Volume XXV | 15 August 2025

In this issue:

GLOBAL

1. World Ozone Day 2025 – From science to global action

Forty years ago, nations came together under the Vienna Convention for the Protection of the Ozone Layer and agreed to take appropriate measures to protect people and the planet from harmful UV radiation pouring through a potentially damaged ozone layer.

They succeeded. Based on additional scientific information, the Montreal Protocol was adopted and chlorofluorocarbons – man-made chemicals used in refrigeration, aerosol sprays and foam production – started being phased out setting the ozone layer on the road to recovery.

On World Ozone Day, we celebrate this achievement and look forward to another forty years of action. The Montreal Protocol and Vienna Convention remain crucial for monitoring ozone and UV radiation levels, as well as ozone-depleting substances and other chemicals, such as hydrofluorocarbons (greenhouse gases), being phased out under the Kigali Amendment.

The ozone treaties have epitomised the concept of moving from Science to Global Action. And they will do so for many years to come.

Source/image: Ozone Secretariat, August 2025

2. Kigali Amendment Latest Ratifications

Congratulations to the latest country that has ratified the Kigali Amendment:

Nepal, 6 August 2025

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.

Source: United Nations Treaty Collection | Image: Flagpedia.net

Related: Nepal Statement – UNEP Ozone Secretariat

3. INVITATION: UNEP Webinar on Enhancing Environmental Oversight in Trade: A focus on free trade zones, trans-shipment and MEA obligations on Tuesday | 9 September 2025 | 14:00-15:30 Paris time

UNEP invites you to join in a webinar on **Enhancing Environmental Oversight in Trade: A Focus on Free Trade Zones, Trans-shipment, and MEA Obligations** on **Tuesday, 9 September 2025, 14:00-15:30 Paris time**. Click here for registration:

Useful resources: Recently prepared Information Note: Free Trade Zones, Trans-shipment and Multilateral Environmental Agreements, and a factsheet Free Trade Zones and Trade in ODS prepared in 2015.

Source: UNEP OzonAction, Halvart Keoppen ECA Montreal Protocol Regional Coordinator, 12 August 2025

4. ASHRAE and UNEP Launch Sustainability Assessment Tool for Refrigeration and Air-Conditioning Plants

New checklists and guidance sheets aim to improve performance, compliance, and sustainability across the RAC sector

Paris, France, 3 August 2025 — The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), in partnership with the United Nations Environment Programme (UNEP) OzonAction, has launched a new tool designed to support sustainable practices in refrigeration and air-conditioning (RAC) plants. The Assessing RAC Plant Sustainability checklists and guidance sheets are now freely available to help technicians, plant managers, engineers, and suppliers improve operational performance, reduce emissions, and align with environmental and energy efficiency objectives.

This resource addresses the growing complexity of RAC systems, the increasing use of low-global warming potential (GWP) refrigerants, and the need for practical guidance that connects equipment design to safe and sustainable operation.

"The tool provides practical assistance to worldwide efforts that promote sustainable and safe cooling systems," said Jim Curlin, Head of UNEP OzonAction Branch. "Under the Montreal Protocol and its Kigali Amendment, many countries, especially developing ones, face growing technical and regulatory challenges in reducing reliance on high-GWP refrigerants. Tools like these help bridge that gap by making key concepts such as compliance, safety, and energy efficiency actionable at the facility level."

Environmental agreements require more than just commitments because their actual implementation needs to occur at the operational level. The toolkit enables policy implementation through practical solutions that support efforts to minimize refrigerant leaks and enhance maintenance practices and system optimization. The Protocol and its amendments achieve long-term compliance through these specific results. National stakeholders can use this tool to enhance their training programs and certification systems, and cooling strategies.

"We encourage national stakeholders to integrate this tool into training programmes, certification schemes, and cooling strategies. It offers a practical, scalable way to strengthen technician competencies and improve environmental outcomes across the sector."

While originally developed for field technicians, the toolkit serves a broad audience:

- **Plant managers** can assess system performance across eight sustainability dimensions—including leak detection, energy use, refrigerant management, and end-of-life practices—to identify areas for improvement.
- **Suppliers** can use the materials to train clients on preventive maintenance, extending equipment life and supporting compliance.
- **Engineers and educators** can incorporate the checklists into training and system documentation, bridging the gap between design and daily operations.

Each checklist includes key performance indicators to help users monitor improvements and determine when corrective action or equipment upgrades may be necessary.

This initiative is part of the wider ASHRAE–UNEP partnership to support climate- and ozone-safe cooling practices and strengthen the implementation of the Montreal Protocol.

The Assessing RAC Plant Sustainability toolkit is available at: http://www.ashrae.org/unep-RACchecklists

Source: UNEP OzonAction, 3 August 2025 | Image: Shutterstock

5. World Cold Chain Symposium – Save the date | November 1 | Nairobi, Kenya

Advancing a sustainable cold chain requires coordinated efforts from a broad range of stakeholders. Governments and non-profit organizations play a critical role in identifying and highlighting pilot projects, and industry engagement is essential to help build business models and drive long-term market growth. With this in mind, the theme for this year's World Cold Chain Symposium is Energizing the Private Sector.

Join the Global Food Cold Chain Council, the United Nations Environment Program's OzonAction, the Cool Coalition, Carrier and experts from around the world as we come together for an in-person and virtual event focused on the benefits of investing in efficient, sustainable cold chain development programs and highlighting the progress to date.

6. Sustainable management of refrigerants could be a powerful climate solution

As countries around the world work to reduce greenhouse gas emissions, a new study by researchers from IIASA and Peking University highlights an overlooked but powerful solution hiding in plain sight: fluorocarbon banks.

Fluorocarbons, which are widely used in refrigeration, air conditioning, foam insulation, and fire suppression, are potent greenhouse gases. Despite international regulations under the Montreal Protocol and its Kigali Amendment, vast quantities of these chemicals remain in old equipment and products. These stockpiles, known as "banks," continue to accumulate, posing a constant environmental threat. In China alone, their emissions could add 0.014°C to global warming by mid-century, with even greater global effects.

But there's good news. The new study published in Environmental Science & Technology highlights an opportunity for China to take the lead in fluorocarbon lifecycle management (FLM) – a strategy that could prevent up to 8 billion tonnes of CO_2-equivalent emissions by 2060. By implementing FLM strategies like recovery, recycling, reclamation, and destruction – known collectively as RRRD – China could reduce more than half of the residual refrigerant emissions expected to remain after meeting its Kigali Amendment pledges. Crucially, up to 93% of this mitigation can be achieved for less than $10 per tonne of CO_2-equivalent, which is far below the Intergovernmental Panel on Climate Change (IPCC)'s benchmark range of $226–385 for meeting the 1.5°C target.

"Fluorocarbon lifecycle management is one of the most scalable and affordable climate actions available today," explains lead author Ziwei Chen, a PhD candidate at Peking University and an alumna of the 2024 IIASA Young Scientists Summer Program. "Yet it remains largely untapped, especially in developing countries, where the potential is greatest."

In 2021, fewer than 3% of end-of-life refrigerants were recovered in China. To address this gap, the research team developed a new modeling tool called the Extended Lifecycle Emissions Framework (ELEF), which accurately tracks emissions across every stage of a product's life. Their analysis shows that current practices result in most refrigerants being vented into the atmosphere instead of recovered.

If China scales up reclamation, it could not only meet domestic servicing demand for fluorocarbons but also generate a surplus for export to developing countries struggling with supply shortages, thereby amplifying climate gains globally. Reclaimed substances also have a significantly smaller carbon footprint compared to newly manufactured ones. In fact, the indirect emissions from virgin production are more than four times higher than from reclamation.

Despite the promise, the road to wide-scale FLM adoption in China is not without barriers. The study identifies weak enforcement, low recovery rates, and limited market demand for reclaimed gases as major hurdles. It calls for clear regulatory mandates, financial incentives, and robust enforcement mechanisms to unlock the sector's full potential.

"This work shows how managing existing fluorocarbon stocks can deliver fast, scalable, and affordable climate benefits," says coauthor Pallav Purohit, a senior researcher in the Pollution Management Research Group of the IIASA Energy, Climate, and Environment Program. "If China acts decisively, it could become a model for the rest of the world and help bridge the emissions gap while advancing circular economy principles."

The authors emphasize that action must begin now, with a focus on large-scale equipment and the development of supporting infrastructure. The systems built today for handling HCFCs and HFCs can later accommodate new-generation fluorinated gases like HFOs, ensuring long-term sustainability.

As climate deadlines loom ever closer, this study offers a rare win-win: a climate strategy that is not only feasible and cost-effective but already within reach. For China and the world, sustainable fluorocarbon management may be one of the clearest paths yet to an affordable climate future.

The study is a result of research partly conducted during the 2024 IIASA Young Scientists Summer Program (YSSP) as part of Chen's YSSP project.

Source: IIASA, 4 August 2025

7. CCAC Workshop on Lifecycle Refrigerant Management (LRM)

Lifecycle Refrigerant Management (LRM) has been identified as one of the focus areas of the CCAC Cooling Hub.

Following the successful conduct of the first workshop on the fluorocarbon inventories banks in 2024, this years workshop review progress in the development of national inventories of banks of controlled substances and deepen understanding of participants on the key elements of the national plans for management of these substances.

COPA supported the workshop and provided 3 speakers for the event.

The workshop was live-streamed and recorded. To view the workshop recording, please visit: https://www.youtube.com/watch?v=2YGHKi0JCKg

Further information about the workshop, including the agenda and the recorded Event, is also available at the following link: 2025 Workshop on Lifecycle Refrigerant Management (LRM): Progress on Fluorocarbon Banks Inventories and National Action Plans | Climate & Clean Air Coalition

Source: COPA, July 2025

AFRICA

8. Côte d'Ivoire – AIP/ Des agents des douanes et des contrôleurs formés sur le contrôle des substances destructrices de la couche d'ozone à Bondoukou

Bondoukou, 23 juil 2025 (AIP) – Un atelier national de renforcement des capacités des agents des douanes et des contrôleurs du ministère du Commerce et de l'Industrie sur l'identification et le contrôle des substances qui appauvrissent la couche d'ozone se tient, du mardi 22 au mercredi 23 juillet 2025 à la préfecture de Bondoukou, à l'initiative du Bureau national ozone (BNO), en partenariat avec ONU-Environnement.

L'objectif de cet atelier est de former les agents intervenant aux frontières et dans les circuits commerciaux à identifier et intercepter des substances réglementées telles que les Hydrochlorofluorocarbones (HCFC), dont l'usage et l'importation sont strictement encadrés par le Protocole de Montréal, ratifié par la Côte d'Ivoire depuis 1992.

Présidant la cérémonie d'ouverture, le préfet de la région de Bondoukou, Gbongbo Kouadio André, a salué cette initiative visant à armer les acteurs de première ligne face à la menace environnementale.

« Cette bataille, au vu des effets néfastes de ces produits sur la couche d'ozone, est une lutte pour la vie. Chaque contrôle effectué résonne comme un acte de préservation planétaire. Votre mission est grande. Chaque saisie contribue à la guérison de notre atmosphère. L'avenir de notre planète dépend de votre détermination », a-t-il déclaré.

La coordonnatrice nationale par intérim du projet ozone, Kouassi Odile, a rappelé que la couche d'ozone, barrière protectrice essentielle pour l'humanité, a été gravement endommagée depuis les années 1970 par des pratiques et produits chimiques nocifs, souvent liés au confort thermique.

Mme Kouassi a précisé que la Convention de Vienne et le Protocole de Montréal visent à éliminer progressivement ces substances, en les remplaçant par des alternatives moins dangereuses. Elle a insisté sur le cas du Fréon 22, un réfrigérant appartenant à la famille des HCFC, largement utilisé dans les climatiseurs et les centrales frigorifiques.

« Sa suppression progressive doit atteindre 67 %, ce qui en fait une priorité dans le processus de retrait du marché », a-t-il dit.

Elle a également souligné l'importance de « former et d'informer les agents aux frontières et sur les marchés afin qu'ils puissent identifier et retirer ces produits nocifs de la circulation ».

Pendant deux jours, une trentaine d'agents des douanes et de contrôleurs du ministère du Commerce vous suivre des modules sur la réglementation nationale et internationale, l'identification des substances (HCFC, HFC, hydrocarbures, etc.), les procédures de dédouanement, et l'utilisation d'équipements spécialisés. Des travaux pratiques, un film de sensibilisation et une remise de certificats seront présentés.

Cette activité s'inscrit dans la mise en œuvre du Plan de Gestion et d'Élimination des HCFC (PGEH), piloté par le ministère de l'Environnement, du Développement durable et de la Transition écologique.

Source/image : Agence Ivoirienne de Press, 23 juillet 2023

ASIA AND THE PACIFIC

9. Low Carbon Footprint: Pakistan Reduces Harmful Chlorofluorocarbons by 67.5%

Peshawar (TDI): In terms of carbon footprint, 2025 has seen a remarkable reduction in Pakistan's use of harmful hydrochlorofluorocarbons (HCFCs). The target was set at a 67.5% reduction, which has been met.

As United Nations Pakistan and the Ministry of Climate Change kicked off World Ozone Day 2025 campaign in Peshawar, this milestone was specifically mentioned and applauded. This campaign coincides with forty years of the adoption of the Vienna Convention (1985).

Pakistan's reduction in HCFCs brings it within the compliance mechanism of the Montreal Protocol (1987), a specific protocol under the Vienna Convention that details the control and phase-out of ozone-depleting substances.

Some other highlights from the event include:

- Technical discussions on ozone layer protection and climate co-benefits
- Gender-responsive approaches in HCFC phase-out sectors
- Youth-led exhibits and climate quizzes

Hydrochlorofluorocarbons are gases used worldwide in refrigeration, air-conditioning and foam applications, but they are being phased out under the Montreal Protocol since they actively cause the depletion of the ozone layer.

The Montreal Protocol phases down the consumption and production of the different Ozone Depleting Substances (ODS) in a step-wise manner, with different timetables for developed and developing countries.

Pakistan's carbon emissions per capita are equivalent to 0.82 tons per person, as per the total population figure of 2022, while for the United States, this figure is a shocking 13.8 metric tons per American. Also, a Chinese person is responsible for 8.89 tons carbon emissions.

Comparing these figures, Pakistan's carbon footprint is visibly minimal. The country ratified the Montreal Protocol in 1992 and established the National Ozone Unit (Ozone Cell) in 1996 to monitor and ensure the implementation of the protocol.

Pakistan banned the import of first-generation ODSs by January 1, 2010 and has a HCFC phase-out management plan in place to eliminate the use of HCFCs.

Source/image: The Diplomatic Insight, 3 June 2025

10. Bangladesh steps up ozone fight; targets ambitious 85% HFC cut by 2045

Bangladesh has reaffirmed its dedication to safeguarding the ozone layer through a strategic phase-down of hydrofluorocarbons (HFCs) under the Kigali Amendment to the Montreal Protocol.

This commitment was highlighted during a national consultation workshop held recently at the Department of Environment, co-organised by the United Nations Development Programme (UNDP) and the Ministry of Environment, Forest and Climate Change (MoEFCC) under the 'Renewal of Institutional Strengthening for Phase-out of ODS (Phase-X)' project supported by the Multilateral Fund.

Under the theme 'Advancing the Montreal Protocol in Bangladesh: Fostering Stakeholder Collaboration', the workshop brought together policymakers, technical experts, industry leaders, and development partners to tackle challenges and explore opportunities in phasing down hydrofluorocarbons (HFCs), powerful greenhouse gases with high global warming potential.

Bangladesh has made remarkable progress in technology transfer, private sector engagement and institutional capacity-building, supported by UNDP through initiatives like the Institutional

Strengthening Projects, the Hydrochlorofluorocarbon Phase-out Management Plan (HPMP) and the Kigali Implementation Plan.

UNDP, in a media release said, it remains fully committed to supporting Bangladesh's vision for an ozone-safe, climate-resilient future, including continued collaboration with the National Ozone Unit to promote energy-efficient and environmentally friendly technologies in the cooling sector.

Govt working to protect ozone layer: Shahab Uddin

Bangladesh, a global leader in phasing out ozone-depleting substances (ODS) such as CFCs, halons and methyl chloroform, ratified the Kigali Amendment in 2020.

The country is now advancing towards an ambitious 85% reduction in HFC consumption by 2045, according to UNDP.

Md Mahiuddin Manik, National Project Director of the IS Phase-X Project, delivered a keynote presentation outlining Bangladesh's progress, challenges and roadmap for achieving these targets.

Md Khayrul Hasan, Additional Secretary of MoEFCC, underscored the need for collaborative action, saying, "Achieving the goals of the Kigali Amendment hinges on robust partnerships across government, academia, industry, and civil society. Through proactive collaboration and transparent communication, we can secure a sustainable environment for future generations."

Sonali Dayaratne, Resident Representative of UNDP Bangladesh, attended as the Guest of Honour and reaffirmed UNDP's unwavering support for the National Ozone Unit.

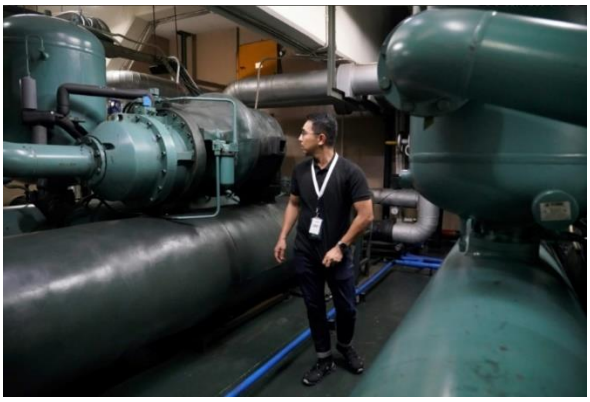
"UNDP is committed to assisting Bangladesh in meeting its Montreal Protocol and Kigali Amendment targets, fostering private sector engagement in phasing out harmful chemicals, and promoting energy-efficient technologies in the cooling sector," she said.

Dr Md Kamruzzaman, Director General of the Department of Environment and workshop Chair, emphasized the urgency of unified efforts, saying, "Implementing the Kigali Amendment demands coordinated action across all sectors. We must align with global protocols while addressing national priorities and industry needs through strengthened oversight, heightened awareness, and swift action."

The workshop featured high-level discussions with experts from government, academia, industry, and development partners, focusing on the Kigali Implementation Plan, sectoral readiness for HFC phase-down, technological innovations, inclusive public-private partnerships, and the development of bankable projects.

Source/image: United News of Bangladesh, 9 August 2025

11. En Indonésie, capturer les gaz de climatisation pour limiter le réchauffement climatique



Au sous-sol d'un complexe résidentiel de Jakarta, entouré des tuyaux du système de climatisation, Ari Sobaruddin mène un travail peu glamour mais inspirant: capturer les gaz de refroidissement afin de lutter contre le changement climatique.

Avec ses collègues, le technicien de 30 ans récupère le gaz réfrigérant des climatiseurs pour empêcher ce "superpolluant" climatique, des milliers de fois plus puissant que le dioxyde de carbone, de s'échapper dans l'atmosphère.

"J'adore ça parce qu'il s'agit de préserver la nature, de la sauver", confie à l'AFP cet employé de la société Recoolit, lancée en Indonésie en 2021 pour traiter les fluides réfrigérants, présents dans les climatiseurs, les réfrigérateurs ou les voitures.

Des recherches menées dans les années 1970 ont montré que les réfrigérants alors courants, appelés chlorofluorocarbures (CFC), détruisent la couche d'ozone.

Un accord international visant à les éliminer progressivement est entré en vigueur en 1989.

Mais si leurs substituts, notamment les hydrofluorocarbures (HFC), sont moins nocifs pour la couche d'ozone, ils présentent d'importantes propriétés de réchauffement climatique.

"Et ceux-ci se trouvent dans des unités de climatisation (...) partout dans les pays en développement", explique Yosaka Eka Putranta, responsable des opérations de Recoolit.

- "Problème croissant" -

Des accords internationaux ont été signés, visant à réduire progressivement les HFC, mais ces produits seront utilisés pendant encore plusieurs décennies.

Et la demande pour ces produits ne fait qu'augmenter en raison du changement climatique et parce que les classes moyennes en pleine expansion recherchent des solutions de climatisation.

"C'est un problème croissant car nous avons besoin que nos environnements intérieurs soient plus résilients au changement climatique", estime Robyn Schofield, professeure de chimie atmosphérique à l'Université de Melbourne.

Selon le Programme des Nations Unies pour l'environnement (PNUE), les HFC devraient représenter entre 7 et 19% des émissions de gaz à effet de serre d'ici 2050.

Le risque de dispersion survient lors de l'entretien ou de l'élimination, lorsque des réfrigérants comme le HFC connu sous le nom de "R-134a" peuvent être libérés accidentellement ou volontairement.

En Indonésie, comme dans la plupart des pays, cette dispersion est illégale, mais l'application de cette interdiction est limitée.

"C'est inodore, impossible à repérer. La capture (du gaz) nécessite énormément de ressources: la machine, les hommes. Donc certains le laissent s'échapper", déplore Erik Cahyanta, directeur du développement commercial de Recoolit.

Un technicien reçoit 50.000 roupies (2,60 euros) par kilogramme de réfrigérant récupéré. Le réfrigérant récupéré est ensuite détruit à haute température dans un four ou un incinérateur.

- Crédits carbone -

Pour se financer, l'entreprise lève des fonds en vendant des crédits carbone pour les émissions évitées.

Le prix d'une tonne d'équivalent dioxyde de carbone est fixé à 75 dollars (64 euros), un prix plus élevé que de nombreux crédits vidant à empêcher la déforestation, mais inférieur à celui de l'élimination du carbone par d'autres technologies de pointe.

Alors que de nombreux crédits carbone sont vendus sur des bourses avec vérification par un tiers, Recoolit vend directement aux acheteurs, grâce à une méthodologie développée par le Carbon Containment Lab, une organisation à but non lucratif issue de l'Université américaine de Yale.

Les crédits carbone ont été l'objet de critiques ces dernières années. Pour Benja Faecks, analyste pour l'ONG Carbon Market Watch, "la compensation" peut donner l'impression "que les émissions peuvent simplement être effacées par des transactions financières".

Cela permet aux "pollueurs de revendiquer la +neutralité carbone+ ou de +nier les émissions en cours+ sans réellement réduire leurs propres émissions", a-t-elle déclaré à l'AFP.

Recoolit répond que ses crédits carbone sont robustes car ils détruisent de manière mesurable un gaz à effet de serre. Les bidons sont échantillonnés et l'analyse est ensuite effectuée par le seul laboratoire qualifié de la région, en Malaisie, pour confirmer que le contenu est constitué de réfrigérants, explique M. Putranta.

De plus, l'entreprise paie les fluides frigorigènes moins cher que le marché, évitant ainsi de créer un marché pour de nouveaux fluides frigorigènes.

La destruction des réfrigérants reste une part relativement faible du marché du carbone, même si certains acteurs clés y participent, notamment la société américaine Tradewater.

Recoolit a de son côté attiré l'attention de l'un des plus grands acteurs du marché, le géant américain du numérique Google, qui a annoncé récemment un partenariat avec Recoolit et avec une deuxième entreprise pour éviter des émissions équivalentes à un million de tonnes de dioxyde de carbone.

Contactée par l'AFP, Google n'a pas répondu dans l'immédiat mais a indiqué vouloir aider Recoolit à multiplier ses opérations par 10 et à s'étendre en dehors de l'Indonésie.

Source/image: IMAZ Press, 20 juillet 2025

EUROPE AND CENTRAL ASIA

12. Illegal R134a found on bus in Serbia

SERBIA: A further attempt to smuggle small quantities of refrigerant across borders by bus has been uncovered, this time by authorities in Serbia.

At the end of July, officers of Serbian customs' anti-smuggling department, in cooperation with the police, intercepted a bus heading to Germany on Serbia's A1 motorway between Vranje and Niš.

Amongst 13 bottles of undeclared Botox and 6kg of unbranded perfume concentrates was discovered seven 13.6kg non-refillable cylinders of R134a. The total haul was valued at RSD450,000 (€3,840).

The Chinese manufactured refrigerant had originally been sourced from Kosovo.

The goods were seized and the driver fined RSD60,000 (€512).

Source/image: Cooling Post, 8 August 2025

13. Promoting Energy Efficient air conditioners and refrigerators: New Videos from Armenia

The Montreal Protocol Unit of Armenia has developed two informational videos on **energy-efficient air conditioners** and **energy-efficient refrigerators**, produced under the *Energy Efficient Additional Activities* project. These videos are designed to guide consumers in making informed choices when purchasing domestic refrigerators and air conditioners, encouraging the selection of appliances that deliver higher energy efficiency and lower environmental impact.

The Public Television channel broadcast the videos during World Refrigeration Day 2025. Subsequently, the company Vega World LLC shared them on their social media platform with over 250K followers. Within a day, they had over two thousand views. The videos have English subtitles and are available on YouTube at the following links:

[Sisak, Misak and the Energy Efficient Air Conditioner]

[Sisak, Misak and the Energy-Efficient Refrigerator]

These videos are part of a continuing series on climate change, featuring the characters **Sisak and Misak**, produced by UNDP Armenia:

- Sisak, Misak and Climate Change
- Sisak, Misak Continue Adapting to Climate Change

If you would like to adapt the videos into your national language, please contact the Armenian Montreal Protocol Officer. If you have produced similar materials, kindly share them with OzonAction.

Source/image: Armenia Montreal Protocol Unit, 5 August 2025

NORTH AMERICA

14. EIA Highlights Online Sales of Illegal Refrigerants in U.S. Smuggling Case

The Environmental Investigation Agency (EIA) has published a bulletin detailing a recent case of illegal refrigerant trade involving cross-border smuggling and unauthorized online sales, in violation of U.S. environmental laws.

On February 3, 2025, Michael Hart of San Diego was sentenced to time served, one year of supervised release, and a $1,500 restitution fee for conspiring to illegally import and sell hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs). Hart pleaded guilty to charges under the American Innovation and Manufacturing (AIM) Act and the Clean Air Act.

Court documents state that between July and October 2022, Hart smuggled refrigerants from Mexico into the U.S. using his personal vehicle. He then sold them via informal online platforms

including OfferUp and Facebook Marketplace. Hart claimed to have purchased canisters in Mexico for approximately $130–140 USD each and resold them in the U.S. for around $275 per unit.

Records show that Hart offered at least 94 cylinders of refrigerant to 22 individuals. The products included R-22 (51 cylinders), R-410A (10), R-404A (31), and R-134A (2), with an estimated total of 2,840 metric tons CO_2e—comparable to the annual emissions of 663 gasoline-powered vehicles if released, according to EPA data.

A U.S. Customs and Border Protection (CBP) officer intercepted Hart's vehicle on October 18, 2022, discovering ten 24-pound canisters labeled as Freon 404A imported from China. These contained HFC-143a, HFC-125, and HFC-134a, all of which require an EPA import allowance.

The EIA emphasized that this case exemplifies how illegal refrigerant trade can bypass environmental controls through online peer-to-peer sales without proper certification or documentation. The agency urged stakeholders to remain vigilant and outlined key red flags, including suspicious pricing, lack of certification, and improper labeling or packaging.

The bulletin concludes that increased awareness and due diligence across the HVACR supply chain are essential to help prevent illegal refrigerant trade and uphold environmental regulations.

Source/image: Refindustry, 7 August 2025

WEST ASIA

15. MECC hosts UNIDO experts to support ozone protection

DOHA: As part of Qatar's ongoing international commitment to protecting the ozone layer, the Ministry of Environment and Climate Change (MECC), represented by the Department of Chemical and Hazardous Waste Management, hosted a team of experts from the United Nations Industrial Development Organization (UNIDO) for a series of coordination meetings held from July 27 to 29, 2025.

The visit focused on monitoring the progress of the national plan for the phase-out of hydrochlorofluorocarbons (HCFCs), including the implementation of control mechanisms to regulate the circulation of these environmentally harmful substances.

The agenda included meetings with importing companies, as well as coordination sessions with customs officials, aiming to strengthen monitoring mechanisms and ensure compliance with environmental requirements under international agreements.

This initiative reflects the State of Qatar's active role and strong commitment as a party to the Vienna Convention and the Montreal Protocol.

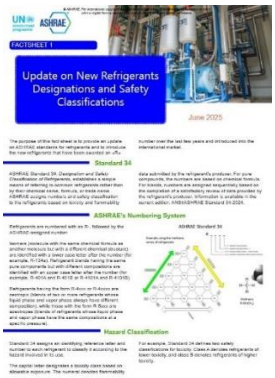
By enhancing cooperation with specialized international organizations, Qatar continues to contribute effectively to global efforts to protect the ozone layer.

The MECC emphasised that this visit underscores Qatar's ongoing efforts to meet its environmental obligations and support international actions to safeguard the planet and preserve environmental integrity for future generations.

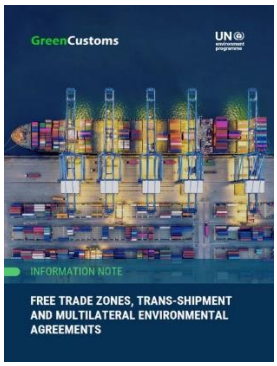
Source/image: The Peninsula, 30 July 2025

RESOURCES

FACTSHEET: Update on New Refrigerants Designations and Safety Classifications - June 2025. Also available in French and Spanish



INFORMATION NOTE: Green Customs – Free Trade Zone, trans-shipment and Multilateral Environmental Agreements



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