See online

In this issue:

1. Kigali Amendment latest ratifications
2. Montreal Protocol talks further commitment to protect ozone layer and climate
3. Thirty years on, what is the Montreal Protocol doing to protect the ozone?
4. Twenty questions and answers about the ozone layer: 2018 update
5. Lower-GWP alternatives in stationary air conditioning: A compilation of case studies
6. Sustainable cooling for a healthy future
7. Clean up the cooling sector and save on energy bills
8. Governing complexity: How can the interplay of multilateral environmental agreements be harnessed for effective international market-based climate policy instruments?
9. The Cooling Imperative: Forecasting the size and source of future cooling demand - K-CEP Webinar
10. East African countries build their capacity and strengthen cooperation to combat illegal trade in ozone depleting substances
11. African ministers of the environment call for fast climate action on super pollutants
12. Cabinet approves amendments to environment and ozone regulations (Seychelles)
13. Agencies join forces in methyl bromide monitoring programme (New Zealand)
14. GrainCorp fined $40,000 for environmental breaches at Port Kembla terminal
15. To protect the ozone layer .. Oman to regulate maintenance of "air conditioning"
16. Disposal of ozone-depleting substances in Egyptian factories
17. Launching of 5th edition of Europe and Central Asia (ECA) Montreal Protocol Award for Customs and Enforcement Officers for 2019-2020
18. Fondoin participó en III Congreso Venacor para impulsar la refrigeración sostenible en el país
19. Quebec to invest $90M to recycle old fridges, air conditioners

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:

Argentina, 22 November 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. Montreal Protocol talks further commitment to protect ozone layer and climate

Speakers during the high-level segment of the 31st Meeting of the Parties (MOP 31) to the Montreal Protocol highlighted the interconnectedness of environmental challenges, punctuating a theme that was addressed in many respects during the week-long meeting.

MOP 31 was the first such meeting following the entry into force of the Kigali Amendment. This Amendment was agreed at MOP 28, in Kigali, Rwanda, in 2016. It amends the Protocol to set phase-down schedules for hydrofluorocarbons (HFCs), which are produced as replacements for chlorofluorocarbons (CFCs) and thus a result of ozone depleting substances (ODS) phase-out efforts. HFCs are not a threat to the ozone layer, but have a high global warming potential (GWP).

The Earth Negotiations Bulletin (ENB) analysis from MOP 31 highlights that "parties acknowledged the Kigali Amendment is the bridge between the ozone and climate regimes." In addition, the Amendment connects to issues of food security and sustainable agriculture, as well as to access to energy efficient technology.

These interconnections were discussed at MOP 31, which convened from 4-8 November 2019, in Rome, Italy, in relation to decisions on the terms of reference (ToR) for the study on the 2021-2023 replenishment of the Multilateral Fund (MLF), the unexpected emissions of trichlorofluoromethane (CFC-11), and the areas of focus for the 2022 quadrennial assessment reports of the Scientific Assessment Panel (SAP), the Technology and Economic Assessment Panel (TEAP) and the Environmental Effects Assessment Panel (EEAP). MOP 31 also addressed: review of the TEAP's ToR, composition, balance, fields of expertise, and workload; ongoing reported emissions of carbon tetrachloride (CTC); critical use exemptions (CUEs); and issues of non-compliance.

On unexpected CFC-11 emissions, the meeting concluded with a decision that provides for information gathering on illegal activities and illegal trade of banned substances and encourages intersessional discussion. The ENB analysis notes that, "many noted this will serve as a 'litmus test' of the Protocol's ability to effectively address and resolve compliance matters."

The topics for the quadrennial assessment reports of the three Assessment Panels will include the state of the ozone layer, the interactions between ozone and climate, the effects of changes in the ozone layer on human health and ecosystems, as well as alternative technologies to the controlled substances. These reports will be submitted by the end of 2022 for consideration by Parties.

In addition, Parties were invited to sign the Rome Declaration on the Contribution of the Montreal Protocol to Food Loss Reduction through Sustainable Cold Chain Management. The Declaration will remain open for signature up until the start of MOP 32 in November 2020. It highlights cold chain's key role in implementing the 2030 Agenda for Sustainable Development and the SDGs.

IISD Reporting Services, 19 November 2019, By: Lynn Wagner

3. Thirty years on, what is the Montreal Protocol doing to protect the ozone?

The Montreal Protocol to protect the Earth's ozone layer is to date the only United Nations environmental agreement to be ratified by every country in the world. It is also one of the most successful. With the parties to the Protocol having phased out 98 per cent of their ozone-depleting substances, they saved an estimated two million people from skin cancer every year.

Following the thirty-first meeting of the parties in Rome during 4–8 November, Stephanie Haysmith, the communications officer for the Ozone Secretariat, explained why the Montreal Protocol has been so successful and what lies ahead for the treaty.

The 2019 ozone hole is the smallest on record since its discovery. How does the ozone repair and how long will it take?

The Montreal Protocol has been successful in reducing ozone-depleting substances and reactive chlorine and bromine in the stratosphere. As a result, the ozone layer is showing the first signs of recovery. It is expected that the ozone layer will return to pre-1980s levels by the middle of the century and the Antarctic ozone hole by around 2060s. This is because once released, ozone-depleting substances stay in the atmosphere for many years and continue to cause damage. The 2019 hole is indeed the smallest since recording of its size began in 1982 but the ozone is also influenced by temperature shifts and dynamics in the atmosphere through climate change. In 2019, the stratosphere was particularly warm during the Antarctic winter and spring.

The Kigali Amendment, which came into force January 2019, requires countries to limit hydrofluorocarbons in refrigerators and air-conditioners by more than 80 percent. Yet, there is a growing demand for cooling. How can the two needs be met?

While there is a growing global demand for cooling systems for personal well-being and in the commercial sector, improving energy efficiency with low or zero global-warming-potential will be needed to meet needs while minimizing adverse impacts on climate and environment. Research and development have kept pace: equipment design has changed and improved with the ozone-depleting substances phase-out.

At the Rome meeting, parties were made aware of an unexpected increase in global emissions of trichlorofluoromethane, or CFC-11. Why is that, and what is being planned to address it?

The issue of unexpected emissions of CFC-11 was brought to the attention of the parties in 2018. Global emissions of CFC-11 had increased in the period after 2012. This unexpected trend suggests that there is illegal production and consumption of CFC-11. The exact sources of these emissions have yet to be found. The parties take this very seriously and a decision was made at the MOP30 [30th Meeting of the Parties to the Montreal Protocol] to cooperate in further scientific research. In addition, the parties will assess the mechanisms of monitoring for the Montreal Protocol and the Multilateral Fund.

What is meant by "a sustainable cold chain" and how does it reduce food loss?

A cold chain is a connected set of temperature-controlled facilities (pack houses, cold stores, refrigerated transportation, etc.) that ensures perishable foods maintain their freshness and quality while in transit. Access to cold chain allows local producers to link with high-value markets locally, nationally and internationally. By enabling perishable food commodities to be stored and transported in a temperature-controlled environment not only ensures quality and safety, but reduces overall food loss, while improving economic gains and increasing sustainability.

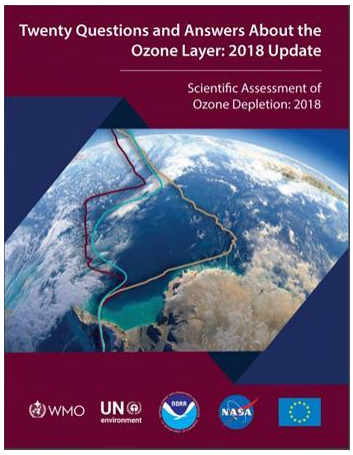
From an environmental perspective, it is important that increasing demand for cold chain is sustainable with increased use of green fuels, energy efficiency and low or zero global warming potential technologies.

What do you hope the Montreal Protocol will inspire?

The Montreal Protocol is one of the world's most successful environmental treaties and since its adoption, it has encouraged countries to commit to phasing out the production and consumption of ozone-depleting substances. The parties to the Protocol, on realizing that the alternatives, known as hydrofluorocarbons, are potent greenhouse gases contributing to global warming, agreed to address this. After protracted discussions, in 2016 the parties adopted the Kigali Amendment. The global partnership, stakeholder involvement and overall commitment of the countries lent to the success of the ozone protection regime. A successful hydrofluorocarbon phasedown is expected to avoid up to 0.4°C of global temperature rise by 2100, while continuing to protect the ozone layer.

UNEP, Ozone Secretariat, 15 November 2019

4. Twenty questions and answers about the ozone layer: 2018 update



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

The 2018 edition of the 20 Questions document is the fourth update of the original edition that appeared in the 2002 Assessment Report.

The motivation behind this scientific publication is to tell the story of ozone depletion, ozone-depleting substances and the success of the Montreal Protocol. The questions and answers format divides the narrative into topics that can be read and studied individually by the intended audience of specialists and non-specialists. The topics range from the most basic (e.g., What is ozone?) to more recent developments (e.g., the Kigali Amendment).

Each question begins with a short answer followed by a longer, more comprehensive answer. Figures enhance the narrative by illustrating key concepts and results.

This document is principally based on scientific results presented in the 2018 and earlier Assessment Reports and has been extensively reviewed by scientists and non-specialists to ensure quality and readability.

Lead Author: Ross J. Salawitch
Coauthors: David W. Fahey, Michaela I. Hegglin, Laura A. McBride, Walter R. Tribett, Sarah J. Doherty

20 Questions and Answers about the ozone layer-2018 | Figures

NOAA Earth System Research Laboratory (ESRL), November 2019

5. Lower-GWP alternatives in stationary air conditioning: A compilation of case studies

Stationary air conditioning systems are used to provide cooling for indoor occupants for their thermal comfort at a suitable indoor air quality. Within the cooling sector the stationary air conditioning sub-sector represents the largest and most rapidly growing area of HFC use. It is associated with significant indirect emissions of CO_2 due to electricity consumption, particularly in developing countries.

In order to encourage industry and government policymakers to implement the phase-down of HFCs in stationary air conditioning through the adoption of lower-GWP energy efficient refrigerants, the CCAC has developed this booklet of ten case studies from around the globe, which represents various countries, climates and alternative technologies.

This booklet can also serve as a reference guide for end-user and system purchasers on factors to consider when transitioning to lower-GWP air conditioning. While the case studies mainly discuss experiences relating to transitioning from HFCs to lower-GWP refrigerants, the information provided is also relevant for transitioning directly from HCFCs to such refrigerants.

With the aim of providing information on the successful adoption of a range of refrigerants, technologies and geographic locations, ten examples were selected from the case studies submitted. The selected case studies consider the energy efficiency benefits of the alternative system, as well as the cost, safety, availability and environmental impacts. Robust technical information was collected in the chosen case studies based on data provided by the source.

The case studies in this booklet discuss several applications in the stationary air conditioning sector. The applications include chillers of natural refrigerants and hydrofluoroolefins (HFOs) as well as split-units which use hydrocarbons (HCs) as the refrigerant. The technologies presented in these case studies are only some examples of the many available options for zero and lower GWP substances. The examples take into account design criteria such as system performance, environmental impact and cost. All these refrigerants still have many challenges that should be considered in the design, for example their flammability, toxicity, lower efficiency in some cases, and cost. Balancing these challenges using a consistent and comprehensive methodology across

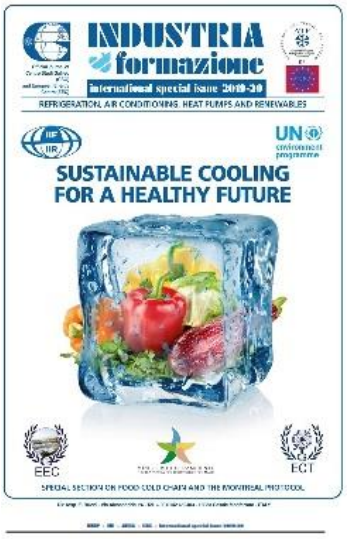
all refrigerants and system types is essential in assessing alternatives. To ensure that refrigerant emissions are reduced during the installation, operation, maintenance, decommissioning and disposal, two key parameters need to be provided. These parameters are: provide a good design for the cooling system and: train technical staff on good engineering practices to ensure the most adequate handling of the equipment during all phases of the air conditioning unit's lifecycle.

Future Needs for Cooling and Heating

It is important to transition to lower-GWP refrigerants today as the future need for cooling and heating is expected to significantly increase over the next decades . It is also crucial that the stationary air conditioning sector further improves the unit component designs; otherwise the direct and indirect emissions will proportionally increase with the cooling and heating demand.

Climate and Clean Air Coalition (CCAC), 2019

6. Sustainable cooling for a healthy future



In January this year, the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer entered into force. This historic amendment bought hydrofluorocarbons (HFCs) under the purview of the Protocol, committing countries to phase-down the production and consumption of these chemicals according to agreed schedules. While not ozone depleting, HFCs have high global warming potentials, of up to almost 15,000 times more powerful at warming the atmosphere than carbon dioxide.

So, the Montreal Protocol is set to achieve a significant contribution to combatting climate change, avoiding up to 0.4 °C of global temperature rise by the end of the century, thus contributing to the climate protection aspirations of the Paris Agreement.

This co-benefit of the Montreal Protocol is in addition to its widely recognised success in addressing global ozone depletion by phasing out 99 per cent of ozone-depleting substances (ODS) which were commonly used in refrigerators, air-conditioners, and other applications.

The most recent Scientific Assessment of Ozone Depletion indicates that as a result of the Montreal Protocol the ozone layer is forecast to recover by around 2060. This success is reflected in the theme of this year's World Ozone Day: "32 Years and Healing". The theme reinforces two very important aspects of the Montreal Protocol, one, that the treaty has demonstrated unprecedented international cooperation over three decades and two, that it has produced significant and measurable results.

While this success should justifiably be celebrated, the cooperation and commitment achieved needs to continue to be strengthened so as to grow, especially as the Protocol broadens its scope.

Along with the continuing commitments to phase out ODS and forthcoming commitments to phase down HFCs, there are huge associated opportunities for countries to consider in terms of adopting alternative technologies and refrigerants which can achieve considerable climate and energy efficiency benefits.

One very important sector with regards to refrigeration is the Food Cold Chain, which is critical to ensure food security and reduce food loss. The world produces enough food to feed the entire population, yet the poor availability, preservation and access to this food – often due to an imperfect or non-existent food cold chain – means that the current food systems are failing to fulfil societal, nutritional and environmental needs.

There are acute imbalances in availability, consumption and diets over the world. The Food and Agriculture Organisation estimates that to satisfy the demand of the world's growing and richer population – who seek more meat in their diet – by 2050, food production will have to increase by at least 60 per cent. However, this figure can be reduced by improving production efficiency, changing dietary trends and decreasing food losses and waste. Efficient and systematic food cold chains including

refrigerated storehouses, refrigerated transport, cold rooms, and domestic refrigerator-freezers can play a significant role in preventing food loss and waste.

It is therefore very apt that this edition of the International Special Issue focuses on the importance of Food Cold Chain for food production and food security. United Nations Environment Programme (UNEP) recognises that our work can only be effectively delivered through partnerships with countries and with other like-minded organisations and expert institutions. UNEP OzonAction is very pleased to once again partner with Centro Studi Galileo, the International Institute of Refrigeration, the Italian Refrigeration Association and the European Energy Centre to share key developments in refrigeration and air conditioning technology through this edition.

Information in this publication concerning technological advances and latest research which contributes to protecting the Earth's climate and stratospheric ozone layer, specifically technologies that avoid high global warming options and that are energy efficient will assist developing countries to better understand and make informed choices that will benefit their country and the global environment.

By continuing to work together, we can positively contribute to climate and ozone protection for generations to come.

Elizabeth Maruma Mrema, Director, Law Division, United Nations Environment Programme, Foreword in "Industria & Formazione, International Special Issue 2019-2020", page 5

Centro Studi Galileo, November 2019

7. Clean up the cooling sector and save on energy bills

Keeping cool in a warming world just became a little easier, thanks to the Cool Technologies sustainable cooling database.

As temperatures rise, refrigeration and air-conditioning systems are vital to help keep people cool and products chilled or frozen. Yet it is ironic that refrigerant gases and the energy used in current cooling equipment are significant contributors to two global crises – climate change and ozone layer depletion.

To help combat these, the Environmental Investigation Agency (EIA) and Greenpeace today relaunch Cool Technologies [www.cooltechnologies.org], a database showcasing clean cooling technologies as alternatives to the climate-damaging hydrochlorofluorocarbon (HCFC) and hydrofluorocarbon (HFC) systems used at present.

Cool Technologies features commercially available equipment using natural refrigerants (hydrocarbons, carbon dioxide, ammonia, water and air) as well as Not-In-Kind technologies (which do not use vapour compression cycles). It also features case studies of companies deploying these technologies and enjoying the benefits of the greater energy efficiency that many of these systems boast.

"Sustainable cooling is about avoiding obsolete, inefficient technologies which are harmful to the environment. By understanding what Cool Technologies are available and working well for others, manufacturers and businesses can make the best choice for the future." said Fionnuala Walravens, Senior Climate Campaigner at EIA.

The website, targeted primarily at business in the developing world, will also help raise awareness of and build confidence in HFC-free alternatives for clean cooling worldwide. It is being relaunched to coincide with the 31st Meeting of the Parties to the Montreal Protocol in Rome, Italy

"As the global demand for air-conditioning and refrigeration grows, natural refrigerants are emerging as sustainable solutions; saving the planet from billions of tonnes of greenhouse gases and helping to keep global warming below 1.5°C," said Paula Tejón Carbajal, Global Campaign Strategist at Greenpeace International.

Conventional refrigeration and air-conditioning systems have relied on the use of F-gases for the past few decades. F-gases are super greenhouse gases, thousands of times more damaging than carbon dioxide. HFCs, the most recent generation of F-gases, are now being phased out by the Montreal Protocol.

"Going HFC-free is an opportunity for businesses across the globe to future proof their investments, clean up the cooling sector and save on energy bills," added Walravens.

Contacts:
Fionnuala Walravens, EIA Senior Climate Campaigner,
Paul Newman, EIA Press & Communications Officer

Environmental Investigation Agency (EIA), November 2019

8. Governing complexity: How can the interplay of multilateral environmental agreements be harnessed for effective international market-based climate policy instruments?

Abstract
Major new multilateral environmental agreements (MEAs) have entered into force in 2016, including the Paris Agreement (PA) under the United Nations Framework Convention on Climate Change (UNFCCC) with nationally determined contributions (NDCs) for greenhouse gas (GHG) reduction, the Kigali Amendment (KA) to the Montreal Protocol with a phase-down schedule for HFC production and use in all countries as well as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) under the International Civil Aviation Organization, an offset mechanism for GHG emissions.

Regarding climate change mitigation, these MEAs are implicitly and explicitly linked to each other.

However, the interaction effects between them have not yet been studied. We apply document analysis to assess the following question: how does the MEA interplay impact the scope and effectiveness of international market-based climate policy instruments defined in Article 6 of the PA (Paris Mechanisms) regarding NDC achievement?

The Paris Mechanisms can generate early reductions in HFCs that lower the KA baseline and thus the entire phase-down schedule, thereby generating long-term GHG mitigation.

Reduction in HFC-23—a large, controversial source of carbon credits under the Kyoto Protocol's Clean Development Mechanism (CDM)—is now mandated through the KA and thus no longer available for international market mechanisms.

If it accepts CDM credits predating 2020, CORSIA will not generate demand for emission units generated by the Article 6 mechanisms and thus not impact their effectiveness. Otherwise, CORSIA demand for Article 6 credits enhances effectiveness, provided that 'double counting' of credits is prevented through corresponding adjustments.

Springer Nature - International Environmental Agreements: Politics, Law and Economics, Volume 19, Issue 4-5, October 2019

9. The Cooling Imperative: Forecasting the size and source of future cooling demand - K-CEP Webinar

Monday, 9 December 2019
08:00 PT | 16:00 GMT | 17:00 CET

Early access to a new report from The Economist Intelligence Unit

Commissioned by the Kigali Cooling Efficiency Programme (K-CEP), 'The Cooling Imperative: Forecasting the size and source of future cooling demand' quantifies the need to transition to more efficient, climate-friendly cooling, and maps out what this transition could look like.

Ahead of the report launch, the EIU will be hosting a webinar to present the report's approach and headline findings. Driven by climate change, urbanisation and income growth, demand for cooling - refrigeration and air conditioning - is on a rapid growth trend.

In this new report it is estimated that 4.8bn new units of cooling equipment will be sold globally between 2019-2030. These cooling technologies, and broader cooling use, are a substantial and growing contributor to climate change. The report highlights the urgent steps that must be taken to avoid the need for cooling, shift to cooling with lower emissions, improve cooling efficiency and protect those most vulnerable to a lack of cooling.

Join the webinar on Monday 9 December 2019 16:00 GMT / 17:00 CET / 08:00 PST to learn about the scale and nature of the challenge and to debate how companies can best move to more efficient, climate-friendly cooling.

Sign up

K-CEP, November 2019

Africa

10. East African countries build their capacity and strengthen cooperation to combat illegal trade in ozone depleting substances

20-22 November 2019, Kampala, Uganda, Today saw the close of a three-day twinning workshop and border dialogues for National Ozone Officers and Customs officials from countries of the East African Region – Africa Anglophone Network. The workshop was organised by the United Nations Environment Programme (UNEP) OzonAction in collaboration with the Government of Uganda, National Environment Management Authority (NEMA). This practical and focused workshop was honoured to have the participation of the Executive Director of NEMA, Dr. Tom O. Okurut and Milton Rahuka, Manager Customs, Uganda Revenue Authority who opened the meeting, along with Mr Patrick Salifu, Regional Network Coordinator, UNEP Africa Office.

The workshop had a varied agenda consisting of presentations, discussions, practical demonstrations and working groups as well as interactive exercises to consider overall challenges in the region and good practices on ODS trade controls. The meeting also focused on the management of seized and unwanted ODS, facilitating legal trade and combatting illegal trade of environmentally sensitive commodities. A significant portion of the workshop was dedicated to sharing of enforcement mechanisms, cooperation activities and available information materials and resources. The final day of the workshop was dedicated to bilateral discussions, which allowed countries, in a confidential setting, to examine their import-export statistics and compare with trading partners and explore the differences in reported in import-export data. A parallel session on ODS identification practical exercises with refrigerant identifiers and demonstration of OzonAction smartphone applications was also conducted.

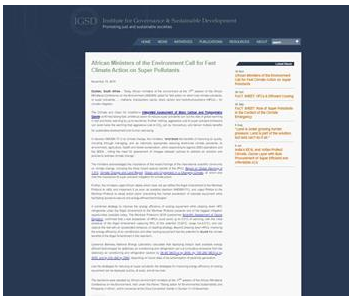
The workshop was part of the 2019 work plan of UN Environment Programme Compliance Assistance Programme (CAP) to support countries in implementing their Montreal Protocol commitments.

Contact:
Patrick Salifu, Regional Network Coordinator, Anglophone Africa

Ezra Clark, Capacity Building Manager

UNEP, OzonAction, November 2019

11. African ministers of the environment call for fast climate action on super pollutants



Durban, South Africa— Today African ministers of the environment at the 17th session of the African Ministerial Conference on the Environment (AMCEN) called for fast action on short lived climate pollutants, or super pollutants, — methane, tropospheric ozone, black carbon and hydrofluorocarbons (HFCs)— for climate mitigation.

The Climate and Clean Air Coalition's Integrated Assessment of Black Carbon and Tropospheric Ozone confirmed taking fast, ambitious action to reduce super pollutants can cut the rate of global warming in half and Arctic warming by up to two-thirds. Further nothing, aggressive cuts to super pollutant emissions can avoid twice the warming that aggressive cuts to CO_2 can by mid-century, and deliver multiple benefits for sustainable development and human well-being.

In decision AMCEN 17/ 2 on climate change, the ministers, "emphasize the benefits of improving air quality, including through managing, and as nationally appropriate reducing short-lived climate pollutants, to environment, agriculture, health and forest conservation, while responding to agenda 2063 aspirations and the SDGs , noting the need for assessment of linkages between policies to address air pollution and policies to address climate change."

The ministers acknowledged the importance of the recent findings of the international scientific community on climate change, including the three recent special reports of the IPCC, Report on Global Warming of 1.5°C, Climate Change and Land Report, Ocean and Cryosphere in a Changing Climate, all which also note the importance of super pollutant mitigation for climate action.

Further, the ministers urged African states which have not yet ratified the Kigali Amendment to the Montreal Protocol to ratify and implement it as soon as possible (decision AMCEN17/1), and urged Parties to the Montreal Protocol to adopt action plans "preventing the market penetration of obsolete equipment while facilitating access to secure and energy-efficient technologies."

A combined strategy to improve the energy efficiency of cooling equipment while phasing down HFC refrigerants under the Kigali Amendment to the Montreal Protocol presents one of the biggest mitigation opportunities available today. The Montreal Protocol's 2018 quadrennial Scientific Assessment of Ozone Depletion, confirmed that a fast phasedown of HFCs could avoid up to 0.5°C of warming, with the initial schedule of the Kigali Amendment capturing 90% of this potential (0.44°C; range 0.4-0.5°C), and can capture the rest with an accelerated schedule, or leapfrog strategy. Beyond phasing down HFCs, improving the energy efficiency of air conditioners and other cooling equipment has the potential to double the climate benefits of the Kigali Amendment in the near-term.

Lawrence Berkeley National Energy Laboratory calculates that deploying today's best available energy efficient technologies for stationary air conditioning and refrigeration can cut cumulative emissions from the stationary air conditioning and refrigeration sectors by 38–60 $GtCO_2e$ by 2030, by 130–260 $GtCO_2e$ by 2050, and by 210–460 by 2060, depending on future rates of de-carbonization of electricity generation.

Like the strategies for reducing all super pollutants, the strategies for improving energy efficiency of cooling equipment can be deployed quickly, at scale, and at low cost.

The decisions were adopted by Africa's environment ministers at the 17th session of the African Ministerial Conference on the Environment, held under the theme "Taking action for Environmental Sustainability and Prosperity in Africa", which convened at the Olive Convention Center in Durban 11-15 November.

Institute for Governance & Sustainable Development (IGSD), 15 November 2019

12. Cabinet approves amendments to environment and ozone regulations (Seychelles)

Ms Chang-Waye (Photo: Joena Meme)

Cabinet approves amendments to environment and ozone regulations

Cabinet last week approved six proposed amendments to the Environment Protection (Ozone) Regulations 2010 to incorporate provisions of the Kigali Amendments to the Montreal Protocol which Seychelles ratified on August 18 this year.

The proposed amendments, most of which are set to take effect as from January 1, 2020, aims to bring the country up to par with the requirements of the Kigali amendments to the Montreal Protocol, towards the phase-down of hydrofluorocarbons (HFCs) by cutting their production and consumption, with a goal to achieve over 80 percent reduction in global consumption by 2047.

The first approved amendment is for the inclusion of Annex F group I and II gases of the Kigali Amendment, including refrigerants used in air-conditioning units, fridges and cooling equipment in the revised law on account that such gasses still contribute towards global warming, despite not having the ozone-depleting effects. As per the Kigali Amendment, member states are required to destroy Annex Group II HFC gasses in line with timelines and processes set out in Article 2J and Article 5.

According to senior ozone officer at the Ministry of Environment, Energy and Climate Change (MECC), Inese Chang-Waye, cabinet also approved the introduction of hydrocarbon and ammonia, natural refrigerants and that do not cause ozone depletion or global warming, along with standards to regulate their use.

“To introduce it, we need to have standards and monitoring to avoid any accidents since hydrocarbon is flammable and if you do not know how to use it, it can cause explosions while ammonia is toxic and if it is not being monitored, it can get released into the atmosphere and can be toxic to human health,” Ms Chang-Waye noted.

The MEECC is working closely with the National Bureau of Standards (NBS) to establish national standard for the use of such gases. Currently, there are factories that make use of ammonia, but they have their own standards which they abide by. A national standard is expected to be enforced by the first quarter of 2020.

Asides from standards to regulate the use of certain gases, a certification and classification mechanism is to be introduced for all practising local and foreign refrigerant technicians, to ensure that they are complying with the laws and are providing services that are up to the expected standard. Technicians will be required to join associations and will be classified according to the type of service they can offer with categorisations for those equipped to work on domestic equipment, commercial equipment and others on central systems.

As for foreign technicians, MEECC is working with the Department of Immigration and the Department of Employment to establish a system by which the Ministry will be informed when foreign nationals are recruited as technicians. The applicants’ certification will be verified by the ministry and subsequently, they will be required to sit an assessment to determine whether they meet the standards and can carry out the work to a satisfactory level.

As the country works towards achieving the provisions set out by the Kigali Amendments and Montreal Protocol, MEECC is calling for all new buildings, to use equipment with less than 100 Global Warming Potential (GWP). Such a requirement is in line with the legal requirements of the Kigali Phase down schedule to commence in 2021.

“As of January 2020, all buildings for which an Environmental Impact Assessment (EIA), will have to as part of their EIA submit their proposed cooling system and will be required to remain below the 1000 GWP limit,” Ms Chang-Waye stated, noting that buildings with existing cooling systems will not be affected by the new requirement, until the need to replace such equipment arises.

Furthermore, the approved amendment is calling for an environmental levy to be introduced for equipment and refrigeration gasses. As per the amendment, a 5 percent levy will apply for equipment and gases between 100-2000 GWP, an 8 percent levy on equipment and gases between 2000 to 3000 GWP and 10 percent on 3000+ GWP, in addition to Value-Added Tax (VAT). The levy is to be collected by the Customs Department.

As for equipment and gases with zero ozone depleting potential, cabinet approved for a VAT exemption for equipment not considered a threat to the environment and ozone. The law currently applies ad makes VAT exceptions for energy efficient equipment but with the approved amendment, a clause is to be inserted into Paragraph 17 of the first schedule to allow such equipment and gas with zero ozone depleting potential and very low GWP of under 100 to also benefit from VAT exemptions.

More details will be given to the public, contractors, importers and interested stakeholders at a consultative meeting to be held on November 19 from 8.30 am at the STC conference hall.

Seychelles Nation, 5 November 2019, By: Laura Pillay

Asia Pacific

13. Agencies join forces in methyl bromide monitoring programme (New Zealand)

Plans are being put in place to increase methyl bromide monitoring following a theoretical modelling report about how the log fumigant disperses into the environment after use.

This is additional monitoring, over and above the routine monitoring that industry is required to carry out every time methyl bromide fumigation occurs.

The mathematical modelling of operations at the Port of Tauranga was commissioned by the Environmental Protection Authority (EPA) as part of a modified reassessment currently underway to review the rules around methyl bromide use.

This modified reassessment is a statutory process where an independent decision-making committee considers evidence in relation to the way methyl bromide is used. The additional monitoring, to be carried out by WorkSafe, will feed into that process.

The Ministry of Health is maintaining a watching brief on the monitoring programme and stresses there is no immediate public health concern. [...]

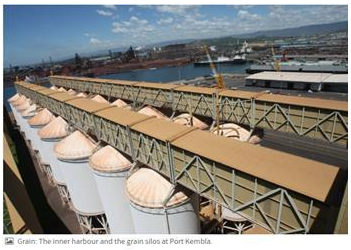
Data from the tests will fill the gap between what the modelling reflects and what can be detected in the air; it will track the chemical's dispersal patterns and concentration levels. This additional data will then be considered by the EPA Decision-making Committee which is responsible for deciding if changes are needed to the rules around methyl bromide use.

The mathematical modelling report, subsequent peer review and all other related information being put forward as evidence to inform the modified reassessment of methyl bromide is publicly available on the EPA's website.

Today the EPA's Decision-making Committee considering the modified reassessment of methyl bromide announced the public hearings planned for December will be deferred to the new year so that this additional monitoring data can be taken into account.

Scoop, 18 November 2019

14. GrainCorp fined $40,000 for environmental breaches at Port Kembla terminal


Grain: The inner harbour and the grain silos at Port Kembla.

GrainCorp has been fined more than $40,000 for breaching its environmental protection licence at its Port Kembla Grain Terminal.

GrainCorp was prosecuted by the [New South Wales] NSW Environment Protection Authority for failing to carry out activities in a competent manner by incorrectly calculating and recording the emissions of fumigation chemicals used to treat grain.

The company pleaded guilty in the Land and Environment Court to the breaches between 2016 and 2018.

Regional Manager Operations Illawarra Peter Bloem said the use of fumigation chemicals by GrainCorp requires vigilant management to ensure the environment and human health is protected at all times.

"The chemicals used to fumigate grain (phosphine and methyl bromide) can be hazardous to plants, animals and people and for this reason are subject to strict regulation by the EPA," Mr Bloem said.

"The enforcement action is a reflection of the risks posed by these chemicals and the need to carry out activities in a competent manner at all times when using them".

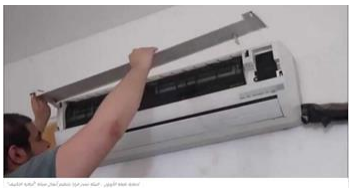
In addition to the $40,200 penalty, GrainCorp was ordered by the Court to pay the EPA's legal costs.

The company was also ordered to publish details of the conviction and offence in various newspapers and on its website and social media pages. [...]

Mercury News, October 2019

West Asia

15. To protect the ozone layer .. Oman to regulate maintenance of "air conditioning"



لحماية طبقة الأوزون .. البيئة تصدر قرارا بتنظيم أعمال صيانة أجهزة التكييف

من أجل حمايــة طبقــة الأوزون، أصدرت وزارة البيئـة والشـؤون المناخيــة قـرار وزاري رقـم 2019/59 بلائحة تنظيم ترخيص الشؤون المناخية لمنشآت مزاولة أعمال صيانة وإصلاح وخدمة أجهزة التبريد والتكييف والتعامل مع وسائط التبريد

وذلك استنـــادا إلـــى المرســـوم السلطانـــي رقـــم 98/73 بالموافقـــة علـــى انضمـــام سلطنـــة عمـــان إلـــى اتفاقية فيينا لحمايــة طبقــة الأوزون وإلى بروتوكــول مونتريــال بشـأن المــواد المستنفدة لطبقــة الأوزون ، وإلى ، وإلى المرسوم السلطاني رقم 2001/قانون حماية البيئة ومكافحة التلوث الصادر بالمرسوم السلطاني رقم 114 2004/106 بالتصديق على تعديـــل مونتريـــال 1997 وبكين 1999 على بروتوكول مونتريال حول المواد المستنفدة لطبقة الأوزون ، وإلى لائحة حماية طبقة الأوزون الصادرة بالقرار الوزاري رقم 2013/107 ، وإلى موافقة وزارة المالية ، وبناء على ما تقتضيه المصلحة العامة

[...]

Abu Dhabi News, 1 December 2019

16. Disposal of ozone-depleting substances in Egyptian factories

الدكتور عزت لويس رئيس وحدة الأوزون بالبيئة: مصر حصلت على منح وليست قروضا لتنفيذ برنامج الحماية.. التخلص من العديد من المواد المستنفذة لـ«الأوزون » داخل المصانع المصرية

أكد الدكتور عزت لويس، رئيس وحدة الأوزون بجهاز شئون البيئة، أنه تم التخلص من العديد من المواد المستنفذة للأوزون داخل المصانع المصرية، وتم استبدالها بمواد أخرى نظيفة تحمى طبقة الأوزون، مؤكدا أن هناك تجاوبا من الصناعة المصرية نحو التوافق فنيا مع التكنولوجيات والمعدات لحماية الأوزون، مشيرا إلى أن الدولة متمثلة في وزارة البيئة لم تحمل المصانع العبء المالى من أجل ذلك

وقال الدكتور "لويس" إن هناك تعاون كامل ما بين الخبراء الفنيين وأصحاب المصانع، حيث يتم إجراء دراسات على المصنع والمعدات الصناعية به، والتكنولوجيات التى يستخدمها ومدى احتياجه لكى يتوافق بيئيا ورفيق بالمناخ أيضا

وكشف «لويس» أن مصر استفادت من الصندوق والمنح لدى بروتوكول مونتريال، ويدعى «الصندوق متعدد الأطراف»، مشيرا إلى أن الصندوق يتحكم في آلية مالية تتمثل في إلزام الدول الصناعية التى ابتدعت تلك التكنولوجيات التى صدرتها لدول العالم، وخاصة منها النامية وتعمل على استنفاد الأوزون، ويعمل الصندوق على تمويل إنشاء مشروعات بتلك الدول وتستبدل التكنولوجيات القديمة بأخرى حديثة. مؤكدا أن الصناعة لم تتحمل أي أعباء مالية، لأنهم يحصلون على «منح وليست قروض» من بروتوكول مونتريال لتوفيق أوضاعهم البيئية، واستخدام مواد صديقة للأوزون

ولفت إلى وجود تعديلات على بروتوكول مونتريال، آخرهم تعديل يسمى «تعديل كيجالي»، وهو يتمثل في التقليل من استخدام المواد الهيدورفلوركربونية، مشيرا إلى أن هذه المواد تستخدم بشكل كبير في مصانع التكييف والتبريد، ولم تضر طبقة الأوزون ولكنها تزيد من الاحتباس الحرارى؛ وقال إن مصر وقعت على تعديل «كيجالي» وتستكمل حاليا تنفيذ الإجراءات

[...]

AlBawaba News, 28 November 2019

Europe & Central Asia

17. 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

Latin America and Caribbean

18. Fondoin participó en III Congreso Venacor para impulsar la refrigeración sostenible en el país

Prensa Fondoin (13/11/2019) Durante los días 7, 8 y 9 de Noviembre del año 2019, se celebró la tercera edición del Congreso Venacor, en las instalaciones del Hotel Meliá Caracas, ubicado en el municipio Libertador de la Capital venezolana; donde expertos presentaron tópicos referentes a las áreas de la refrigeración, ventilación y aire acondicionado, en todos los ámbitos productivos del país.

El encuentro reunió a los principales representantes del frío, con el objetivo de debatir sobre las nuevas tecnologías y servicios en la industria de la climatización y contó con la presencia de 50 empresas del sector de la cadena del frío, talleres técnicos asociados con las áreas del enfriamiento y se impartieron más de 30 conferencias.

Antonio Maceira, presidente de la Cámara Venezolana de la Ventilación, Aire Acondicionado, Refrigeración y Afines (Venacor), agradeció la masiva participación al congreso destacando que, “se realizaron talleres sobre sistemas de tuberías, fallas en los sistemas de refrigeración, áreas mecánicas de aires acondicionados, controles de humedad, Normas Covenin, el uso de refrigerantes en Venezuela, tecnologías digitales en materia de refrigeración entre otros aspectos de interés”, además de la exhibición de las diferentes empresas y aliados de la refrigeración.

CAMINO HACIA LA ELIMINACIÓN DE LAS SAO Y LOS HFC

Venezuela, por ser un país firmante del Protocolo de Montreal, posee la responsabilidad de impulsar una refrigeración amigable con el planeta, orientada a una disminución y transición sostenible de las Sustancias que Agotan la Capa de Ozono (SAO).

La Fundación Fondo Venezolano de Reconversión Industrial y Tecnológica (Fondoin), impulsa para el año 2020; el uso seguro de los Hidrocarburos como refrigerantes alternativos, capacitación de los técnicos del frío en Buenas Prácticas en Refrigeración y acciones que vayan hacia la reducción del consumo de los gases refrigerantes fluorados SAO Y HFC

Por ello, se emprenden líneas de acción para promover y demostrar soluciones respetuosas con el clima, a través del apoyo y financiamiento de la Unión Europea, el Ministerio Federal Alemán de Cooperación Económica y Desarrollo (BMZ), ejecutado por la Deutsche Geseellschaft fur Internationale Zusammenarbeit (GIZ), con el apoyo de las subvenciones de la Organización de las Naciones Unidas para el Desarrollo Industrial (ONUDI)

ALIANZA INTERINSTITUCIONAL

En el congreso se destacó la participación de la asesor técnico de la fundación Carmelina Flores, quien explicó el proyecto de Normas COVENIN para refrigerantes fluorados y naturales, el cual brindará a los técnicos del frío los requisitos de seguridad para la instalación, y mantenimiento de los equipos, así como también indicará las pautas para el manejo de gases inflamables.

Asimismo, las representantes de Fondoin, Hazel Tovar y Betilde Urbina expusieron los beneficios de utilizar el Hidrocarburo (HC) como refrigerante alternativo, haciendo énfasis en el proyecto de reconversión realizado en el Hospital Materno Infantil Dr. Pastor Oropeza (HMIC), donde se rediseñó e instaló un equipo Chiller a través de la sustitución del compresor por uno de condiciones especiales para HC.

En simultáneo, se atendieron a los asistentes del punto informativo donde el consultor de la Organización de Naciones Unidas para el Desarrollo Industrial (ONUDI), Edgar Oropeza y el personal de la fundación, brindaron capacitación en materia de cursos en Buenas Prácticas en Refrigeración (BPR) y suministraron información referente a los Kit para emplear las BPR.

En la visita se ejecutaron prácticas con el banco de prueba, a base de Propano y una breve explicación de la maquina recicladora de gases refrigerantes.

El ciclo de ponencias culminó con el foro “Proyecto Control de Fugas 2019”, que contó con la participación de especialistas de ONUDI, Venacor y personal de Fondoin, indicando que próximamente arrancará el “Programa Cero Fugas” en tres automercados de país, con la intención de reducir el uso de refrigerantes en las grandes cadenas de consumidores.

CIERRE

El Congreso Venacor 2019, contó con la participación de destacados expositores de América y fue auspiciado por la Organización de las Naciones Unidas para el Desarrollo Industrial (ONUDI) y la Federación de Asociaciones Iberoamericanas de Aire Acondicionado y Refrigeración (FAIAR).

Durante el evento, se entregó material impreso y digital para difundir sobre la eliminación sostenible de los refrigerantes fluorados del proyecto SPODS, bolsas ecológicas con el fin de contribuir con la reducción del consumo de plástico en el país y gorras fomentando el cuidado de la piel y los ojos por la incidencia de los rayos ultravioletas en el planeta producto del agotamiento de la capa de ozono.

Fundación Fondo Venezolano de Reconversión Industrial y Tecnológica (FONDOIN), 13 de noviembre de 2019

19. Quebec to invest $90M to recycle old fridges, air conditioners

The government says if the province can successfully recycle the majority of old fridges, air conditioners and other large appliances, there will be a decrease of 200,000 tonnes per year in greenhouse gas emissions. (Submitted by Mark Miller)

New regulations will put onus on businesses to recycle large appliances

About 90 per cent of major appliances like fridges and air conditioners in Quebec are disposed of improperly, says Mathieu Filion, the general manager of a recycling plant in Bécancour.

"[Appliances] contain lots of chemical products, which cause lots of problems to do with climate change and greenhouse gases," Filion said.

Starting Dec. 5, 2020, Quebec manufacturers will be responsible for recycling major appliances under a new system, Environment Minister Benoit Charette announced Monday.

The measures are part of an amendment to the province's environmental regulations that will include manufacturers that produce major appliances.

The province is investing $90 million from 2020 to 2031 to fund the program.

"It will be a new system that will that will lead to a better environmental impact for everyone," Filion told CBC Montreal's Daybreak.

Refrigerant gases and foam blowing agents are some of the gases that could be released, which can be up to a thousand times worse than carbon dioxide, Filion explained.

"Every appliance that's disposed of improperly can release those chemicals into the atmosphere."

Filion said the increase in plastics, gases, oil and electronics in the world comes with a responsibility to ensure the chemicals are being properly disposed of.

"This is a very, very strong leadership that the government is taking now. It's a first in North America ... and we hope that it will have a snowball effect on the rest of the country."

The CAQ government says the measures could result in a drop of more than 200,000 tonnes per year in greenhouse gas emissions — the equivalent of more than 60,000 cars.

CBC News, 5 November 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

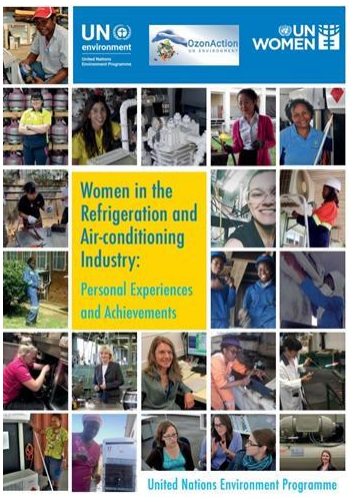
- 83rd meeting of the Executive Committee
- 82nd meeting of the Executive Committee

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



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

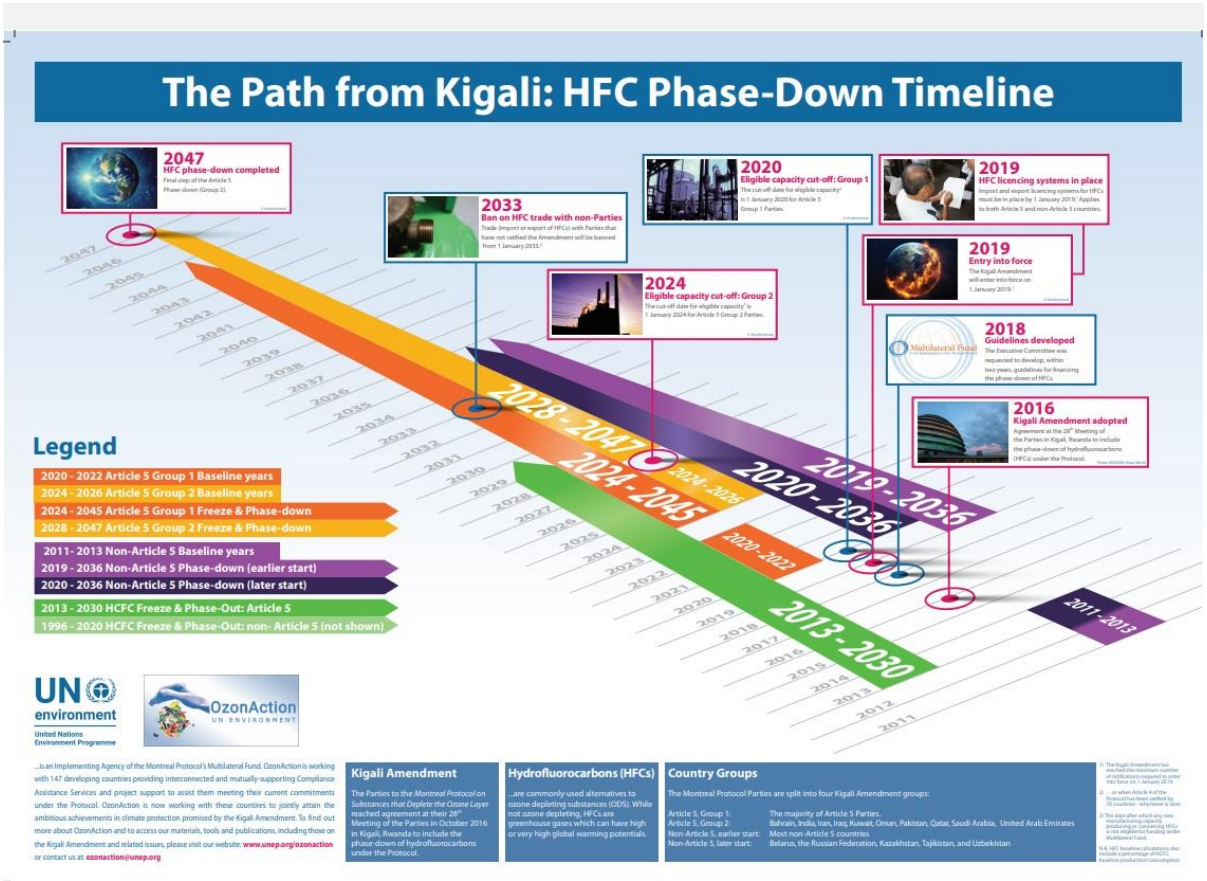
Contact: Dr. Ezra Clark, UNEP, OzonAction

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.

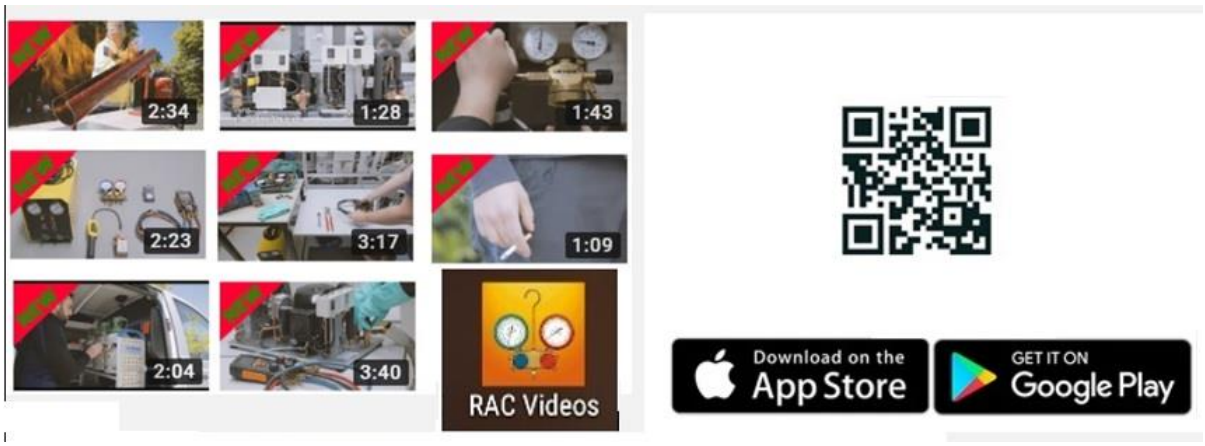
It is intended for use by Montreal Protocol National Ozone Officers, Customs and Enforcement Officers as well as technicians involved in the servicing and maintenance of refrigeration and air conditioning systems.

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, 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.

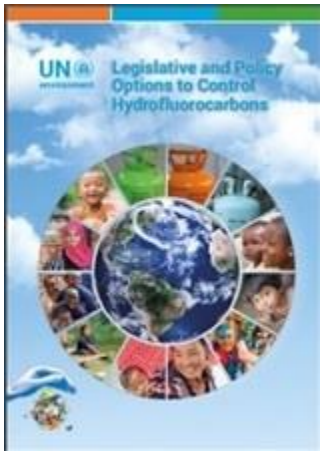
OzonAction Multimedia Video Application: Refrigeration and Air-conditioning Technician Video Series - Over 50,000 downloads to date - OzonAction has launched an exciting new application which hosts series of short instructional videos on techniques, safety and best practice for refrigeration and air-conditioning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



Reading

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

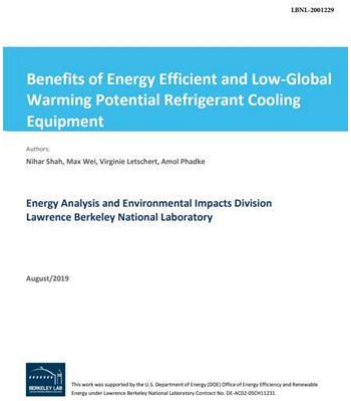
Impact of Standards on Hydrocarbon Refrigerants in Europe – Market research report. The market research report was realised for the EU-funded LIFE FRONT project. Amongst the main result of the market research:
• Current charge limits set in standards both restrict and obstruct the development of hydrocarbon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



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:
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Enhanced content and functions
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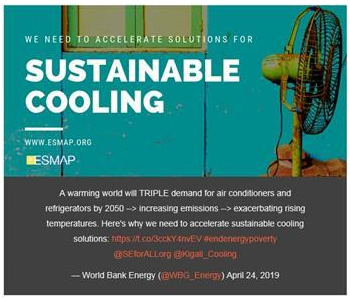
- Consult the research highlights overview of articles in volumes from 2012 onwards.
To access this new service, click “activate my e-IJR subscription now” and follow the instructions.

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.



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Multilateral Fund for the Implementation of the Montreal Protocol

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