

# OzoNews

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

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## GLOBAL



### 1. Kigali Amendment latest ratifications

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

**Indonesia, 14 December 2022**

**Venezuela (Bolivarian Republic of), 5 December 2022**

At the Twenty-Eighth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, held in Kigali from 10 to 15 October 2016, the Parties adopted, in accordance with the procedure laid down in paragraph 4 of article 9 of

the 1985 Vienna Convention for the Protection of the Ozone Layer, a further amendment to the Montreal Protocol as set out in Annex I to the report of the Twenty-Eighth Meeting of the Parties (Decision XXVIII/1).

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

## United Nations Treaty Collection

Image: UN Treaty Collection website

## 2. The Multilateral Fund in Action 2022 - Year-end Update

### Chair's statement

It has been my pleasure to serve the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, as its Chair for 2022. It has been my privilege to serve the Executive Committee as the

Multilateral Fund is a unique and very successful financial mechanism established for the specific purpose of assisting countries to comply with the Montreal Protocol and its amendments.

2022 is the first year where we met again in person after three challenging years of the pandemic and online meetings. I am proud of the progress we have made with the cost funding guidelines for the implementation of the Kigali Amendment, with the decision on strengthening even more the capacity of the developing countries to implement the plans at the national level, the discussions on energy efficiency while phasing down HFCs, and on the disposal, with the projects we have approved, and with the preparatory funding we have allocated for the years to come. We are closer to implementing the Kigali Amendment, to protect the ozone layer and to mitigate climate warming.

This annual newsletter gives a snapshot of the progress we all made together, and we are all so proud of. I would like to thank all members of the Executive Committee, the Vice Chair, and all colleagues from the Multilateral Fund Secretariat for their dedication and commitment to our common cause. I would also like to wish the best to the incoming Chair, my colleague Annie Gabriel, from Australia to continue with our work in 2023.

*Hasan Ali Mubarak, Chair of the Multilateral Fund Secretariat*

### Year in Review



The Executive Committee held their 90th and 91st meetings in 2022. Bilateral and implementing agencies submitted a total of 233 funding requests for tranches of approved multiyear agreements, projects and activities amounting to US \$113,003,310 including agency support costs, where applicable. This resulted in the approval of 218 projects for 95 countries, for a total funding of US \$101,068,390. These approvals included 106 projects related to HCFC phase out, 58 HFC-related projects, and 54 projects of other categories.



This year also saw tremendous progress in the discussion of various policy issues facing the Executive Committee. Agreements were reached on an increase in the funding levels for institutional strengthening projects, and a funding window for the preparation of national inventories of used and unwanted controlled substances.

In an important boost of support for energy efficiency activities agreed as part of the Kigali Amendment, the Executive Committee established criteria and a funding window for pilot projects to maintain and/or enhance energy efficiency in the context of HFC phase down to start at the 93<sup>rd</sup> meeting.

The Executive Committee ended 2022 having considered the first Kigali HFC implementation plan (KIP), and the promise of a new year that is expected to bring closer collaboration on outstanding policy issues, especially on HFC cost guidelines.

[2022 MLF year-end message and Annual newsletter](#), December 2022

*Image: Multilateral Fund Secretariat*



### 3. How the world mended the ozone layer but still struggles with climate change

The Montreal Protocol came into force 34 years ago and has largely ended the release of ozone-depleting substances

The recent Cop27 summit in Egypt highlighted the difficulties the world has in dealing with what is increasingly being described as a climate emergency.

While agreement was struck on financial assistance to help poorer nations deal with the effects of

climate change, there was concern about the lack of progress in limiting greenhouse gas emissions.

The world's continuing struggles to get a grip on climate change – just as its effects become increasingly apparent – is a stark contrast to the action taken to protect the ozone layer.

This protective shield in the stratosphere (the area of the atmosphere above the troposphere, which stretches up 12 kilometres from ground level) filters the sun's ultraviolet rays, but a hole over the Antarctic became evident in the early 1980s.

January 1 marks the anniversary of the coming into force, in 1989, of the Montreal Protocol, the universally ratified treaty that provided a framework to significantly cut the release of ozone-depleting substances. The protocol has had a transformative effect.

"I think it's been massively effective. It's been a huge success," says John Pyle, co-chair of the protocol's scientific assessment panel.

"It's well documented that when Kofi Annan was secretary general of the United Nations, he called it the most successful environmental treaty ever."

Indeed, the protocol is now credited with the phasing out of more than 98 per cent of substances, such as chlorofluorocarbons (CFCs), that harm the ozone layer.

Such has been the protocol's impact that scientists predict that by about 2060 or 2070 the ozone layer will be close to the levels it was at decades ago. Changes in the atmosphere linked to global warming will prevent the ozone layer from completely returning to its former state.

#### **The rise of climate change scepticism**

Several factors made the ozone layer issue easier to deal with than climate change.

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One, Mr Pyle says, is that the scientific evidence over the damage to the ozone layer was more clear cut and so received rapid acceptance, even from the very industries that produced ozone-depleting substances.

By contrast, when the Kyoto Protocol – the treaty that aimed to reduce the release of greenhouse gases – was agreed in the 1990s, there was much scepticism that human activity was even causing climate change.

"There were a very large number of people ... you could call them climate change deniers, who didn't think there was a problem," says Mr Pyle, an emeritus fellow at St Catharine's College, part of the University of Cambridge.

While there is now much wider acceptance of the scientific evidence related to climate change, Mr Pyle says this has taken longer than was the case with the ozone layer.

The dangers from climate change, even when accepted, may have lacked the immediacy of the fact that the ozone layer was damaged and people were at increased risk of skin cancer and cataracts because sunlight was not being filtered as it should have been.

"With climate, a lot of the risks were uncertain and in the future," says Bob Ward, policy and communications director of the Grantham Research Institute on Climate Change and the Environment, part of the London School of Economics.

"For a long period people felt we had more time and it wasn't clear we needed to act as strongly. Unfortunately, all that was wrong."

The actions required to deal with the damage to the ozone layer were less difficult to bring about. Products that damage the ozone layer had a more select range of uses, such as in aerosols and refrigerants, and alternatives were available.

Indeed, says Niklas Hoehne, founder of the NewClimate Institute for Climate Policy and Global Sustainability, a think tank in Germany, many of the companies that produced ozone-depleting substances also manufactured the alternatives, so there were fewer vested interests to come up against.

"For climate, it's very different. The companies that do business with fossil fuels, they go out of business," Mr Hoehne says.

Burning fossil fuels is central to so many activities of modern life, from generating power to travelling by land, sea or air, so stopping the production of greenhouse gases requires an almost wholesale transformation of economies.

### **Aid for climate strategy**

Another factor in favour of dealing with the depletion of the ozone layer is, Mr Hoehne says, that the financial mechanisms to reward developing nations for moving away from the use of harmful substances worked well.

The Multilateral Fund for the Implementation of the Montreal Protocol, set up in 1991, has offered money and technical assistance to help developing nations move away from the use of ozone-depleting substances. It has, the UN Environment Programme says, put more than \$3.9 billion into more than 8,600 schemes.

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"Developed countries paid money into a fund. That's a success," Mr Hoehne says. "But it's a much smaller scale. With climate we need an order of magnitude [greater] to solve that problem. That's difficult."

While the Montreal Protocol is widely hailed as a success, its implementation has not always been plain sailing.

In its initial form, Mr Pyle says, the protocol would not have prevented the atmospheric concentration of ozone-depleting substances from increasing but would have slowed its growth.

The protocol's strengthening over time has ensured that their concentration is now falling, which has allowed the ozone layer to begin to recover.

Yet a number of years ago the panel that Mr Pyle co-chairs identified that concentrations of some harmful substances were not declining as they should have been.

"It was realised that production and emission of these gases was occurring in the Far East, which was essentially against the protocol," he says.

"That's now stopped. The fact of having regular scientific updates means we can keep track of what's going on ... I think what we cannot afford to be is complacent ... but we're in a much better place than we would've been.

### **Limiting global warming**

With climate change, the forecast is that temperatures will have risen 1.5°C above pre-industrial levels within a decade.

Yet, far from carbon emissions being cut in the way that scientists have said is necessary to prevent the worst effects of climate change, in 2022 they are expected to reach a record 37.5 billion tonnes, it was announced at Cop27.

Analysts do, however, see cause for optimism. The increasing adoption of renewable energy, such as wind and solar, moves the possibility of net-zero economies closer.

"We know we can use renewables at large scale to replace gas and coal to generate electricity, and electric cars instead of petrol-driven cars," Mr Ward says.

"These technologies have come on. But there are still areas where we find it more difficult, and this is against the background of the risks growing."

Some of the fields where decarbonisation has proved harder include cement and steel production, Mr Hoehne says, but even here there are signs of transition, such as the emergence of "green steel", where the energy required is provided by hydrogen.

"For steel the alternative has to be provided by the same companies, so steel companies are not under threat of losing their business model. They 'only' have to change their production processes, but they still have a role in the market," he says.

So, although net zero is still at least decades away, the fight against climate change is making technological progress. Yet it remains a much tougher challenge to solve.

**[The National News/World, 23 December 2022, By Daniel Bardsley](#)**

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Image: The National News website



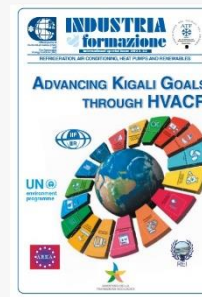
It is with great sadness that we learned about the passing of Dr. Mack McFarland. We had the privilege and honor to know and work with Dr. McFarland on the Montreal Protocol. He will be remembered as a sound scientist, and a significant contributor to the more than three decades of success that has allowed the Montreal Protocol to be known as the most successful environmental treaty ever negotiated.

His work was known and appreciated by industry leaders and the most senior policy officials around the world.

Our deepest condolences to his family and friends.

### **Advancing Kigali goals through HVACR - International Special Issue 2022- 2023**

To provide an update on this global effort, The Centro Studi Galileo (CSG) and the Renewable Energy Institute (REI), with support from the International Institute of Refrigeration (IIR), The United Nations Environment Programme-OzonAction, (UNEP-OzonAction) and The Air conditioning and Refrigeration European Association (AREA), Ministero Della Transizione Ecologica, have collected experiences from around the world, compiled in this special publication, featuring papers from leading global institutions and experts, addressing the current situation, the challenges ahead, and sharing opinions from different National Ozone Units, on issues related among others to HVAC&R, training, and the role of women in the cooling industry.



The **International Special Issue 2022- 2023** was officially launched during a side event at the Thirty-Fourth Meeting of the Parties to the Montreal Protocol in Montreal, (MOP34), 31 October – 4 November 2022 | Montreal, Canada

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

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

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

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

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

*Image: Sustainable cold chains website*





## Categories



1 exhibits

On site post-harvesting  
and/or precooling  
applications



6 exhibits

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



11 exhibits

Storage on board ships,  
aircraft, and containers



4 exhibits

Food processing plants



1 exhibits

Transport (large and  
smaller trucks, smaller  
containers)



6 exhibits

Supermarkets (wholesale  
markets & Retailers)



1 exhibits

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



2 exhibits

Vaccines and other  
pharmaceutical  
products



11 exhibits

Game-changing and  
systemic approaches

AFRICA

#### 4. Egypt: The government approves the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone

#### الحكومة توافق على تعديل كيجالي لبروتوكول مونتريال بشأن المواد المُستنفذة للأوزون



وافق مجلس الوزراء خلال اجتماعه اليوم، بمقر الحكومة بالعاصمة الإدارية الجديدة، على مشروع قرار رئيس الجمهورية بشأن تعديل كيجالي لبروتوكول مونتريال بشأن المواد المُستنفذة لطبقة الأوزون، بهدف مواكبة التوجه العالمي في مجال تحديث التكنولوجيا في إطار الحفاظ على البيئة وتحقيق التنمية المستدامة.

وينص التعديل على إدراج مركبات الهيدروفلوروكربونية HFC's ذات الاستخدام في بعض أجهزة التبريد وتكييف الهواء، ضمن جداول المواد الخاضعة لرقابة بروتوكول مونتريال، والخفض التدريجي لاستهلاك هذه المواد لكونها من أقوى الغازات المسببة لظاهرة الاحتباس الحراري، لاسيما وأن لها العديد من البدائل الصديقة للمناخ والتي تحقق الكفاءة والخفض في استهلاك الطاقة.

**Alyawm el7, 14 December 2022**

*Image: Alyawm AlSabee*

#### 5. National Environmental Standards and Regulation Enforcement Agency Prevents 15 Vessels from Bringing Hazardous Materials into Nigeria



As Nigeria continues to tackle the proliferation of substandard products, the National Environmental Standards and Regulation Enforcement Agency (NESREA) disclosed that it turned back 15 vessels carrying hazardous materials into Nigeria.

According to the News Agency of Nigeria (NAN), the Director-General of the agency, Mr Aliyu Jauro, explained that the vessels were laden with chemicals and electronics harmful to the environment.

He cautioned that government would not allow any importer to turn Nigeria into a dumping ground for hazardous materials.

"It is allowed to import electronics into Nigeria, but such electronics must be functional and safe.

"Nigeria is not a dumping ground where any waste can be allowed in.

"Most of the items arriving in Nigeria are not good and don't function well, so only those that are functional and are safe are allowed to be discharged.

“People are able to bring hazardous items into Nigeria because the country’s borders are porous.

“As an agency, we test imported equipment to ensure that they are working perfectly and they are safe for the ecosystem,” he said.

Mr Jauro said particularly disturbing was the importation of used refrigerants and chemicals used in refrigeration that should not be allowed into any society because of their risk levels.

He said that some of the chemicals were found to react and deplete the ozone layer, the protective layer that shields the earth from radiation emitted by the sun.

“The use of chlorofluorocarbons in refrigerants and other chemicals used as fire extinguishers are responsible for global warming. “Also, some pesticides used in agriculture deplete the ozone layer and have many negative effects on humans and the ecosystem,” Mr Jauro stressed.

Nigeria has, over the years, moved to strengthen its defences against the importation of hazardous materials and other rejected substandard substances, with the Nigeria Customs Service (NCS) and the National Drug Law Enforcement Agency (NDLEA) in their capacity working effortlessly to prevent this.

[BusinessPost, Nigeria, 19 December 2022, By Adedapo Adesanya](#)

*Image: BusinessPost*

## ASIA AND THE PACIFIC

### 6. Halon disposal – Australia

From 1 January 2023, the Australian Government will no longer charge fees to dispose of halon surrendered within Australia to the National Halon Bank.



#### How do I know I have Halon?

Halon was widely used in fire extinguishers used in cars, boats and domestically. Fire extinguishers containing halon are colour coded yellow. There are two forms of halon commonly used by the public. These are:

- Halon 1211 also known as BCF - usually found in hand held fire extinguishers; and
  - Halon 1301 also known as BCM - used mainly in ‘flooding’ systems, for example in computer rooms, machinery rooms etc.
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### **Why should I dispose of halon or my halon fire extinguisher?**

It has been illegal to own or use halon-based fire protection systems in Australia since 1995, unless for an approved essential use. It has also been illegal for fire protection technicians to service non-essential halon systems since that date.

Like most safety equipment, fire extinguishers need to be serviced. There is therefore a significant risk that the extinguisher will not operate correctly in a time of emergency if it hasn't been serviced since before 1995.

There are a number of alternative products available to replace halon systems. You should seek advice from a fire protection expert. If there are no feasible alternatives, you can apply for special approval to maintain the halon system. Essential Use Exemptions are granted rarely and only in situations where no alternatives are available.

- [Halon Essential Use Exemptions](#)

### **How do I dispose of Halon?**

The National Halon Bank operates a free call service to advise you on disposal of halon, as well as other ozone depleting substances (ODS) and synthetic greenhouse gases (SGG). Call 1800 658 084 to arrange for the disposal of any unwanted halon or other ODS/SGG product.

Halon and other ODS/SGG's may also be deposited at collection points such as fire stations and by the fire protection company that services your fire systems, who will then arrange for dispatch to the National Halon Bank.

The Government provides a free service for the collection and disposal of fire extinguishers surrendered within Australia.

Parties surrendering halon and/or collection organisations need to complete the halon disposal form when receiving deposited substances.

[Halon Collection Deposit Form \(PDF - 152 KB\)](#)

[Halon Collection Deposit Form \(DOCX - 50.5 KB\)](#)

### **International disposal**

The National Halon Bank will facilitate the responsible disposal of Halon and other ozone depleting substances in accordance with standards agreed by the Meeting of the Parties to the Montreal Protocol. More information is available on Halon recycling, reclaiming and other services offered by the National Halon Bank.

- [Halon recycling, reclaiming and other services](#)

**[Australian Government, Department of Climate Change, Energy, the Environment and Water, December 2022](#)**

*Images: Australian Government, Department of Climate Change, Energy, the Environment and Water Website*

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## 7. Cook Islands: Workshop for specialist importers

The National Environment Service (NES) has held a training workshop on the Montreal Protocol Licensing system. It was attended by Cook Islands Customs Officers, Customs Brokers and importers of controlled substances listed under the Montreal Protocol.

The purpose of the workshop was to introduce the Montreal Protocol Licensing System, which requires importers of hydrofluorocarbons (HFCs) and hydrocarbons (HCs) refrigerants to apply for an import permit. HFCs are harmful chemicals that contribute towards climate change and HCs are the alternatives which have minor impact on the environment, says National Environment Service.

The Cook Islands Government have committed to the phasing down of hydrofluorocarbons to ensure the country is playing a part in reducing Green House Gas (GHG) emissions.

In a statement, National Environment Service said the licensing system will help to monitor the importation, consumption, and trade of HFCs and HCs, for which the Cook Islands have a set baseline that the country must stay within.

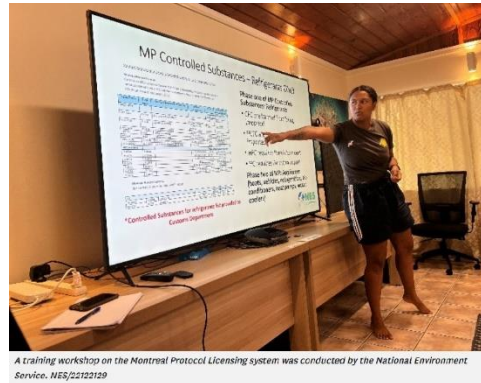
Importers must register with the NES before applying for a permit to import.

NES Montreal Protocol project coordinator, Mii Herman acknowledges the hard work that customs officers do to strengthen illegal trade measures and border control. "Collaboration and cooperation at national level is important, we must work together to make the work lighter and achievable."

The Montreal Protocol System will be effective from January 1, 2023.

[Cook Islands News \(CIN\), 22 December 2022, By Al Williams](#)

*Images: CIN Website*



A training workshop on the Montreal Protocol Licensing system was conducted by the National Environment Service, NES/22122129

**WEST ASIA**

## 8. Interview with Khamis Mohamed Alzeedi, National Ozone Officer of Oman

Oman's achievements under the Montreal Protocol, ambitions under the Kigali Amendment and proposed strategy on a low-carbon transportation development.



### 1. Can you tell us a little bit about your background, how you started to work in the sector and your experience as the National Ozone Officer for Oman?

Because of my interest to work in the field of environment, I joined Air and Noise Pollution Control Section in the Ministry of Environment in 1992. I started to work as an Air and Noise Pollution Inspector, eventually becoming Head of the same section. After that, I was promoted to the position of Deputy Director of the Environmental Inspection and Control Department. In 2008, I was promoted to the Director of Climate Change Control Department, then Director of Climate Mitigation.

I started working as a National Ozone Officer in 2001 and the experience since that time until now has been a very enjoyable one that enabled me to understand and appreciate the importance of contributing to the protection of the ozone layer, because of its importance in protecting the planet and life on Earth.

I really feel proud to be part of the success story of the Sultanate of Oman in the field of ozone layer protection during these years. The most important milestones that I was part of, were the establishment of a special division for the protection of the ozone layer, development of the necessary legislation and its development over time, as well as the development of the national e-licensing system.

Perhaps, the most important of these achievements is the Sultanate of Oman's ability to fulfill its obligations towards the Montreal Protocol ever since its ratification in 1998.

### 2. What are the priority sectors and targeted activities in Oman's HCFC Phase-Out Management Plan?

Since Oman is classified as a country with extremely hot weather<sup>[1]</sup> especially in summer, the priority sector is the refrigeration and air conditioning sector. Where the majority of HCFCs refrigerants are used in the RAC servicing sector.

The targeted activities in the HCFC phase out management plan for Oman include the following:

- Training of about 1000 technicians in the RAC sector on the best practices during servicing activities.
  - Development of a certification system for the servicing technicians.
  - Establishment of five reclamation, recovery, and recycling centers to help the Sultanate of Oman in achieving the targeted plan to phase out HCFCs and to ensure the availability of these gases after the phase out stage.
-

- Supply 5 training institutes with training equipment and materials required for training and certification purposes.
  - Development of specifications for newly emerging technologies and substances such as safety standards for using hydrocarbons.
  - Organize activities related to public awareness for different sectors (public, private and government sectors) on the importance of protecting the ozone layer and new technologies that are both ozone and climate friendly.
3. **What is Oman's experience in identifying alternative solutions for High Ambient Temperature (HAT) countries?**

In Oman, most of the buildings are designed to achieve the maximum cooling efficiency.

The country has also adopted specifications for refrigeration and air conditioning equipment for optimal energy efficiency.

Nowadays, the relevant organizations are also working on the update of the building codes to maximize the energy and cooling efficiency.

4. **Which challenges will Oman be facing in the next years, implementing the Montreal Protocol and Kigali Amendment? What are some particular synergies which can be noted with the Paris Agreement?**

The biggest challenge will be finding the best technologies and alternatives that are suitable for Oman's hot weather and at the same time are commercially feasible.

Another challenge is to find new alternatives with low global warming potential (GWP) which is essential to Oman to implement its Nationally Determined Contributions (NDCs) that are submitted under the Paris Agreement.

5. **What are the key lessons from implementing the HPMPs in Oman which other NOUs could benefit from?**

The key lessons learned from the implementation of the different stages of HPMPs in Oman are:

- The importance of identifying the key sectors that depend on the use of HCFCs to establish the best transition and phase-out requirements.
  - Early preparation and adoption of new regulations, specifications and standards for new alternatives and technologies are also essential for smooth transition.
  - Training of technicians dealing with refrigerants on best practices is key factor for the success of any phase-out plan.
6. **Oman has recently partnered with UNIDO to work on a low-carbon transportation development strategy project with funding from the Green Climate Fund (GCF), which was approved in July. Congratulations! Can you tell us about the overarching goal of the project and the importance of this project for Oman?**
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Through a quick analysis of the transport sector in the Sultanate of Oman, the following can be concluded in terms of the importance of this project for Oman:

The most challenging sector to decarbonize in the sultanate of Oman is the transportation sector, which contributed over 14% of Oman's total carbon emissions in 2015.

The transportation sector in the Sultanate of Oman will have difficulty meeting any reduction goals due to the continued reliance on fossil fuels, with negligible use of clean energy.

The total demand for transport in Oman will increase, and society will emphasize punctuality, personalization, and comfort. This will make managing total carbon emissions and transportation's carbon intensity more difficult.

Due to the importance of transportation to Oman's economic and social development, reducing emissions is essential for the country's long-term decarbonization strategies.

<sup>[1]</sup> Oman is a so called High Ambient Temperature (HAT) country Parties to the Montreal Protocol recognized in 2009 about the non-availability of low-GWP refrigerant options for HAT.

## **UNIDO Montreal Protocol Unit, Newsletter December 2022**

*Images: UNIDO Montreal Protocol Unit Newsletter*

# LATIN AMERICA AND CARIBBEAN

## **9. Panama: Ultra-High UV Rays Alert**

The National Civil Protection Service (Sinaproc) has warned about the high levels of Ultraviolet radiation (UVB) indices that will be present until December 29, both in the Caribbean and in the Panamanian Pacific.



The institution warned that, with the advanced deterioration of the ozone layer, these solar rays could cause burns and skin damage, and they recommend avoiding prolonged sun exposure and using sunscreen.

The indices will range from moderate, from 3-5, to extreme, exceeding the UVB 11 index.

When the UVB radiation indices are greater than 5 to 8, it is advisable to wear glasses, a hat, and clothing that protects the skin, drink plenty of water, and use an umbrella or parasol.

When the solar radiation index is very high, greater than 8 to 10, it is recommended to use the same items and avoid exposing children.

When the rates are extreme, it would be best to stay at home or be protected from the sun.

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The population is reminded to use sunscreens greater than 50 FPS and touch them up from time to time if it is on the beach, river, or pool, as well as in simple sun exposure.

Also, if you are at the beach, river, or pool, it is advisable to wear clothing that contains +50 FPS sun protection technology, which covers the arms to prevent further burns and skin damage.

When people deliberately expose themselves to the sun's rays without any type of protection, they could suffer heat stroke and even suffer from skin cancer.

### **MENAFN- Newsroom Panama, 26 December 2022**

*Images: MENAFN Website*

## **NORTH AMERICA**



### **10. US EPA GreenChill's 2022 Webinar Recordings made available**

As 2022 ends, the [U.S. EPA GreenChill Program](#) is pleased to share that a full year of webinar recordings are posted and available for viewing.

If you missed a webinar or want to revisit any of this year's content [access the recordings and slides on our Webinars and Events page](#).

**April: [Data Technology to Reduce Supermarket Refrigeration Leak Rates](#) featuring [Hussmann](#)**

- **May: [Deconstructing Flammable Refrigerants – The Who, What, Why, and How of Flammable Refrigerants](#) featuring [Chemours](#)**
- **June: [Refrigerant Banking – A Different Kind of Asset Management](#) featuring [National Refrigerants](#)**
- **July: [Exploring the True Cost of Refrigerant Leaks and Proactive Solutions](#) featuring the [North American Sustainable Refrigeration Council](#)**
- **August: [Refrigerant Update – Hydrofluoroolefins and Future Architectures](#) featuring [Honeywell](#)**
- **October: [Fluorinated Gases Overview and Opportunities](#) featuring [WAVE Refrigeration](#)**

### **US EPA GreenChill Program, December 2022**

*Image: USEPA GreenChill*

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## EUROPE AND CENTRAL ASIA

### 11. Spanish organization dismantled Operation OSOON criminal trafficking greenhouse gases

The operation was jointly carried out by the Spanish tax authority, Guardia Civil, Olaf and Europol. Twenty-seven people were arrested during the operation, three were examined and 110 tons of ozone depleting gases were confiscated. The operation was carried out in eleven provinces (Granada, Valencia, Albacete, Toledo, Madrid, Murcia, Malaga, Seville, Jaen, Córdoba, and Badajoz).

Tax Agency, in a joint operation with Guardia Civil, Europol and OLAF, dismantled an important criminal organization, structured on four levels, dedicated to illicit trafficking in Spain of refrigerant greenhouse gases, that is, fluorinated gases that deplete the ozone layer, many of them even flammable.

One hundred and ten tons of different types of gas, worth 11 million euros were discovered along with 600 air conditioners [among other goods].

[...] The importer of gas from China imported it irregularly under the guise of the so-called external community customs transit. It allows a company to move goods imported from non-community countries destined for a third country, located outside the European Union. through the territory of the European Union All this without being subject to any import right, or tariffs or taxes or commercial policies.

Thus, it imported tons of gas into Spain, notably through the port of Valencia, which would supposedly be transported through several EU countries to its final destination in a third country such as Jordan. But in reality, these goods should remain in Spain and be distributed by the organization throughout the national territory for a final amount three times below the market price.

In particular, the non-payment of tax on fluorinated greenhouse gases leads to significant unfair competition in the distribution sector in the national market.

Excerpt from the article in WCO, RILO WE magazine, December 2022, pg 3-4

**Contact:** World Customs Organization (WCO), [Regional Intelligence Liaison Office for Western Europe](#), Cologne, Germany



Image: WCO, RILO WE magazine cover

## FEATURED



### Summary of the 34<sup>th</sup> Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP34), 31 October – 4 November 2022 | Montreal, Canada

- Read/Download the [full report](#)
- pre/post documents, United Nations Environment Programme (UNEP), Ozone Secretariat [MOP-34](#)
- [Daily highlights](#) Earth Negotiations Bulletin-International Institute for Sustainable Development (IISD) / [Presentations and statements](#) / [Side events](#)

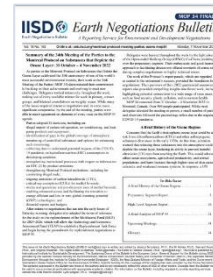


Image: ENB-IISD website

**Overview for the meetings of the ozone treaties in 2022** - Click [here](#) for past and upcoming Montreal Protocol Meetings dates and venues.

## Online introductory course 'International legal framework on ozone layer protection'

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



## United Nations Environment Programme (UNEP), Ozone Secretariat

Image: UNEP, Ozone Secretariat website

## Free teaching kits on ozone layer and environmental protection

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



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

Image: UNEP, Ozone Secretariat website

**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](#)

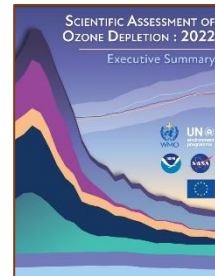
In the past there were 4 main panels. The Panels for Technology and Economic Assessments were merged in 1990 into one Panel, now called the Technology and Economic Assessment Panel.

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

### **Scientific Assessment of Ozone Depletion: 2022 - Executive Summary**

**United Nations Environment Programme (UNEP), Ozone Secretariat, November 2022**



### **The Multilateral Fund for the Implementation of the Montreal Protocol**

The Fund is dedicated to reversing the deterioration of the Earth's ozone layer. It was established by a decision of the Second Meeting of the Parties to the Montreal Protocol (London, June 1990) and began its operation in 1991. The main objective of the Fund is to assist developing country parties to the Montreal Protocol whose annual level of consumption of the ozone depleting substances (ODS) chlorofluorocarbons (CFCs) and halons is less than 0.3 kilograms per capita to comply with the control measures of the Protocol. Currently, 147 of the 197 Parties to the Montreal Protocol meet these criteria. They are referred to as Article 5 countries.

The Multilateral Fund is managed by an Executive Committee with equal membership from developed and developing countries. Since the inception of the Fund, the Executive Committee has held 90 meetings. The Fund Secretariat, located in Montreal, assists the Executive Committee in its tasks. Projects and activities supported by the Fund are implemented by four international implementing agencies.

As at September 2022, the contributions received by the Multilateral Fund from developed countries, or non-Article 5 countries, totalled over US\$ 4.49 billion. The Fund has also

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received additional voluntary contributions amounting to US \$25.5 million from a group of donor countries to finance fast-start activities for the implementation of the HFC phase-down.

Last 16 July 2022, following the adoption of interim budgets for the Multilateral Fund due to the Covid-19 pandemic, the Fifth Extraordinary Meeting of the Parties to the Montreal Protocol (5th ExMOP) decided on the replenishment of the Multilateral Fund for the triennium 2021-2023. The Parties agreed on a budget of US \$540 million for the triennium.

To facilitate phase-out by Article 5 countries, the Executive Committee has approved 144 country programmes, 144 HCFC phase-out management plans and has funded the establishment and the operating costs of ozone offices in 145 Article 5 countries.

- [Updated guide for the presentation of stage II of HCFC phase-out management plans \(August 2022\)](#), 9/19/2022
- [The provisional agenda for the 91st meeting is now posted](#), 9/14/2022
- [The Information Note for the 91<sup>st</sup> meeting is now available](#), 9/9/2022

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



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

**The section below features several of our most recent products.**  
**Visit [OzonAction website](#) for more information, discover the entire range of products.**

Images in this section are by OzonAction

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



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



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

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

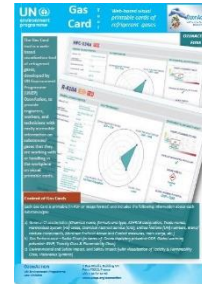


Click [HERE](#) to access the OzonAction Knowledge Maps tool

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

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

**Content of Gas Cards** - Each Gas Card is printable (in PDF or image format) and includes the following information about each substance/gas: a) General Characteristics (Chemical name, formula and type, ASHRAE designation, Trade names, Harmonized System (HS) codes, Chemical Abstract Service (CAS), United Nations (UN) numbers, Blend/ mixture components, Montreal Protocol Annex and Control measures, main usage, etc.) b) Gas Performance—Radar Chart (in terms of: Ozone depleting potential-ODP, Global warming potential-GWP, Toxicity Class & Flammability Class) c) Environmental and Safety Impact, and Safety Impact (with visualization of Toxicity & Flammability Class, Hazardous Symbols). **More Information** - The Gas Card web based tool is part of UNEP OzonAction's portfolio of activities and tools to assist various stakeholders in developing countries, including customs officers and technicians, to achieve and maintain compliance with the Montreal Protocol on Substances that Deplete the Ozone Layer. In the left navigation bar of the Gas Card tool web page, you will find a list of commonly used HFCs and HFC Blends in different sectors. \*

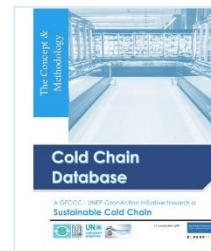


### Using the Gas Card web-based tool

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

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

**OzonAction and GFCCC launch the methodology questionnaires the Cold Chain Database Initiative** - The Global Food Cold Chain Council (GFCCC) and the United Nations Environment Programme (UNEP) OzonAction announced the launch of their Cold Chain Database and Modeling initiative. The initiative marks the first formal step to assist developing countries in identifying their cold chain baseline along with consumption of relevant HCFCs or HFCs or other refrigerants. The initiative was conceived in 2019 and kicked off during the 31<sup>st</sup> Meeting of Parties to the Montreal Protocol (Rome, Italy), which concluded with the Rome Declaration on “The Contribution of the Montreal Protocol to Food Loss Reduction through Sustainable Cold Chain Development”.



- > [GFCCC-UNEP OzonAction Cold Chain Modelling Press Release](#)
- > [GFCCC-UNEP Cold Chain Database Methodology Final](#)
- > For countries or partners interested to use the model data collection detailed questionnaires, please fill in the [Expression of Interest and NDA of Cold Chain Database](#) form and return to UNEP, [OzonAction](#)



Substances	Quantity	Importers	Quota
Substance 1	100	Importer 1	100,000
Substance 2	200	Importer 2	200,000
Substance 3	300	Importer 3	300,000

**HCFC Quota and Licence Tracker** - a new desktop application to assist with HCFC licences and quotas - National Ozone Officers have the great responsibility of managing the allocation and monitoring of quotas for substances controlled under the Montreal Protocol. This process can be

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

**Access the:**

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

**GWP-ODP Calculator Application** - Updated- “Quickly, efficiently and accurately convert between values in metric tonnes, ODP tonnes and CO<sub>2</sub>-equivalent tonnes”

Data are extremely important for the Montreal Protocol community, and the data reporting formats for both A7 and CP have changed recently, to a large degree triggered by the Kigali Amendment. HFCs, blends, CO<sub>2</sub>-equivalent values, etc, now have to be addressed much more frequently by Ozone Officers during their daily work. Sometimes the terminology and values are complex and can be confusing, and it helps to have it all the official facts and figures in one place. Conversion formulas need to be applied to calculate CO<sub>2</sub>-eq values from both GWP and metric tonne values. This free app from OzonAction is a practical tool for Ozone Officers to help demystify some of this process and put frequently needed information at their fingertips.



**What's new in the app:**

- An updated more user-friendly interface
- Multilingual interface: English, French and Spanish

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

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



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



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



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

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

**Updated OzonAction "WhatGas?" Mobile App**-The OzonAction ‘WhatGas?’ application is an information and identification tool for refrigerants gases: ozone depleting substances (ODS), HFCs and other alternatives. It is intended to provide some stakeholders, including Montreal Protocol National Ozone Officers, customs officers, and refrigeration and air-conditioning technicians with a modern, easy-to-use tool that can be accessed via mobile devices or the OzonAction website to facilitate work in the field, when dealing with or inspecting ODS and alternatives, and as a useful reference tool. This latest release includes the 2022 Harmonized System (HS) Codes for HFCs and blends, which facilitates the process of inspection and identification of controlled and alternative substances.



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

## RAC Technician Videos - Full length films!


Two 'full length' videos for refrigeration and air-conditioning (RAC) sector servicing technicians: on 1) Techniques, Safety and Best Practice and 2) Flammable Refrigerant Safety

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


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

Following many requests to make the videos more versatile and better suited to classroom and training settings, OzonAction has responded to this demand and produced two 'full-length' instructional videos. You may wish to share this message and the flyer with:

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

 You can watch these videos on the OzonAction YouTube Channel:

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

 The videos are also available for download by request from UNEP OzonAction: [unep-ozonaction@un.org](mailto:unep-ozonaction@un.org)



If you prefer to access the video clips via the OzonAction smartphone application, just search for "RAC Technician Video Series" or UNEP in the Google Play Store and iTunes/App Store or scan the QR code – **Free to download!** The flyer is available from the [OzonAction website](#).



**Refrigerant Cylinder Colours: What has Changed** - A new UNEP OzonAction factsheet on the new AHRI revised guideline on a major change to refrigerant cylinder colours - One of the ways in which refrigeration cylinders are quickly identified is by cylinder colour. Although there was never a truly globally adopted international standard, the guideline from the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) although not required by law was used by the vast majority of industry and chemical producers around the world. An AHRI revised guideline, first published in 2015, now removes paint colour assignments for refrigerant containers and specifies that all refrigerant containers should have the same paint colour from 2020 onwards. NOOs and technicians should be aware of this change and inform national stakeholders, as well as familiarising themselves with relevant container labels and markings for refrigerants. **Read/download the factsheet**



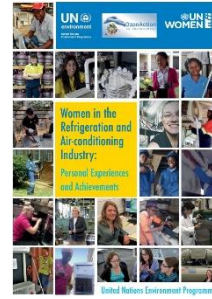
**Update on new refrigerants designations and safety classifications** - The latest version of the factsheet providing up to date information on refrigerant designations and safety classifications is now available (September 2020 update). The factsheet, produced by **ASHRAE** in cooperation with **UN Environment Programme OzonAction** is updated every 6 months. **Read/download the factsheet**  
**Contact:** **OzonAction**, UN Environment Programme



**OzonAction's iPIC platform - Updated**-Collaboration between China and Thailand using OzonAction's informal Prior Informed Consent (iPIC) system has resulted in the prevention of a huge consignment of ozone-depleting and climate damaging hydrochlorofluoro-carbons (HCFCs). Those chemicals, which are primarily used as refrigerants for air conditioners and fridges, are controlled under the Montreal Protocol on Substances that Deplete the Ozone Layer and are being phased out by all countries according to a specific timeline.



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

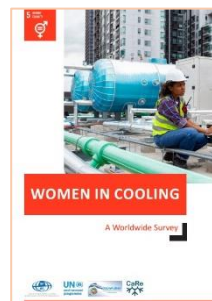


As part of IIR and UNEP OzonAction's partnership, a set of Cold Chain Technology Briefs was released over the past few years, which includes in-depth summaries about the cold chain in different key sectors. They include descriptions of technology, refrigerant options and trends and conclude with prospects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

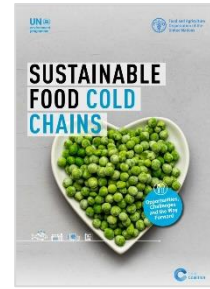


## PUBLICATIONS

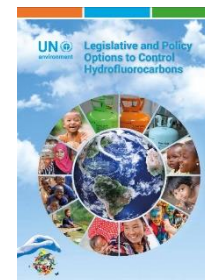
**Results of a Worldwide Survey about Women in Cooling Released by IIR and UNEP OzonAction** - Refrigeration, Air-Conditioning, and Heat-pumps (RACHP) are crucial for our health, nutrition, comfort, and well-being. It is one of the sectors that crosscuts many of the UN sustainable development goals and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



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



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



Latest issue of Centro Studi Galileo magazine, **Industria & Formazione**, n. **10-2022** (in Italian).



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



a solid basis to revise current procurement criteria for sustainable cooling systems in public buildings. **Read/Download the study**

**Cut Super Climate Pollutants Now!**: The Ozone Treaty's Urgent Lessons for Speeding Up Climate Action (Resetting Our Future). We have a decade or less to radically slow global warming before we risk hitting irreversible tipping points that will lock in catastrophic climate change. The good news is that we know how to slow global warming enough to avert disaster. Cut Super Climate Pollutants Now! explains how a 10-year sprint to cut short-lived "super climate pollutants" -- primarily HFC refrigerants, black carbon (soot), and methane -- can cut the rate of global warming in half, so we can stay in the race to net zero climate emissions by 2050.

*Authors: Alan Miller, Durwood Zaelke, Stephen O. Andersen.*



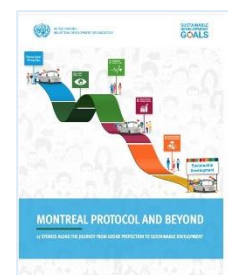
E-Book on Process Safety Management (PSM) Training for Ammonia Refrigeration - a new e-book about the critical elements of a process safety management (PSM) training program for facilities operating an ammonia refrigeration system. The e-book, titled "**7 Keys to a Compliant PSM Training Program for Ammonia Refrigeration**," outlines important questions a facility's program should address and questions that trained plant personnel should be able to answer. Topics covered include:

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

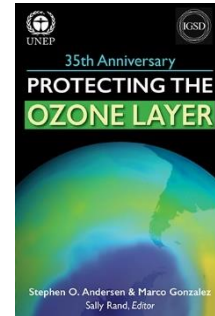
**Request free Download [here](#)**



**Montreal Protocol and beyond: 17 stories along the journey from ozone layer protection to sustainable development** - The 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals (SDGs) embody the global commitment to build a more sustainable future for all. These universally agreed objectives address the most urgent environmental, social and economic challenges of our time... **Read/Download [here](#)**



**Protecting the Ozone Layer - 35<sup>th</sup> Anniversary Edition** - a new book celebrating the 35<sup>th</sup> Anniversary of the Montreal Protocol. The electronic version (Kindle Edition) of the book has become **available for purchase \$3.03 on Amazon**. The book highlights successes and documents innovation during the first 35 years and inspires new ambition to strengthen protection of stratospheric ozone and climate before Earth passes tipping points. The book tells the story of the Montreal Protocol, revealing a model of cooperation, collaboration, universal ratification, record of compliance with over 99 per cent of controlled ozone-depleting substances (ODSs) phased out, the ozone layer on the path to recovery, the 2007 Montreal Adjustment, and the 2016 Kigali Amendment moving the Montreal Protocol further into environmental protection. Unfinished business includes: HCFC phase out, ODS bank management, HFC phase down, uncontrolled ozone-depleting greenhouse gas nitrous oxide (N<sub>2</sub>O), feedstock exemptions for plastics production, and dumping of obsolete cooling appliances. **The book was released at 34<sup>th</sup> Meeting of the Parties to the Montreal Protocol on 31 October 2022.**



## MISCELLANEOUS

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INTERNATIONAL CONFERENCE  
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**Ammonia and CO2  
Refrigeration Technologies**  
April 27-29, 2023, Ohrid, R. Macedonia

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



The United Nations Environment Programme, OzonAction, in collaboration with Marco Gonzalez and Stephen O. Andersen are updating and expanding the "**Montreal Protocol Who's Who**".

We 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 Programme, OzonAction

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



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**Request a PDF of the current issue**

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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  
Reviewed by: James S. Curlin

If you wish to submit articles, invite new subscribers, please contact:  
Samira Korban-de Gobert, [samira.degobert@un.org](mailto:samira.degobert@un.org)



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