

# OzoNews

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

**Volume XXII | 15 June 2022**

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## GLOBAL

1. Kigali Amendment latest ratifications



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

[Singapore, 1 June 2022](#)

[Italy, 25 May 2022](#)

[Solomon Islands, 23 May 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. World Refrigeration Day 2022 - UNEP & partners raise profile on cold chain with support of world-renowned chefs



**COOLING  
KEEPS FOOD FRESH**

To celebrate World Refrigeration Day, June 26, [UNEP OzonAction](#), the [Secretariat of World Refrigeration Day](#) (WRD), [Chefs4thePlanet](#), and the [Global Food Cold Chain Council](#) (GFCCC) are partnering to raise the profile and awareness about the essential role of cooling in protecting human health and the planet. The Cooling Keeps Food Fresh campaign will describe why cooling is necessary for food safety and how it supports

nutritious diets that sustain our health, help reduce food loss and waste, and protect the environment.

Leading chefs from around the world have signed on to the campaign thanks to Chefs4thePlanet organization, the new partner joining this year's campaign. They will explain how cooling is necessary for their locally inspired cuisine. The chefs' recipes will be accompanied by tips for consumers on the cooling choices they can make in their homes to save money, prolong the life of products, and understand how food waste and loss contribute to climate change.

During the campaign, chefs from various regions of the world will deliver video messages, reinforcing their commitment to maintaining a planet sustainable for human life and describing how cooling contributes to day-to-day cooking and their kitchens' operations.

According to estimates compiled by the Food and Agriculture Organization (FAO), by 2050 we will need to produce 60 per cent more food to feed a world population of 9.3 billion. The truth is that the way we produce, process, distribute, and consume our food is profligate. Roughly one-third of all the food produced in the world for human consumption every year -- approximately 1.3 billion tonnes -- is lost or wasted. Avoiding food loss will lead to more efficient use of land and water, positively impacting biodiversity.

The contributions of cooling to our health and the environment extend much further. Freezing fruits and vegetables within hours of being harvested at their peak ripeness, locks in nutrients and flavours. Cooling also reduces one of the largest contributors to climate change - the emission of greenhouse gases from food that is lost due to spoilage and waste. Reducing food loss would feed greater numbers of undernourished people and advance climate protection. In addition, the wise selection and operation of cooling technology contributes significantly to the protection of the ozone layer and combating climate change.

*Further details and resources will be shared shortly.*

**Contact:** [Ayman Eltalouny](#), OzonAction, Coordinator International Partnerships

[UNEP OzonAction, 12 May 2022](#)

*Image: OzonAction website*

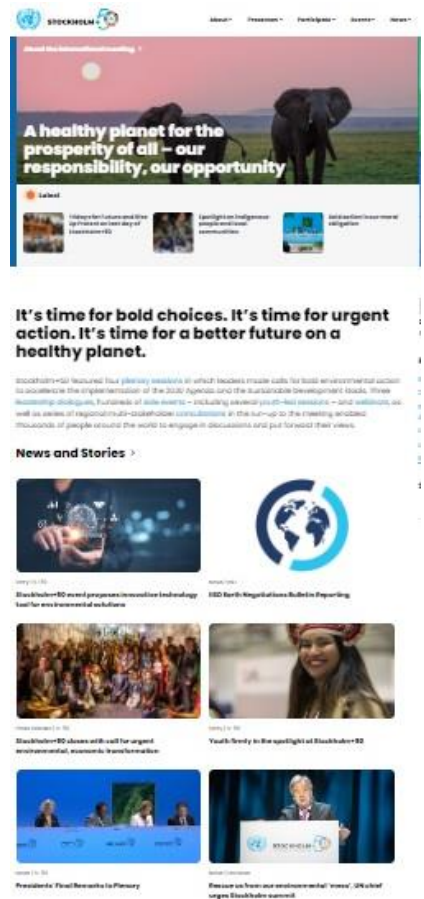
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### 3. Stockholm+50 references to ozone layer and Montreal Protocol

Stockholm+50 took place on 2-3 June 2022 in Stockholm, Sweden.

Fifty years after the landmark 1972 UN Conference on the Human Environment—the first ever UN conference on the environment—Stockholm was once again the gathering point to take stock of the state of the human environment and collectively brainstorm on how to move forward. Amidst a global pandemic and a triple planetary crisis of climate change, pollution, and biodiversity loss, there was a renewed sense of urgency around “implementation, implementation, implementation” predicated on fairness and inclusion.

The two-day meeting, Stockholm+50: A Healthy Planet for the Prosperity of All – Our Responsibility, Our Opportunity, featured an interactive series of free-flowing dialogues focused on three key themes: achieving a healthy planet and prosperity for all; a sustainable and inclusive recovery from the COVID-19 pandemic; and implementation of the environmental dimension of sustainable development. These Leadership Dialogues, along with the statements in plenary, yielded interesting insights and conversations both on the past 50 years and action needed going forward. The main outcome from the meeting was a series of recommendations focused on the right to a healthy and sustainable environment, changing our economic system, accelerating implementation of existing commitments, rebuilding trust, and strengthening multilateralism. [...]



**We share with you below few quotes with references to the ozone layer and the Montreal Protocol throughout the event:**

**Remarks** by António Guterres, The UN Secretary-General: [...] Fifty years ago, the United Nations convened the landmark Conference on the Human Environment here in Stockholm. World leaders recognized that we have a collective responsibility to protect the environment so humanity can enjoy peace, prosperity, and sustainable progress.

And indeed, over that time humanity has progressed. But today global well-being is in jeopardy, in large part because we have not kept our promises on the environment. Yes, we have rescued the ozone layer – a remarkable example of multilateral cooperation that should inspire us as we go forward. But, as we have become more populous and prosperous, our environmental footprint has become unbearably heavy. Earth's natural systems cannot keep up with our demands. [...]

In her **remarks**, Inger Andersen, Executive Director of UNEP, who has been appointed by UN

Secretary-General António Guterres as the Secretary General of the Stockholm+50 international meeting, said:

“We need to urgently work to transform our economies and societies, but our branches will spread only as far as our roots are deep. By remembering Stockholm at 50, we also remember how the world came together to heal the ozone layer in 2013, phase out leaded fuel this year and stop endangered species from going extinct. By convening in Stockholm, we also recommit to human and planetary health, responsibility, prosperity, equality, and peace – as we have seen only too clearly in COVID-19.”

Quotes from the “[6 environmental victories](#)”:

Since that conference fifty years ago, there have been many environmental victories, a primary one being the development of international environmental laws. These include the International Convention for the Prevention of Marine Pollution from Ships (MARPOL) in 1973 to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1975, and the Convention on Migratory Species in 1983, and the Rio Conventions (climate, biodiversity, desertification) in 1992 and the 2013 Minamata Convention on Mercury. Other victories include the elimination of chlorofluorocarbons (CFCs) under the Montreal Protocol in 1987, which protects the ozone layer, the moratorium on whaling, and the reduction of acid rain in industrialized countries, and the ban on radioactive waste dumping at sea. The fact that these are issues not often mentioned today is testament to the transformative effect of these decisions. [...]

**The Montreal Convention (1987)** One of the most important multilateral agreements of the past fifty years, the Montreal Protocol on Substances that Deplete the Ozone Layer regulated the production and consumption of nearly 100 chemicals – including CFCs – referred to as ozone depleting substances. The Montreal Protocol was the first global treaty that dealt with the environment and showed what was possible with global cooperation and proved something of a template for future global environmental treaties. [...]

Quotes from the [IISD Summary](#) of Stockholm+50

[...] The Ozone Secretariat noted the Vienna Convention and Montreal Protocol’s impact on protecting the ozone layer and also helping combat climate change, especially through the recent Kigali Amendment.

*Image: Stockholm+50 website*

#### 4. Updated OzonAction "WhatGas?" Mobile App

The OzonAction ‘WhatGas?’ application is an information and identification tool for refrigerant 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](#)

[UNEP, OzonAction, June 2022](#)

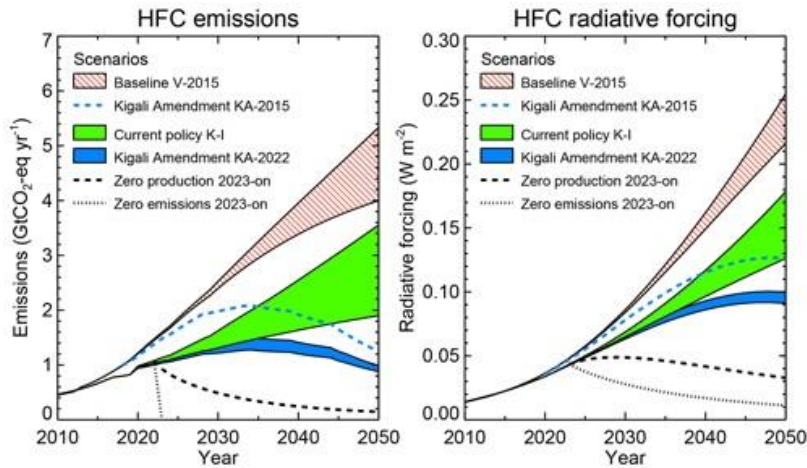
## **5. New research estimates the future emissions of potent greenhouse gases based on current trends and compliance with climate policies**

New research published in [Atmospheric Chemistry and Physics](#) projects future emissions of hydrofluorocarbons (HFCs), a class of potent greenhouse gasses, based on recent trends and compliance with current policies. The ability to observe trends of these compounds in the atmosphere is made possible by the long-term record of observations produced by the Halocarbons and other Atmospheric Trace Species (HATS) Division within NOAA's Global Monitoring Laboratory.

As substitutes for ozone-depleting substances, the emissions of HFCs have increased substantially over the past two decades as a response to controls on ozone-depleting substances under the Montreal Protocol. Due to HFCs' growing climate impact, the Kigali Amendment to the Montreal Protocol has scheduled a phase-down of their future production and consumption.

This study is designed to give policymakers quantitative feedback on the future climate benefits anticipated from the Kigali Amendment. The results will guide the Parties to the Montreal Protocol to decide if existing controls in the Protocol need revision, depending on the climate outcomes that they hope to achieve through the Montreal Protocol. Additionally, this study highlights the critical need for continued high-quality, long-term records of atmospheric composition, which NOAA's Global Monitoring Laboratory has been producing for decades.

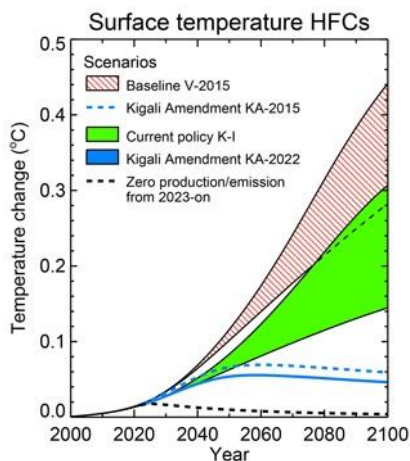
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Global total HFC emissions ( $\text{GtCO}_2\text{eq.yr}^{-1}$ ; left panel) and radiative forcing (right panel) from the V-2015 baseline scenarios developed in Velders et al. (2015) and the updated scenarios derived here (current policy Kigali independent (K-I) and KA-2022). The bands represent the upper and lower ranges of these scenarios. Also shown are scenarios that follow the phasedown schedules of the Kigali Amendment, based on the V-2015 baseline, and the current policy K-I scenario. No range is shown for the updated Kigali Amendment scenario (KA-2022) since the lower and upper range scenarios virtually coincide. Also shown are hypothetical scenarios in which the global HFC production ceases in 2023 or the global HFC emissions (from new production and from banks) cease in 2023. The curves contain the contributions of all HFCs, except HFC-23. Figure 4 from the publication.

Total  $\text{CO}_2$  equivalent global HFC emissions derived from NOAA observations continue to increase through 2019, but are about 20% lower than previously projected for 2017-2019, mainly because of the lower global emissions of HFC-143a, which is one of the longer-lived HFCs in use today.

Current Kigali-independent control policies reduce projected emissions in 2050 from 4.0–5.3  $\text{GtCO}_2\text{eq.yr}^{-1}$  in the absence of controls to 1.9–3.6  $\text{GtCO}_2\text{eq.yr}^{-1}$ , and the added provisions of the Kigali Amendment reduce the projected emissions further to 0.9–1.0  $\text{GtCO}_2\text{eq.yr}^{-1}$ .



Contribution of HFCs to the global average surface warming for the V-2015 baseline scenario without measures on HFC consumption and the current policy Kigali-independent (K-I) scenario. The bands represent the upper and lower ranges of these scenarios. Also shown are the effects of the phasedown of HFCs, following controls of the Kigali Amendment (KA-2022), and a hypothetical scenario that assumes that the global production of emissions of HFCs would cease in 2023. No range is shown for the Kigali Amendment scenario since the lower and upper range scenarios virtually coincide. The surface temperature change is calculated using the MAGICC6 model (Meinshausen et al., 2011a). The curves contain the contributions of all HFCs, except HFC-23. Figure 7 from the publication.

Without any controls, HFC emissions were projected to contribute 0.28-0.44 °C to global surface warming by 2100, compared to a contribution of about 0.04 °C by 2100 with Kigali Amendment controls.

[Read the Study >>>](#)

[National Oceanic & Atmospheric Administration, NOAA Research, 2 June 2022, By Xinyi Zeng](#)

*Images: NOAA website*

**International contest of scholar articles on the topic of “The Ozone Layer and Life on Earth” (Republic of Uzbekistan)**-Regulation on the procedure for selecting scholar articles devoted to the protection of the ozone layer for the international contest under the Joint project of the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection and UNDP/GEF ‘Complete HCFC Phase-out in Uzbekistan through Promotion of Zero ODS Low GWP Energy Efficient Technologies’.



Applications and electronic versions of scholar articles, including a link to the published paper on web-platforms or a scanned copy shall be sent to [ozone.o3.uz@gmail.com](mailto:ozone.o3.uz@gmail.com) by **August 1, 2022**

**Learn more >>>** <https://bit.ly/3L3xI3n> (English) <https://bit.ly/3GnBSzE> (Russian)

## AFRICA

### 6. UNEP-U-3ARC team up to advance RAC technical awareness in Africa

**Paris, 7 June 2022**–The United Nations Environment Programme (UNEP), OzonAction, and the U-3ARC (Union of Associations of African Actors in Refrigeration and Air Conditioning) agreed to collaborate towards expanding and advancing technological awareness and best servicing practices in Africa’s refrigeration servicing sector.

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During a 2-day meeting held at the UNEP premises in Paris, France from 8-10 June 2022, the UNEP OzonAction Compliance Assistance Programme (CAP) Africa team and the global CAP team led by OzonAction's Head of Branch, James Curlin, welcomed and met with the U-3ARC board members. The meeting was set to establish a strategic relationship between both parties to address the key challenges that are facing the refrigeration and air-conditioning (RAC) sector in Africa including, but not limited to, knowledge about new refrigerants, safety considerations in handling flammable refrigerants, training and certification of servicing technicians, support to local technicians' associations, and advancing women's engagement in the sector across the continent.

U-3ARC was created in 2020 by 30 associations of RAC actors from 29 Anglophone and Francophone African countries (Morocco, Tunisia, Cape Verde, Senegal, Mali, Guinea, Cote d'Ivoire, Burkina Faso, Togo, Benin, Niger, Chad, Nigeria, Djibouti, Congo, DR Congo, Uganda, Kenya, Rwanda, Burundi, Zambia, Zimbabwe, Lesotho, Madagascar, Cameroon, Gabon, Gambia, Comoros, and Tanzania) to build a regional programme to support the local associations in conducting state-of-art events and programmes to upgrade the capacities of refrigeration individuals and companies in the continent and build a connection and network with the international HVACR associations and societies. To date, U-3ARC includes representation from all 54 African countries and offers technical support to countries that are not yet officially registered as associations to formally do so. U-3ARC also currently represents more than 20,000 formal and informal businesses with nearly 150,000 employees at the date of its creation.

Building on the Montreal Protocol's 30 years of successful elimination of ozone-depleting substances, the Kigali Amendment aims for a worldwide phase down of the potent greenhouse gases, hydrofluorocarbons (HFCs), to prevent the consequences of climate change. African countries are among those already hit hardest by the growing consumption of high Global Warming Potential (GWP) substances mainly emitted by the cooling sector. As a result, the African refrigeration sector is certainly an effective player in reaching the compliance targets set by the Montreal Protocol and the Kigali Amendment.

To this end, the wise management and competent support to this sector in Africa is crucial for meeting ozone and climate objectives while contributing notably to many sustainable development goals.

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UNEP OzonAction and U-3ARC, through their collaboration, aim to assist the National Ozone Units (NOUs) and National Associations in advancing the servicing sector in Africa by offering tools and opportunities to expand the engagement of the sector in Montreal Protocol businesses and foster the relationship between governments and the local associations. Both parties agreed to develop a joint workplan including designing programmes, tools, and co-organize technical events. The collaboration arrangement will be pursued and concluded shortly in order to launch and present to NOUs and U-3ARC members.

**Contact:**

[Ayman Eltalouny](#), Coordinator International Partnerships, OzonAction, Law Division – UNEP

[Madi Sakandé](#), President – Union of Associations of African Actors in Refrigeration and air-Conditioning (U-3ARC)

*Image: OzonAction*

## LATIN AMERICA AND CARIBBEAN

### 7. El amoniaco, una opción pero siempre bajo buenas prácticas

Introducirlo en la refrigeración y la climatización supone la estricta observancia de las reglas de seguridad, uno de los temas del primer curso impartido en La Habana por el IRC.



Cuba apuesta por el uso del amoniaco y el IRC contribuye con la preparación del personal que opera los sistemas. Foto: Cortesía del IRC

El programa de entrenamiento que imparte el habanero Instituto de Refrigeración y Climatización (IRC) sobre el uso del amoniaco, acompaña al empeño del país de introducirlo cada vez más, pero sin descuidar la estricta observancia de las buenas prácticas que precisa ese gas refrigerante.

Se trata de la primera edición de un curso de tal alcance, que consta de cinco módulos, en cuya preparación se enrolaron otros especialistas como los de la Oficina de Ozono, el Ministerio del Interior (MININT), profesores de la Universidad Tecnológica de La Habana José Antonio Echeverría (CUJAE), y demás personal con vasta experiencia en el campo de la refrigeración con amoniaco.

El Ingeniero Oscar Hernández Pérez, director de Aplicaciones Ingenieras del IRC, comentó que el entrenamiento surge a punto de partida de las necesidades de las empresas, tanto explotadoras, como serviciadoras y mantenedoras que emplean el amoniaco como refrigerante principal, las cuales carecen del conocimiento básico sobre la forma de operar

y trabajar con seguridad los sistemas de este tipo, que en Cuba están bastante deteriorados.

Casi el 90 % de las grandes instalaciones frigoríficas industriales en la nación caribeña emplean el amoníaco, pero igual está presente en sitios que lo han introducido para la climatización, como la Zona Especial de Desarrollo de Mariel, el Centro de Ingeniería Genética y Biotecnología (CIGB) y otros que ha apostado por ese gas natural, dada su capacidad de no afectar la capa de ozono y no generar efecto invernadero.

A juicio del Ingeniero Pedro Peña Rojas, especialista principal del IRC y profesor líder del entrenamiento, las jornadas han puesto un marcado énfasis en las reglas de seguridad, la operación, la explotación y la concepción de esas instalaciones para evitar problemas con fugas, accidentes o averías que provoquen una situación que atente contra las personas y el patrimonio industrial.

“Es una sustancia clasificada como tóxica, pero posee muchas conveniencias en la refrigeración por ser ecológica. Las propiedades ventajosas que posee, entre estas las termodinámicas, superan la elección de otros refrigerantes, y si se explota bien no tiene inconvenientes”, añadió.

Con una duración de cinco meses –inició en febrero último- el programa está dirigido al personal técnico de organismos, y a quienes operan las instalaciones, tratando de despertar conciencia de que el respeto al uso del amoníaco debe nacer del conocimiento.

El primer especialista en Protección a Sustancias Peligrosas, de la Dirección de Protección del MININT, Teniente Coronel Lino Martell Membribes, reconoció que todo está normado, pero en la práctica se aprecia que hay quienes carecen de la habilidad necesaria para trabajar esos sistemas.

Significó la trascendencia del curso, que entre otros temas se centra en las cuestiones de la seguridad, y las principales causas que pueden provocar un incidente o un accidente en escenarios de este tipo.

Para el joven Fernando Castillo, técnico en refrigeración, han sido jornadas muy provechosas, que le aportan una visión más abarcadora de cómo operar eficazmente el sistema instalado en el CIGB donde labora desde hace casi cuatro años. “Muchos más deben pasar por estos entrenamientos”, advierte.

El mundo transita en estos momentos hacia el empleo de los refrigerantes naturales. Hoy entra al país un número importante de equipos con hidrocarburos y hay que preparar al personal encargado de la atenderlos, repararlos y darles mantenimiento.

“En el caso del amoníaco, Cuba ha ido perdiendo fuerza técnica preparada, por ello identificamos la necesidad de revertir esta realidad y una de las acciones son estos cursos”, afirmó el director general del IRC, Ingeniero José Rojo.

Más adelante destacó cómo ese centro perteneciente al Grupo de la Electrónica, del Ministerio de Industrias, tiene entre sus objetivos introducir en todos los nuevos proyectos que ejecuta el uso de amoníaco, en dependencia de la factibilidad de hacerlo.

Las entidades interesadas en acceder a los cursos deben comunicarse con la secretaria docente del IRC Iraida Rodríguez, a través del 7265-9077, extensión 108. Pueden

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organizarse dentro de las propias entidades, como lo hace en estos momentos la Empresa Prodal, en el habanero municipio de Regla.

### [Tribuna de La Habana, 7 JUNIO 2022, Por Lissette Martín López](#)

*Image: Tribuna de la Habana website / Cortesía del IRC*

#### **8. Haïti: 30 techniciens frigoristes haïtiens formés sur l'utilisation des nouvelles technologies du froid**

L'ingénieur Astrel Joseph, Directeur Général du Ministère de l'Environnement, a clôturé ce la session de formation de trois jours en faveur de techniciens frigoristes haïtiens sur les bonnes pratiques en matière de climatisation et réfrigération et sur l'utilisation des nouvelles technologies du froid à Port-au-Prince.

Cette formation a permis à 30 techniciens frigoristes de recevoir leur certification sur cet aspect très important pour la protection de la couche d'ozone. Astrel JOSEPH a salué l'intérêt montré par ces jeunes techniciens pour cette formation qui, ajoutait-il, « a été à la hauteur des attentes tant dans la partie théorique que dans les travaux pratiques [...] » s'adressant aux récipiendaires de cette formation il a déclaré « [...] vous représentez un maillon fort dans la chaîne des responsabilités dans la protection de la couche d'Ozone » en a profitant pour les inciter à mettre leurs connaissances en pratique, à cultiver le partage de l'information afin de mobiliser le plus de monde que possible autour de ce double objectif qui est la réduction des impacts négatifs sur la couche d'Ozone et sur le climat.



### [Ici Haïti, 13 juin 2022](#)

*Image: Ici Haïti website*

#### **9. Adoptan nuevo estándar internacional de seguridad para aire acondicionado**

La Comisión Electrotécnica Internacional (IEC) aprobó una norma internacional sobre requisitos de seguridad para bombas de calor eléctricas, acondicionadores de aire y deshumidificadores para uso doméstico.



El nuevo estándar permite límites de carga más altos para hidrocarburos como el propano (R290) y otros refrigerantes inflamables en tecnología doméstica, lo que a su vez significa reducciones potencialmente masivas en la emisión de gases refrigerantes que dañan el clima.

Los hidrocarburos son refrigerantes rentables y eficientes que no dañan el clima, pero debido a su inflamabilidad se han restringido a tamaños de carga muy pequeños en los equipos de refrigeración.

La líder de la Campaña Climática de EIA (Agencia de Investigación Ambiental), Clare Perry, dijo: "Después de instar a los gobiernos y la industria a abordar este problema durante muchos años, EIA está encantada de ver este hito crítico alcanzado en el camino hacia una refrigeración sostenible limpia y neta cero".

Este estándar revisado no podría ser más oportuno. El mundo está eliminando gradualmente los hidrofluorocarbonos (HFC) que dañan el clima bajo la Enmienda de Kigali al Protocolo de Montreal y necesitamos urgentemente adoptar soluciones rentables y preparadas para el futuro, como el propano, para no caer en la trampa de comprar otro F-'solución' de la industria del gas, como las hidrofluoroolefinas (HFO), que están cargadas de preocupaciones ambientales y de salud humana.

"Con este nuevo estándar, esperamos que el Parlamento Europeo y los estados miembros de la UE reconozcan que los HFC ya no son necesarios para una gran parte del mercado de aire acondicionado y bombas de calor y, en consecuencia, fortalezcan el Reglamento de gases fluorados de la UE propuesto recientemente", agrega Perry.

Después de un riguroso proceso de seis años y medio para acordar revisiones, el viernes 29 de abril se aprobó un borrador final del nuevo estándar, designado oficialmente como IEC 60335-2-40.

Asbjørn Vonsild, el coordinador del grupo de trabajo de IEC que guio el estándar de seguridad a través de sus revisiones, dijo: "La nueva edición de IEC 60335-2-40 permitirá que el R-290 [propano] se use en muchos A/C y sistemas de bomba de calor que previamente estaban bloqueados para usar este refrigerante por la versión obsoleta. Esto permitirá una reducción de mil veces en las emisiones climáticas directas en comparación con los sistemas que utilizan R410A".

El estándar de seguridad revisado permite usar una carga mayor de refrigerantes inflamables (hasta 988 g de R290 en un sistema de aire acondicionado dividido estándar) en equipos nuevos diseñados de acuerdo con ciertos requisitos de seguridad adicionales para garantizar el mismo alto nivel de seguridad que los equipos que no utilizan - Refrigerantes inflamables.

Se espera que la nueva norma se publique el 24 de junio. Luego, los países deberán adoptar rápidamente las revisiones en su legislación nacional.

[ACR Latino America, 14 Junio 2022, Por Duván Chaverra Agudelo](#)

*Image: ACR Latino America website*

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## WEST ASIA

**10. Kuwait Environment Public Authority in collaboration with UNEP, trains 1,000 employees from customs, leasing, and industry to control local markets and prevent them from being dumped with materials that do not conform to environmental specifications, including ozone depleting substances.**



سميرة الكندري



من الحضور

الهيئة العامة للبيئة تدرّب 1000 موظف من الجمارك والإجارة والصناعة لضبط الأسواق المحلية ومنع إغراقها بالمواد غير المطابقة للمواصفات البيئية

تستمر الهيئة العامة للبيئة بتنفيذ البرنامج الوطني لحماية طبقة الأوزون لرفع الوعي البيئي وبناء قدرات الجهات الرقابية المعنية بإحكام الرقابة لضبط الأسواق المحلية، ومنع إغراق السوق المحلي بمواد أو منتجات غير مطابقة للمواصفات القياسية، وضارة بالبيئة وضمان تحقيق الالتزامات الوطنية تجاه بروتوكول مونتريال وتعديلاته المختلفة.

وفي هذا الإطار افتتح امس قطاع الرقابة البيئية بالتعاون مع برنامج الأمم المتحدة للبيئة البرنامج التدريبي الذي سيستمر خلال الشهر الجاري لتدريب (1000) موظف من العاملين بالجهات الرقابية المعنية بالرقابة على الاستيراد والتجارة الخارجية في المواد الخاضعة لبروتوكول مونتريال من موظفي الجمارك والهيئة العامة للبيئة ووزارة التجارة والصناعة وذلك في المعهد الوطني للاتصالات والملاحة.

وقالت نائب المدير العام لشؤون الرقابة البيئية في الهيئة العامة للبيئة ونقطة الارتباط الوطنية للاتفاقية د.سميرة الكندري ان الدورة التدريبية التي يتم عقدها بالتعاون مع برنامج الأمم المتحدة للبيئة تهدف إلى رفع الوعي البيئي بقضية استنفاد طبقة الأوزون والالتزامات الوطنية ببروتوكول مونتريال وآليات العمل ومتطلبات الرقابة والإبلاغ، ولقنت الى ان الدورة تتضمن شرح كيفية التعرف على المواد الخاضعة لرقابة بروتوكول مونتريال والمنتجات المحتوية عليها وكذلك تصنيف وسائط التبريد وفقا للنظام الجمركي المنسق (HS Code) التابع لمنظمة الجمارك العالمية، وقد تمت الإشارة إلى الاتجاهات الإقليمية والدولية للتجارة والاتجار غير المشروع بالمواد والمنتجات الخاضعة للرقابة.

وأوضحت ان عرض القوانين والقرارات الوزارية والمنشورات الجمركية المنظمة للإجراءات الوطنية الخاصة بالإفراج عن شحنات المواد والمنتجات الخاضعة للرقابة من ابرز متضمنات الدورة، كما يتضمن البرنامج التدريب العملي على استخدام أجهزة كشف وتحليل وسائط التبريد وكيفية التعامل الآمن مع المواد الخاضعة للرقابة وكيفية التمييز بين الاسطوانات الحاوية للمواد وأنواع اجهزة ومعدات التبريد وتكييف الهواء والمنتجات الاخرى التي تعتمد على استخدام المواد الخاضعة لرقابة بروتوكول مونتريال.

وجددت الكندري التزام الكويت باتفاقية فيينا لحماية طبقة الأوزون وبروتوكول مونتريال بشأن المواد المستنفذة لطبقة الأوزون، والتزامها بالمساعدة في حشد الجهود الإقليمية والدولية لتحقيق أهداف الاتفاقية والبروتوكول، حيث إن الجهود التي تبذلها الهيئة في هذا الاتجاه تنطلق من رؤية قطاع الرقابة البيئية التي أكدت التزام الدولة بصفقتها جزءا من النسيج العالمي بالمشاركة في تطوير وتطبيق الحلول المبتكرة لحماية البيئة وضمان استدامتها.

وقالت إن التعاون الوثيق والمثمر بين كافة الجهات المعنية في القطاعين الحكومي والخاص، هو ما دفعنا إلى وضع النهج للبرنامج الوطني للتخلص التدريجي من المركبات الهيدروكلوروفلوروكربونية حتى عام 2040، وفقا للبرنامج الزمني الذي أقره الاجتماع

التاسع عشر للدول الأطراف في بروتوكول مونتريال، وأن نجاح البرنامج الوطني قد عكس بصورة واضحة حجم الجهود التي بذلتها الهيئة في هذا الجانب.

وأشارت الكندري إلى أن نظام التراخيص والافراجات الخاص بالمواد المستنفذة لطبقة الأوزون الذي صدر ضمن قانون البيئة رقم (42) لسنة 2014 والمعدل بعض أحكامه بالقانون رقم (99) لسنة 2015، قد أخضع المواد والأجهزة والمعدات والمنتجات المستنفذة لطبقة الأوزون بالحصول على تصريح لاستيراد أو تصدير أو إعادة تصدير أي منها وبما لا يتجاوز الحصص التي ستخصص لكل منها.

[Alanba, May 2022, By Daryn Elali](#)

Image: Alanba website

## NORTH AMERICA

### 11. Action on Short-Lived Climate Pollutants Like HFCs 'Essential' to Limit Global Warming

Researchers at the Institute for Governance and Sustainable Development (IGSD) in Washington, D.C., have concluded that inaction on short-lived climate pollutants like HFCs risk undermining the efforts to limit global warming.



Roofing HVAC unit with view of fresh air intake vent. Credit: Wikimedia

By looking at models, the researchers found that non-CO<sub>2</sub> greenhouse gases (GHG), such as HFCs, are responsible for nearly half of all GHG climate-altering effects. They concluded that the importance of non-CO<sub>2</sub> pollutants, particularly short-lived climate pollutants (SLCP), in climate mitigation has been underrepresented.

The article "[Mitigating climate disruption in time: A self-consistent approach for avoiding both near-term and long-term global warming](#)" was published in volume 19 of the Proceedings of the National Academy of Science (PNAS).

The aim of the research is to analyze the role of CO<sub>2</sub>, non-CO<sub>2</sub> GHGs and aerosols in near- and long-term climate mitigation strategies, as well as the net effect of policies targeting the phase out of fossil fuels by 2050. The researchers simulated how the planet would react if only direct decarbonization policies were enacted – i.e., replacing fossil fuels with renewables.

Without any action to cut short-lived pollutants, such as fluorinated refrigerants, the planet would warm faster in the near term (up to 2050), limiting the likelihood that we can stay within the 1.5°C (2.7°F) increase limit proposed in the Paris Agreement, according to the

article's authors. "Absent deep cuts in non-CO<sub>2</sub> emissions, CO<sub>2</sub> abatement alone is unable to keep warming below even the 2°C threshold by 2050," they explained.

"We have to win the sprint to slow warming in the near term by tackling the short-lived climate pollutants, [such as HFCs], so that we can stay in the race to win the marathon against CO<sub>2</sub>," said Gabrielle Dreyfus, chief scientist at the IGSD and lead author of the study in an [article](#) following its release.

### **Long-term vs short-term mitigation**

The article underlines that in the long-term, decarbonization efforts would yield the best results as they focus on carbon dioxide, a molecule with a long life in the atmosphere.

"However, a new set of issues has emerged because of the link between warming and extreme weather and the risk of crossing uncertain tipping points that increase additional warming," the authors point out. "The critical need to curb near-term warming and limit warming to well below 2°C requires broadening the zero carbon dioxide emission approach, which focuses on mitigating the long-term warming, with other approaches that can quickly reduce the near-term warming by including non-CO<sub>2</sub> warming pollutants as an additional major focus of climate mitigation action".

The study points out that the importance of SLCPs like HFCs has been underrepresented in the public debate related to global warming. "Many publications and reports by scientific agencies highlighted the role of non-CO<sub>2</sub> for rapid near-term climate mitigation, specifically SLCPs – methane, black carbons, HFC, and tropospheric ozone," the study recalls, lamenting however that these calls "have not captured the attention of global mitigation actions, which still focuses largely on CO<sub>2</sub> emissions."

The researchers also remark that using shorter time spans to assess the effect of GHGs would better "account for the important differences between strategies that can reduce warming in the near term." Adopting a 20-year GWP instead of the currently favored 100-year GWP would also see the GWP values of many commonly used HFCs increase drastically, reflecting their short-term global warming effect.

The production and consumption of HFCs has been targeted globally by the Kigali Amendment to the Montreal Protocol since its adoption in 2016. In the European Union the F-gas Regulation is currently being revised, including a proposal to cut the allowed amount of HFCs on the market by 97.27% by 2048. The U.S. is also moving to curb the use of HFCs, having proposed a phase down of 85% by 2036 and discussing further action on the technology transition and refrigerant management. [...]

[r744, 31 May 2022, By Thomas Trevisan](#)

*Image: r744 website - Credit: Wikicommons*

**EUROPE & CENTRAL ASIA**



## 12. UK House of Commons: European Scrutiny Committee, Third Report of Session 2022–23, Documents considered by the Committee on 8 June 2022

[...]

### Fluorinated Greenhouse Gases<sup>1</sup>

#### Overview

1.1 The European Commission is proposing measures to intensify the phasedown of harmful greenhouse gases—hydrofluorocarbons (HFCs)—in the EU. The measures revoke and replace existing legislation, which is applicable in Northern Ireland (NI) under the Northern Ireland Protocol. As such, they potentially have implications across the UK and could, in particular, affect the UK’s own policy review for Great Britain (GB).

1.2 Hydrofluorocarbons are one of several Fluorinated Greenhouse Gases (F-Gases), which are human-made gases used in a range of everyday and industrial products and processes. Their global warming effect is substantially greater than carbon dioxide, and emissions are rising.<sup>2</sup> Countries around the world have agreed under the Kigali Amendment to the Montreal Protocol<sup>3</sup> to control and reduce the placing on the market of HFCs, the most prevalent F-Gases.

1.3 In GB, the UK Government, Welsh Government and Scottish Government have agreed to operate a single GB F-Gases regulatory system, based at the moment on the EU F-Gases Regulation (Regulation (EU) No 517/2014) as retained in the UK. A Common Framework will support this joint work. The Parliamentary Under-Secretary of State (Jo Churchill MP) says in her Explanatory Memorandum (EM) that the EU’s approach may inform the UK’s own review, taking into account alignment between GB and NI.

1.4 We have written to the Minister seeking an update on the progress of the Government’s analysis, including more detail on the potential implications of divergence between Great Britain and Northern Ireland. [...]

### Ozone-depleting substances<sup>8</sup>

#### Overview

2.1 The European Commission is proposing changes—applicable in Northern Ireland (NI) under the NI Protocol—to improve regulation of ozone-depleting substances (ODS). These are human-made chemicals that,<sup>9</sup> after emission, frequently reach the upper atmosphere and damage the stratospheric ozone layer which protects the earth’s surface from solar radiation. This damage results in the so-called ‘ozone hole’ with significant adverse health and environmental impacts. They are largely banned and are carefully regulated, as required under the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer.<sup>10</sup>

2.2 The Commission proposes to revoke the existing ODS Regulation (Regulation (EC) No 1005/2009) which lays down rules on the production, import, export, placing on the market, use, recovery, recycling, reclamation and destruction of ODS. It sets out requirements on the reporting of information related to ODS and on the import, export, placing on the market and use of products and equipment containing or relying on ODS. The replacement legislation will meet the same objectives but aims to reduce the associated burdens on businesses while strengthening controls, largely through digitisation and automation.

2.3 In Great Britain, the UK Government, Welsh Government and Scottish Government have



agreed to operate a single GB-wide ODS regulatory system based, at the moment, on the EU ODS Regulation as retained in the UK. The Administrations are currently reviewing the system and aim to consult on proposed changes later in 2022. A Common Framework is in place to support this joint work.<sup>11</sup> The Parliamentary Under-Secretary of State (Jo Churchill MP) says in her Explanatory Memorandum (EM) that the EU's approach will inform the UK's own review, taking into account alignment between GB and NI. The Government may choose, says the Minister, to implement similar measures, as the Government is keen to streamline the ODS Regulation and also needs to consider the role of ODS in supporting the UK's target of achieving net zero carbon emissions.

2.4 The Government's initial analysis of the Commission's proposal shows that the key suggestion is to increase efficiency of regulating ODS and reduce the administrative and cost burden on undertakings and authorities. This includes removing the need for per shipment licences, the removal of the registration requirements for laboratory uses and removing the annual quota allocation systems. This, says the Minister, would result in cost and administrative savings for NI undertakings which use or trade in ODS and authorities who enforce the Regulation. The Minister does not foresee significant trade implications arising between NI and GB. [...]

<sup>1</sup>Proposal for a Regulation on fluorinated greenhouse gases, amending Directive (EU) 2019/1937 and repealing Regulation (EU) No 517/2014; Council and COM numbers: 8042/22, COM(2022) 150; Legal base: Article 192(1) TFEU, QMV, ordinary legislative procedure; Department: Environment, Food and Rural Affairs; Devolved Administrations: Consulted; ESC number: 42050.

<sup>2</sup>European Commission, 'Fluorinated Greenhouse Gases' (accessed 25 May 2022).

<sup>3</sup>Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer,

<sup>8</sup>Proposal for a Regulation on substances that deplete the ozone layer and repealing Regulation (EC) No 1005/2009; Council and COM numbers: 8048/22, COM(2022) 151; Legal base: Article 192(1) TFEU, QMV, ordinary legislative procedure; Department: Environment, Food and Rural Affairs; Devolved Administrations: Consulted; ESC number: 42051.

<sup>9</sup>Such as chlorofluorocarbons (CFCs), which were commonly used in aerosols and fridges.

<sup>10</sup>The Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987.

[Full Report >>>](#)

[The House of Commons, UK, 14 June 2022](#)

*Image: The House of Commons website*

## FEATURED



ozone  
secretariat

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## Overview for the meetings of the ozone treaties in 2022

**68<sup>th</sup> IMPCOM**, Bangkok, Thailand | 09 July 2022

**44<sup>th</sup> OEWG**, Bangkok, Thailand | 11 - 16 July 2022

**5<sup>th</sup> ExMOP**, Bangkok, Thailand | 16 July 2022

**69<sup>th</sup> IMPCOM**, Venue – to be determined | 29 October 2022

**33<sup>rd</sup> MOP Bureau**, Venue – to be determined | 30 October 2022

**34<sup>th</sup> MOP**, Venue – to be determined | 31 October - 04 November 2022

Click [here](#) for past and upcoming Montreal Protocol Meetings Dates and Venue.

## 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, 14 February 2022](#)

*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 >>>](#)



## [THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL](#)

In view of the global COVID-19 situation and the relevant directives released by the Governments of Canada and Quebec in response to the pandemic, on 18 January 2022 the Secretariat informed the Executive Committee that the in-person 89<sup>th</sup> meeting, planned for 7 to 11 March 2022, in line with decision 87/60(a) would not take place.

Following discussions with the Executive Committee, the following contingency plan was approved:

- (a) The 89<sup>th</sup> meeting will be held in two parts:
- (i) Part I: Virtually, on 16, 18 and 20 May 2022, to consider items listed in the agenda of part I of the 89<sup>th</sup> meeting contained in document UNEP/OzL.Pro/ExCom/89/Add.1;
  - (ii) Part II: In-person, from 16 to 18 June 2022, in Montreal, Canada, at the International Civil Aviation Organization (ICAO);
-

(b) A "refresher" informal session for Executive Committee members will be organized on agenda item 7(a) of the 89<sup>th</sup> meeting, development of the cost guidelines for the phase-down of HFCs in Article 5 countries: draft criteria for funding (decision 83/65(d)), on 15 June 2022 from 4 p.m. to 6 p.m., in Montreal, Canada, at Le 1000, Conference Centre; and

(c) The 90<sup>th</sup> meeting will be held from 20 to 23 June 2022, in Montreal, Canada at ICAO. In light of the Canadian Grand Prix being held the weekend of 17 to 19 June, all attendees are advised to make lodging arrangements as soon as possible.

- [Evaluation of regional networks of national ozone officers \(desk study and terms of reference for the second phase\)](#)
- [Evaluation of regional networks of national ozone officers \(desk study and terms of reference for the second phase\): Corrigendum](#)
- [Guide for project preparation of Stage I of Kigali HFC implementation plans \(KIP\) \(February 2022\)](#)
- [Updated guide for the presentation of stage II of HCFC phase-out management plans \(February 2022\)](#)
- [Executive Committee Primer 2022](#)

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



**OzonAction**

[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*

**OzonAction Knowledge Maps tool** - The UNEP OzonAction Knowledge Maps tool was developed to provide the National Ozone Units (NOUs) and different UNEP partners with a simple tool to help them access data and information about relevant stakeholders, who are mainly involved in the implementation of programmes and projects under the Montreal Protocol (MP) supported by Multilateral Fund (MLF).

**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** developed by the UN Environment Programme (UNEP) OzonAction, to provide engineers, workers, and technicians with easily accessible information on substances/ gases that they are working with or handling in the workplace on visual printable cards.

**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. \*

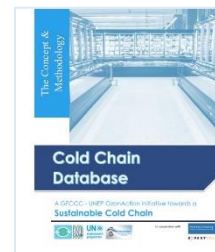
### Using the Gas Gard web-based tool

- The Gas Gard 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 [Ayman Eltalouny](#)

Contact: [Ayman Eltalouny](#), Coordinator International Partnerships, UNEP, OzonAction

### 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](#)

## OzonAction [WhatGas?](#) Updated

### New features:

- An updated more user-friendly interface
- Multilingual interface: English, French and Spanish
- HFCs and HFC containing mixtures
- Latest updated ozone depleting potential and global warming potential values from the recent reports from the Montreal Protocol technology and scientific expert panels as well as the Intergovernmental Panel on Climate Change; as well as the standard ODP and GWP values as specified in the text of the Montreal Protocol
- References to sources of all values used
- New refrigerant mixtures (with ASHRAE approved refrigerant designations)
- Values for ‘actual GWP’ and ‘Kigali Amendment context’ GWP for pure substances and mixtures (i.e. only including GWP values/components assigned to controlled hydrofluorocarbons - HFCs).



**The WhatGas?** application is an information and identification tool for refrigerant gases: ozone depleting substances (ODS), HFCs and other alternatives. It is intended to provide a number of 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. If the user requires additional information or assistance in identifying a refrigerant gas they are inspecting or that is described in the relevant paperwork, this can be easily obtained by consulting the application.

### Using the application:

If you already have the application installed on your device, be sure to update to benefit from the new features.

**Smartphone Application:** Just search for “WhatGas?” or UNEP in the Google Play store or use the QR code – free to download!



**Desktop Application:** WhatGas? is also available online on the OzonAction [website](#)

**For more information:** Watch the new short introductory tutorial [video](#) on WhatGas? available on [YouTube](#).

See/download the [WhatGas? flyer](#)

**Over 10,000 installations on Android and iOS devices to date!**

### [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](#)

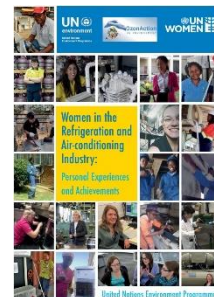
**Contact:** [Ayman Eltalouny](#), OzonAction, UN Environment Programme



[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 field and follow in their footsteps. Read/download the [publication](#)



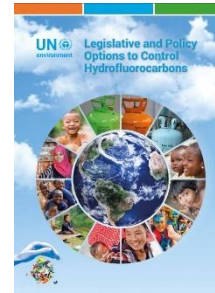
As part of IIR and UNEP OzonAction's partnership, a set of **Cold Chain Technology Briefs** was released over the past few years, which includes in-depth summaries about the cold chain in different key sectors. They include descriptions of technology, refrigerant options and trends and conclude with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

Read/Download in [English](#) | [French](#) | [Russian](#) | [Spanish](#)



## PUBLICATIONS

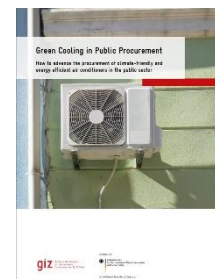
**Legislative and Policy Options to Control Hydrofluorocarbons**-In order to follow and facilitate the HFC phase-down schedules contained in the Kigali Amendment, the Parties, including both developed and developing countries, will have to implement certain measures. This booklet contains a recommended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



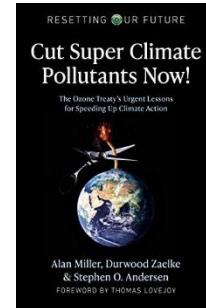
Latest issue of Centro Studi Galileo magazine, **Industria & Formazione, n. 4-2022** (in Italian).



**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.

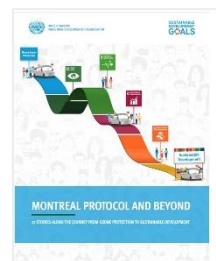


The e-book, titled "[7 Keys to a Compliant PSM Training Program for Ammonia Refrigeration](#)," outlines important questions a facility's program should address and questions that trained plant personnel should be able to answer. Topics covered include:

- 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](#)**



**The Green Customs Guide to Multilateral Environmental Agreements** was designed to promote sustainable trade and encourage customs and border control officers to take on a proactive role in protecting the environment. The guide provides useful information and guidance about relevant trade-related multilateral environmental agreements (MEAs), thus facilitating legitimate trade in environmentally sensitive items while preventing illicit trade in such items and contributing to the achievement of the [Sustainable Development Goals](#). Read/Download the [full report](#).



See pages 91-98 on "How the Montreal Protocol regulates trade", and "Montreal Protocol-specific training materials for customs officers."

## MISCELLANEOUS

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**SIFA**

LE SALON  
DU FROID  
ET SES APPLICATIONS

8, 9 ET 10 NOVEMBRE 2022, EUREXPO LYON



## Candidatez aux Grands Prix du Froid

>> Téléchargez le dossier de candidature



### 6 catégories

Présentez une ou plusieurs innovation(s) :

- Prix de la meilleure innovation en Froid Commercial
- Prix de la meilleure innovation en Froid Industriel
- Prix de l'installation innovante
- Prix de la meilleure innovation en Climatisation
- Prix de la meilleure innovation en Cuisine professionnelle
- Prix de la meilleure initiative en développement durable

Date limite de dépôt de candidature: **29 juillet 2022**

**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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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)



UNEP, OzonAction, 1 rue Miollis · Bat. VII · Paris 75015 · France