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# OzoNews

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

**Volume XX | 28 February 2020**

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# GLOBAL

## 1. Kigali Amendment latest ratifications

Congratulations to the latest country which has ratified the Kigali Amendment this month:

**Lebanon, 5 February 2020**

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](#)



## 2. Executive Committee Primer – 2020

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 Executive Committee. It is updated after the last meeting of each calendar year in preparation for new members who will join the following year.

It 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.

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It also provides information on how the Multilateral Fund operates from financial planning, project review and approval, to project monitoring and evaluation of completed projects. It furthermore guides the new Executive Committee members through the meeting process, from pre-session preparations, to an agenda item-by-agenda item explanation of in-session activities, and post-session follow-up.

A brief background on each agenda item is provided and the matters and type of actions that the Executive Committee may wish to take are discussed. [...]

[The Multilateral Fund for the Implementation of the Montreal Protocol, February 2020](#)

See also >>> A number of [guides updated as of February 2020](#)

### 3. The OzonAction new iPIC platform - The Informal Prior informed consent system (iPIC) has been completely overhauled and updated

*OzonAction is delighted to release the latest updated and streamlined version of the online Informal Prior-Informed Consent (iPIC) platform. Responding to comments and feedback we have changed how the system looks and operates.*

iPIC is a voluntary and informal mechanism of information exchange on intended trade between countries in ozone depleting substances (ODS) and **hydrofluorocarbons (HFCs)**, mixtures containing these as well as products and equipment. It enables countries to share details of eligible importers and exporters with other member countries through a secure online platform. iPIC has become a global voluntary initiative used by more than 100 like-minded states who wish to strengthen the implementation of their national licensing system for ODS and HFCs.

iPIC has helped to clarify the status of many hundreds of suspicious or uncertain shipments since its inception and has been responsible for preventing hundreds of illegal, unauthorised and 'unwanted' shipments. iPIC has also facilitated the legal trade and prevented illegal or unwanted trade in thousands of metric tonnes of ODS including HCFCs, CFCs halons, and HBFCs as well as trade in HFCs and equipment.

The iPIC platform has been re-designed and improved, responding to comments and suggestions from regular users:

**The new iPIC platform**  
The updated Informal Prior Informed Consent platform can assist you in Montreal Protocol implementation

**iPIC has had a complete makeover!**

- Now includes HFCs and HFC mixtures
- The new iPIC platform is much easier to use and navigate
- Improved interface, graphical displays and streamlined operation
- Straightforward data entry
- A new secure system of communication with trade partners
- Password-protected access with improved security for your confidence
- All countries can actively and effectively engage in the iPIC process
- An effective means to prevent illegal and unwanted trade in ODS and HFCs

Are you :  
An active iPIC user?  
A new national Ozone Officer?  
A member who does not actively use the system?  
A non-member?  
Interested to know more?

Then the new iPIC platform is for you!  
See more details overleaf...

**iPIC ONLINE**

- Now includes HFCs and HFC mixtures
- Streamlined navigation and operation with an improved interface
- Simple and straightforward data entry
- A new secure system of communication with trade partners
- Encrypted password-protected access with improved security
- Graphical display of main data (individual and global)

OzonAction encourages countries to proactively use the iPIC mechanism to assist in their efforts in Montreal Protocol implementation. Many countries include the use of iPIC as an element in their Institutional Strengthening projects. All countries have been invited by the Montreal Protocol Meeting of Parties to consider participation in iPIC as a means to improve information about their potential imports of controlled substances with the aim of reducing the difference between reports of imports and exports of ODS and helping to identify illegal trade\*.

See the [iPIC flyer](#) for more details - Visit [iPIC website](#) to familiarise yourselves with the new features and functionalities. *Automatically re-set your password if required.*

Contact: [iPIC Online Administrators](#) for any further questions.

\* Decision XXIV/12

[UNEP, OzonAction, February 2020](#)

#### 4. The ozone layer and climate protection: Customs' essential role

The ozone layer, which lies in the atmosphere high above our heads, is vital for protecting human health and the environment from dangerous ultraviolet radiation reaching the earth's surface. Without it, life on earth could not exist. Depletion of this thin layer of gas is caused by the emission of man-made ozone depleting substances (ODS) such as chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs) used primarily in refrigeration and air-conditioning as well as in the production of foams.

In October 2019, there were many optimistic media reports that the hole in the ozone layer, which forms every year over the Antarctic, was at its smallest on record. This was certainly welcome news, but does not indicate that the ozone layer has yet recovered. The small size of the ozone hole at this time was due to the somewhat



abnormally warmer temperatures in the upper atmosphere, which prevented the usual development of the ozone hole. Nevertheless, the ozone layer is repairing itself, albeit slowly, with complete recovery expected in the latter part of this century.

### **Montreal Protocol**

This environmental success story is testament to the achievements of the Montreal Protocol on Substances that Deplete the Ozone Layer, under which nations of the world have phased out 99% of ODS. One may conclude, therefore, that a global environmental catastrophe has been averted and it is now just a case of waiting. However, the reality is more disquieting. Many of the alternatives to CFCs and HCFCs, while not ozone depleting, can have very high global warming potential – some are almost 15,000 times more powerful at warming the atmosphere than carbon dioxide.

Thankfully, in January 2019, the Kigali Amendment to the Montreal Protocol entered into force. This historic amendment has now brought hydrofluorocarbons (HFCs), the main alternatives to CFCs and HCFCs, under the purview of the Protocol, committing countries to phase-down the production and consumption of these chemicals according to agreed schedules. Through this amendment, the Montreal Protocol is set to achieve a significant goal, i.e. contributing to combating climate change by avoiding up to a 0.4 °C global temperature rise by the end of the century.

By controlling the trade in these chemicals, and in doing so ensuring that the provisions of the Montreal Protocol are respected, is one of the best examples of Customs officers' contribution, among others, to environmental protection and the well-being of humanity. To ensure the continued success of the Protocol, Customs is required to facilitate legal trade and to prevent illegal trade.

The smuggling of CFCs, HCFCs and other ODS has been a significant problem since the entry into force of the Montreal Protocol, and there is currently growing evidence of the illegal production of CFCs, which should have been completely phased-out a decade ago. In addition, and arguably more importantly, Customs plays an indispensable role in the monitoring and reporting of detailed import and export data on which a country's compliance with their commitments under the Protocol is based. Customs is, therefore, at the front line of the enforcement of national regulations related to this important Protocol.

### **Next chapter**

With the Kigali Amendment and what some refer to as the 'next chapter' of the Montreal Protocol, Customs officers will again be called upon to fill an essential role in monitoring and controlling the trade in HFCs. But to do so, they need national nomenclatures that differentiate between the most common HFCs and refrigerant mixtures using the HS.

As the current HS Nomenclature, the 2017 edition, does not include specific codes for HFCs, the WCO recommended the creation of HS codes for HFCs in countries' individual national nomenclatures until the entry into force of the 2022 edition of the HS, which will include specific HS codes for the most commonly traded HFCs and mixtures.

In the above regard, without these national HS codes, it will be a great challenge for countries to enforce the import and export licensing system for HFCs that each country that is party to the Kigali Amendment should have put in place by 1 January 2019 (or two

years later if required). Likewise, it will be very difficult to calculate the consumption of these substances, given that in the context of the Montreal Protocol, 'consumption' is calculated from data on imports and exports as well as any production and destruction of HFCs.

### **Ongoing cooperation**

It is of utmost importance for Customs administrations that have not yet created HS codes for HFCs in their national nomenclature to look into this issue urgently and implement the WCO recommendation. OzonAction – a branch of the United Nations Environment Programme (UNEP) – and the WCO have published an information brief on the subject, in which detailed guidance on how to handle the matter is provided.

As a matter of fact, for many years, both organizations have been working closely together in developing and deploying innovative information material and training tools, in setting up enforcement operations, and in designing intelligence-sharing exercises, all aimed at facilitating the legal trade in ODS while preventing any illicit trade.

### **DOSSIER**

One of OzonAction's latest workshops took place in Uganda, where National Ozone Officers and Customs officials from countries of the East African region discussed the overall challenges in the region as well as best practices in ODS trade controls. The meeting also enabled these countries, in a confidential setting, to examine their import and export statistics, compare them with those of their trading partners, and explore any differences in reported data.

During the above-mentioned workshop, practical exercises were conducted on refrigerant identifiers. These identifiers are a very useful tool to assist Customs officers in identifying the ever-increasing range of refrigerants being traded. UNEP provides such identifiers to more than 100 countries through the Montreal Protocol projects it implements, and provides training and materials, including videos, on their use as well as more general guidance on options for dealing with seized consignments of refrigerants.

A demonstration of OzonAction's smartphone applications also took place. The applications include WhatGas?, a searchable database that allows to quickly find information on ODS, including trade names and related control measures.

Customs administrations interested in such a workshop or in need of further guidance may contact either the WCO Secretariat or OzonAction, as both stand ready to fully support Customs officers around the globe in ensuring the continued success of the Montreal Protocol both for the protection of the ozone layer and the prevention of any further global warming of the planet.



By Ezra Clark, OzonAction, United Nations Environment Programme

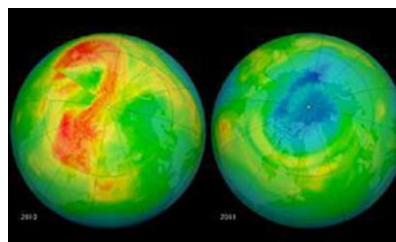
[More information >>>](#)

[The World Customs Organisation News, n°91, February 2020, page 32-34](#)

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## 5. The unexpected link between the ozone hole and Arctic warming

One of the earliest climate model predictions of how human-made climate change would affect our planet showed that the Arctic would warm about two to three times more than the global average. Forty years later, this "Arctic amplification" has been observed firsthand.



Record-breaking Arctic warming and the dramatic decline of sea ice are having severe consequences on sensitive ecosystems in the region.

But why has the Arctic warmed more than the tropics and the mid-latitudes?

We now know that this is due, in part, to tiny concentrations of very powerful greenhouse gases - ozone-depleting substances such as chlorofluorocarbons (CFCs).

### A wonder gas?

The ozone layer is the protective layer in the stratosphere, roughly 20-50 kilometres above the Earth, that absorbs harmful ultraviolet radiation from the sun. Ozone-depleting substances are potent greenhouse gases, but they are more commonly known for their devastating effect on the ozone layer.

These chemicals were invented in the 1920s. They were touted as "wonder gases" used as refrigerants, solvents and propellants, in refrigerators, air conditioners and packing materials. It wasn't until the 1980s when scientists discovered a hole in the ozone layer above Antarctica that they realized the full extent of the ozone-depleting nature of these chemicals.

In 1987, 197 countries agreed to phase out their use of ozone-depleting substances by ratifying the Montreal Protocol. The success of this historic international agreement has reduced the emissions of CFCs to nearly zero; however, the recovery of the ozone hole has been slower as CFCs remain in the atmosphere for decades.

Due to the effect of ozone-depleting substances on the ozone layer, climate scientists who study these chemicals and their climate impacts have been focused on the consequences of ozone depletion. The climate impact of ozone-depleting substances themselves has been typically considered small given the very tiny concentrations of these gases in the atmosphere, and has been largely unexplored.

### Experimenting with climate models

My colleagues and I were interested in understanding how ozone-depleting substances might have influenced late-20<sup>th</sup> century warming from 1995 to 2005. We specifically chose this time period in order to capture the rapid rise in ozone-depleting substances in the atmosphere over this time. Since the early 2000s, atmospheric concentrations have been declining.

One way that climate scientists approach problems like this one is to use computer models of the Earth to understand what the effects of different phenomena, such as volcanic eruptions, and greenhouse gases, such as methane, might have on air temperatures, ocean circulation patterns, rainfall and so on.

To explore the contribution of ozone-depleting substances to late-20<sup>th</sup> century warming, we ran a climate model over the period from 1955 to 2005. One of the simulations incorporated all of the various historical climate drivers - those that warm the climate, like carbon dioxide, methane, nitrous oxide and ozone-depleting substances, and those that cool the climate, like volcanic particulate matter. The second simulation had all the historical climate drivers, except the ozone-depleting substances.

This is one of the first times the role of ozone-depleting substances had been isolated. Typically, climate model experiments that examine the roles of different climate drivers will lump all greenhouse gases together.

Comparing the two model simulations revealed that global warming was reduced by one-third and Arctic warming by one-half when the ozone-depleting substances were not included in our simulation.

### **Arctic amplification**

Why do ozone-depleting substances have such a large impact despite their very small atmospheric concentrations? First, these chemicals are very potent greenhouse gases, a fact that we have known for a long time. Second, in the late-20<sup>th</sup> century, warming from carbon dioxide is partially cancelled out by the cooling that comes from particulate matter in the atmosphere, allowing CFCs and other ozone-depleting substances to contribute substantially to warming.

Finally, when it comes to Arctic amplification, we know that this phenomenon arises from feedbacks within the climate system that act to enhance warming, and this is exactly what we find in our model simulations. In the simulation without ozone-depleting substances, the climate feedbacks were weaker than in the simulation with them, resulting in less Arctic amplification.

Understanding why the feedbacks differ is the aim of our future research but, in the meantime, our work clearly demonstrates the significant impact of ozone-depleting substances on Arctic climate.

Thirty years ago, those who signed the Montreal Protocol were not thinking about climate change. Yet, research such as ours underscores the important role this agreement will play in mitigating future warming as the concentrations of ozone-depleting substances decline over time.

That said, without massive reductions in carbon dioxide emissions in the coming decades, the gains we will achieve through the Montreal Protocol will be quickly overwhelmed. Further action is needed to protect the Arctic - and our planet.



[Space Daily, 26 February 2020](#) - By Karen Smith | University of Toronto, Canada (The Conversation)

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## 6. Women working for the Montreal Protocol to protect the ozone

International Day of Women and Girls in Science is marked every year on 11 February. Because the work of protecting the ozone layer is embedded in science, we think it is important to debunk the myth that science is for men only and boring.

To commemorate the event, we interviewed Marta Pizano, a floricultural consultant, Co-Chair of the Methyl Bromide Technical Options Committee (MBTOC) since 2005, and Co-Chair of the Technology and Environmental Assessment Panel (TEAP) to the Montreal Protocol since 2010, who told us **“It encourages me greatly to see many more women in science overall and particularly in my own field. I want to inspire and encourage both girls and boys to pursue science as a career rather than more profitable or ‘mundane’ options.”** [Read more](#)



For our second instalment to mark International Day of Women and Girls in Science, we spoke with Professor Rachel Neale, Group Leader, Cancer Aetiology and Prevention at the QIMR Berghofer Medical Research Institute in Queensland, Australia and Member of the Environmental Effects Assessment Panel to the Montreal Protocol since 2015. During the interview, Professor Neale advises women and girls considering a career in science to seek mentors who can help and guide them, to be prepared to be flexible, but above all **“insist on being recognized for your contributions. Women tend to be very good at getting things done, but not taking the full credit.”** [Read more](#)



[United Nations Environment Programme, Ozone Secretariat, 10 February 2020](#)

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ASIA PACIFIC

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## 7. Enrollment in National Training and Support Programme for Refrigeration and Air-Conditioning (RAC) Servicing Sector technicians under the Montreal Protocol Programme of the Maldives



This is a call to enroll into the National Programme of Training and Technical Support of the Ministry of Environment for technicians working in the Refrigeration Servicing Sector.

The Government of Maldives has ratified the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer. With the Kigali amendment, new alternative refrigerants with flammable properties will be more widely entering the market in the Maldives.

The Ministry of Environment will continue to place a high priority in training technicians in good servicing practices.

The enrolled technicians will have priority access to national and international training programmes on good servicing practices. Technicians can take part in national certification scheme for handling refrigerants as well as Refrigerant Driving License; an international qualification programme recognized by the global Refrigeration and Air-Conditioning industry.

This national training and technical support programme will help the technicians to get ready for these changes in the Refrigeration and Air-conditioning Sector in the Maldives. Interested technicians are invited to submit the expression of interest [...]

**Deadline: 12:30 hrs on 7<sup>th</sup> March 2020**

For more information contact: 3018361 / 3018369 | [E-mail](#)

[Maldives Ministry of Environment Gazette, 23 February 2020](#)

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**WEST ASIA**

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## 8. Qatar Ministry of Municipality and Environment Discusses Developments of Ozone Layer Protection



The Radiation and Chemicals Protection Department at the Ministry of Municipality and Environment held a coordination meeting on Wednesday [18 February] with its ozone team, as well as companies and specialized agencies working in the refrigeration and air-conditioning sector, to discuss the most important developments related to the Vienna Convention for the Protection of the Ozone Layer.

During the meeting, the progress made in this area was reviewed and various opinions and observations regarding the implementation of the convention were heard and discussed with the competent authorities. [...]

[Qatar News Agency, 19 February 2020](#)

## NORTH AMERICA

## 9. Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes



On February 26, 2020, EPA Administrator Andrew Wheeler signed the final rule *Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes*. This action rescinds the November 18, 2016, extension of the leak repair provisions to appliances using substitute refrigerants, such as hydrofluorocarbons.

This action does not rescind the applicability of the other 40 CFR Part 82 Subpart F provisions that were extended to substitute refrigerants such as the sales restriction and technician certification requirement, safe disposal requirements, evacuation requirements, reclamation standards, and requirement to use certified recovery equipment.

Likewise, this action does not affect the requirements for appliances containing ozone-depleting refrigerants.

An advance copy of the rule is available [here](#) at which will be updated once the rule is published in the *Federal Register*.

This final rule will be effective 30 days after its publication in the Federal Register.

Click [here](#) to view the public docket in the *Federal Register*, visit and search for docket number EPA-HQ-OAR-2017-0629.

## 10. GreenChill Webinar: Small and Independent Grocers Partnering with GreenChill



**Topic:** [Small and Independent Grocers Partnering with GreenChill](#)

**Date:** Tuesday, 24 March 2020

**Time:** 2:00 pm to 3:00pm (Eastern time)

**Description:** Representatives from Cook County Whole Foods Co-Op and City Market Onion River Co-Op will present on Small and Independent Grocers Partnering with GreenChill. Cook County Whole Foods Co-op is a small format grocery store located in Grand Marais, Minnesota. Their remote location and small population can make refrigeration repairs and maintenance challenging. Jennifer Stoltz will discuss steps taken that helped reduce repairs and refrigerant leaks. City Market Onion River Co-Op is based in Burlington, VT. Brett Frazer and Kevin Danahy will discuss their experience in GreenChill as an independent grocer.

**To join the webinar:** 1. Visit the webinar access page: [Small and Independent Grocers Partnering with GreenChill](#)

2. Select "Enter as a Guest". It is important that you select the option to enter as a guest.  
3. Enter your name. | 4. Click "Enter Room". | 5. Click "OK".

**For audio:** 1. Call the toll free call-in number: 1-866-299-3188 | 2. Use Conference Code: 202 351 9573#

## 11. Delaware Department of Natural Resources and Environmental Control (DNREC) to launch refrigerant incentive program



DNREC's Division of Climate, Coastal, & Energy launch a program on Monday, March 2 to provide incentives to businesses to install refrigeration systems that are less harmful to the environment.

The "Cool Switch – Low Impact Refrigerant Program" aims to reduce the amount of hydrofluorocarbons (HFCs) released into the atmosphere. Some refrigerants contain potent greenhouse gases that have a large impact on global warming. Incentives for installing new systems or making upgrades to existing systems will be offered to participating municipalities, businesses, and industries. The incentives will be based on calculations for reducing greenhouse gas potential associated with the new refrigerant used.

Delaware is also proposing regulations that, if finalized, may phase out the use of certain HFCs. Draft regulations will be published in the state Register of Regulations.

The Cool Switch – Low Impact Refrigerant Program is funded through the Regional Greenhouse Gas Initiative (RGGI). RGGI is a market-based program among 11 states, including Delaware, that aims to reduce greenhouse gas emissions. DNREC receives

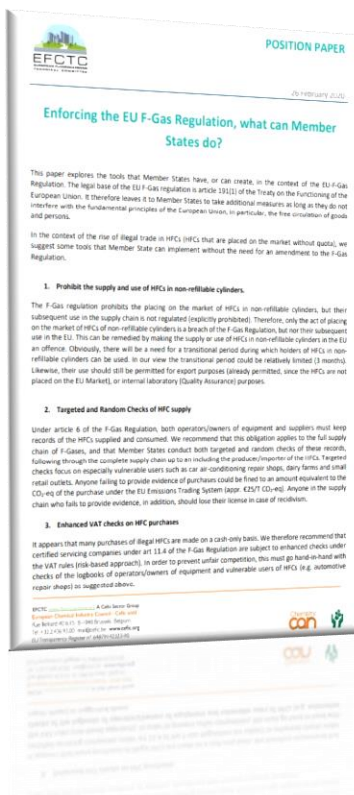
RGGI funding from the state, which sells emissions allowances through auctions. Proceeds are invested in energy efficiency, renewable energy, and other consumer benefit programs.

Cool Switch program grants are available for both new systems and existing system retrofits that utilize refrigerants with lower Global Warming Potential (GWP) impacts. Grants are available on a first-come, first-served basis and subject to funding availability.

For more information on the program, visit [de.gov/dcce](https://www.de.gov/dcce) and click on Energy Policy and Programs

[Delaware Department of Natural Resources and Environmental Control, 24 February 2020](#)

## EUROPE & CENTRAL ASIA



### 12. Enforcing the EU F-Gas Regulation, what can Member States do?

This paper explores the tools that Member States have, or can create, in the context of the EU-F-Gas Regulation. The legal base of the EU F-Gas regulation is article 191(1) of the Treaty on the Functioning of the European Union. It therefore leaves it to Member States to take additional measures as long as they do not interfere with the fundamental principles of the European Union, in particular, the free circulation of goods and persons. In the context of the rise of illegal trade in HFCs (HFCs that are placed on the market without quota), we suggest some tools that Member State can implement without the need for an amendment to the F-Gas Regulation.

1. Prohibit the supply and use of HFCs in non-refillable cylinders. The F-Gas regulation prohibits the placing on the market of HFCs in non-refillable cylinders, but their subsequent use in the supply chain is not regulated (explicitly prohibited). Therefore, only the act of placing on the market of HFCs of non-refillable cylinders is a breach of the F-Gas Regulation, but not their subsequent use in the EU. This can be remedied by making the supply or use of HFCs in non-refillable cylinders in the EU an offence. Obviously, there will be a need for a transitional period during which holders of HFCs in nonrefillable cylinders can be used. In our view the transitional period could be relatively limited (3 months).

Likewise, their use should still be permitted for export purposes (already permitted, since the HFCs are not placed on the EU Market), or internal laboratory (Quality Assurance) purposes.

2. Targeted and Random Checks of HFC supply Under article 6 of the F-Gas Regulation, both operators/owners of equipment and suppliers must keep records of the HFCs supplied and consumed. We recommend that this obligation applies to the full supply chain of F-Gases, and that Member States conduct both targeted and random checks of these records, following through the complete supply chain up to an including the producer/importer of the HFCs. Targeted checks focus on especially vulnerable users such as car air-conditioning repair shops, dairy farms and small retail outlets. Anyone failing to provide evidence of purchases could be fined to an amount equivalent to the CO<sub>2</sub>-eq of the purchase under the EU Emissions Trading System (appr. €25/T CO<sub>2</sub>-eq). Anyone in the supply chain who fails to provide evidence, in addition, should lose their license in case of recidivism.

3. Enhanced VAT checks on HFC purchases It appears that many purchases of illegal HFCs are made on a cash-only basis. We therefore recommend that certified servicing companies under art 11.4 of the F-Gas Regulation are subject to enhanced checks under the VAT rules (risk-based approach). In order to prevent unfair competition, this must go hand-in-hand with checks of the logbooks of operators/owners of equipment and vulnerable users of HFCs (e.g. automotive repair shops) as suggested above.

4. Dissuasive Penalties At present, penalties for infringement of the F-Gas Regulation are considered as a “cost of doing business”. We recommend that any intentional breach of obligations under the F-Gas Regulation is subject to a fine no less than the ETS value of the HFCs imported or used illegally (appr. € 25 T CO<sub>2</sub>-eq), and the cost of destruction in case of confiscation.

5. Enhance Customs Involvement Customs Authorities have many responsibilities and are often overwhelmed by the number of tasks they are expected to complete. From our discussions with Customs Authorities, it seems that there is little awareness of the restrictions under the F-Gas Regulation EFCTC has developed a “Decision Tree” which intends to assist front-line customs agents to determine if HFCs declared for Import are legitimate. One of the critical elements is access to the EU F-Gas portal where customs can check if the consignee is registered in the F-Gas Registry (Fgas Registry System) and the quota allocated. We strongly recommend that Member States require any importer of HFCs to include their registration ID in their customs declarations (e.g in Box 44 of the Import Declaration). It also appears that a substantial quantity of HFCs are entering the EU under transit rules (“T-1”). We recommend to request a security for the CO<sub>2</sub>-eq value of the shipment (at € 25/T CO<sub>2</sub>-eq). Moreover, Customs in cooperation with DG CLIMA could create lists for monitoring:

- Companies exceeding Quota (which claim to re-export, etc);
- Companies claiming their cargo ‘in transit’ – and track that they leave the EU
- Companies importing HFCs under the 100 TCO<sub>2</sub>eq threshold (but who may repeatedly import)

[The European FluoroCarbons Technical Committee \(EFCTC\), 26 February 2020](#)

### **13. Belarus stops importing ozone-depleting substances**

Belarus has stopped importing ozone-depleting substances, BelTA [Belarus News Agency] learned from the press service of the Ministry of Natural Resources and Environmental Protection of Belarus.



“In accordance with Belarus' obligations under the Montreal Protocol, the country stopped importing ozone-depleting substances in 2019. To ensure the maintenance and operation of equipment and technical devices running on such substances, the country has made stockpiles and also established the processes of recycling and recovery of ozone-depleting substances,” the press service noted.

The Ministry of Natural Resources and Environmental Protection is preparing to ratify the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer to phase down hydrofluorocarbon regulation (HFCs). Changes have been made to the law on the protection of the ozone layer, according to which natural resource users are required to carry out an inventory of equipment containing HFCs. Preliminary baseline data for ratification of the Kigali Amendment have been collected, and plans have been drawn up to phase out the production and consumption of HFCs in the country.

The Montreal Protocol on Substances that Deplete the Ozone Layer was adopted in 1987. It provides for specific measures to reduce the production and consumption of ozone-depleting substances, which include chlorine or bromine-containing organic substances used as refrigerants in the refrigeration and air conditioning sector, propellants in household and medical aerosol products, fire extinguishing agents in fire extinguishing systems, solvents in electronic and precision engineering, blowing agents in the production of building materials.

The Parties to the Montreal Protocol adopted the Kigali amendment to phase down production and consumption of hydrofluorocarbons (HFCs) worldwide. HFCs do not deplete the ozone layer but are powerful greenhouse gases.

Belarus was one of the first to sign the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer. The law on the protection of the ozone layer came into force in Belarus in 2001.

[BelTA News, 21 February 2020](#)

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### **14. Italy and Somalia meet on the Bosphorus: UNIDO-CSG Training on F-Gases and Alternatives to 12 Somali Technicians in Istanbul**

*Centro Studi Galileo has just delivered a highly specialized training for 12 Somali Technicians in Istanbul, Turkey, that was commissioned by UNIDO (United Nations Industrial Development Organization) and provided in cooperation with ISKAV (Isıtma Soğutma Klima Araştırma ve Eğitim Vakfı), CSG's Turkish partner.*

2020 has kicked off with a great engagement for Centro Studi Galileo, who played once again a leading role in international cooperation with one of the many "Train-the-Trainers" project. The event took place from 8 to 15 January in the ISMEK excellence training centre in Istanbul, Turkey; during the eight days, the Somali students could benefit from both

theoretical and practical lessons, provided once again by CSG Expert Trainer Mr Gianfranco Cattabriga, who supported and instructed the Technicians with a two-part scheduled programme, mainly focused on F-Gases and Real Alternatives (the EU-funded blended learning programme, already translated in 15+ languages, that offers a study on flammable refrigerants, carbon dioxide and ammonia). The course was additionally characterised by site visits, practical demonstrations and hands-on exercises, plus a series of assessments, where the Technicians could prove their increased abilities.

The lessons began after a live-stream welcome message by CSG Director Mr Marco Buoni, also President of AREA and Secretary General of ATF - the two reference points for the European and Italian RAC sector. After four intense days dedicated to learning and assessing best practices in refrigeration and air conditioning technologies working with fluorinated gases, a deep study on the use of low-GWP alternative and natural refrigerants piqued the group's interest; in particular, the last two days' training on carbon dioxide were hosted in Friterm Akademi's premises.

Going along with the latest market trends, and nonetheless EU and UN's guidelines, the Somali Technicians profited from a in-depth study on CO<sub>2</sub>'s characteristics, hazards, applications and design details, highlighting the necessary safety measures and having furthermore the opportunity to practice thoroughly in the laboratory.

At the end of this "Train-the-Trainers" experience the 12 Somali participants proudly acknowledged a growth in their personal skills and knowledge, being rewarded not only the F-Gas Certification (mandatory and legally recognized in all EU Member States) but also the Real Alternatives certificates for positively passing the assessments on flammable





refrigerants, carbon dioxide and ammonia, which are also recognised all over Europe and strongly supported by leading Institutions i.e. the EU Commission and United Nations. This will allow them to instruct and support their fellows in Somalia, as the experienced Technicians showed their willingness to collaborate with their national HVACR sector, to increase its knowledge thanks to the recently developed experience.

This rewarding training course emphasises once more the leading role of Centro Studi Galileo, while renewing the longstanding and ongoing collaboration with United Nations(\*) and the most important training centers all around the world, such as the Turkish partner ISKAV – thanks to these cooperation, CSG guarantees the best quality and tools to its students in national and international courses.

[Centro Studi Galileo, 28 January 2020](#)

### **5<sup>th</sup> Edition of Europe and Central Asia (ECA) Montreal Protocol Award for Customs and Enforcement Officers for 2019-2020**

The United Nations Environment Programme, OzonAction, in cooperation with the World Customs Organization and the Ozone Secretariat, has launched the fifth edition of the ECA Montreal Protocol Award for Customs and Enforcement Officers for the period 2019-2020. Nominations forms are available in English and Russian and the award ceremony is scheduled for 2021. The award is part of the work programme of OzonAction's Regional Montreal Protocol Network for Europe and Central Asia (ECA network).

The award recognizes the crucial role of customs & enforcement officers in implementing trade restrictions and bans for hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs). Both groups of chemicals, which are controlled under the Montreal Protocol on Substances that Deplete the Ozone Layer, are widely used as refrigerants and foam blowing agents in the refrigeration, air conditioning and foam blowing sectors.

The informal Prior Informed Consent (iPIC) system allows trade partners to confirm the legitimacy of an intended trade in controlled substances prior to issuing import / export licenses. More information on iPIC is available [here](#)

The award aims to recognize and offer encouragement to customs and enforcement officers and their respective organizations for successful prevention of illegal or unwanted trade in HCFCs / HFCs. This also includes equipment or products containing or relying on the use of HCFCs / HFCs.

Eligible nominees include customs and enforcement officers and / or their respective organizations who have been directly involved or instrumental in preventing illegal or unwanted trade in HCFCs / HFCs as well as equipment or products containing or relying on the use of HCFCs / HFCs.

Eligible enforcement actions include the detection of an illegal shipment and the subsequent seizure, detention or sending back of the disallowed goods, as well as successful iPIC consultation preventing the issuance of export / import licenses for illegal or unwanted shipments.

Enforcement actions are eligible if they have not been submitted to any other award schemes.

#### **Geographical scope and time period**

Eligible countries include those in the Europe and Central Asia (ECA) region including countries with economies in transition (CEIT countries) and Western European countries as well as their trading partners.

**Eligible enforcement actions must have taken place during the period: 1 January 2019 – 31 December 2020.**

Completed nomination forms with detailed and comprehensive case descriptions and supporting photos and documents should be received by the United Nations Environment Programme as soon as possible but **at the latest by 31 January 2021.**

[Learn more >>>](#)

## FEATURED



## OZONE SECRETARIAT

- [31<sup>st</sup> Meeting of the Parties to the Montreal Protocol](#),  
4 - 8 November 2019, Rome, Italy
- [Bureau Meeting of the 30th Meeting of the Parties to the Montreal Protocol](#),  
3 November 2019, Rome, Italy
- [63<sup>rd</sup> Meeting of the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol](#),  
2 November 2019, Rome, Italy
- [41<sup>st</sup> Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol](#), 1 - 5 July 2019,  
1 - 5 July 2019, Bangkok, Thailand
- [62<sup>nd</sup> Meeting of the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol](#),  
29 June 2019, Bangkok, Thailand

Click [here](#) for Montreal Protocol upcoming Meetings Dates and Venue



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

## 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.



## [THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL](#)

- [Documents and information note for the 84<sup>th</sup> meeting of the Executive Committee](#), Montreal, Canada, 16-20 December 2019
- [Executive Committee Primer – 2019](#) - An introduction to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

- [Report of the 83<sup>rd</sup> meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol](#), Montreal, Canada, 27-31 May 2019
- [83<sup>rd</sup> meeting of the Executive Committee](#)
- [82<sup>nd</sup> meeting of the Executive Committee](#)

[Learn more >>>](#)



## OZONACTION



### Job Opening

Posting Title: STAFF ASSISTANT, G4  
 Job Code Title: STAFF ASSISTANT  
 Department/Office: United Nations Environment Programme  
 Duty Station: PARIS  
 Posting Period: 26 February 2020 - 24 March 2020  
 Job Opening Number: 20-Administration-UNEP-131081-R-Paris (X)  
 Staffing Exercise: N/A

United Nations Core Values: Integrity, Professionalism, Respect for Diversity

[Apply Now](#)

### Special Announcement // Job Opening

Posting Title: STAFF ASSISTANT, G6  
 Department/Office: United Nations Environment Programme, OzonAction  
 Duty Station: PARIS  
 Posting Period: 26 February 2020 - 26 March 2020  
 Job Opening Number: 20-Administration-UNEP-131081-R-Paris (X)

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



### OzonAction Factsheet: Proposed additional HS code sub-headings for HFCs in advance of the 2022 HS code update - **'Cheat Sheet'**

This document is intended to accompany the OzonAction policy brief: "[HS CODES FOR HFCs - Advice for countries in advance of the 2022 HS code update](#)", available [here](#).

[Download the Factsheet](#)

Contact: [Ezra Clark](#), UNEP, OzonAction



## OzonAction Factsheet: Dealing with seized ODS - Options for Article 5 countries

This concise factsheet summarises the five main options available to countries when dealing with seized ODS or HFCs as well as outlining the various considerations and the pros and cons of these options.

[Download the Factsheet](#)

Contact: [Ezra Clark](#), UNEP, OzonAction

## UNEP OzonAction Training Programme for National Ozone Officer

A key factor contributing to the significant success of the Montreal Protocol on Substances that Deplete the Ozone Layer is the 'country-driven approach'. This approach places National Ozone Units at the centre of the action to protect the ozone layer.

The National Ozone Unit led by the National Ozone Officer (NOO), is the single most important element in national strategies to comply with the Montreal Protocol.

The knowledge and capacity of the NOO in effectively developing projects, managing strategies, reporting data, and working with national and international institutions -directly or indirectly affects each developing (Article 5) country's ability to meet its obligations under the Montreal Protocol treaty.

For this reason OzonAction has completely transformed and updated its NOO training programme to assist NOUs in successfully understanding all the roles and requirements and in carrying out their daily tasks in Montreal Protocol implementation.



The main objective of this training programme is to provide new National Ozone Unit (NOU) staff with essential information about the Montreal Protocol, a country's obligations under the Montreal Protocol, and the main activities carried out by NOUs. It aims to provide new NOU staff with fundamental knowledge and information tools that will enable them to support their national government in meeting the commitments agreed by all countries under the Montreal Protocol.



[Download the flyer >>>](#)

**Contact:** [Mikheil Tushishvili](#), Montreal Protocol Programme Officer, UNEP-OzonAction.



### [OzonAction Factsheet: Article 7 Data Reporting on HFCs - When Countries Need to Start Reporting](#)

One of the important commitments of the Protocol is that of reporting the consumption and production of substances controlled under the Montreal Protocol.

Following ratification of the Kigali Amendment, this commitment is now extended to HFCs.

This short factsheet provides some useful information on relevant Article 7 reporting dates and deadlines for HFCs.

[Download the Factsheet](#)

**Contact:** [Ezra Clark](#), UNEP, OzonAction



### [HS Codes for HFCs - Advice for countries in advance of the 2022 HS code update](#)

The Kigali Amendment requires Parties to put into place an import and export licensing system for hydrofluorocarbons (HFCs) by 1st January 2019 (or two years later if required).

To enable a licensing system to function effectively, it is important that the government is able to monitor and record imports and exports of each specific HFC individually.

Import and export statistics are normally collected by customs officers using the international product nomenclature system – the Harmonized Commodity Description and Coding System, or Harmonized System (HS).

However, until the HS is revised in 2022, all HFCs are contained in a single HS code which does not allow differentiation of the individual chemicals or of mixtures.

This document outlines a proactive interim approach, recommended by the World Customs Organization (WCO), to establish additional digits in the existing national HS codes to identify specific HFCs.

This practical document is suitable for outreach to the customs agencies, customs officers in the field, and others involved in controlling trade in HFCs.

Document prepared by the UN Environment Programme in cooperation with the World Customs Organization (WCO).

[Download the publication](#)

Contact: [Ezra Clark](#), UNEP, OzonAction



### Update on new refrigerants designations and safety classifications - factsheet

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.

The United Nations Environment Programme (UNEP), represented by the OzonAction-Law Division, and ASHRAE have a Memorandum of Understanding to establish technical cooperation and mutual coordination toward providing professional technical services to the refrigeration and air-conditioning stakeholders (governmental, private, and public). The organizations work to ensure that up-to-date related technical information and standards are properly introduced and promoted.

[Download the Factsheet](#)

Contact:

[W. Stephen Comstock](#), Manager of Business Development EMEA, ASHRAE

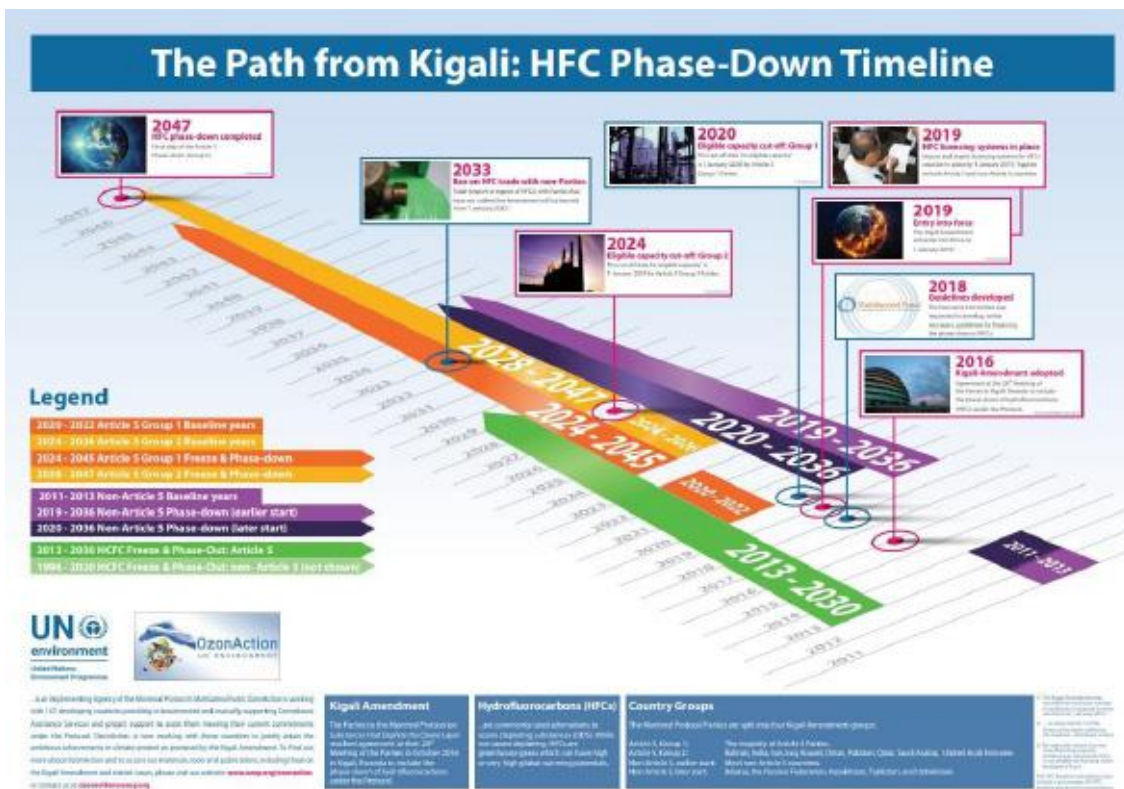
[Ayman Eltalouny](#), Coordinator International Partnerships , UN Environment OzonAction



## [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.

[Download the publication](#)



## **The Path from Kigali: HFC Phase-Down Timeline**

This timeline, produced by OzonAction, highlights key hydrofluorocarbons (HFCs) phase-down dates. Click [here](#) to download the timeline





## Good Servicing: Flammable Refrigerants Quick Guide

This is the electronic and interactive version of the UN Environment OzonAction Quick Guide on Good Servicing Practices for Flammable Refrigerants. It offers easy reference to the key safety classification and technical properties of flammable refrigerants that are available in the market.

It also provides important safety guidance for the installation and servicing of room air-conditioners designed to use flammable refrigerants.

This interactive guide allows you to scroll and browse the text, jump to specific chapters or use the comprehensive dynamic index to locate specific keywords, figures and tables. The application also includes a refrigerant charge size calculator and a room size calculator for flammable refrigerants.

Available for [free](#) on the Google play store (Apple version coming soon). Search for “UNEP Quick guide” or use the QR code



## Refrigerant Identifier Video Series

Guidance on how to identify refrigerants using a refrigerant identifier.

This new OzonAction video series consists of short instructional videos showing how to use and maintain a refrigerant identifier.

The videos provide useful guidance on safety and best practice, understanding the difference between different identifier units, testing procedures and identification of results.

It is intended for use by Montreal Protocol National Ozone Officers, Customs and Enforcement Officers as well as technicians involved in the servicing and maintenance of refrigeration and air conditioning systems. The application features 10 short instructional videos on the following topics:

- Refrigerant cylinder types
- Types of identifiers
- Getting to know your identifier
- Safety and precautions
- Testing a sample – vapour (gas)
- Testing a sample – liquid
- Results
- Faults & error messages
- Maintaining the unit
- Software updates

Available for [free](#) on the Google play store (Apple version coming soon). Search for “UNEP Refrigerant ID” or use the QR code



## GWP-ODP Calculator Smartphone Application

- Helps in understanding and reporting under the Montreal Protocol (and future commitments under the Kigali Amendment)
- The calculator will automatically perform the conversion between metric tonnes, ODP tonnes and/or CO<sub>2</sub>-equivalent tonnes (or kg) and display the corresponding converted values
- The app includes both single component substances and refrigerant blends
- The components of a mixture and their relative proportions (metric, ODP, CO<sub>2</sub>-eq) are also displayed.

Available for free from the Apple IOS store and [Google PlayStore](#). Search for “GWP ODP CALC” in the Playstore to install! Download it Now!

The application allow you to easily convert ODP, CO<sub>2</sub>-eq and metric quantities of refrigerants and other chemicals.



## OzonAction Smartphone Application WhatGas? Quickly search for the information you need

- Chemical name
- Chemical formula
- Chemical type
- ASHRAE designation
- Trade names
- HS code
- CAS number
- UN number
- Montreal Protocol Annex and Control measures
- Ozone depleting potential (ODP)
- Global warming potential (GWP)
- Blend components
- Toxicity and flammability class
- Main uses

OzonAction Smartphone Application WhatGas? Available for [free](#) in the Google Play and Apple IOS Store Scan the QR code or search for “UNEP”, “OzonAction” or “WhatGas?”



## OzonAction Multimedia Video Application: Refrigeration and Air-conditioning Technician Video Series - **Over 50,000 downloads to date** –

OzonAction has launched an exciting new application which hosts series of short instructional videos on techniques, safety and best practice for refrigeration and air-conditioning technicians.

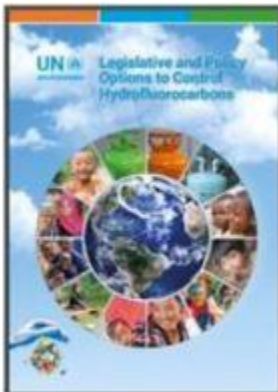
This application, consisting of short instructional videos on techniques, safety and best practice, serves as a complementary training tool for refrigeration and air-conditioning (RAC) sector servicing technicians to help them revise and retain the skills they have acquired during hands-on training.

### **New videos on flammable refrigerants just added!**

Please share with your RAC associations, technicians and other interested stakeholders...

OzonAction Multimedia Video Application: Refrigeration and Air-conditioning Technician Video Series **Available in the [Android Play Store](#) and [Apple Store/iTunes](#). (Just search for “OzonAction”, or scan this QR code)**

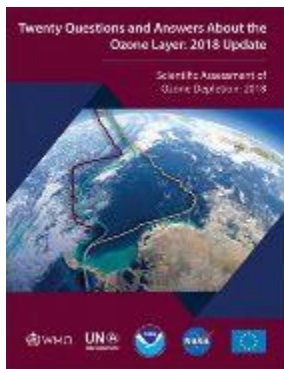
## PUBLICATIONS



### [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.



[Twenty questions and answers about the ozone layer: 2018 update](#), is a component of the Scientific Assessment of Ozone Depletion: 2018 report. The report is prepared quadrennially by the Scientific Assessment Panel (SAP) of the Montreal Protocol on Substances that Deplete the Ozone Layer.

**Lead Author:** Ross J. Salawitch

**Coauthors:** David W. Fahey, Michaela I. Hegglin, Laura A. McBride, Walter R. Tribett, Sarah J. Doherty

**Read / Download:**

[20 Questions and Answers about the ozone layer- 2018](#) | [Figures](#)



[Primer on Hydrofluorocarbons \(HFCs\)](#) - IGSD - 11 January 2018 Fast action under the Montreal Protocol can limit growth of hydrofluorocarbons (HFCs), prevent 100 to 200 billion tonnes of CO<sub>2</sub>-eq by 2050, and avoid up to 0.5°C of warming by 2100.

**Lead authors:** Durwood Zaelke, Nathan Borgford-Parnell, and Stephen O. Andersen.

**Contributing authors:** Kristin Campbell, Xiaopu Sun, Dennis Clare, Claire Phillips, Stela Herschmann, Yuzhe Peng Ling, Alex Milgroom, and Nancy J. Sherman.

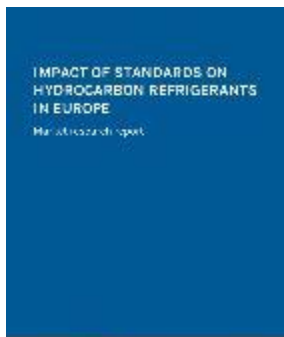


The [IIR International Dictionary of Refrigeration](#) Available in 11 languages, the complete version of the International Institute of Refrigeration (IIR) International Dictionary of Refrigeration is now freely accessible online. The IIR International Dictionary of Refrigeration offers researchers, industrialist or administrations the practical resources required to produce content related to refrigeration technologies in multiple languages.

This online tool allows you to find definitions, in English and French, of scientific and technical terms, as well as identify terms in the language of your choice and find corresponding translations in the 10 other languages.

The dictionary provides term searches in Arabic, Chinese, Dutch, English, French, German, Italian, Japanese, Norwegian, Russian and Spanish.

Access the International Dictionary of Refrigeration on the [IIR website](#)

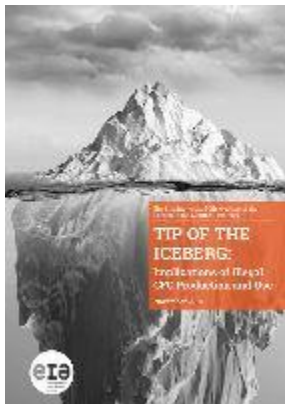


life  
**front**

### [Impact of Standards on Hydrocarbon Refrigerants in Europe – Market research report.](#)

The market research report was realised for the EU-funded [LIFE FRONT](#) project. Amongst the main result of the market research:

- Current charge limits set in standards both restrict and obstruct the development of hydrocarbon technology
- Over 50% survey respondents already work with hydrocarbons to some extent
- Most of those planning to start working with hydrocarbons in the future will do that in 2019-2020 timeframe - revision of standards could have a major impact on the scale of this shift
- Large proportion of respondents indicated they manufacture equipment using multiple refrigeration circuits - allowing higher hydrocarbon charge limits per single refrigeration circuit would have a profound impact on cost and availability of larger units.



### [Tip of the Iceberg: Implications of Illegal CFC Production and Use.](#)

The Environmental Investigation Agency (EIA) recently released report urges Parties to the Montreal Protocol to address a number of remaining unanswered questions, in particular the absence of comprehensive data regarding the size of current banks of CFC-11 in PU foam and other products or equipment.



### [Cold Hard Facts 3 - Review of the Refrigeration and Air Conditioning Industry in Australia](#)

[...] This study provides a broad view of the composition, size and value of the industry, and projections for its future. This will assist industry and policy makers with management of ozone depleting substances as they are phased out, and synthetic greenhouse gases, including hydrofluorocarbons (HFCs) which are being phased down from January 2018.



[Ozone-depleting substances 2019 Aggregated data reported by companies on the import, export, production, destruction, feedstock and process agent use of ozone-depleting substances in the European Union, 2006-2018/1994-2019](#) - The 2019 edition of the European Environment Agency (EEA) report on ODS confirms that the EU has already achieved its goals on the phase-out of such substances under the Montreal Protocol. [...]



[Benefits of Energy Efficient and Low-Global Warming Potential Refrigerant Cooling Equipment](#)  
Authors: Nihar Shah, Max Wei, Virginie Letschert, Amol Phadke.  
Energy Analysis and Environmental Impacts Division  
Lawrence Berkeley National Laboratory  
August/2019



The Economist Intelligence Unit (EIU) newly launched report [The Cooling Imperative: Forecasting the size and source of future cooling demand](#) forecasts the size and source of future cooling demand out to 2030. Commissioned by the Kigali Cooling Efficiency Program (K-CEP), this report quantifies the cooling market in unit sales and financially and maps out what the transition to more efficient, climate-friendly cooling could look like.



[Lower-GWP Alternatives in Stationary Air Conditioning: A Compilation of Case Studies](#) -The case studies in this booklet discuss several applications in the stationary air conditioning sector. The applications include chillers of natural refrigerants and hydrofluoroolefins (HFOs) as well as split-units which use hydrocarbons (HCs) as the refrigerant. The technologies presented in these case studies are only some examples of the many available options for zero and lower GWP substances. The examples take into account design criteria such as system performance, environmental impact and cost. All these refrigerants still have many challenges that should be considered in the design, for example their flammability, toxicity, lower efficiency in some

cases, and cost. Balancing these challenges using a consistent and comprehensive methodology across all refrigerants and system types is essential in assessing alternatives...

[Climate and Clean Air Coalition \(CCAC\), 2019](#)



Latest issue of Centro Studi Galileo magazine, [Industria & Formazione, n. 1 - 2020](#) (in Italian language).



[The nationally determined contributions \(NDC\) support Facility for efficient, climate-friendly cooling](#). Launched in January 2020, the NDC Support Facility for Efficient, Climate-Friendly Cooling (NDC Support Facility) provides funding and guidance to organizations to support governments that want to integrate cooling solutions into the next round of their country's Nationally Determined Contributions (NDCs), which are expected to culminate at the 2020 UNFCCC climate negotiations (COP26) in Glasgow.

K-CEP hosted an information webinar on January 28<sup>th</sup> providing an overview of the program. Check out the [webinar recording](#) and [presentation slides](#).

## MISCELLANEOUS



## I am in the Montreal Protocol Who's Who... Why Aren't You?

The United Nations Environment Programme, OzonAction, in collaboration with Marco Gonzalez and Stephen O. Andersen are updating and expanding the "Montreal Protocol Who's Who". We are pleased to invite you to submit your nomination\*, and/or nominate Ozone Layer Champion(s). **The short profile should reflect the nominee's valuable work related to the Montreal Protocol and ozone layer protection.**

Please notify and nominate worthy candidates

through the on-line form We look forward to receiving your nomination(s), and please feel free to contact our team for any further assistance concerning your nomination.

**Take this opportunity to raise the profile of women and men who made an important contribution to the Montreal Protocol success and ozone layer protection.**

- View the «Montreal Protocol Who's Who» [Introductory video](#)
- Contact : [Samira Korban-de Gobert](#), UN Environment, OzonAction

*\* If you are already nominated, no need to resubmit your profile*

## New International Journal of Refrigeration service for IIR members



Access the complete archives of the International Journal of Refrigeration (IJR) online. Designed with IIR members in mind, this new and practical electronic subscription gives members substantial advantages:

- Immediate and permanent access to the latest research and to IJR archive
- Access the latest articles as soon as they become available online.
- Browse, search and read each one of the nearly 4,500 papers since Volume 1, Issue 1.
- Unlimited access to seminal contributions to the field of refrigeration dating back to 1978.
- Keep up-to-date with subscriptions to customized e-alerts on New Volumes, Topics and saved Searches. Enhanced content and functions
- Easily export references, citations and abstracts.
- Print, download or share articles with colleagues or peers.



- See which papers, published in Elsevier or elsewhere, have cited any selected article.
- Consult the research highlights overview of articles in volumes from 2012 onwards.

To access this new service, click "[activate my e-IJR subscription now](#)" and follow the instructions.

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### International Observers - New AREA membership category



Due to the significant worldwide interest in European legislative developments and the increase in competence of personnel who handle new refrigerants, AREA is pleased to introduce its brand new "International Observer" membership category. This provides a fantastic opportunity for non-European RACHP installer bodies the world, to benefit from the expertise and discussions within Europe through access to AREA.

Contact: [info@area-eur.be](mailto:info@area-eur.be)

**green  
cooling initiative**

[GIZ Proklima Cool Training is a series of international trainings on the safe use of natural refrigerants in the refrigeration and air-conditioning \(RAC\) sector.](#) Launched in 2014, these trainings have since supported the worldwide promotion of sustainable cooling technologies by providing training on the safe handling of natural refrigerants. Main target group are international RAC technicians and trainers as well as political decision makers from developing countries and emerging economies. Depending on the training program, the courses are offered as one-week or two-week packages aiming at NOU representatives and technicians, respectively.

#### Schedule 2020

- Technician Training: May 4th to May 15th 2020
- Policy Training: June 2nd to June 5th 2020 (in English/French)
- Policy Training: June 15th to June 19th 2020 (in Spanish)

[Learn more >>>](#)

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The United Nations Environment (UNEP), Economy Division, OzonAction provides OzoNews as a free service for internal, non-commercial use by members of the Montreal Protocol community. Since its inception in January 2000, the goal of OzoNews is to provide current news relating to ozone depletion and the implementation of the Montreal Protocol, to stimulate discussion and promote cooperation in support of compliance with the Montreal Protocol. With the exception of items written by UNEP and occasional contributions solicited from other organizations, the news is sourced from on-line newspapers, journals and websites.

The views expressed in articles written by external authors are solely the viewpoints of those authors and do not represent the policy or viewpoint of UNEP. While UNEP strives to avoid inclusion of misleading or inaccurate information, it is ultimately the responsibility of the reader to evaluate the accuracy of any news article in OzoNews. The citing of commercial technologies, products or services does not constitute endorsement of those items by UNEP.

If you have questions or comments regarding any news item, please contact directly the source indicated at the bottom of each article.

Prepared by: Samira Korban-de Gobert, OzonAction

Reviewed by: Ezra Clark, OzonAction

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