See online

Volume XIX | 30 October 2019

In this issue:

NEW 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.

Read/Download >>>

Global

1. Kigali Amendment latest ratifications

Congratulations to the latest countries which have ratified the Kigali Amendment this month:

Jordan, 16 Oct 2019
Lesotho, 7 Oct 2019
Sao Tome and Principe, 4 Oct 2019
New Zealand, 3 Oct 2019
Mauritius, 1 Oct 2019

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. 31st Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP 31) 4-8 November 2019 | Headquarters of the Food and Agriculture Organization of the UN (FAO), Rome, Italy

The Montreal Protocol on Substances that Deplete the Ozone Layer was recently called “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” by UN Secretary-General António Guterres in his message for the International Day for the Preservation of the Ozone Layer. The thirty-first Meeting of the Parties to the Protocol (MOP 31) is expected to build on this reputation, and discuss pressing issues, including unexpected emissions of trichlorofluoromethane (CFC-11) and ongoing reported emissions of carbon tetrachloride (CTC).

MOP 31 will also consider:

• Terms of reference for the study on the 2021-2023 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol;
• potential areas of focus for the 2022 quadrennial assessment reports of the Scientific Assessment Panel (SAP), the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel (TEAP);
• 2019 TEAP report;
• Article 5 parties access to energy-efficient technologies in the refrigeration, air-conditioning and heat-pump sectors;
• Safety standards;
• Compliance and data-reporting issues;
• Initial assessment by the SAP and the TEAP of five volatile fluoroorganic and related compounds found in the Arctic; and
• Nominations for critical-use exemptions, stocks of methyl bromide, and process agents.

MOP 31 will convene from 4-8 November 2019 at the headquarters of the UN Food and Agriculture Organization of the UN in Rome, Italy. The preparatory segment will meet from 4-6 November, followed by the high-level segment from 7-8 November.

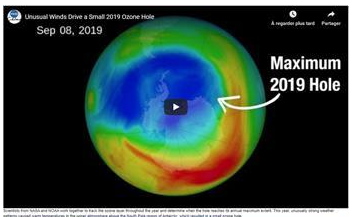
Adopted in 1987, the Montreal Protocol is the sole protocol to the 1985 Vienna Convention for the Protection of the Ozone Layer. The Protocol seeks to control and phase out ozone-depleting substances (ODS) such as chlorofluorocarbons (CFCs), halons, CTC, methyl chloroform, methyl bromide, hydrobromofluorocarbons, and HCFCs. The 2016 Kigali Amendment, the most recent amendment to the Protocol, seeks to phase down HFCs, substitutes for many ozone depleting substances that have been found to have a high global warming potential.

The MOP serves as the decision making body of the Protocol and meets annually to consider and decide on issues put forward by the Open-Ended Working Group of the Parties.

IISD will provide daily reporting services during MOP31, starting 4 October.

IISD Reporting Services, October 2019

3. 2019 Ozone hole is the smallest on record since its discovery



Abnormal weather patterns in the upper atmosphere over Antarctica dramatically limited ozone depletion in September and October, resulting in the smallest ozone hole observed since 1982, NASA and NOAA scientists reported today.

The annual ozone hole reached its peak extent of 6.3 million square miles (16. 4 million square kilometers) on Sept. 8, and then shrank to less than 3.9 million square miles (10 million square kilometers) for the remainder of September and October, according to NASA and NOAA satellite measurements. During years with normal weather conditions, the ozone hole typically grows to a maximum area of about 8 million square miles in late September or early October.

“It’s great news for ozone in the Southern Hemisphere,” said Paul Newman, chief scientist for Earth Sciences at NASA's Goddard Space Flight Center in Greenbelt, Maryland. “But it’s important to recognize that what we’re seeing this year is due to warmer stratospheric temperatures. It’s not a sign that atmospheric ozone is suddenly on a fast track to recovery.”

Ozone is a highly reactive molecule comprised of three oxygen atoms that occurs naturally in small amounts. Roughly seven to 25 miles above Earth’s surface, in a layer of the atmosphere called the stratosphere, the ozone layer is a sunscreen, shielding the planet from potentially harmful ultraviolet radiation that can cause skin cancer and cataracts, suppress immune systems and also damage plants.

The Antarctic ozone hole forms during the Southern Hemisphere’s late winter as the returning Sun’s rays start ozone-depleting reactions. These reactions involve chemically active forms of chlorine and bromine derived from man-made compounds. The chemistry that leads to their formation involves chemical reactions that occur on the surfaces of cloud particles that form in cold stratospheric layers, leading ultimately to runaway reactions that destroy ozone molecules. In warmer temperatures fewer polar stratospheric clouds form and they don’t persist as long, limiting the ozone-depletion process.

NASA and NOAA monitor the ozone hole via complementary instrumental methods.

Satellites, including NASA’s Aura satellite, the NASA-NOAA Suomi National Polar-orbiting Partnership satellite and NOAA’s Joint Polar Satellite System NOAA-20 satellite, measure ozone from space. The Aura satellite’s Microwave Limb Sounder also estimates levels of ozone-destroying chlorine in the stratosphere.

At the South Pole, NOAA staff launch weather balloons carrying ozone-measuring “sondes” which directly sample ozone levels vertically through the atmosphere. Most years, at least some levels of the stratosphere, the region of the upper atmosphere where the largest amounts of ozone are normally found, are found to be completely devoid of ozone.

“This year, ozonesonde measurements at the South Pole did not show any portions of the atmosphere where ozone was completely depleted,” said atmospheric scientist Bryan Johnson at NOAA’s Earth System Research Laboratory in Boulder, Colorado.

Uncommon but not unprecedented

This is the third time in the last 40 years that weather systems have caused warm temperatures that limit ozone depletion, said Susan Strahan, an atmospheric scientist with Universities Space Research Association, who works at NASA Goddard. Similar weather patterns in the Antarctic stratosphere in September 1988 and 2002 also produced atypically small ozone holes, she said.

“It’s a rare event that we’re still trying to understand,” said Strahan. “If the warming hadn’t happened, we’d likely be looking at a much more typical ozone hole.”

There is no identified connection between the occurrence of these unique patterns and changes in climate.

The weather systems that disrupted the 2019 ozone hole are typically modest in September, but this year they were unusually strong, dramatically warming the Antarctic’s stratosphere during the pivotal time for ozone destruction. At an altitude of about 12 miles (20 kilometers), temperatures during September were 29 degrees F (16˚C) warmer than average, the warmest in the 40-year historical record for September by a wide margin. In addition, these weather systems also weakened the Antarctic polar vortex, knocking it off its normal center over the South Pole and reducing the strong September jet stream around Antarctica from a mean speed of 161 miles per hour to a speed of 67 miles per hour. This slowing vortex rotation allowed air to sink in the lower stratosphere where ozone depletion occurs, where it had two impacts.

First, the sinking warmed the Antarctic lower stratosphere, minimizing the formation and persistence of the polar stratospheric clouds that are a main ingredient in the ozone-destroying process. Second, the strong weather systems brought ozone-rich air from higher latitudes elsewhere in the Southern Hemisphere to the area above the Antarctic ozone hole. These two effects led to much higher than normal ozone levels over Antarctica compared to ozone hole conditions usually present since the mid 1980s.

As of October 16, the ozone hole above Antarctica remained small but stable and is expected to gradually dissipate in the coming weeks.

Antarctic ozone slowly decreased in the 1970s, with large seasonal ozone deficits appearing in the early 1980s. Researchers at the British Antarctic Survey discovered the ozone hole in 1985, and NASA's satellite estimates of total column ozone from the Total Ozone Mapping Spectrometer confirmed the 1985 event, revealing the ozone hole's continental scale.

Thirty-two years ago, the international community signed the Montreal Protocol on Substances that Deplete the Ozone Layer. This agreement regulated the consumption and production of ozone-depleting compounds. Atmospheric levels of man-made ozone depleting substances increased up to the year 2000. Since then, they have slowly declined but remain high enough to produce significant ozone loss. The ozone hole over Antarctica is expected to gradually become less severe as chlorofluorocarbons— banned chlorine-containing synthetic compounds that were once frequently used as coolants—continue to decline. Scientists expect the Antarctic ozone to recover back to the 1980 level around 2070.

National Aeronautics and Space Administration (NASA), 21 October 2019

4. Changing the approach: turning nitrogen pollution into money

A Q&A with Nitrogen expert Mark Sutton of the United Kingdom Centre for Ecology & Hydrology

Waste is money. At least that's what Mark Sutton of the United Kingdom Centre for Ecology & Hydrology wants policymakers to understand. Sutton, who has studied nitrogen pollution for more than three decades, is convinced that there is a way to harvest emitted nitrogen to be reused by farmers as nitrogen fertilizer.

Nitrogen pollution—which Sutton calls the "godfather of pollution," as you can't see it as you can the results—is a major challenge for the 21st century, as it contaminates the air, water and land, making it difficult to breathe and altering plant growth. To reduce nitrogen pollution as part of the circular economy, Sutton advocates that we reuse old gas.

Where is Nitrogen found?

Nitrogen (N_2) is all around us. Over 78 per cent of our atmosphere is made of nitrogen, it's the reason the sky is blue and the earth is stable to live in. (If there was only oxygen everything would be on fire.) Nitrogen is a harmless and chemically unreactive gas but if combined with other gases it becomes usable. For example, joined with hydrogen (H_2) we get ammonia NH_3, which is the raw material for most nitrogen fertilizers. However, ammonia is a major cause of eutrophication and affects biodiversity.

In the combustion of fuel-engines and industry, Nitric Oxide (NO) and Nitrogen Dioxide (NO_2) are formed, which are air pollutants and harmful to human hearts and lungs. Nitrate (NO_3) is a product of wastewater and widely used in fertilizers and explosives. It makes part of the harmful particulate matter in air, that has major impacts. Nitrous Oxide (N_2O) is used in rocket propellants and in the medical sector as laughing gas. But it is a greenhouse gas 300 times more powerful than carbon dioxide and causes depletion of the ozone layer.

Altogether, humans are producing a cocktail of reactive nitrogen that creates pollution. Scientists call it the Nitrogen Challenge. We've divided nitrogen's threats into an acronym of five: WAGES. That stands for water, air, greenhouse gases, ecosystems, and soils/stratospheric ozone depletion.

Nitrogen is one of the most important pollution issues facing humanity. Yet the scale of the problem remains largely unknown and unacknowledged outside scientific circles.

How did we get to have too much nitrogen?

Since the 1950s we've doubled the amount of nitrogen compounds in the world following the introduction of mass-produced fertilizer for crops to allow a world population that's doubled to be fed. With the introduction of cars and heavy industry this has further boosted nitrogen pollution. [...]

How will you do that?

We're trying to institute a coordination mechanism, under the auspices of UNEP, where all the different UN conventions that exist—air, land, water, climate and stratospheric ozone—will work together to complement their efforts in reducing nitrogen without interfering with each other's mandates. We talk about this in the 2018/19 Frontiers report.

At the upcoming UN Nitrogen Campaign launch event in Colombo, Sri Lanka 23–24 October—for which Ricky Kej has prepared a nitrogen song—we will work with countries to prepare for this coordination mechanism. Our expectation is that countries will then want to bring this to the fifth UN Environment Assembly in 2021. [...]

United Nations Environment Programme, 22 October 2019

Africa

5. Protection de la couche d'ozone: l'Afrique centrale et de l'Est se concertent

Pendant deux jours, des représentants de 12 pays de ces deux régions, réunis à Yaoundé ont parlé des mesures pour limiter les produits appauvrissants dans leurs marchés.

Mercredi et jeudi, le*ministère de l'Environnement, de la Protection de la nature et du Développement durable* (Minepded) a réunis les responsables de la protection de la *couche d'ozone* et les représentants des services douaniers de 12 pays d'Afrique francophone. Il s'est agit d'un atelier pilote de jumelage et de dialogue parallèle entre ces participants, en collaboration avec le *Programme des Nations unies pour l'environnement *(PNUE). Thème de la rencontre : « Dialogue frontalier entre les fonctionnaires de la douane et les coordonnateurs d'Ozone de douze (12) pays sélectionnés du réseau francophone ».

Ainsi, les participants issus des pays tels que le Burundi, la République centrafricaine, la République démocratique du Congo, le Congo, le Gabon, le Tchad, la Guinée équatoriale, Djibouti et les Comores, ont échangé sur la nécessité de collaborer afin de renforcer l'application du système de licences relatif au commerce des substances qui détériorent la couche d'ozone. C'est dans cette optique que le ministre, Pierre Hele a précisé, en ouvrant les travaux, qu' « il s'agit de faire le point sur la mise en œuvre des obligations de la convention de Vienne portant sur la protection de la couche d'ozone et du protocole de Montréal relatif aux substances qui substances qui appauvrissent la couche d'Ozone(Sao)».

A l'issue de cette rencontre, des résolutions fermes sont attendues dans le but d'empêcher le transit non autorisé des substances qui détériorent la couche d'Ozone.

La rencontre vise également l'amélioration de la mise en œuvre des systèmes de licences et quotas avec une approche globale visant à attribuer les quotas dans la perspective des Sao sur le marché des pays représentés à Yaoundé.

Cameroun Tribune, 25 October 2019, By: Hélène EWOLO ELEMBE

Asia Pacific

6. Pakistan ready to cut ODS emissions by 35 percent till 2020

[...] "In the next phase, a decline of 35 percent ODS emissions target is set for Pakistan to comply with till Jan 1, 2020. Luckily, there is no indigenous production of Ozone damaging gases in the country. Pakistan mainly imports such refrigerants and through proper training of customs department staff members MoCC has managed to get maximum compliance," said a [Ministry of Climate Change (MoCC)] official.

He informed that the customs officers last year had confiscated the biggest consignment of R-22 (also known as HCFC-22) refrigerant, a powerful ozone-depleting substance and greenhouse gas.

The seized cache weighed around 18,000 kilograms of the smuggled refrigerant at Karachi Port. The customs officer got some information regarding an attempt to illegally import huge quantities of the gas, he added.

Pakistan's customs deserved appreciation for their prompt response and action which foiled the nefarious attempt of importing such hazardous substances into the country.

"The entire action has been made possible due to the fact that the custom officers have been trained MoCC under various capacity building trainings and workshops to identify and detect ODS gases smuggled into the country through various shipments," he added.

"Countries around the world are phasing out hydro-chlorofluorocarbons like R-22 under the Montreal Protocol, the treaty that protects the ozone layer. According to the latest Scientific Assessment of Ozone Depletion, actions taken under the Montreal Protocol are resulting in steady, long-term decreases in the atmospheric abundance of controlled ozone-depleting substances (ODSs) and the ongoing recovery of stratospheric ozone at a rate of 1 to 3 per cent per decade since 2000," quoted a local newspaper on the status of ODS emissions decline world over.

He said the customs officers who conducted the operation against the consignment labeled as permissible R-32 refrigerant substance where upon scanning and confirmation tests it was found R-22 which is a serious pollutant.

"The customs team has been awarded prizes and appreciation certificates to boost their moral and acknowledge their achievement so that this success story of Pakistan gets recognition at home and around the globe," the official added.

UrduPoint, 28 October 2019, By: Fahad Shabbir

Europe & Central Asia

7. Launching of 5th 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.

HCFCs contribute to ozone layer depletion and global warming. They will gradually be phased out by 2030 and are already banned in the European Union. HCFC traders require annual import / export quota as well as import / export licenses for HCFC shipments.

HFCs contribute to global warming. They are controlled and will gradually be phased down by the Parties to the Montreal Protocol under the Kigali Amendment to the Montreal Protocol. National legislation might already require establishment of import / export licenses for HFC shipments, and they are already restricted in the European Union.

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

Tolerating illegal or unwanted trade in HCFCs / HFCs might undermine the success and credibility of the Montreal Protocol and lead to non-compliance.

OBJECTIVES

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.

The award is expected to enhance regional and international cooperation and raise awareness of the customs and enforcement community. It will facilitate reporting on illegal trade to UN Environment Programme and the Ozone Secretariat, pursuant to paragraph 7 of decision XIV/7 of the parties to the Montreal Protocol and encourage trading partners to consistently apply iPIC prior to issuing export / import licenses for HCFCs / HFCs. It is expected that the award will thus contribute to enforcing the Montreal Protocol trade provisions and compliance.

Often, seizures of controlled substances, equipment and products containing or relying on controlled substances are not publicized because of a perception that they reflect negatively on the concerned countries. Providing recognition and visibility of customs and enforcement agents might change this perception and encourage the reporting on illegal trade cases and seizures. Publicizing the seizures, court cases and penalties can discourage potential smugglers.

ELIGIBILITY

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.

NOMINATION

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

Learn more >>>

United Nations Environment Programme, OzonAction, October 2019

8. How to pave the way for R290 Split ACs

Market assessments that GIZ carried out in numerous countries show that accelerating the transition to more energy-efficient split ACs with R290 (propane) refrigerant will play a key role in creating a more sustainable RAC sector.

Leapfrogging to high efficiency appliances using R290 reduces the energy consumption and GHG emissions and thus provides a significant opportunity to contribute to national climate action plans (Nationally Determined Contributions). While there is an urgent need for action in the sector, there are several barriers to a market transition, such as safety concerns about the flammability of R290, lacking awareness and uncertainties about new technologies, as well as limited understanding of the proper treatment of the refrigerants in the process of manufacturing, installation, operation, and disposal.

Against this background, GIZ published a resource guide (volume 1) to inform relevant stakeholders about the factors that are deemed crucial for a successful market transition to energy-efficient R290 split ACs.

The guide aims to close knowledge gaps that hinder the introduction and application of R290 split ACs. This guide tackles all topics relevant to R290 split ACs and provides a set of references for more detailed information at the end of each chapter.

The information in this guide is built on practical experience gained in GIZ projects (including IKI projects like the conversion of Godrej & Boyce production line to R290 split ACs in India, Cool Contributions fighting Climate Change, Green Chillers NAMA project Indonesia, Green Cooling Initiative) and interviews with industry players.

The guideline is intended to enable key stakeholders to take effective and coordinated measures to introduce Green AC technology in their country. Ultimately, it aims to encourage policy makers to facilitate the market uptake of energy-efficient split ACs using R290.

The resource guide is available for free download here

GIZ Proklima, October 2019

9. Identifying the most important innovation in refrigeration or air conditioning


IOR.org.uk

Identifying the most important innovation in refrigeration or air conditioning

The refrigeration and air conditioning industry is defined by its constant innovation and work to make systems ever more efficient and address ever greater technical challenges.

Each year the IOR [Institute of Refrigeration] in association with J&E Hall recognise the achievements of someone who has strived to help the industry to progress in a critical area. Past winners of the prestigious J&E Hall Gold Medal have included individuals such as Dr Mark McLinden of NIST in the USA), who helped provide the industry with tools to identify new, environmentally-friendly refrigerants, and Ian Tansley of SureChill UK an innovator who has designed aa refrigerator for vaccines that can provide reliable cooling in areas with erratic power supplies.

Nominations are now open to recognised the next greatest industry innovator, an individual or team considered to have made the most noteworthy contribution to the advancement of refrigeration and related technologies this year. Some examples of the work for which they might be nominated include:

• Practical applications of innovative designs
• Projects which have made an original contribution to the field
• Systems which demonstrate substantial potential and evidence that they will be completed successfully
• Outstanding and significant work in a new or unusual area

The £5,000 award and Gold Medal will be presented at the IOR Annual Dinner on 27 February 2020 by J & E Hall International on behalf of the Institute and the winner will be invited to present a paper on their work to members the following year.

Full details of how to nominate can be found here

The deadline for names to be put forward is 5th November.

Institute of Refrigeration, 21 October 2019

Latin America and Caribbean

10. National Consultation on Harmonized System (HS) codes for hydrofluorocarbons (HFCs)

The National Ozone Unit (NOU) in collaboration with the Grenada Customs and Excise Division has organized a Consultation for importers of refrigerants, customs brokers, trade officials and the Inland Revenue Division (IRD), to discuss a revision to the World Customs Organization (WCO), Harmonized System (HS) codes for hydrofluorocarbons (HFCs).

According to National Ozone Officer, Mr. Leslie Smith, this level of consultation is necessary and timely since the ratification of the Kigali Amendment to the Montreal Protocol and its entry into force on January 1st, 2019 requires Grenada to report on consumption of each HFC individually. However, data collection and the implementation of an important and export licensing system would present a challenge, as the most recent HS Nomenclature 2017 Edition, does not include individual codes for HFCs. The next HS edition which will include HS codes for the most commonly traded HFCs and mixtures, will only enter into force in 2022.

Grenada and other early ratifiers of the Kigali Amendment are therefore encouraged to take early innovative and proactive measures at the national level to address this situation. The WCO recommends that countries may insert relevant new additional subheadings in their statistical nomenclature. Countries are therefore recommended to expeditiously insert additional sub-divisions for the HFCs and HFC containing blends to facilitate the collection and comparison of data on the international movement of HFCs and HFC blends controlled under the Montreal Protocol

The consultation would examine this issue thoroughly. During the consultation, the National Ozone Unit will inform the participants on the implications that this could have for Grenada in meeting its reporting requirements under the Kigali Amendment of the Montreal Protocol and future import control measures to be implemented for the importation of HFC refrigerants and their blends. The Customs & Excise Division would also have an opportunity to present for the first time, proposed subheadings, as well as, new breakout codes to be established for the classification of HFCs and their blends.

The consultation is planned for Thursday, 31 October, at the National Cricket Stadium from 9:00 a.m. to 12:00 noon.

Grenada National Ozone Unit, 24 October 2019

North America

11. HFC Non-refillable Refrigerant Containers Prohibited for Import into Canada

Environment and Climate Change Canada issued a Fact Sheet on the Import of HFC Refrigerant Containers.

All refrigerant containers imported into Canada must be refillable as regulated under Canada's Ozone-depleting substances and Halocarbon Alternatives Regulations.

Small cylinders are widely available in the USA and so cross-border importation/shopping is seen as a threat.

See the Regulation here

MOPIA Bulletin # 194, 10 October 2019

12. Effective installation of retrofit doors on refrigerated display cases - US EPA GreenChill Webinar

Topic: Effective Installation of Retrofit Doors on Refrigerated Display Cases
Date: Tuesday, November 12, 2019
Time: 2:00 pm to 3:00pm (Eastern time)

Description:
Andrew Goldberg (Retail Business Services) will present information on the energy savings associated with converting open multi-deck refrigerated display cases to reach-in doored refrigerated display cases. Mr. Goldberg will focus on the challenges, opportunities and best guidance on how to effectively install retrofit doors

To join the webinar:
1. Visit the webinar access page: Effective Installation of Retrofit Doors on Refrigerated Display Cases
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#

US EPA GreenChill, October 2019

Featured

OZONE SECRETARIAT

• 31st 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
• 63rd Meeting of the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol, 2 November 2019, Rome, Italy
• 41st Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol,1 - 5 July 2019, Bangkok, Thailand
• 62nd 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 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

- 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

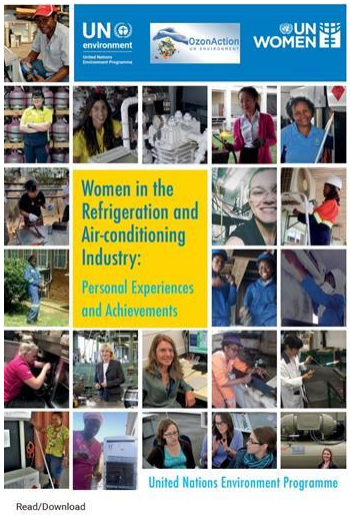
- 83rd meeting of the Executive Committee
- 82nd meeting of the Executive Committee

Learn more

OZONACTION

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



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

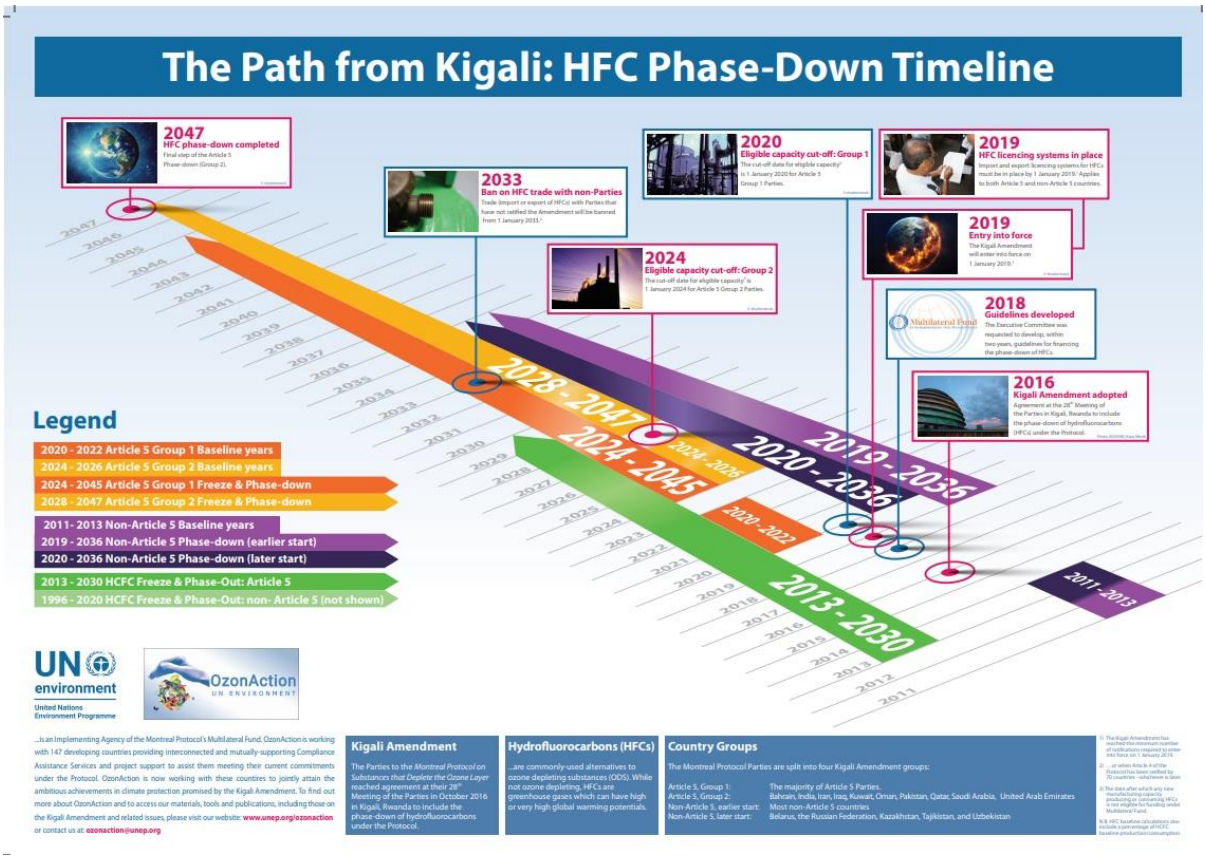
Contact: Dr. Ezra Clark, UNEP, OzonAction

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.

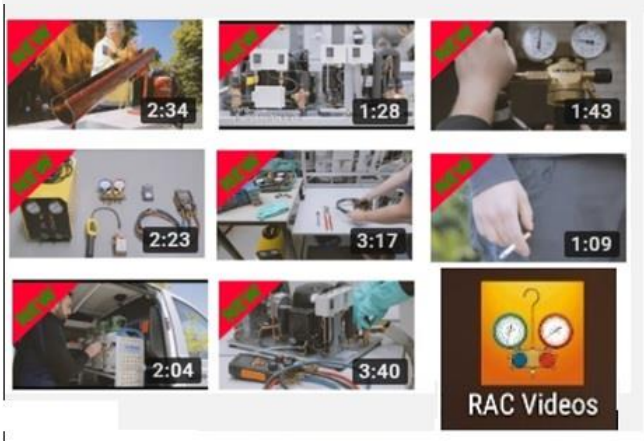
It is intended for use by Montreal Protocol National Ozone Officers, Customs and Enforcement Officers as well as technicians involved in the servicing and maintenance of refrigeration and air conditioning systems.

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



Download on the App Store

GET IT ON Google Play

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, CO_2-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 CO_2-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_2-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

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.

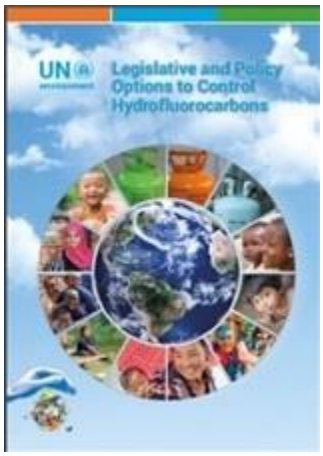
OzonAction Multimedia Video Application: Refrigeration and Air-conditioning Technician Video Series - Over 50,000 downloads to date - OzonAction has launched an exciting new application which hosts series of short instructional videos on techniques, safety and best practice for refrigeration and air-conditioning 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. 7, 2019

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
Fast action under the Montreal Protocol can limit growth of hydrofluorocarbons (HFCs), prevent 100 to 200 billion tonnes of CO_2-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

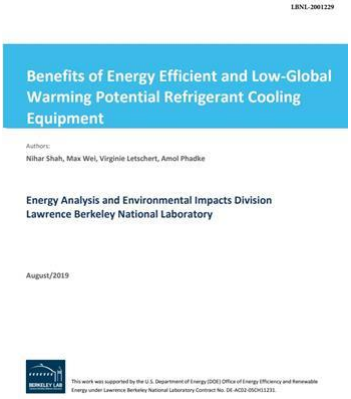
Impact of Standards on Hydrocarbon Refrigerants in Europe – Market research report. The market research report was realised for the EU-funded LIFE FRONT project. Amongst the main result of the market research:
• Current charge limits set in standards both restrict and obstruct the development of hydrocarbon 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.

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, 2006-20181994-2019 - 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. In particular, the report shows that in 2018, the consumption of ODS (an aggregated parameter that integrates imports, exports, production and destruction of ODS, except those for feedstock use) in the EU was negative (-1 505 metric tonnes), which means thatmore ODS were destroyed or exported than produced or imported. This was the case since 2010 with the exception of 2012. These negative values are the result of the phase-out according to Regulation (EC) No 1005/2009, which, in many aspects, goes further than the Montreal Protocol, in combination with rather high destruction rates and decreasing stocks. Companies in the EU have been consuming relatively small amounts of ODS 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



Events

2019

• Impact of EU F-Gas Regulation on Environment, Energy Consumption and Practical Implementation, Wednesday, 13 November 2019, 08:30 - 09:30 - Members Salon - European Parliament, Brussels - Belgium

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*

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.

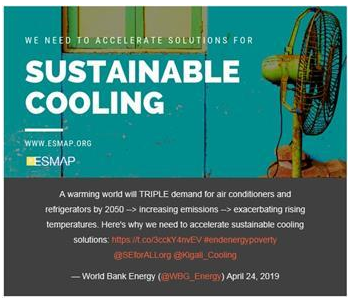
Enhanced content and functions
- Easily export references, citations and abstracts.
- Print, download or share articles with colleagues or peers.
- See which papers, published in Elsevier or elsewhere, have cited any selected article.
- Consult the research highlights overview of articles in volumes from 2012 onwards.

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

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 - 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.

Click here to access recent OzoNews Issues

Request a PDF of the current issue

Disclaimer:

The United Nations Environment Programme (UNEP), Law 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: Dr. Ezra Clark, OzonAction

If you wish to submit articles, invite new subscribers, please contact:

Samira Korban-de Gobert,

Tel. (+33) 1 44.37.14.52,

samira.degobert@un.org