

# OzoNews

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

**Volume XXIII | 30 March 2023**

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## GLOBAL



### 1. Kigali Amendment latest ratifications

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

[Eritrea, 7 February 2023](#)

[Republic of Korea, 19 January 2023](#)

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).

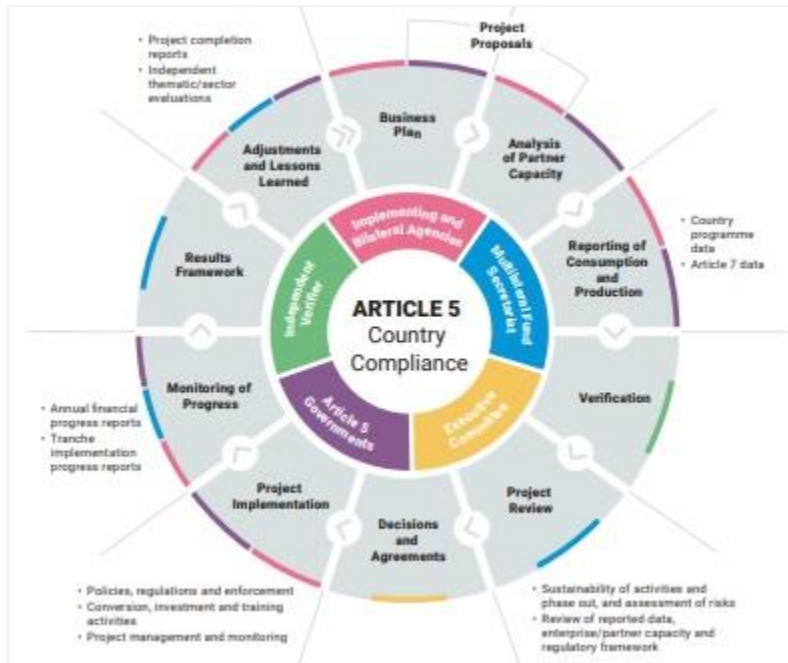
Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Status of Ratification 15 October 2016 to [date](#).

[United Nations Treaty Collection](#)

Image: UN Treaty Collection website

## 2. Framework of activities for sustainability supported by the Multilateral Fund

The Multilateral Fund for the Implementation of the Montreal Protocol has safeguards in place to ensure that compliance with the Montreal Protocol targets is sustained. The figure below shows the stakeholders involved and the safeguards in place that ensure the sustainability of activities supported by the Fund.



The main partners in the framework include the Executive Committee, Article 5 country governments, bilateral and implementing agencies, third-party verifiers, and the Multilateral Fund Secretariat. These partners work together to respond to Article 5 country compliance needs through the development, implementation, and monitoring of projects and plans.

### Article 5 country engagement

Projects submitted to the Multilateral Fund are proposed by Article 5 countries based on their specific needs and national circumstances, following a country-driven approach.

Under the HFC phase-down, the country-driven approach has been explicitly complemented by flexibility in implementation. Funding under the Montreal Protocol is based on a commitment by the Article 5 country concerned to sustainably and permanently reduce the consumption and production of controlled substances.

### Policy, regulations, and institutional strengthening

- Since its 4<sup>th</sup> meeting, the Executive Committee has provided support to strengthen policy and regulatory frameworks in Article 5 countries to facilitate compliance with the Montreal Protocol and enable the long-term sustainability of the phaseout achieved.
- Over the years, and with the support of the Multilateral Fund, Article 5 countries have established and strengthened their national licensing and quota systems and trained customs and law enforcement officers. Capacity-building has been provided to Article 5 countries that produce controlled substances to ensure controls on the levels of production are in place, including licensing and quota systems, measures to ensure that controlled substances produced for feedstock use are used for that purpose, and controls on exports for which non-controlled uses of such substances remain.
- Institutional strengthening projects aim to provide the necessary resources to facilitate the expeditious and effective phaseout of controlled substances within the country and strengthen its capacity long term. The Executive Committee approved the first institutional strengthening project at its 6<sup>th</sup> meeting. Since then, that support has continued given the critical role those projects play in the implementation of Montreal Protocol-related activities.

### **Project development, review, and implementation**

Approved funding is transferred in full to the four implementing agencies (i.e., UNDP, UNEP, UNIDO, and the World Bank) for implementation of the projects approved by the Executive Committee. Implementing agencies have in place and apply their own enterprise risk management and internal control frameworks to assess partner capacity and risk, in accordance with UN and other relevant rules and procedures. For example, when preparing project proposals, agencies always discuss technology selection with enterprises, including the capacity of those enterprises to safely and successfully implement the new technology.

### **The Multilateral Fund Secretariat's project review examines:**

- the consumption and, where relevant, production data for the country concerned;
- the capacity of institutions and enterprises to undertake the planned activities;
- policy and regulatory frameworks to support the sustained phase-out; and
- measures that may have been undertaken in case of delays and challenges in implementation.

### **In reviewing proposals to convert manufacturing enterprises, the Secretariat always considers:**

- the capacity of the enterprises to safely manufacture equipment with the proposed alternative technology; and
- the capacity of the technicians to safely install, maintain, and service such equipment, and the policy mechanisms that might be needed to mitigate risks to the successful uptake of new technology, which are particularly relevant when another non-controlled technology with a high global warming potential (GWP) is already broadly available in the market.

### **Data reporting and verification**

- Country programme data reports provide detailed information on how controlled substances are used in Article 5 countries, allowing trends and areas of growth to be identified.
- Verification reports submitted under multi-year agreements provide important and independently verified information that include a risk assessment, an assessment on the operation of the import/export licensing and quota system and other monitoring systems in place, and confirmation of a country's compliance with the targets specified in its Agreement with the Executive Committee.
- Independent verifications have provided useful recommendations to Article 5 countries to improve existing licensing and quota systems and the procedures to operate them in a reliable manner. The Multilateral Fund Secretariat is directly involved in reviewing the findings and recommendations contained in a verification report and brings relevant issues to the attention of the Executive Committee for decision.

### **Communicating sustainability in project and other documents**

Documents for tranches of HCFC phase-out management plans (HPMPs) include a section titled 'Sustainability of the HCFC phase-out and assessment of risks,' which includes a brief analysis of:

A similar section will also be included in the documents for tranches of Kigali HFC implementation plans (KIPs).

- the activities and regulatory measures implemented to ensure the sustainability of HCFC phase out achieved through conversion(s) in the manufacturing sector;
- the sustainability of the training programmes (so they can continue being provided after the completion of the HPMP);
- the overall sustainability of the reductions in HCFCs achieved through the HPMP; and
- partner capacity and qualitative risk. Challenges due to partner capacity, market uptake of new technologies, and delays in implementation, including policy and regulatory measures, are identified as well as the steps to address those challenges.

Documents for new stages of HPMPs also include a section titled 'Sustainability of the HCFC phase out and assessment of risks,' which encompasses:

A similar section will also be included in the documents for new stages of KIPs.

- a qualitative assessment of the risks to the project and its sustainability addressing partner capacity, possible challenges in the market uptake of new technologies, the implementation timeline, the role of enterprises and organizations not participating in the project, and other challenges;
- measures to mitigate the risks identified above, including how the phase-out will be sustained after the completion of the stage of the HPMP; and
- a description of how ensuring sustainability will be monitored and reported, including in subsequent tranche implementation reports.



## Looking at the future

The scorecard of the Multilateral Fund will track and reflect indicators and metrics on sustainability and risk management. In cases where common risks are identified across planned HCFC or HFC projects, or those under implementation, the Secretariat will, as appropriate, include a new section to:

- ▶ the documents on tranche implementation delays;
- ▶ the annual consolidated progress report describing common risks across projects under implementation;
- ▶ the overview of issues identified during project review describing policies or measures proposed under new proposed projects to mitigate risk and ensure sustainability; and, as needed
- ▶ the consolidated business plan identifying possible prospective risks.

### The Multilateral Fund for the Implementation of the Montreal Protocol, 22 March 2023

Images: The Multilateral Fund website

#### 3. Leading ozone scientist says more climate surprises likely

Susan Solomon, a leading scientist in the fight to tackle the Antarctic ozone hole, says people are now getting worried enough to spur climate action.

The former expert for the UN's Intergovernmental Panel on Climate Change said the organisation's final instalment of a major series of reports, released Monday, would not be the "last word" on warming.



IPCC warned that climate change impacts are hitting faster than expected and the key 1.5 degree-Celsius warming limit could be reached in the early 2030s.

Solomon, a professor at MIT, said in an interview that more surprises were likely in store.

Her own research had delivered a recent "shocker" that Australia's massive 2019-20 wildfires combined with lingering remnants of the chlorofluorocarbons (CFCs) still in the atmosphere to erode the ozone layer -- Earth's protective shield from damaging ultraviolet radiation.

The following interview has been edited for length and flow:

**Q: Did it feel like a crisis when the ozone hole was discovered?**

A: It was a huge moment. The only thing you could compare it to would be if a piece of Greenland suddenly fell off into the sea and people were waiting for the three metres of sea level rise to show up on their doorstep.

All of a sudden you had 50 percent less ozone over Antarctica at certain times of year. And we did not know why.

I was 29 years old when the British Antarctic Survey discovered the ozone hole in 1985.

In 1986, I led the national ozone expedition to Antarctica. We made measurements of everything that we could think of: ozone itself, but also chlorine monoxide, chlorine dioxide, all of the ozone eating molecules and we were able to show that they were completely out of whack.

My idea was that maybe the reason this was happening was because of polar stratospheric clouds and surface chemistry. That turned out to be right.

**Q: The Montreal Protocol (phasing out CFCs and other ozone depleting molecules) was signed in 1987. What enabled governments to act so quickly?**

A: Three P's -- It was personal to people, because skin cancer and cataracts are scary. And it was perceptible because you could see these dramatic images on TV. It could easily be explained. And practical solutions were found pretty quickly.

Had we not stopped making these molecules, you would have massive ozone depletion worldwide. Overall, it has been a remarkable science, policy, and public success story.

**Q: Why has climate change not had the same urgency?**

A: People are beginning to get concerned enough about climate change, particularly the young. That is a tremendous spur to politicians.

The biggest problem is that people believe the solutions are not practical, but it's not at all true. People have to recognise how much more it's going to cost us if we don't do anything.

It's also too easy to tie climate change up with the culture wars, or whatever your social issue of the moment is.

We didn't have that with the ozone.

I was once in an IPCC meeting about chlorofluorocarbons with a delegate from a Middle Eastern country that produces a lot of oil. I asked him if his government had any concerns and he said: "No, we don't really care what's in the air conditioner, as long as it makes it cold".

The chemical companies could make other compounds. The problem with the fossil fuel companies is they're not going to be the ones to make solar panels.

**Q: What are the key unanswered questions on climate change?**

A: There's a lot of work going on now on understanding how storm tracks are going to change. Are we going to have more extreme Arctic air cold snaps? It might not be the issue you expected, but it's an issue.

Melting of the polar ice sheets -- how fast is that going to happen? There's a lot of uncertainty. It affects people on coastlines and island states all around the world.

The impact on the food and water supply -- there are open questions on both.

Things that involve the crossover between biology and physics are often the most difficult to understand. There's a 30 percent decline in the insect population worldwide going on right now. We really don't know why.

It's a great time to be a climate scientist, but on the other hand, it seems to me that every year something important and scary is happening.

**Yahoo News, 21 March 2023, by Kelly Macnamara**

*Image: Yahoo News website*



**4. Google Doodle Celebrates Mario Molina's 80<sup>th</sup> Birthday**

March 19, Doodle celebrates the 80<sup>th</sup> birthday of Dr. Mario Molina, a Mexican chemist who successfully convinced governments to come together to save the planet's ozone layer. A co-recipient of the 1995 Nobel Prize in Chemistry, Dr. Molina was one of the researchers who exposed how chemicals deplete Earth's ozone shield, which is vital to protecting humans, plants, and wildlife from harmful ultraviolet light.

Dr. Molina was born on this day in 1943 in Mexico City. As a child, he was so passionate about science that he turned his bathroom into a makeshift laboratory. Nothing could compare to the joy of watching tiny organisms glide across his toy microscope.

Dr. Molina went on to earn a bachelor's degree in chemical engineering from the National Autonomous University of Mexico, and an advanced degree from the University of Freiburg in Germany. After completing his studies, he moved to the United States to conduct postdoctoral research at the University of California, Berkeley, and later at the Massachusetts Institute of Technology.

In the early 1970s, Dr. Molina began researching how synthetic chemicals impact Earth's atmosphere. He was one of the first to discover that chlorofluorocarbons (a chemical found in air conditioners, aerosol sprays, and more) were breaking down the ozone and causing ultraviolet radiation to reach Earth's surface. He and his co-researchers published their findings in the *Nature* journal, which later won them the Nobel Prize in Chemistry.

The groundbreaking research became the foundation of the Montreal Protocol, an international treaty that successfully banned the production of nearly 100 ozone-depleting chemicals. This international alliance is considered one of the most impactful environmental treaties ever made – a precedent that shows governments can work together effectively to tackle climate change.

Thanks to Dr. Molina's critical scientific discoveries, the planet's ozone layer is on track to fully recover in the next few decades! The Mario Molina Center, a leading research institute in Mexico, carries on his work to create a more sustainable world.

Thank you, Dr. Molina, for your years of research that truly changed the world.

**Google Doodle, 19 March 2023**

*Image: Google Doodle website*

## **5. UNIDO reaches a billion-dollar milestone on ozone and climate action**

VIENNA - Over 133 million metric tons of carbon dioxide-equivalent emissions, roughly equal to emissions from 28.7 million passenger vehicles driven in a year, were reduced due to UNIDO projects under the framework of the Montreal Protocol in 2022.

"UNIDO reached a major milestone in 2022—the cumulative funding received from the Multilateral Fund for the Implementation of the Montreal Protocol (MLF) to implement projects around the world crossed USD 1 billion mark (including the agency support costs)," said Ole Nielsen, Chief of UNIDO's Montreal Protocol Unit. "As one of the four implementing agencies of the MLF, UNIDO plays an active role in addressing climate change and promoting sustainable industrial development," he said.

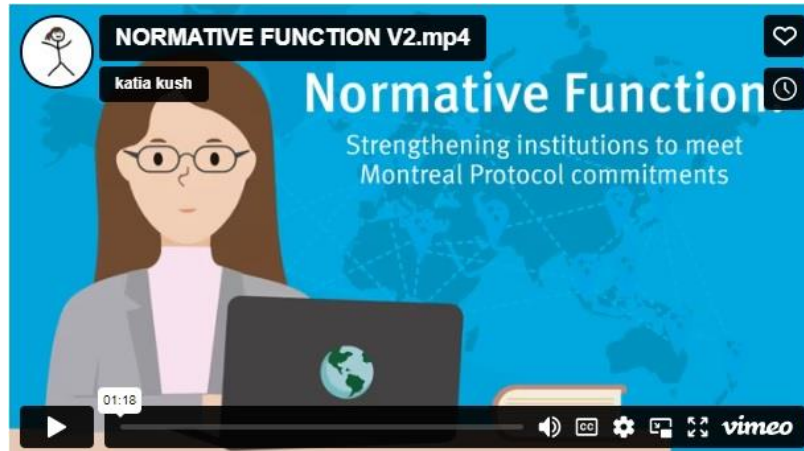
UNIDO delivers technical assistance to developing countries to help them comply with their obligations under the Montreal Protocol - a global environmental agreement created to safeguard the ozone layer and protect our planet, which came into force in 1989.

UNIDO enables the transformation of industries, especially the refrigeration, air-conditioning and foam sectors, while ensuring countries' compliance with Montreal Protocol phase-out targets. "We work with industries, governments, and institutions to find sustainable alternatives to controlled substances. We also substitute each ton of ozone-depleting substances (ODS) with a less harmful substance or a new process; thereby have a tangible impact on the national, regional and global levels," Nielsen explained.

The Montreal Protocol has a rich and inspiring history and considered as one of the examples of effective multilateral cooperation. By 2015, all Parties to the Montreal Protocol had successfully phased out chlorofluorocarbons (CFCs), Halons and other harmful substances as outlined in the treaty. These substances formed the critical elements in major industrial sectors. Phasing-out these substances required coordinated global efforts.

Since 2010, UNIDO has implemented 134 stages of hydrochlorofluorocarbons phase-out management plans (HPMPs) in 79 countries. Under the HPMPs, UNIDO has supported more than 400 enterprises in changing their production models to ensure that their manufacturing processes and products have a less harmful impact on the environment.

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With the adoption of the Kigali Amendment to the Montreal Protocol in 2016, the 198 Signatory Parties committed to cut the production and consumption of hydrofluorocarbons (HFCs) by more than 80 percent over the next 30 years. This strengthens the ambitions of the Montreal Protocol and brings the treaty closer to the Paris Agreement. UNIDO is working to help countries ratify the Kigali Amendment and design their national Kigali HFC Implementation Plans to achieve further sustainable industrial transformation for the good of people and the planet.

**Contact:** [Ole Nielsen](#), Chief, UNIDO, Montreal Protocol Unit

**UNIDO, Montreal Protocol Unit, 27 March 2023**

Image: UNIDO website

**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



0 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



0 exhibits

Game-changing and  
systemic approaches

## AFRICA

## 6. Fit for the future: training for lady cooling technicians in Senegal

ROCA conducted two trainings for Senegalese female technicians on climate-friendly cooling and business creation to fight the huge challenges they face when trying to integrate into the labour market.



The project [Refroidissement respectueux de l'Ozone et du Climat en Afrique de l'Ouest et Centrale](#) (ROCA) promotes Green Cooling technologies as well as gender equality. ROCA is co-financed by the European Union (EU) and the German Ministry for Economic Cooperation and Development (BMZ). In cooperation with the Senegalese Agence Nationale de la Maison de l'Outil (ANAMO), the project conducted two trainings in February 2023 for 21 technicians of Senegal's female Refrigeration and Air Conditioning (RAC) Association (RENAFF).

### The importance of Green Cooling

The women learnt about the latest refrigeration technologies and best practices for their work.

**"The training gave us the opportunity to become more skilful as technicians. It was very practical, so we can use it at our places at the local level. Our work will be improved"**, said Marème Diop, one of the participants.

The focus lied on energy efficiency and climate-friendly natural refrigerants. As the Director General of ANAMO explained in his discourse during the closing ceremony on 10 March: **"The global context of this training is the fight against climate change"**.

The sector was responsible for 7% of global emissions in 2021, which is more than three times of the emissions of all air traffic. And the need for cooling is rising. The good news: Emissions can be reduced significantly with energy efficient Green Cooling technologies that use natural refrigerants.

### The importance of entrepreneurship training

Another important part of the training were lessons on entrepreneurship. In spite of their diplomas and experiences, women graduates in refrigeration and air conditioning are in a very vulnerable situation professionally. The reason for their precariousness is that in the collective consciousness, technical jobs in the industry are men's jobs and therefore companies are very reluctant to recruit women. Therefore, women desperately turn to other jobs that are associated with women. The bravest ones, however, turn to self-employment in order to be able to exercise the business they are passionate about, which is refrigeration and air conditioning.

**"The entrepreneurship training helps us to become more autonomous and not to depend on employers"**, said Madame Marème Diop. **"However,"** she continues, **"I hope that also more women will get a chance to get hired and to be paid like men"**.

Madame Sokhna Fall, the president of RENAFF, also stressed the need for gender equality in her discourse at the closing ceremony. She also expressed her gratitude for the training:

**"You have honoured the Femmes Frigoristes from Senegal and we hope that this will be the beginning of a long cooperation!"**

### GIZ, Green Cooling Initiative, 10 March 2023

Image: GIZ Green Cooling Initiative Website

## 7. New Refrigerants - Open letter to sellers of dangerous technologies in Africa, from U-3ARC

### POSITION PAPER N°01/23/BE/GA/U-3ARC

Ouagadougou, Mars 27<sup>th</sup> 2023

Flammable Refrigerants

### New Refrigerants - Open letter to sellers of dangerous technologies in Africa



As U-3ARC's BOARD (Union of African Associations of Refrigeration and Air Conditioning Actors), through this Open Letter, we solemnly address the Manufacturers, Equipment Manufacturers and other Suppliers and Traders of Dangerous Technologies in the field of Refrigeration and Air Conditioning, particularly using flammable refrigerants.

Ladies and Gentlemen,

Considering the Montreal Protocol and its Kigali Amendment, the European F Gas Regulation of April 16<sup>th</sup> 2014, with regard to Standard NF EN 378 Version II and the Norm UNI – EN 13313, given the situation of import taxes in Africa, given the various international reports on climate change and the involvement of Africa in this global phenomenon, U-3ARC declares that the introduction of flammable refrigerants and technologies in Africa is inappropriate, until local technicians are all trained. This preliminary training must be accompanied by a vast awareness campaign among end users of these technologies which can cause disasters for humans, in terms of fires, even if they are beneficial for the environment.

The protection of the environment only makes sense if the human being who is at its center benefits from it.

We find it imperative that this human being is safe from explosions due to flammable gases. The risks are enormous, as much by the nature of these new refrigerants, certainly welcome to preserve the ozone layer, as by a new approach diametrically opposed to that of the refrigerants of yesteryear which, it should be remembered, were non-flammable.

With this new technology, beware of leaks! In such situations, a trivial gesture, such as lighting a room or the kitchen, lighting a cigarette or answering the phone... can become fatal. Unfortunately, accidents have already been reported to us here and there!

This is an opportunity for us to firmly express Africa's refusal to serve as a "guinea pig" for a technology, so far only tested here, in the absence of training sessions, without delay and supported by these same designers and other OEMs. Zero risk does not exist, but together we can, considering all of the above, contribute to a lot of damage mitigation.

We thank you in advance for your understanding and reach out to you for a responsible sector that preserves both the environment and people.

The Executive Board

*Signature of the Executive Board Members*

**U-3ARC (Union of African Associations of Refrigeration and Air Conditioning Actors), 27 March 2023**

*Image: U-3ARC open letter*

## **8. Zimbabwe implements stage two of Montreal Protocol on ozone depleting substances**

Zimbabwe is implementing stage two on controlling and monitoring trade in ozone depleting substances and hydrofluorocarbons under the Montreal Protocol.

The second stage of hydrochlorofluoro-carbons phase out management plan (HPMP) seeks to phase out the use of [hydrochlorofluorocarbons] in line with the provisions of the Montreal Protocol on substances that deplete the ozone layer and its Kigali Amendment. The Montreal Protocol on substances that Deplete the Ozone Layer is the landmark multilateral environmental agreement that regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances that were stripping the Earth of its ozone protecting layer until major international action worked well to stop the emission and production of these chemicals, largely used in refrigeration and as the propellant for spray cans



In a speech read on his behalf at a workshop for customs officers on controlling and monitoring trade under the Montreal Protocol, Secretary for Environment, Climate, Tourism and Hospitality Industry Ambassador Raphael Faranisi said the country was also implementing the first stage of the Kigali protocol to further phase down hydrofluorocarbons in line with the Kigali amendment to the Montreal Protocol.

In a speech read on his behalf at a workshop for customs officers on controlling and monitoring trade under the Montreal Protocol, Secretary for Environment, Climate, Tourism and Hospitality Industry Ambassador Raphael

Faranisi said the country was also implementing the first stage of the Kigali protocol to further phase down hydrofluorocarbons in line with the Kigali amendment to the Montreal Protocol.

Zimbabwe, like many other developing countries does not produce these substances," he said. "We, therefore, rely entirely on imports to meet our domestic needs largely in the refrigeration and air conditioning sector. "If adequate control measures are not instituted at ports of entry, Zimbabwe risks being a dumping ground for obsolete substances and technology. As customs officers, you, therefore, play a crucial role to prevent illegal imports of these substances into the country."

Ambassador Faranisi said customs officers were the country's first line of defence as illegal substance trade was now of major concern to the international community.

He said if it was not effectively controlled, there will be continued use of the substances, nullifying the tremendous achievements already made to heal the ozone layer and combat climate change.

"Controlling illegal trade in ozone depleting substances and hydrofluorocarbons requires a lot of investment in human capital development, availability of advanced equipment and effective legal instruments," Ambassador Faranisi said.

This training workshop will, therefore, equip you with the necessary knowledge to enable you to curb illegal trade in these chemicals. Illegal traders are dynamic in their operations and will try by all means to be ahead of enforcement officers.

A lot of intelligence is, therefore, required to outwit these illegal traders. To ensure that the Montreal Protocol's ozone depleting substances phase out and hydrofluorocarbons phase down targets are met, the Government of Zimbabwe established an import and export licensing system to control and monitor the quantities of these substances entering or leaving our borders.

Ambassador Faranisi said the regulations required all importers and exporters of controlled substances to apply for permits from the Ministry prior to shipment of the goods.

The regulations were recently revised to incorporate recent developments under the Montreal Protocol and include new harmonised system codes

[Our] Ministry, with the support of customs officers at all ports of entry, has been implementing an import and export licensing system for ozone depleting substances and their dependent equipment since January 2005," he said.

This is provided for under Article 4B of the Montreal Protocol to curb illegal imports of controlled and prohibited substances. Refrigerant identifiers and cameras were distributed to all the major ports of entry for use by customs officers in detecting mislabeled cylinders of refrigerants.

A number of concealed, mislabeled or falsely declared consignments have been seized at some stations and ports of entry."

[The Herald, 24 March 2023, By Ivan Zhakata](#)

Image: The Herald Website

## 9. Nigerians Purchase One Million air Conditioners Yearly – UN

The Federal Government has warned that Nigeria will not be a dumping ground for air conditioners and refrigerators with energy efficiency ratio that are below internationally acceptable minimum energy performance standard.

This came as the United Nations says Nigerians purchase about one million air conditioners every year.

Meanwhile, the Federal Government told the Nigeria Customs Service, Standard Organisation of Nigeria, and other relevant agencies, to be alive to their responsibilities, stressing that the influx of substandard cooling appliances posed danger to the climatic conditions across the country.



This came as the United Nations Environment Programme announced that over one million air conditioners were sold annually in Nigeria, adding that this was eating deep into the finances of Nigerians with respect to energy bills.

Speaking at the National Stakeholders' Consultative Workshop on Energy Efficient and Climate-Friendly Cooling in Nigeria, the Minister of Science, Technology, and Innovation, Adeleke Momara, said the enforcement of laws should be intensified.

After listening to a presentation by the UNEP Programme Management Officer, Brian Holuj, on the magnitude of pollution caused by the influx of substandard cooling devices imported into Nigeria, Mamora charged the NCS and SON to be alive to their duties.

"I listened to your presentation and certain issues were raised in it. There is the issue of monitoring and enforcement of protocols. Often times, we have beautiful policies and laws, but it is not the beauty of the policy, guideline or law that matters. It is the zeal for implementation that is most important.

"You mentioned this issue of Minimum Energy Performance Standard. What I think is that you have a minimum standard, but if there is no compliance with that, then we cannot get results. And if we must get results, it means the enforcement agencies must be alive to their responsibilities.

"The customs, Standard Organisation of Nigeria, and other relevant agencies need to be alive to their responsibilities and ensure that Nigeria does not become a dumping ground, where you just bring in all sorts of products that are not in line with what we expect by way of standards," the minister stated.

He said the workshop, which was organised by the Energy Commission of Nigeria and UNEP, was aimed at promoting energy efficiency best practices in the cooling sector in Nigeria.

Momara said UNEP officials flew into Nigeria to support the country's transition from inefficient cooling appliances to the most efficient ones in line with Nigeria's commitment to mitigating climate change challenges.

He said, "It is a fact that Nigeria is the largest market in Africa, and this also applies to the cooling sector. With the current growing population, combined with improving lifestyle, urbanisation and rising global warming, Nigeria will continue to experience growing demand for air conditioners, refrigerators and other cooling devices.

"Thus, becoming one of the fastest growing air conditioners and refrigerators market in the world. Unfortunately, most of the air conditioners utilised in the country have an energy efficiency ratio below internationally acceptable minimum energy performance standard.

**Economic Confidential, 31 March 2023**

Image: Economic Confidential Website

## ASIA AND THE PACIFIC

### 10. Indonesia wins Montreal Protocol Award

Jakarta (ANTARA) - Indonesia has won the Montreal Protocol Award for successfully preventing the illegal import of six tons of ozone-depleting substances during 2019–2020.

The award was handed over by the United Nations Environment Program, namely UNEP OzonAction, to the Ministry of Environment and Forestry (KLHK), at an event held virtually on Wednesday (March 29, 2023).

"The import of illegal ozone-depleting substances could be thwarted due to the informal Prior Informed Consent Procedure (iPIC) mechanism," the ministry's director general of climate change control, Laksmi Dwanti, informed in Jakarta on Thursday.

She explained that iPIC is a platform for the voluntary exchange of information regarding plans for the export-import of ozone-depleting substances and hydrofluorocarbons (HFCs) between the Montreal Protocol party countries.



The platform was built by UNEP to support countries in providing detailed information on importers and exporters of registered ozone-depleting substances and HFCs to other state parties.

iPIC consultations between Indonesia and the European Union helped thwart the illegal export of six tons of the chemical compound HCFC-123, which was to be used in fire extinguishers, from the European Union to Indonesia, Dwanti informed.

"The HCFC-123 importer is not registered as an importer of ozone-depleting substances. The importer did not have an import permit and allocation. Therefore, we requested the HCFC-123 export request from Europe to be canceled," she disclosed.

UNEP OzonAction routinely works with the Ozone Secretariat and the World Customs Organization (WCO) to present awards to customs and excise officers, as well as officials who are authorized to control the consumption of ozone-depleting substances.

The latest awarding ceremony was attended by 18 countries: Bulgaria, China, France, Georgia, Germany, Indonesia, Italy, Lithuania, Malaysia, the Netherlands, North Macedonia, Poland, Romania, Spain, Turkmenistan, Ukraine, Uzbekistan, and the European Union/Commission.

Dwanti said that illegal imports of HCFCs could have an impact on policies for eliminating the consumption of ozone-depleting substances, especially HCFCs in Indonesia.

She expressed the hope that the award would encourage the Indonesian government to improve the monitoring of imports of ozone-depleting substances and HFCs in the future.

The Indonesian government is committed to increasing efforts to exchange information regarding the export-import of ozone-depleting substances and HFCs through iPIC with all countries in the Montreal Protocol as part of efforts to protect the ozone layer and contribute to climate change prevention.

**ANTARA Indonesia News Agency, 30 March 2023**

*Images: ANTARA website*

#### **11. Thailand destroys 19 tonnes of CFCs**

**Mission-based project development company Tradewater has reached a critical milestone in a landmark carbon offset project in Thailand, permanently destroying more than 19 metric tonnes of ozone-depleting refrigerant gas.**

The project has prevented the release of over 192,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) from entering the atmosphere.

The senior director of international programs at Tradewater, María José Gutiérrez Murray, said this milestone represents several years of planning and collaboration with their partners in Thailand.

"This is a highly impactful project, involving the large-scale destruction of harmful ozone-depleting and global warming gases," she said.

"We're excited to show what's possible when governments, local partners, and a private sector company – Tradewater – come together to address an urgent climate threat."

Destruction of the 19 metric tonnes represents the first of seven phases in the project, which is a collaboration between Tradewater, Thailand's Customs Department, Industrial Estate Authority of Thailand (IEAT), Bangpoo Environmental Complex (BPEC), Waste Management Siam (WMS), and the Department of Industrial Works (DIW).

When completed, this unique public-private partnership is expected to permanently prevent over 1.14 million tonnes of CO<sub>2</sub>e from escaping into the atmosphere.

Decades ago, the Montreal Protocol began to phase out production of CFC (chlorofluorocarbon) refrigerant gases. The Thailand Customs Department started seizing disposable cylinders of CFCs improperly imported into the country.

Over the years, they seized over 10,000 cylinders containing more than 120 metric tonnes (120,000 kilograms) of CFCs, a potent ozone-depleting substance and greenhouse gas, and stored them in 42 depots around the country.



In storage, these cylinders remained at risk of leaking into the atmosphere – a common occurrence when cylinders rust and deteriorate – and the Customs Department sought an environmentally responsible solution.

“The Montreal Protocol was a significant step in the fight to protect our ozone layer. However, its focus on end-of-life solutions for the gases it addressed was limited, and there has been insufficient funding to help countries destroy these potent gases—making it very challenging for any remaining stockpiles to be properly disposed of,” Gutiérrez Murray said. “We commend the diligence of Thailand’s government and local stakeholders, as well as their close collaboration in this unique project.”

The Thai authorities had been looking for a solution for many years, and a pathway eventually led them to Tradewater. The Thai Customs Department and Tradewater were introduced in 2020 and began a series of conversations, facilitated by The Creagy Company, and including IEAT, BPEC, DIW, WMS. Global law firm Latham & Watkins and local counsel Thanathip & Partners were retained to provide the legal support necessary for the process. From this dialogue, the unique public-private partnership was established, and Tradewater agreed to organize and finance destruction of the CFC stockpile.

While complex to coordinate, Tradewater COO, Gabe Plotkin, said this project is a testament to the great things that can be accomplished when public and private stakeholders work together to solve a problem.

“The Thai stockpile is the largest that we have uncovered to date, and we are proud to provide a way to leverage the voluntary carbon credit market to ensure these refrigerants are safely and permanently destroyed,” Plotkin said.

Tradewater expects to destroy all the refrigerants seized by the Thailand Customs Department by early 2024. It is one of several international projects Tradewater is currently overseeing, thanks to the work of capable and environmentally conscious stakeholders all over the world.

“The problem the Customs Department faced in Thailand is not unique,” Plotkin said.

“We hope this project inspires other governments to consider similar partnerships to safely destroy legacy CFCs and stranded refrigerant stockpiles.”

[Climate Control News \(CCN\), 22 March 2023](#)

*Images: CCN website*

## WEST ASIA

### 12. Oman charting a path towards climate resilience

MUSCAT - “UNIDO supports the climate resilience agenda of Oman and promotes partnerships between its Member States to address climate challenges,” said Ciyong Zou, Deputy to the Director General and Managing Director of the Directorate of Technical Cooperation and Sustainable Industrial Development.



Speaking after a meeting with Abdullah Bin Ali Al Amri, Chairman of Oman’s Environmental Authority, Zou said that addressing climate challenges presents an excellent opportunity to promote prosperity, security, and a brighter future in Oman and across the region.

“All sectors in Oman are harmonizing towards a green economy and an accelerated and holistic response from UNIDO is urgently needed to achieve the national environmental agenda,” said Abdullah Bin Ali Al Amri. Oman seeks to achieve carbon neutrality by 2050 and implement a wide range of energy transition activities in the country.

“Oman is a regional and global reference due to its rapid response and resilience to environmental shocks like the tropical cyclone Gonu in 2007,” Al Amri recalled.

The two discussed opportunities to strengthen collaboration in deploying climate technologies such as green hydrogen.

A new UNIDO project will strengthen the long-term capacity of Oman to plan for the impacts of climate change. A joint initiative of the Green Climate Fund (GCF), the Environment Authority of Oman, UNIDO and the Sultan Qaboos University, the project will deliver validated drafts of the National Adaptation Plan and the Climate Change Adaptation Policy, among other objectives.

A launch ceremony for the project, “Enhancing the National Adaptation Plan Process for the Sultanate of Oman”, attracted over 80 stakeholders from government entities, national organizations, academia and civil society.

Zou echoed the call of the Islamic Declaration on Global Climate Change. “It is essential that all countries, especially the developed nations, increase their efforts and adopt the pro-active approach needed to halt and eventually reverse the damage being wrought,” he said.

Ibrahim Ahmed Al-Ajmi, Technical Focal Point of the Oman’s Environment Authority, underlined the the project outputs’ direct linkage with the Oman Vision 2040 Implementation Follow-up Unit.

“The partnership of the project provides an avenue that secures country-ownership. It aligns with the GCF criteria and a technically sound approach to investment planning to enhance the resilience of Oman’s priority sectors,” said Eduardo Freitas, Regional Manager Africa Desk of the GCF.

UNIDO representatives outlined the work of the Organization in climate-resilient development and catalyzing adaptation financing. They stressed the importance of involving the private sector in national strategies, as well as placing the most vulnerable communities, including women, at the centre of the decision-making process.

Contact: [Yunrui Zhou](#), Associate Industrial Development Officer, UNIDO Montreal Protocol Unit

[UNIDO Montreal Protocol Unit, 18 March 2023](#)

*Images: UNIDO website*

## LATIN AMERICA AND CARIBBEAN

### 3. Latin America and Caribbean National Ozone Officers reunite to address Kigali Amendment challenges



**30 March 2023, Panama City, Panama** – National Ozone Officers from Latin America and the Caribbean, met in Panama City from 16-27 March 2023 to discuss and address the Kigali Amendment challenges including Montreal Protocol related activities. The series of meetings (1. Joint Network Meeting for Latin America and the Caribbean, Latin American, 2. the Caribbean Thematic Meetings and 3. Training for New National Ozone Units (NOUs) for the Caribbean and Latin America) were organised by [UNEP OzonAction](#) in collaboration with Panama’s National Ozone Unit. The Ozone Secretariat, the Multilateral Fund Secretariat, Implementing Agencies, and bilateral agencies also attended the meeting.

The Joint Network meeting was opened by Mr. Jim Curlin, Head of OzonAction, Ms. Tina Birmpili, Chief Officer, Multilateral Fund Secretariat, Mr. Juan Bello, Regional Director, UNEP Regional Office Latin America and the Caribbean, and Dr. Melva Cruz, Director General, Ministry of Health of Panama.

In his opening remarks Mr. Juan Bello, UNEP Regional Director said, “I am pleased to note that the Latin American and Caribbean regions have shown good performance in ratifying the Kigali Amendment to the Montreal Protocol.



Countries are facing great challenges in front of them as the control measures are very tight. These face-to-face meetings are very important to share experiences and information to prevent any country from not complying with the Kigali Amendment.”

Dr. Melva Cruz, Director General, Ministry of Health in Panama, reaffirmed Panama’s commitment to continue supporting compliance with the Montreal Protocol. She noted the importance of the Sustainable Development Goals in a comprehensive manner, improving health and well-being, food security and nutrition, promoting gender equality, and the transition towards cleaner technologies which have low global warming potential and are more efficient.

Further, the Multilateral Fund’s Chief Officer, Tina Birmpili pointed out that, “The National Ozone Officers in the Latin America and Caribbean countries have been actively engaged in the discussions on all Montreal Protocol institutions, always ensuring that developing countries receive assistance for the implementation of the Protocol’s provisions, currently negotiating the cost funding guidelines for the HFC phase-down. Countries from the Caribbean have advocated for the special needs of low-volume-consuming countries and for the disposal of controlled substances in the discussions of the funding guidelines. The amendment can change people’s lives and address the climate challenge, but only if we get moving and assist developing countries to implement it by addressing any challenges they may have. The strong engagement of the governments is what enables the implementation of robust plans that ensure sustainable reductions of controlled substances, but the presence of the Multilateral Fund Secretariat is a reassurance that we are here to assist you in any way we can.”

UNEP OzonAction presented the status and trends of compliance for the two sub-regions: Latin America, and the Caribbean. Projected trends in HFC consumption were highlighted, as well as those Parties at risk of going into non-compliance with respect to attaining the 2024 HFC freeze.

The Ozone Secretariat presented relevant decisions of the Open-Ended Working Group (OEWG)/Meeting of the Parties (MOP) and baseline calculations for HFCs. The Multilateral Fund Secretariat informed on the recent decisions of the 91st Executive Committee Meeting. The decisions that pertain to a funding window on pilots for energy efficiency, preparation of national inventories and plans of action for disposal of unwanted controlled substances, and the updated format increase in funding and the extension for a 3-year period of Institutional Strengthening (IS) projects were highlighted.

UNEP OzonAction presented global examples of best practices in gender mainstreaming in the cooling sector covering the work undertaken by women, providing past and current publications, mechanisms in which women can get connected and providing various modalities for gender mainstreaming activities. Two case studies were shown from Trinidad and Tobago and Chile advocating for women’s empowerment.

The United States Environmental Protection Agency provided an overview of the HFC Licensing and Quota System in the United States. The EU presented an overview of their F-gas regulation displaying current baselines and the accelerated phase down approach in contrast to the Montreal Protocol’s schedule. Environment and Climate Change Canada provided an overview of the legislative framework for the management of ODSs and HFCs in Canada.

A field visit was organised by the Panamanian NOU to visit “Grupo Rey” which is a centre for logistical operations of El Rey supermarket chain invested in CO2 low global warming technology. The group is also committed to renewing old technology to CO2 by 2030 in all the largest supermarkets in Panama. The participants were given firsthand information on how this technology operates, and they were extremely interested in this technology choice.

UNEP OzonAction provided an overview of the capacity-building tools available to countries. They also presented global and regional awareness activities. The Kigali Amendment [brochure](#) and [posters](#) were mentioned as well as the countdown to 31 March 2023 to receive the artwork for the Regional Art Contest “[The Planet is Your Canvas](#)” [www.theplanetisyourcanvas.com](http://www.theplanetisyourcanvas.com). The contest has four categories: digital illustration, drawing and painting, photography, and video. The art contest is organised for both Latin America and the Caribbean.

The implementing agencies UNIDO, UNEP, UNDP, and the bilateral agency, GIZ provided an overview of the work being undertaken on a regional level. Consumption data, new refrigerants and blends, in addition to recovery and reclamation were discussed as new challenges that countries will be faced regarding compliance.

**Contact:** [Anne-Maria Fenner](#), Information manager,

**[UNEP, OzonAction, 30 March 2023](#)**

*Images: [UNEP OzonAction website](#)*

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#### 14. Gases refrigerantes naturales: la innovación para frenar la contaminación en la industria del retail

Se estima que el 70 por ciento de la huella de carbono del sector de retail corresponde a fugas de gases de refrigeración contaminantes. Desde hace varios años el país ratificó su compromiso con desincentivar su uso. Para el 2030 las empresas deberán contar con sistemas más modernos y sostenibles.



Desde 2017, el Gobierno colombiano ratificó su compromiso con la enmienda de Kigali del Protocolo de Montreal, que insta a limitar el uso de gases refrigerantes con un potente efecto sobre la capa de ozono, que en su mayoría son usados por la industria de retail para sus sistemas de aire acondicionado y de refrigeración.

“El gran efecto contaminador de estos gases refrigerantes se debe a que la gran mayoría funcionan con sistemas viejos, de más de 20 años de uso. Por sus niveles de presión, y como circulan por tubería de cobre, suele haber fugas que contaminen el ambiente de forma drástica”, explica Romain Viscaye, director de operaciones de Eficiencia Energética en [GreenYellow Colombia](#).

Con la Resolución 2749 de 2017, la reglamentación del país fue contundente. Por ejemplo, una de las sustancias más usadas como la R22 (HCFC22), solo podrá usarse en un 2.5 del volumen que se utilizaba en 2013. “Si bien para ese año las empresas podrían seguir usando en pocas cantidades estos gases, por temas de reparación, mantenimientos o recargas, será muy costoso mantener esos sistemas. Quizás estas sustancias solo se encuentren en el mercado negro”, agrega Viscaye.

El año pasado hubo otra resolución que ratifica el compromiso del país con esta enmienda. Con la Resolución 0634 de 2022 se limita la fabricación e importación de equipos que contengan o requieran para operar ese tipo de gases refrigerantes. “En la región es algo destacable. El país se lo ha tomado en serio, pues hay incentivos para incursionar en gases refrigerantes que no contaminen”, indicó el directivo.

#### Apoyo a la transición

Precisamente, uno de los objetivos de la multinacional francesa GreenYellow, que opera en el país hace más de una década, es convertirse en una aliada de las compañías colombianas que quieren sumarse a ese proceso de [transición energética](#).

Lo hace con una oferta de soluciones con refrigerantes naturales que no contaminan y son energéticamente más eficientes y un acompañamiento que arranca desde entender el flujo de gastos en mantenimiento y funcionamiento por los sistemas viejos de refrigeración de las empresas con la idea de no sobrepasar ese presupuesto actual.

“Allí entramos nosotros con la figura de *leasing* operacional, que incluye instalación, suministro, operación, mantenimiento y garantía de eficiencia energética. Esos costos los proyectamos a varios años hasta encontrar un punto de equilibrio de optimización e incluso de ahorro de gastos. A esto se suman los ahorros por beneficios tributarios por usar sustancias no contaminantes”, indica Viscaye.

Para el directivo, la excusa de que no hay presupuesto para ese tipo de transformaciones no es válida porque en el mercado hay flexibilidades que lo permiten. “Quienes quieran hablar de sostenibilidad tienen que estar trabajando por cumplir esas dos resoluciones”, concluyó.

**Semana, 30 de Marzo 2023**

Images: [Semana website](#) / [Getty Images](#)

**NORTH AMERICA**

## 15. USEPA GreenChill is hosting two webinars in April

### Subsection (h) Under the American Innovation and Manufacturing (AIM) Act

12 April 2023 | 4 – 5 PM Eastern

Presenters from the U.S. Environmental Protection Agency (EPA) will provide an overview of subsection (h). Subsection (h) authorizes EPA to establish regulations to control, where appropriate, practices, processes, or activities regarding the servicing, repair, disposal, or installation of equipment, for purposes of maximizing the reclamation and minimizing the release of certain hydrofluorocarbons (HFCs) from equipment and ensuring the safety of technicians and consumers.

[Register Now! Subsection \(h\) Under the AIM Act](#)



### Commissioning and Retro-Commissioning for Food Retailers

April 27 | 2 – 3 PM Eastern

Join GreenChill for a webinar on April 27, 2023, from 2 - 3 PM Eastern! Commissioning and retro-commissioning play key roles in ensuring that stores operate at peak efficiency. Presenters from Danfoss will review best practices for new store commissioning including how to ensure equipment is installed per specification and performance matches the reality of installation. Presenters will also discuss strategies for successful retro-commissioning, particularly adequate planning.

[Register Now! Commissioning and Retro-Commissioning for Food Retailers](#)

Image: USEPA GreenChill website

## EUROPE & CENTRAL ASIA

## 16. OLAF awarded for its work against smuggling in climate-damaging gases

The European Anti-Fraud Office (OLAF) is awarded the prestigious Montreal Protocol Award for Customs and Enforcement Officers in recognition for the strong commitment to address illicit trade in ozone-depleting substances and fluorinated global warming substances controlled under the Montreal Protocol. OLAF's operations in collaboration with its operational partners have led to the seizure and detention of almost 800 tonnes of illegal refrigerants over the past few years.

OLAF Director-General Ville Itälä said: *"Fighting the illicit trade in hydrofluorocarbons is an active contribution to protecting the environment and to the EU's ambitious climate goals to make Europe the first climate neutral continent by 2050. Tackling the illicit imports of HFCs has been an operation priority for OLAF for several years. Our cooperation with national, European and international authorities is key to the success of our operations and I am very honoured that our collective efforts have been recognised"*.

The gases used in refrigeration equipment are often HFCs - hydrofluorocarbons that were introduced as replacements for ozone-depleting substances. HFCs do not deplete the ozone layer but are potent greenhouse gases, often with a high global warming potential. To address this issue, an EU Regulation adopted in 2014 established a phase-down to progressively reduce the quantity of HFCs placed on the market. Criminal networks and other ill-intentioned actors tried to exploit the phase-down to generate opportunities for an illicit parallel trade.

Tackling this black market, especially the illegal imports of these gases into the EU, is an operational priority for OLAF. The environmental impact of illicit imports can be devastating. Preventing them from entering the EU market is part of OLAF's contribution to protecting citizens, the environment and legitimate trade. OLAF supports cross-border investigations and works closely with national and international authorities passing on tracking information and intelligence on suspicious shipments and operators to lead to significant seizures and detentions of illegal shipments.



OLAF's operations in collaboration with its operational partners have led to the seizure and detention of illegal refrigerants. ©EU

OLAF received the award during the 5<sup>th</sup> edition of the ECA Montreal Protocol Awards for Customs and Enforcement Officers that was held virtually on 29 March 2023. Various national authorities and international organisations were awarded the Montreal Protocol Medal and Certificate during the event which included the participation of the World Customs Organization, the Ozone Secretariat and UNEP Law Division's OzonAction Programme.

### **Background**

The global Montreal Protocol award for customs and enforcement officers is awarded by the UN Environment OzonAction, in cooperation with the World Customs Organization and the Ozone Secretariat. The award aims to provide recognition and encouragement to customs and enforcement officers and their respective organizations for successful prevention of illegal or unwanted trade of HCFCs / HFCs. The award is expected to enhance regional and international cooperation and awareness of the customs and enforcement community. It will facilitate reporting on illegal trade to UN Environment and the Ozone Secretariat.

[The European Anti-Fraud Office \(OLAF\), 31 March 2023](#) *Image: OLAF website*

### **17. European Parliament Plenary Session – March 11, 2023**

This week, Members hold their second March plenary session, this time in Brussels. The agenda is full, with debates scheduled on the rule of law in EU countries and on two environmental files [...]



Turning to the environment, in a joint debate scheduled for Wednesday afternoon Members are due to discuss two reports tabled by the Committee on the Environment, Public Health and Food Safety (ENVI), with the aim of fixing Parliament's position for trilogue negotiations with the Council. The reports concern proposals that aim to bring existing legislation into alignment with EU climate goals and with the Montreal Protocol.

The proposed revision of the Ozone Regulation would update current rules on ozone-depleting substances (ODS) to reduce administrative burden, facilitate monitoring, and further reduce ODS emissions. Parliament seeks to establish a rolling review mechanism by which the Commission would be required to assess every 2.5 years (beginning in January 2025) the availability of alternatives to ODS prohibited by the Montreal Protocol but whose use is permitted in the EU in certain applications. The ultimate aim is to phase out such exemptions.

The second proposed regulation concerns fluorinated greenhouse gases (F-gases), a particularly strong – although non-ozone-depleting – category of greenhouse gases (GHG). EU rules on F-gases have been in place since 2006 and have led to significant reductions in GHG emissions. However, in light of the EU's goals of 55 % GHG reductions by 2030 and climate neutrality by 2050, Parliament is pushing further. Among the ENVI committee's proposed changes to the Commission's proposal are a prohibition on the use of F-gases in sectors where alternatives are technologically and economically feasible, steeper product phase-down trajectories, firmer deadlines after which certain F-gases will not be allowed to be placed on the market, and the introduction of minimum fines for non-compliance. [...]

[European Parliamentary Research Service, 28 March, by Aidan Christie with Rebecca Fredrick](#)

*Image: EP website*

### **Video > Joint debate - Fluorinated gases and ozone depleting substances: MEPs debate - 29 March 2023**

**Description** - MEPs debate an ambitious reduction of fluorinated greenhouse gases emissions, to further contribute to the EU's climate neutrality goal, and new legislation for additional cuts of the emissions of substances that damage the ozone layer, in line with the European Green Deal and international agreements.

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### AREA: EU Women in cooling video competition

AREA (Air conditioning and Refrigeration European Association) and World Refrigeration Day (WRD) have partnered to launch a competition on best practices for all EU women in cooling.

The challenge is to provide a video showing their best practices (e.g. installation, repair, charging, leak checking, recovery...) using the right PPE, right tools, etc.... (please refer to the attached modalities); the video will be provided by uploading it on AREA's Facebook page within the **deadline of May 13<sup>th</sup>**.

AREA's appointed judges will decide the winner, who will be awarded:

- by AREA (through ATF) of flight, accommodation, and conference fee
- and by Steve Gill (WRD) of a check in the value of 1,000 EUR
- receiving the prize in the frame of **UNEP-IIR-AREA-CSG 20<sup>th</sup> European Conference (Milan, 8-9 June 2023)**.

Any AREA language is welcome.

Thank you, very much, and good luck, to EU women in cooling!

- [Specifications for the award WOMAN IN COOLING.pdf](#)

- [WOMEN IN COOLING leaflet.pdf](#)

AREA (Air conditioning and Refrigeration European Association), February 2023

Image: AREA website



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**

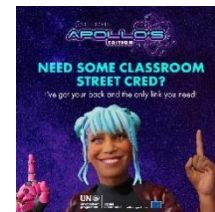
- Read/Download the [full report](#)
- pre/post documents, United Nations Environment Programme (UNEP), Ozone Secretariat [MOP-34](#)
- [Daily highlights](#) Earth Negotiations Bulletin-International Institute for Sustainable Development (IISD) / [Presentations and statements](#) / [Side events](#)



Image: ENB-IISD website

**Overview for the meetings of the ozone treaties in 2022-2023** - Click [here](#) for upcoming and past Montreal Protocol Meetings dates and venues.

**New gaming technology to create environment simulation game for teenagers**-The UN Environment Programme's (UNEP) Ozone Secretariat today launched a simulator game and avatar using the latest software technology. [Apollo's Edition](#) is the latest addition to the [Reset Earth education platform](#). Targeting 13-18-year-olds, the free online education material developed provides educators with resources to teach students the importance of environmental protection.



**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:

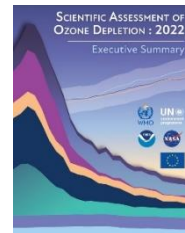
- [The Technology and Economic Assessment Panel](#)
- [The Scientific Assessment Panel](#)
- [The Environmental Effects Assessment Panel](#)

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.

**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 91 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 and a few bilateral agencies.

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.

As at 5 December 2022, the contributions received by the Multilateral Fund from developed countries, or non-Article 5 countries, totalled over US\$ 5.02 billion. The Fund has also 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.

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.

**Latest News and Announcement:**

[Updated guide for the presentation of new stages of HCFC phase-out management plans \(February 2023\), 3/7/2023](#)

[Updated guide for the presentation of tranches of HPMPs \(Updated, March 2023\), 3/7/2023](#)

The 92<sup>nd</sup> meeting is scheduled for 29 May to 2 June 2023, in Montreal, Canada

The 93<sup>rd</sup> meeting is scheduled for 11 to 15 December 2023, in Montreal, Canada

>>> 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)



**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](#).

#### [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).

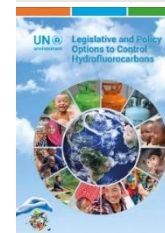
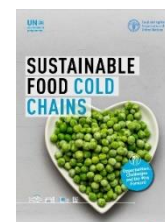
**Green Cooling in public procurement** How to advance the procurement of climate-friendly and energy-efficient cooling equipment in the public sector? Air conditioning in public buildings is often responsible for around 50% of total electricity consumption. Switching to climate-friendly cooling technologies ("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**

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:

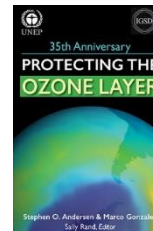
- Safety hazards and health considerations
- Emergency shutdown procedures
- Addressing deviations from system operating limits
- Risks and costs of non-compliance with regulatory standards

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




**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.*



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To be organised by the French Association of Refrigeration (AFF) under the theme "**Towards Efficient, Controlled and Smart Refrigeration**", the **26<sup>th</sup> IIR International Congress of Refrigeration** will be held in Paris (France) on August 21-25, 2023.

Participate to share the latest developments in the industry with the international refrigeration community.

This international event will bring together scientific and technical experts in all fields of refrigeration from across the globe to provide perspectives on the future of the industry in line with sustainable development.

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