the work statement was approved, and Wang said he would seek funding for the research, which he expects to start this summer. The Work Group will also be studying the European market, where residential outdoor heat pumps using 4.9kg of R290 are already provided by a number of companies.

Last year, the Washington, D.C., branch of the Environmental Investigation Agency (EIA) said it strongly supported approval of the proposed Addendum E. "This proposal provides for the safe installation and use of ultra-low global warming potential refrigerants such as propane and other hydrocarbons in indirect outdoor systems," wrote Christina Starr, Senior Manager, EIA-US, in comments submitted to ASHRAE.

The EIA is behind the harmonization of U.S. safety standards and building codes with other international equivalents that already enable safe use of A3 refrigerants in similar outdoor equipment. Current international standards and codes in place globally, including IEC 60335-2-40, allow up to a 4.9kg-charge size of A3 refrigerant outdoors. "Updates to ASHRAE 15.2 and UL 60335-2-40 must be prioritized to bring the U.S. market into step with the cost-effective and ecofriendly technologies being adopted throughout Europe and other regions globally," Starr wrote.

Starr noted that the proposed 4.9kg-charge limit applies to outdoor indirect systems, such as air-to-water (monobloc) heat pumps. In these systems, "the refrigerant remains outdoors and is installed to avoid any possible nearby ventilation or other openings to the occupied space in order to ensure a flammable refrigerant does not enter the occupied space in the event of a leak."

At the ATMosphere America conference in June 2023, Starr urged HVAC&R stakeholders in the U.S. to get engaged in the process of setting national standards and codes for expanding the use of hydrocarbons in air-conditioning and heat pumps.

[hydrocarbons21, 6 March 2024, By Michael Garry](#)

Image: ASHRAE

EUROPE & CENTRAL ASIA

10. Revised Regulation for the Ozone-Depleting Substances - EU

[Regulation \(EU\) 2024/590 on substances that deplete the ozone layer](#) entered into force on 11 March 2024.



The rules governing the placing on the market and use of ozone-depleting substances (ODSs) for essential laboratory and analytical uses have now changed.

Under the new regulation, standards shipped to a location **within the European Union** no longer need to be registered in the labODS registry.

There is no change to the procedure for shipments **outside the European Union**.

The reference standards of the European Directorate for the Quality of Medicines & HealthCare (EDQM) affected by this change are:

[R0250000](#) Class 1 residual solvent solution CRS

[T1985000](#) Trichlorotrifluoroethane CRS

Important notes:

In all cases, these reference standards supplied by the EDQM must be used **exclusively** for essential laboratory and analytical uses (i.e. for analytical uses in conjunction with the texts published in the European Pharmacopoeia).

We would also like to draw your attention to the obligations of users affected by this change that are described under Article 8(4) of this regulation.

[Council of Europe, 28 March 2024](#)

Image: Council of Europe

11. Seminar on ozone-depleting substances for customs service recruits – Turkmenistan

March 26, 2024, as part of the initial training courses for customs officers, a seminar was organized at the customs office of the city of Arkadag on the topic of preventing illicit trafficking in ozone-depleting substances (ODS) and hydrochlorofluorocarbons. The seminar was conducted by the Ministry of Environmental Protection of Turkmenistan in cooperation with the United Nations Industrial Development Organization (UNIDO).



A national expert on ODS trafficking introduced the seminar participants to the legal structure of the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer. Presentations and video materials were heard on the most important areas of monitoring and control of ozone-depleting substances (ODS).

Continuing the seminar, theoretical knowledge was supported by practical exercises on identifying ODS based on customs documentation, visual inspection of containers and using ozone-depleting substance identifiers.

[The State Customs Service of Turkmenistan, 26 March 2024](#)

Image: The State Customs Service of Turkmenistan

13. AREA: Women in cooling video competition- 2nd edition!

AREA and [World Refrigeration Day](#) (WRD) have launched the second edition of the video competition on best practices for EU women in cooling.



The challenge is to provide a video showing best practices in the design and application of RACHP systems and/or handling of refrigeration, air conditioning or heat pumps.

The video must be posted privately on [AREA's Facebook page: "AREA"](#)

or sent to info@area-eur.be

by **Sunday 7th of April 2024 at midnight.**

All European languages are welcome. Good luck to our EU women in cooling!

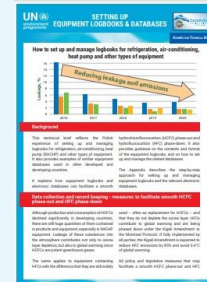
[Learn more / Apply >>>](#)

[Air conditioning and Refrigeration European Association \(AREA\), October 2023](#)

Image: AREA

How to set up and manage logbooks for refrigeration, air-conditioning, heat pump and other types of equipment - Background:

This technical brief reflects the Polish experience of setting up and managing logbooks for refrigeration, air-conditioning, heat pump (RACHP) and other types of equipment. It also provides examples of similar equipment databases used in other developed and developing countries. It explains how equipment logbooks and electronic databases can facilitate a smooth hydrochlorofluorocarbon (HCFC) phase-out and hydrofluorocarbon (HFC) phase-down. It also provides guidance on the contents and format of the equipment logbooks, and on how to set up and manage the related databases. The Appendix describes the step-by-step approach for setting up and managing equipment logbooks and the relevant electronic databases. **This factsheet is available in [English](#) and [Russian](#)**



FEATURED



Overview for the meetings of the ozone treaties - Click [here](#) for upcoming and past Montreal Protocol Meetings dates and venues.

[Avoided CO₂e](#) - The CO₂e App available from the Ozone Secretariat aims to raise awareness and enhance understanding of the contributions of the Montreal Protocol and its Kigali Amendment to climate change mitigation.



World Ozone Day 2023 theme: Montreal Protocol: fixing the ozone layer and reducing climate change - On World Ozone Day, we celebrate the achievements of the Montreal Protocol on Substances that Deplete the Ozone Layer in fixing the ozone layer and reducing climate change. The theme for the 2023 International Day for the Preservation of the Ozone Layer, to be marked on 16 September, is **Montreal Protocol: fixing the ozone layer and reducing climate change**. This reiterates the recent finding by the Scientific Assessment Panel of the positive impact the Montreal Protocol has on climate change, that ozone recovery is on track and how climate challenges can be supported through the Kigali Amendment.



The theme and other related materials available [here](#) in the six UN official languages.

New gaming technology to create environment simulation game for teenagers-The UN Environment Programme's (UNEP) Ozone Secretariat today launched a simulator game and avatar using the latest software technology. [Apollo's Edition](#) is the latest addition to the [Reset Earth education platform](#). Targeting 13-18-year-olds, the free online education material developed provides educators with resources to teach students the importance of environmental protection.



Online introductory course 'International legal framework on ozone layer protection' - Designed for government representatives and national stakeholders new to the Vienna Convention and Montreal Protocol, students of environmental law, and anyone interested in learning about the ozone treaties, the [online course](#) launched by the Ozone Secretariat aims to provide an introduction to the international legal framework on ozone layer protection. [United Nations Environment Programme \(UNEP\), Ozone Secretariat](#)



Free teaching kits on ozone layer and environmental protection

- New free online teacher toolkits and lesson plans based on the success of UNEP's Ozone Secretariat's *Reset Earth* animation and video game
- Targeting Tweens by adopting animation and gamification to create innovative online lessons to raise awareness on ozone layer and environmental protection
- Available online in digital and print format for universal access



Read/download >>> [Ozone Secretariat's education platform](#)

The UN Environment Assessment Panels

The Assessment Panels have been vital components of ozone protection since the Montreal Protocol was first established. They support parties with scientific, technological and financial information in order to reach decisions about ozone layer protection and they play a critical role in ensuring the Protocol achieves its mandate. The Assessment Panels were first agreed in 1988 to assess various direct and indirect impacts on the ozone layer. The original three panels are:

- [The Technology and Economic Assessment Panel](#)
- [The Scientific Assessment Panel](#)
- [The Environmental Effects Assessment Panel](#)

In the past there were 4 main panels. The Panels for Technology and Economic Assessments were merged in 1990 into one Panel, now called the Technology and Economic Assessment Panel.

Why are the three current panels important to ozone layer protection? Each carries out assessment in its respective field. Every four years, the key findings of all panels are consolidated in a synthesis report. [Learn more >>>](#)

[United Nations Environment Programme \(UNEP\), Ozone Secretariat](#)



The Multilateral Fund for the Implementation of the Montreal Protocol

The Fund is dedicated to reversing the deterioration of the Earth's ozone layer. It was established by a decision of the Second Meeting of the Parties to the Montreal Protocol (London, June 1990) and began its operation in 1991. The main objective of the Fund is to assist developing country parties to the Montreal Protocol whose annual level of

consumption of the ozone depleting substances (ODS) chlorofluorocarbons (CFCs) and halons is less than 0.3 kilograms per capita to comply with the control measures of the Protocol. Currently, 147 of the 197 Parties to the Montreal Protocol meet these criteria. They are referred to as Article 5 countries.

The Multilateral Fund is managed by an Executive Committee with equal membership from developed and developing countries. Since the inception of the Fund, the Executive Committee has held 93 meetings. The Fund Secretariat, located in Montreal, assists the Executive Committee in its tasks. Projects and activities supported by the Fund are implemented by four international implementing agencies and a few bilateral agencies.

On 27 October 2023, the Thirty-Fifth Meeting of the Parties to the Montreal Protocol (35thMOP) decided on the replenishment of the Multilateral Fund for the triennium 2024-2026. The Parties agreed on a budget of US \$965 million for the triennium, a record amount.

As at 8 November 2023, the contributions received by the Multilateral Fund from developed countries, or non-Article 5 countries, totalled over US\$ 4.7 billion. The Fund has also received additional voluntary contributions amounting to US \$25.5 million from a group of donor countries to finance fast-start activities for the implementation of the HFC phase-down.

To facilitate phase-out by Article 5 countries, the Executive Committee has approved 144 country programmes, 144 HCFC phase-out management plans (HPMPs), 24 Kigali HFC implementation plans (KIPs), pilot projects to maintain and/or enhance energy efficiency in the context of HFC phase-down and has funded the establishment and the operating costs of ozone offices in 145 Article 5 countries.

New and updated guides and submission forms for the preparation of project proposals:

- Guide for funding requests for preparation of national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances [>>>](#)
- Updated interim guide for the presentation of stage I of Kigali HFC implementation plans (July 2023) [>>>](#)
- Updated guide for the presentation of new stages of HCFC phase-out management plans (July 2023) [>>>](#) **All guides and submission forms are available [here](#)**

Click [here](#) for the Executive Committee upcoming and past Meetings and related documents.



[OzonAction Compliance Assistance Programme](#) produces and outreaches a wide variety of information and capacity building materials and tools that support the implementation of the Montreal Protocol programs and assist Article-5 countries in meeting the compliance targets. These include publications, technology briefs and factsheets, mobile applications, videos, e-Learning, modelling, and database programs and special educational or certification programs.

The section below features several of our most recent products.

Visit [OzonAction website](#) for more information, discover the entire range of products.

Images in this section are by OzonAction

[Considerations for establishing national HFC Quota System](#) - As HFC consumption in most countries is determined by their import, this document aims to highlight guiding principles and key aspects that countries need to consider when developing their import quota system. The underlying principles and approaches are equally applicable for production and export quota allocation. **Read/download the [full document](#)**



[Every Action Counts: Kigali Amendment - UNEP 2022](#) - This brochure targets the general public and explains in a simplified manner what the Montreal Protocol and its Kigali Amendment signify. It includes some actions that everybody can do to support the Kigali Amendment. It also covers the relationship between the Kigali Amendment and Sustainable Development Goals. It introduces some examples of successful communication campaigns on the Kigali Amendment. [English](#) / [Spanish](#)



[Gender Mainstreaming in the Montreal Protocol: Experiences in Latin America and the Caribbean](#)

-Taking into account that women and girls constitute half of the world's population and, therefore, represent half of the potential and innovation necessary to face the "triple planetary crisis" – climate change, nature and biodiversity loss, pollution and waste –, positioning people and the planet as central pillars of the transformation necessary to overcome it, and considering the guiding principles and the scopes of action of the Operational Policy on Gender Mainstreaming of the Multilateral Fund, the United Nations Environment Programme (Latin America and the Caribbean Office). [English](#) / [Spanish](#)



Refrigeration, Air-Conditioning, and Heat Pumps (RACHP) Associations & Organizations: This Knowledge Map provides a global directory of RACHP associations, societies, and organisations around the world. These are key stakeholders for ensuring safe and efficient refrigerant transitions.

Local Technical & Vocational Education and Training (TVET): This Knowledge Map provides a global directory of TVET entities and centres around the world. These are the strategic partners for conducting and promoting training and certification programmes related to the refrigeration servicing sector.

Click [HERE](#) to access the OzonAction Knowledge Maps tool

Click [HERE](#) to download the OzonAction Knowledge Maps tool flyer



Gas Card Tool: Web-based Visual Printable Cards of Refrigerant Gases

Content of Gas Cards - Each Gas Card is printable (in PDF or image format) and includes the following information about each substance/gas: a) General Characteristics (Chemical name, formula and type, ASHRAE designation, Trade names, Harmonized System (HS) codes, Chemical Abstract Service (CAS), United Nations (UN) numbers, Blend/ mixture components, Montreal Protocol Annex and Control measures, main usage, etc.) b) Gas Performance—Radar Chart (in terms of: Ozone depleting potential-ODP, Global warming potential-GWP, Toxicity Class & Flammability Class) c) Environmental and Safety Impact, and Safety Impact (with visualization of Toxicity & Flammability Class, Hazardous Symbols).

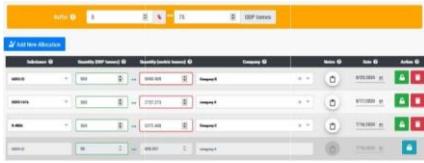


More Information - The Gas Card web-based tool is part of UNEP OzonAction's portfolio of activities and tools to assist various stakeholders in developing countries, including customs officers and technicians, to achieve and maintain compliance with the Montreal Protocol on Substances that Deplete the Ozone Layer. In the left navigation bar of the Gas Card tool web page, you will find a list of commonly used HFCs and HFC Blends in different sectors. *

Using the Gas Card web-based tool

- The Gas Card tool is available online on the [OzonAction website](#).
- Read the full [2021 annual iPIC report](#)
- See the [flyer](#) introducing the new iPIC platform

* Based on the Overall Analysis of the Results of the Survey of ODS Alternatives Report (conducted in 119 countries from 2012 to 2015)



[HCFC Quota and Licence Tracker](#) - a new desktop application to assist with HCFC licences and quotas - National Ozone Officers have the great responsibility of managing the allocation and monitoring of quotas for substances controlled under the Montreal Protocol. This process can be complex with many importers, especially if the country imports a range of

different hydrochlorofluorocarbons (HCFCs) and mixtures containing HCFCs. To address this challenge, OzonAction developed a new desktop application that helps Ozone Officers with the tasks of planning, calculating, monitoring and managing consumption quotas and licences. It can be used on a daily basis to track and manage the current year's quota allocations for different importers, or for future planning by trying different scenarios that adjust the type of substances imported, their quantity, or the number of importers. The HCFC Quota and Licence Tracker allows Ozone Officers to see the effect of such scenarios on the national HCFC consumption and helps ensure that the quotas stay within agreed HCFC Phase-out Management Plan (HPMP) targets. For countries that have ratified the Kigali Amendment, in the future OzonAction will extend the tracker to include hydrofluorocarbons (HFCs) once countries begin designing their quota systems for those controlled substances. **Access the:**

- [HCFC Quota tracker app](#)
- [Flyer for more information on the tracker](#)
- [Short video tutorial on the OzonAction YouTube Channel](#)

[GWP-ODP Calculator Application](#) - Updated- "Quickly, efficiently and accurately convert between values in metric tonnes, ODP tonnes and CO₂-equivalent tonnes"

Data are extremely important for the Montreal Protocol community, and the data reporting formats for both A7 and CP have changed recently, to a large degree triggered by the Kigali Amendment. HFCs, blends, CO₂-equivalent values, etc, now have to be addressed much more frequently by Ozone Officers during their daily work. Sometimes the terminology and values are complex and can be confusing, and it helps to have all the official facts and figures in one place.

Conversion formulas need to be applied to calculate CO₂-eq values from both GWP and metric tonne values. This free app from OzonAction is a practical tool for Ozone Officers to help demystify some of this process and put frequently needed information at their fingertips.



What's new in the app:

- An updated more user-friendly interface
- Multilingual interface: English, French and Spanish
- A new **Kigali Amendment mode** - in this mode the GWP values used to calculate the refrigerant blends/mixtures only include GWP contributions from components that are controlled HFCs
- Latest updated ODP and GWP values from the recent reports from the Montreal Protocol technology and scientific expert panels as well as the Intergovernmental Panel on Climate Change (IPCC) reports
- References added for sources of all values
- New refrigerant mixtures (with ASHRAE -approved refrigerant designations)

If you already have the application installed on your device, be sure to update to benefit from the new features. The app can be viewed in English, French or Spanish.



Smartphone Application: Just search for “GWP-ODP Calculator” or UNEP in the Google Play store or use the QR code – free to download! If you already have the application installed on your device, be sure to update to benefit from the new features.



Desktop Application: GWP-ODP Calculator is also available online on the [OzonAction website](#)



Watch the new short introductory tutorial **video** on the GWP-ODP Calculator - available now on [YouTube](#)

>>> [Read/download the flyer](#)

Updated OzonAction "WhatGas?" Mobile App

The OzonAction ‘WhatGas?’ application is an information and identification tool for refrigerants gases: ozone depleting substances (ODS), HFCs and other alternatives. It is intended to provide some stakeholders, including Montreal Protocol National Ozone Officers, customs officers, and refrigeration and air-conditioning technicians with a modern, easy-to-use tool that can be accessed via mobile devices or the OzonAction website to facilitate work in the field, when dealing with or inspecting ODS and alternatives, and as a useful reference tool.



This latest release includes the 2022 Harmonized System (HS) Codes for HFCs and blends, which facilitates the process of inspection and identification of controlled and alternative substances.

Scan the QR code to download the app (*currently available for Android devices only*). If you’ve already downloaded the app, to update visit the [Google Play Store](#)

[RAC Technician Videos](#) - Full length films! Two ‘full length’ videos for refrigeration and air-conditioning (RAC) sector servicing technicians: on 1) [Techniques, Safety and Best Practice](#) and 2) [Flammable Refrigerant Safety](#).

The OzonAction Refrigeration and Air-Conditioning Technician Video Series consists of instructional videos on techniques, security and best practice and flammable refrigerant safety. They are intended to serve as a complementary training tool RAC sector servicing technicians to help them revise and retain the skills they have acquired during hands-on training. The videos are not intended to replace structured formal technician training, but to supplement and provide some revision of tips and skills and to build on training already undertaken.



These videos are based on the successful UNEP OzonAction smartphone application, the RAC Technician Video Series app. This application has been downloaded on more than **86,000** devices since its launch.

Following many requests to make the videos more versatile and better suited to classroom and training settings, OzonAction has responded to this demand and produced two 'full-length' instructional videos.

You may wish to share this message and the flyer with:

- Your national/regional RAC associations
- Training or vocational institutes
- Master RAC trainers in your country
- Any other interested national stakeholders



You can watch these videos on the OzonAction YouTube Channel:

- [Techniques, Safety and Best Practice](#)
- [Flammable Refrigerant Safety](#)



The videos are also available for download by request from UNEP OzonAction:

unep-ozonaction@un.org



If you prefer to access the video clips via the OzonAction smartphone application, just search for "RAC Technician Video Series" or UNEP in the Google Play Store and iTunes/App Store or scan the QR code – **Free to download!**

The flyer is available from the [OzonAction website](#).

[Women in the refrigeration and air-conditioning industry: Personal experiences and achievements](#) The United Nations Environment Programme's (UNEP), OzonAction, in cooperation with UN Women, has compiled this booklet to raise awareness of the opportunities available to women and to highlight the particular experiences and examples of women working in the sector and to recognise their successes. All of the professionals presented in the booklet are pioneers. They are role models whose stories should inspire a new generation of young women to enter the weld and follow in their footsteps. **Read/download the publication**



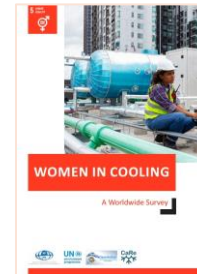
As part of IIR and UNEP OzonAction's partnership, a set of Cold Chain Technology Briefs was released over the past few years, which includes in-depth summaries about the cold chain in different key sectors. They include descriptions of technology, refrigerant options and trends and conclude with prospects and challenges. They cover the main cold chain sub-sectors, i.e., [Production & Processing](#), [Cold Storage](#), [Transport Refrigeration](#), [Commercial & Domestic](#), and [Fishing Vessels](#). **Download the Cold Chain Technology brief in [English](#) | [French](#) | [Russian](#) | [Spanish](#)**



PUBLICATIONS

[Results of a Worldwide Survey about Women in Cooling Released by IIR and UNEP OzonAction](#)

- Refrigeration, Air-Conditioning, and Heat-pumps (RACHP) are crucial for our health, nutrition, comfort, and well-being. It is one of the sectors that crosscuts many of the UN sustainable development goals and can contribute significantly to safeguard the environment, advance welfare of humanity and support the growth of employment and economics worldwide. Women are highly under-represented in this sector as indicated by the fact that only 6% of the members of national refrigeration associations/organisations/institutions are women. In order to better understand the background, motivation, challenges, and opportunities faced by women working in RACHP a worldwide survey was undertaken by the International Institute of Refrigeration (IIR) and OzonAction of UN Environment Programme (UNEP) in cooperation with several partners. [Read/Download the Full Report](#)

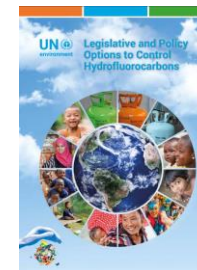


[Sustainable Food Cold Chains: Opportunities, Challenges and the Way Forward](#)

-This [UNEP-FAO] report explores how food cold chain development can become more sustainable and makes a series of important recommendations. These include governments and other cold chain stakeholders collaborating to adopt a systems approach and develop National Cooling Action Plans, backing plans with financing and targets, implementing, and enforcing ambitious minimum efficiency standards. At a time when the international community must act to meet the Sustainable Development Goals, sustainable food cold chains can make an important difference.



[Legislative and Policy Options to Control Hydrofluorocarbons](#) - In order to follow and facilitate the HFC phase-down schedules contained in the Kigali Amendment, the Parties, including both developed and developing countries, will have to implement certain measures. This booklet contains a recommended set of legislative and policy options which the developing (Article 5) countries may wish to consider for implementation. It is intended to be a guide/tool for countries. [Read/download](#)



Green Cooling in public procurement How to advance the procurement of climate-friendly and energy-efficient cooling equipment in the public sector? Air conditioning in public buildings is often responsible for around 50% of total electricity consumption. Switching to climate-friendly cooling technologies ("Green Cooling") can reduce costs and energy consumption and improve the carbon footprint of public buildings. This study takes a closer look at the benefits of Green Cooling in the public sector and discusses current barriers and possible solutions. The information presented provides a solid basis to revise current procurement criteria for sustainable cooling systems in public buildings. **Read/Download the [study](#)**



E-Book on Process Safety Management (PSM) Training for Ammonia Refrigeration - a new e-book about the critical elements of a process safety management (PSM) training program for facilities operating an ammonia refrigeration system.

The e-book, titled "**[7 Keys to a Compliant PSM Training Program for Ammonia Refrigeration](#)**," outlines important questions a facility's program should address and questions that trained plant personnel should be able to answer. Topics covered include:

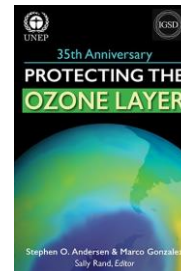


- Safety hazards and health considerations
- Emergency shutdown procedures
- Addressing deviations from system operating limits
- Risks and costs of non-compliance with regulatory standards

Request free Download [here](#)

Protecting the Ozone Layer - 35th Anniversary Edition - a new book celebrating the 35th Anniversary of the Montreal Protocol. **The electronic version (Kindle Edition) of the book has become [available for purchase \\$3.03 on Amazon](#).** The book highlights successes and documents innovation during the first 35 years and inspires new ambition to strengthen protection of stratospheric ozone and climate before Earth passes tipping points. The book tells the story of the Montreal Protocol, revealing a model of cooperation, collaboration, universal ratification, record of compliance with over 99 per cent of controlled ozone-depleting substances (ODSs) phased out, the ozone layer on the path to recovery, the 2007 Montreal Adjustment, and the 2016 Kigali Amendment moving the Montreal Protocol further into environmental protection. Unfinished business includes: HCFC phase out, ODS bank management, HFC phase down, uncontrolled ozone-depleting greenhouse gas nitrous oxide (N₂O), feedstock exemptions for plastics production, and dumping of obsolete cooling appliances.

[The book was released at 34th Meeting of the Parties to the Montreal Protocol on 31 October 2022.](#)





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