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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 XIX

| 16 September 2019

**Special Issue on the International Day for the Preservation of the
Ozone Layer**



**World Ozone Day 2019
“32 years and healing”
OzonAction team wish you
successful celebration!**

World Ozone Day 2019 - OzonAction has a wide range of existing information and awareness-raising materials that could be used for your national celebrations. Please refer to the [Ozone Day webpage](#) in the [OzonAction website](#).

We thank you for your ongoing commitment to compliance with the Montreal Protocol and your excellent work in implementing your national strategies and projects.

OzonAction team wish you successful celebration!

Global

The United Nations Secretary-General António Guterres' message for the International Day for the Preservation of the Ozone Layer, 16 September 2019



Next week, the world will gather at United Nations Headquarters in New York for the Climate Action Summit, which aims to generate a massive step-up in global ambition in addressing the climate emergency. Another year of record heatwaves, superstorms and climate disruption tells us we have no choice but to act now before it is too late.

As we prepare for this crucial meeting, we should remember that the Montreal Protocol is both an inspirational example of how humanity is capable of cooperating to address a global challenge and a key instrument for tackling today's climate crisis. Under this international treaty, nations have worked for 32 years to slash the use of ozone-depleting chemicals, used largely by the cooling industry. As a result, the ozone layer that shields us from the sun's harmful ultraviolet radiation is healing.

The Montreal Protocol can deliver an equally significant result on climate change through its Kigali Amendment, which targets hydrofluorocarbons (HFCs), powerful climate-heating gases still used in cooling systems. Phasing these out could reduce global warming by up to 0.4°C this century. As industry redesigns appliances to replace HFCs, it is also essential to improve their energy efficiency to further reduce their impact on the climate.

The Montreal Protocol has been such a success because of unanimous global support. I commend the 81 nations that have ratified the Kigali Amendment and encourage all others to follow suit. As we rightly focus our energies on tackling climate change, we must be careful not to neglect the ozone layer and stay alert to the threat posed by the illegal use of ozone-depleting gases. The recent detection of emissions of one such gas, CFC-11, reminds us that we need continued monitoring and reporting systems, and improved regulations and enforcement.

Implementation of the Kigali Amendment will be front and center for climate action. We need all countries to develop National Cooling Action Plans to deliver efficient and sustainable cooling and bring essential life preserving services like vaccines and safe food to all people. We are calling for concrete and enhanced actions from industry. The leadership of global leading companies is essential to realize the vision into reality.

A healthy ozone layer and climate are essential to meeting all of the Sustainable Development Goals. The Montreal Protocol continues to protect people and planet alike. Let this International Day for the Preservation of the Ozone Layer be an inspiration towards greater ambition on cooling, at the Climate Action Summit and beyond.

[AR](#) | [CH](#) | [EN](#) | [ES](#) | [FR](#) | [RU](#)

The United Nations, September 2019

Commemoration of World Ozone Day 2019 - Video address by Inger Andersen, Executive Director, UNEP



The World Ozone Day 2019 celebrated on 16 September, under the theme '**32 Years and Healing**'.

This year, the world celebrates over three decades of remarkable international cooperation to protect the ozone layer and the climate under the Montreal Protocol. It reminds us that we must keep up the momentum to ensure healthy people and a healthy planet.

The success of the Protocol is celebrated in a video address in commemoration of World Ozone Day 2019 made by the United Nations Environment Programme new Executive Director, Inger Andersen.

In her address, she commends the work carried out by the parties and the accomplishments achieved to date; but also warns against complacency, and the need to remain vigilant in order to hold on to the gains made.

"On World Ozone Day, we celebrate 32 years of hard work to protect our ozone layer, which shields the planet from the sun's harmful ultraviolet radiation.

In 1987, under the Montreal Protocol, nations committed to healing the ozone layer.

They have since cut out 99 per cent of ozone-depleting chemicals used in refrigerators, air conditioners and many other products.

As a result, the ozone layer is expected to return to pre-1980 levels by the 2060s.

But we can't afford to be complacent. The recent detection of emissions of one such gas, CFC-11, shows that the Montreal Protocol is working well.

However, we still need to improve the monitoring of ozone-depleting substances.

That is why Parties are looking at gaps in atmospheric monitoring station coverage, a key issue under the Vienna Convention, and at strengthening procedures to ensure sustained compliance under the Montreal Protocol.

We need to ensure that we hold on to our gains.

As the world prepares for the UN Climate Action Summit 2019, we must also remember that the Montreal Protocol fights climate change.

By backing the Protocol's Kigali Amendment – which targets climate-warming gases known as HFCs – we can avoid up to 0.4°C of global warming this century.

Together, under the world's most successful environmental treaty to date, we can protect the ozone layer and climate for decades to come."

[>>> Video address](#)

The United Nations Environment Programme, Ozone Secretariat, September 2019

World Ozone Day 2019, Letter to National Ozone Officers



Dear National Ozone Officers,

World Ozone Day, September 16, is the UN celebratory day that marks the anniversary of the signing of the Montreal Protocol on Substances that Deplete the Ozone Layer. It is the birthday celebration for this landmark multilateral environmental agreement that continues to protect human health and the environment from the harmful effects of excessive UV radiation from the sun. Without the stratospheric ozone layer, life on Earth would be impossible. Thanks to over three decades of individual and collective actions taken by governments, scientists, industry, non-governmental institutions, and citizens in all 198 Parties, we have reduced cases of skin cancer, cataracts, and immunodeficiency in our populations; preserved or enhanced agricultural production; and reduced damage to wildlife and ecosystems. All of this contributes significantly to the Sustainable Development Goals, which have been agreed to by your government.

We thus have many reasons to be thankful for this treaty, which has protected us since its establishment in 1987. This is why 32 Years and Healing has been selected by the Ozone Secretariat as the theme of this year's celebration. Now is a good time to reflect on what activities you would like to plan in your respective countries to celebrate this year's World Ozone Day. UNEP OzonAction is your partner and we encourage you to think creatively about how to involve the public and the key stakeholders in this year's event.

OzonAction is pleased to provide you with two exciting new documents produced by the Compliance Assistance Programme (CAP) that are suitable for use in your national celebrations. One is broad and inspirational, and the other is specific and practical, however both reflect different aspects of the Montreal Protocol's impact on our lives:

- **Women in the Refrigeration and Air-conditioning Industry - Personal Experiences and Achievements.** Refrigeration and air-conditioning are crucial for our health, nutrition, comfort and well-being. From prevention of food wastage to preservation of vaccines, from air-conditioning in hospitals to our homes, we increasingly rely on the advances that refrigeration has brought us. However, all around the world the sector has always been a largely male-dominated work environment. The fast-growing sector can offer a wide variety of interesting and fulfilling careers for women as well as men. UNEP OzonAction and UN Women have compiled a 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. Being aware of these experiences and the opportunities available can encourage and inspire other women to consider similar careers and support girls to seek to follow a career path in this fast growing and important sector. This inspirational document is suitable for wide outreach to the general public, to schools, training centers and those preparing for future careers. [Download booklet](#)
- **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. [Download document](#)

In addition to the above documents, OzonAction also has a wide range of existing information and awareness-raising materials that could also be used for your national celebrations. Please refer to the [Ozone Day webpage in the OzonAction website](#).

We would appreciate very much to receive information about your planned World Ozone Day activities or reports about what took place for posting on the OzonAction website. Please send this information to your Network's

Montreal Protocol Coordinator or directly to Ms. [Jo Chona](#). Sharing such information is very encouraging, not only to us, but to the whole Montreal Protocol community.

If you require assistance or any specific awareness material for your celebrations, please do not hesitate to contact me or your Network's Montreal Protocol Coordinator.

We thank you for your ongoing commitment to compliance with the Montreal Protocol and your excellent work in implementing your national strategies and projects. On behalf of the entire OzonAction CAP team, I wish you great success in this year's World Ozone Day celebration!

Yours sincerely,

James S. Curlin
Acting Head of OzonAction
UN Environment, Law Division

[Ozone Day 2019 webpage in the OzonAction website.](#)

Assessment Panels to the Montreal Protocol - A tribute on the occasion of World Ozone Day 2019

The United Nations Environment Programme, Assessment Panels to the Montreal Protocol - This video is a tribute to all those in the Panels who are doing an exceptionally amazing work to support the parties in their decision making process, to protect the ozone layer, to remind us for the risks at hand and to ensure that we are vigilant with the achievements that we have already made.

The footage highlights the crucial work carried out by the Technical and Economic Assessment Panel, Scientific Assessment Panel, and Environmental Effects Assessment Panel.

The Assessment Panels are the pillars of the ozone protection regime and the video recognizes and applauds the vital role that science plays in the implementation of the Montreal Protocol.

Through the provision of independent technical, scientific, environmental assessments and economic information, the various panels have helped the parties reach informed decisions that have made the Montreal Protocol such a world-recognized success.

>>> [Tribute to the Assessment Panels - video](#)

>>> [Assessment Panels Overview](#)

The United Nations Environment Programme, Ozone Secretariat, September 2019



Copernicus Atmosphere Monitoring Service monitors a very unusual 2019 ozone hole

Less than one month into the 2019 Antarctic ozone hole season, the Copernicus Atmosphere Monitoring Service (CAMS) has observed that this year's hole is currently decreasing in size and will rapidly continue to do so over the next three days to reach an unprecedentedly small area for this time of year. The forecast also indicates that, after this minimum, the hole will slowly increase in size again. The current expectation is that the 2019 ozone hole could have the smallest area of any Antarctic ozone hole since the mid-eighties.

Typically, the Antarctic ozone hole starts forming every year in August, reaches a maximum size in October and closes by December. Since early September, however, the polar vortex – a swirl of cold air in the stratosphere that provides the conditions required for severe stratospheric ozone destruction and the resulting formation of the Antarctic ozone hole – has been displaced off-centre and weakened by a sudden warming of the stratosphere. With temperatures in the upper stratosphere rising considerably (up to more than 40°C above normal), the polar vortex has been more unstable than usual.

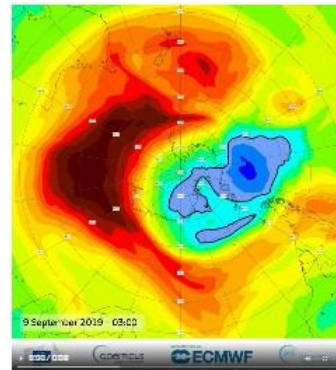
Normally, when sunlight returns to the polar region after the Antarctic winter, chemicals formed in the vortex during the polar night initiate rapid destruction of ozone. This year, cold air with low ozone levels has been mixing with warmer, more ozone-rich air from outside the vortex, which is likely diluting and deactivating a fraction of the ozone-depleting chemicals inside the vortex. This results in less potential for fast ozone destruction when the springtime sun arrives over Antarctica.

CAMS Senior Scientist Antje Inness explains: “We see a lot of variability in the ozone hole from year to year, for example in 2017 it was quite small, then in 2018 it was deeper and longer lived. However, this year's activity is extremely unusual; the last time something so abnormal was seen was in 2002, when the ozone hole actually broke into two very distinct parts.”

“The Montreal Protocol was signed in 1987 to ban the use of the main human-made ozone-depleting chemicals. Consequently, concentrations of these substances are declining, and we expect Antarctic ozone levels to return to pre-1980 values by 2060. This long-term expectation is not changed by this year's very unusual situation.”

CAMS will continue to monitor and forecast changes in the ozone hole in the days and weeks ahead. The latest forecasts can be found in the ozone monitoring section of the CAMS [website](#)

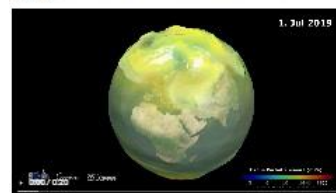
The Copernicus Programme Atmosphere Monitoring Service, 9 September 2019



CAMS forecast of how the ozone hole will look over the next five days. (Credit: Copernicus Atmosphere Monitoring Service, ECMWF)

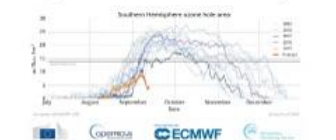
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3D rendering of the 2019 ozone hole, created using CAMS data. (Credit: Copernicus Atmosphere Monitoring Service, ECMWF)

CAMS, which is implemented by the European Centre for Medium-Range Weather Forecasts on behalf of the EU, monitors the ozone hole to provide quality-assured information about the state of the ozone layer; this is important as stratospheric ozone protects life on Earth from potentially harmful ultraviolet radiation. The service forecasts how ozone levels will vary up to five days into the future by combining measurements from satellites with models of the atmosphere.

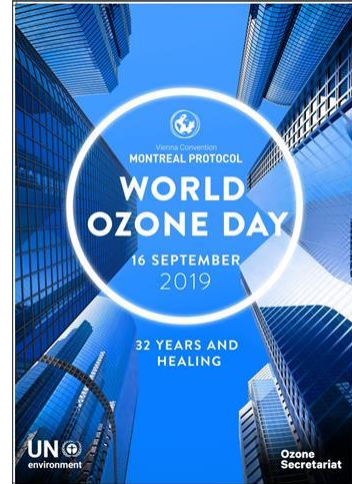


Featured



OZONE SECRETARIAT

32 Years and Healing - World Ozone Day 2019



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

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

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

- [Policies, Procedures, Guidelines and Criteria of the Multilateral Fund](#) - The "Policies, Procedures, Guidelines and Criteria of the Multilateral Fund" contain the policies, procedures, guidelines and criteria, as established by the Meetings of the Parties of the Montreal Protocol and elaborated by the Executive Committee of the Multilateral Fund in accordance with its terms of reference.

The document is updated after each Executive Committee meeting. The current version of the document is updated as at May 2019 and includes decisions taken at the 83rd Executive Committee Meeting and the 30th Meeting of the Parties to the Montreal Protocol. The document is available as a PDF file (in its entirety and in 11 separate chapters).

The supplement "HCFC Phase-out Management Plans and HCFC Production Phase-out Management Plans", containing relevant decisions and agreements on HCFC phase-out multi-year projects and phase-out of production of HCFCs, is available as a PDF file (updated as at May 2019). Another supplement "Phase-out Plans and Projects" contains relevant decisions and agreements on multi-year projects for the phase-out of other ODS and is also available as a PDF file (updated as at May 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 83rd meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol](#), Montreal, Canada, 27-31 May 2019

- [83rd meeting of the Executive Committee](#)

- [82nd meeting of the Executive Committee](#)

[Learn more](#)



OZONACTION

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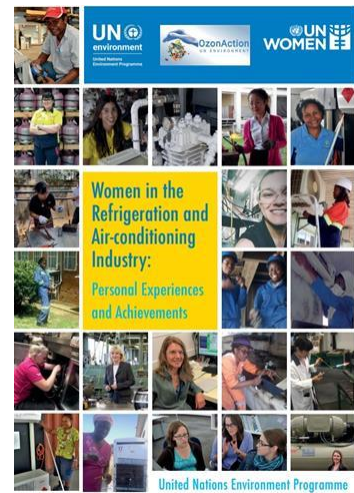
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OzonAction CAP team wish you great success in this year's World Ozone Day celebration!

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 field and follow in their footsteps.

[Download the publication](#)



[Read/Download](#)

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: [Dr. 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.

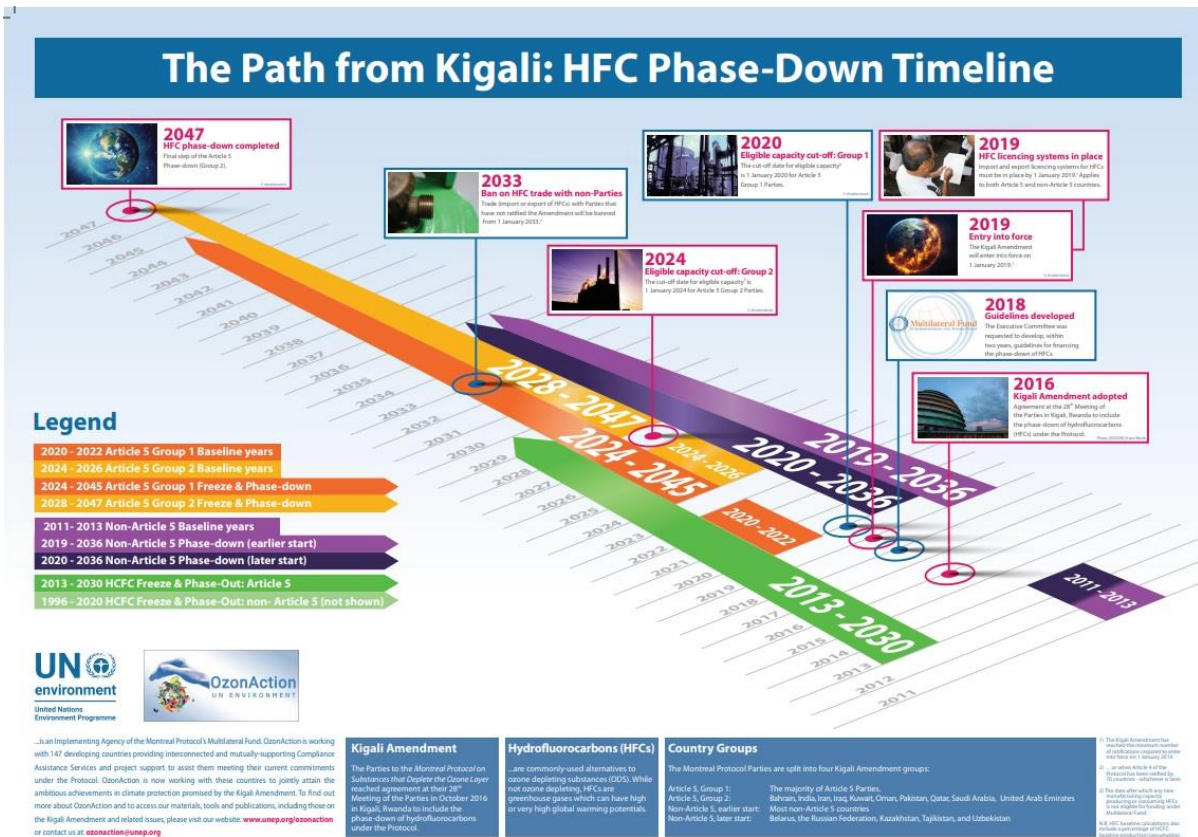
The United Nations Environment Programme (UNEP), represented by the OzonAction-Law Division, and ASHRAE have a Memorandum of Understanding to establish technical cooperation and mutual coordination toward providing professional technical services to the refrigeration and air-conditioning stakeholders (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





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



New videos available on the OzonAction RAC video application

A series of new videos has just been released on the Refrigeration and Air-conditioning Technician Video Series application, with a focus on working with flammable refrigerants ...

50,000 downloads and counting!

To install, search for "RAC Video" in the Google Playstore or Apple IOS store, or scan the QR code.



GWP-ODP Calculator Smartphone Application

The application allow you to easily convert ODP, CO₂-eq and metric quantities of refrigerants and other chemicals.

- 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 CO₂-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, CO₂-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!



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?"



The Kigali Amendment to the Montreal Protocol - Opportunities and Next Steps - OzonAction Video

The Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer reached agreement at their 28th Meeting of the Parties on 15 October 2016 in Kigali, Rwanda to phase down hydrofluorocarbons (HFCs). The UN Environment, OzonAction developed a video to find out from renowned international scientific, health, technical, financial and national experts about background and significance of this Kigali amendment.

The amendment presents many opportunities: improving the environment, refrigeration and air-conditioning systems and especially energy efficiency. It also presents new challenges. It is absolutely critical now for industry, governmental bodies and civil society to work together to adopt greener technologies in each country of the world and fight global warming.

[OzonAction YouTube](#) | See also: [United Nations Treaty Collection](#)

OzonAction Factsheets

The collage displays various factsheets from OzonAction. The top row features five sheets: 'The Kigali Amendment to the Montreal Protocol', 'OzonAction's 7th Annual Report 2016-2017', 'The Montreal Protocol for HFCs and the Role of the Kigali Amendment', 'The Kigali Amendment to the Montreal Protocol - Opportunities and Next Steps', and 'Kigali 2016: Taking Global Warming by the Reins'. The bottom row includes 'Kigali 2016: Taking Global Warming by the Reins', 'TOOLS COMMONLY USED BY REFRIGERATION AND AIR-CONDITIONING TECHNICIANS', and 'Update on New Refrigerants Designations and Safety Classifications'.

UN Environment-ASHRAE Factsheet Update on New Refrigerants Designations and Safety Classifications

OzonAction Series of 19 Fact Sheets related to the Kigali Amendment.

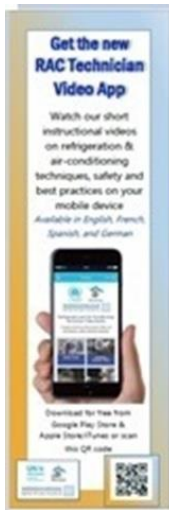
HS codes for HCFCs and certain other Ozone Depleting Substances ODS (post Kigali update).

The Kigali Amendment to the Montreal Protocol: HFC Phase-down - The phase-down of HFCs under the Montreal Protocol on Substances that Deplete the Ozone Layer has been under negotiation by the Parties since 2009 and the successful agreement on the Kigali Amendment at the 28th Meeting of the Parties on 15 October 2016 in Kigali, Rwanda to phase-down hydrofluorocarbons (HFCs) continues the historic legacy of the Montreal Protocol. This factsheet summarises and highlights the main elements of the Amendment of particular interest to countries operating under Article 5 of the Protocol (Article 5 Parties).

Refrigerant Blends: Calculating Global Warming Potentials (post-Kigali update).

Global Warming Potential (GWP) of Refrigerants: Why are Particular Values Used? (post-Kigali update).

Tools Commonly used by Refrigeration and Air-Conditioning Technicians.



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!

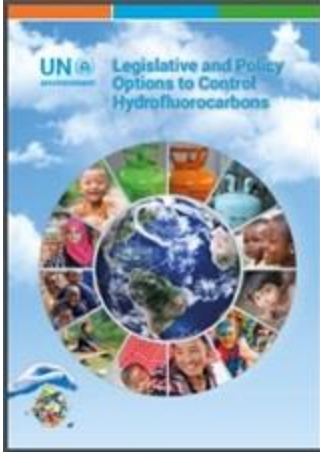
Please share with your RAC associations, technicians and other interested stakeholders...

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.



Latest issue of the Centro Studi Galileo - [Industria & Formazione](#). La rivista per il tecnico della refrigerazione e della climatizzazione, N. 6, 2019

Events

2019

- [International Institute of Refrigeration](#) events
- [Refrigeration Week](#) - 16 - 20 September 2019. This year's event aims to prepare stakeholders for refrigerant change.

Please feel free to [share](#) with us relevant events to be featured.

Reading



[Twenty Questions and Answers About the Ozone Layer](#), presents complex science in a straightforward manner. It complements the [2014 Scientific Assessment Report of Ozone Depletion](#) by WMO and the U.N. Environment Programme.

Lead Author:
Michaela I. Hegglin

Coauthors:
David W. Fahey, Mack McFarland, Stephen A. Montzka, Eric R. Nash



[Primer on Hydrofluorocarbons \(HFCs\)](#) - IGSD -11 January 2018

Summary:

Fast action under the Montreal Protocol can limit growth of hydrofluorocarbons (HFCs), prevent 100 to 200 billion tonnes of CO₂-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](#)



[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 - The refrigeration and air conditioning industry is the largest user of synthetic greenhouse gases and ozone depleting substances in Australia. Cold Hard Facts 3 provides an economic and technological assessment of the refrigeration and air conditioning industry in Australia in 2016. The report includes an analysis of the size and economic value of the industry, the equipment and refrigerant gas bank, trends in gas imports and equipment, and direct and indirect emissions in this sector. [...] 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.

Miscellaneous



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

The United Nations Environment, 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*



The International Institute of Refrigeration supports World Refrigeration Day - As the only independent intergovernmental organisation in the field of refrigeration, the International Institute of Refrigeration (IIR) joins associations and companies worldwide to support the initiative of an official

World Refrigeration Day on 26 June every year. The annual World Refrigeration Day, to be launched on 26 June 2019, aims to raise awareness among the wider public about the importance of refrigeration technologies in everyday life.

Refrigeration is essentially a question of temperature and, as such, it only seems natural to celebrate the field on the birthday of the pioneer at the origin of the international unit of temperature, Lord Kelvin (Sir William Thomson) – born 26 June 1824.

With increasing global stakes at hand, over the past years refrigeration has come to take a leading role at the heart of international affairs.

The inauguration of a World Refrigeration Day would not only be an ideal way to recognise the many historical achievements of the industry, but also a means to anticipate and overcome together the challenges we face. ... Click [here](#) for more information.



New International Journal of Refrigeration service for IIR members -

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 - 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.



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

Ozone Hole: How We Saved the Planet



©2018 HOW WE SAVED THE PLANET
Courtesy of World Bank/UNEP

Premiere Wednesday, April 10, 2019
10:00 PM (EST)

New Documentary Tells the Remarkable Story of how Scientists Discovered the Deadly Hole in the Ozone – and the Even More Remarkable Story of how the World's Leaders Came Together to Fix It.

OZONE HOLE: HOW WE SAVED THE PLANET - New Documentary Tells the Remarkable Story of How Scientists Discovered the Deadly Hole in the Ozone – and the **Even More Remarkable Story of How the World's Leaders Came Together to Fix It.**

New program to scale up efficient, clean cooling in developing countries - The World Bank announced today [24 April 2019] a new program to accelerate the uptake of sustainable cooling solutions, including air conditioning, refrigeration and cold chain in developing countries. The program will provide technical assistance to ensure that efficient cooling is included in new World Bank Group investment projects and mobilize further financing. Globally, demand for cooling is increasing, mainly driven by growing populations, urbanization and rising income levels in developing countries. Further exacerbating the issue, rising temperatures will increase demand for cooling appliances, which not only use large amounts of energy, but also leak refrigerants that contribute to global warming.

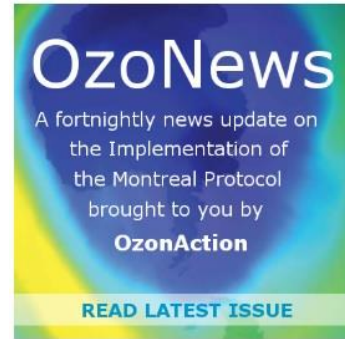


Climate Action Summit - 23 September 2019

Member states, local leadership, private sector, civil society leaders and youth have been responding to the **Secretary General's call for this summit to accelerate ambition and increase commitments to take action to address the climate crisis**, one year ahead of when the Paris Agreement comes into effect.

The United Nations Environment Programme is leading the **Nature Based Solutions to Climate Change track** and the NBS Coalition which received **150+ proposals** to bring to the summit.





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