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In this issue:

1. The Montreal Protocol at the 2025 BRS COPs: Advancing Global Environmental Action
2. Do look up: how science and international cooperation closed the ozone hole
3. Marine cloud brightening may cool the Earth - but could impact the ozone layer
4. L'ONUDI lance la Phase II du projet « Plan de Gestion de l'Elimination des Hydrochlorofluorocarbures – PGEH II
5. L'Assemblée nationale adopte les projets de loi sur l'amendement de Kigali et l'évaluation environnementale et sociale
6. Cooling systems in high demand in Nigeria but regulatory gaps persist
7. Réduction des gaz à effet de serre : Remise de matériel de froid à trois centres de formation professionnelle du Togo
8. Strengthening Pacific Commitment to the Montreal Protocol: Tonga Hosts Key Regional Meeting on Ozone Protection and Climate Action
9. China steps up management of ozone-depleting substances, HFCs to tackle climate change
10. Will the Hole in the Ozone Layer Close?
11. Poland uncovers more HFCs in car LPG tanks
12. National Ozone Layer Conservation Workshop kicks off today in Cuba
13. Carrier Transicold enhances cold chain training in Africa

GLOBAL

1. The Montreal Protocol at the 2025 BRS COPs: Advancing Global Environmental Action

Geneva, Switzerland, 29 April – 9 May 2025 – At the 2025 Conference of the Parties to the Basel, Rotterdam, and Stockholm Conventions (BRS COPs), held in Geneva from 28 April to 9 May 2025, the Montreal Protocol was featured in a series of high-impact discussions and exhibits. Through **a number of side events** and **a dedicated booth**, the Protocol's role in tackling issues related to chemicals, waste, and climate change was showcased, highlighting the power of interlinked multilateral environmental agreements (MEAs).

UNEP OzonAction plays a central role in supporting developing countries, referred to as Article 5 Parties in this context, in implementing the **Montreal Protocol**. Through its **Compliance Assistance Programme (CAP),** OzonAction helps Parties meet their obligations by providing **policy and technical support, capacity-building, and institutional strengthening**. CAP assists national ozone units in developing and enforcing legislation, enhancing enforcement mechanisms, and training customs to detect and prevent illegal trade in ozone-depleting substances (ODS) and hydrofluorocarbons (HFC).

In a strong show of collaboration, UNEP OzonAction, together with the **Ozone Secretariat**, **Climate & Clean Air Coalition (CCAC),** and the partners, including **Carbon Containment Lab**, **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)**, **Environmental Investigation Agency (EIA)**, **Partnership for Action on Challenges relating to E-waste (PACE II),** under the Basel Convention, **UN Development Programme (UNDP)**, and **World Customs Organization (WCO)** presented a united front at the **Basel, Rotterdam and Stockholm Conventions (BRS) COPs**, highlighting the importance of inter-agency cooperation in tackling illegal trade and strengthening environmental governance.

Connecting the Dots: Montreal Protocol and the Basel, Rotterdam and Stockholm Conventions

While the Montreal Protocol is not part of the BRS family, these treaties, alongside the Minamata Convention, are commonly referred to as MEAs of the Chemicals and Waste cluster. The Montreal Protocol and the BRS Conventions share common ground on several critical issues, including controlled manufacturing, use, and trade of specific chemicals and waste streams, the environmentally sound management of end-of-life equipment and refrigerants, as well as customs and enforcement matters.

Highlights from the Three Side Events

1. Interlinkages between the BRS Conventions and the Montreal Protocol
1 May 2025 | Co-organizers: Ozone Secretariat, BRS Secretariat, UNEP OzonAction, and WCO

This event launched an **exploratory report** examining how the BRS conventions and the Montreal Protocol complement each other and what they have in common. Speakers from Belgium, Bosnia and Herzegovina, Ghana, the World Customs Organization, and the Environmental Investigation Agency provided practical insights highlighting policy and practical experience from the perspectives of customs and environmental authorities, responsible for the Basel Convention or Montreal Protocol, and civil society.

Key themes included:

- Examples of interlinkages between the treaties include methyl bromide, carbon tetrachloride, per-and polyfluoroalkyl substances (PFAS) and halons, the environmentally sound management of equipment containing refrigerants and the refrigerants themselves, and illegal traffic and trade of hazardous chemicals and waste under the scope of the Montreal Protocol and the BRS conventions. For example, methyl bromide was classified as a "controlled substance" under the Montreal Protocol in 1992. Methyl bromide was also proposed for listing to the Annex III to the Rotterdam Convention which could provide a valuable opportunity to gather additional information on its international trade and support efforts to identify and enhance control over these unreported uses. Another example would be cooperation between the Stockholm Convention and the Montreal Protocol on sharing scientific knowledge, research findings, and technology transfer related to the management of halons and PFAS. This can support the identification of best practices, alternative substances, and effective regulatory measures for these chemicals.
- Recognizing differing **phase-out and phase-down schedules ODS and HFC** under the Montreal Protocol and their impact on compliance and trade and the e-waste generation and its management. Transition to more energy-efficient alternatives that use low-GWP refrigerants presents opportunities to achieve greater environmental benefits by protecting the ozone layer and mitigating climate change. However, this transition may lead to an increase in the generation of e-waste, ODS banks, and the illegal trade of less energy-efficient equipment, particularly to developing countries.
- **Destruction of ODS banks** in some cases needs to take place in a different country due to the lack of specialized facilities which would ensure the appropriate level of environmental protection. A key issue is linked to determining which regulatory regime applies to the import and export of end-of-life refrigerants. Policy tools like Extended Producer Responsibility are highly relevant, supporting environmentally sound management through the collection, recycling, reclamation, and destruction of refrigerants.
- **Illegal trade** remains a challenge to be addressed under both the Montreal Protocol and the Basel Convention. Coordinated enforcement efforts are essential, particularly

given the border controls and trade control measures within each treaty. While there are similarities in the modes of operation used to detect and prevent illegal trade, the underlying motivations—cost avoidance vs. profit generation—may differ, and financial investigations are often a key component in addressing both.

- **Risk profiling, training of customs officers and inspectors, and information-sharing** between national and international authorities can significantly enhance enforcement effectiveness. Initiatives such as enforcement Operations Demeter have demonstrated the power of joint action.
- Leveraging the **Prior Informed Consent (PIC)** procedure to regulate transboundary movement of waste/refrigerants. The PIC procedure under the Basel Convention plays a critical role in regulating the transboundary movement of waste within its scope, including refrigerant-containing equipment. IPIC (Informal Prior Informed Consent) , managed by UNEP OzonAction, is a voluntary mechanism under the Montreal Protocol which also helps preventing illegal trade.

2. Aligning for Lifecycle Refrigerant Management

5 May 2025 | Co-organizers: Ozone Secretariat, BRS Secretariat, and Carbon Containment Lab

The side-event focused on the Montreal Protocol and the Basel Convention to support the **lifecycle refrigerant management** and **environmentally sound management (ESM?)** of end-of-life cooling and heating appliances. Highlights included:

- The guidance document on environmentally sound repair and refurbishment of used refrigerators, cooling and heating equipment, and environmentally sound management of their waste, developed under the **Partnership on Action on Challenges relating to E-waste (PACE II),** is an important contribution to the discussion on e-waste management.
- **Global use of HFC**, its high global warming potential, and downstream emissions adding up to large volumes of waste gases, mostly destined for the atmosphere, is a recognized concern in the context of the Montreal Protocol.
- Countries **lack facilities to destroy HFCs and ODSs,** which leads to the transboundary movements of such refrigerants, often under the Basel Convention legal regime, subject to the Parties' interpretation of their obligations.
- Case studies of **ODS and HFC transboundary movements** for the purpose of destruction highlight risks of leakages into the atmosphere when delays occur.
- Both the Basel Convention and the Montreal Protocol promote **climate and circularity benefits** through life-refrigerant management.
- **Life cycle management of refrigerants** is effective when embedded in national legal frameworks governing waste management. Extended producer responsibility, back-back schemes and certification of disposal operators ensure the ESM of e-waste and refrigerants.
- **Monitoring and reporting system** throughout the life cycle of refrigerants and e-waste supports the implementation of the Montreal Protocol and the Basel Convention.

3. Agility of MEA Compliance Mechanisms

6 May 2025 | Co-organizers: Basel and Rotterdam Convention Compliance Committees

This side-event showcased the role of compliance mechanisms, including the **Montreal Protocol's Implementation Committee,** in the implementation of MEAs. MEA compliance committees often are dynamic tools, evolving with the agreements to address and incorporate new scientific, legal, and technical knowledge, emerging challenges, and the changing needs of the Parties supported by the Committees. The mandates provided to compliance mechanisms continue to be agile, including being adjusted by governing bodies over time to make previously invisible challenges related to implementation visible. Key points included:

- How compliance committees adapt to **new legal and scientific developments**.
- Examples of **cross-agreement collaboration** including with the Minamata Convention and the Paris Agreement.
- The Montreal Protocol's role in **supporting Parties** through transparency, cooperation, and capacity-building, as well as the importance of data reporting, the establishment of licensing systems, and plans of action to support compliance.
- Analysis of systemic compliance issues based on the previous cases addressed by the **Montreal Protocol's Implementation Committee** over the past decade**.**

Participants highlighted the importance of flexibility and coordination to keep compliance systems effective and relevant in a fast-changing world. The evolution in mandates has strengthened the role of the committees in addressing new developments, including initiating cooperation with other newly established mechanisms as appropriate. Read more...

Source/image: UNEP OzonAction, 16 May 2025

2. Do look up: how science and international cooperation closed the ozone hole

Many scientists thought ozone depletion to be a long-term problem. Research by Joe Farman (pictured in 1989) and his colleagues showed otherwise. Credit: Corbin O'Grady Studio/Science Photo Library

Forty years ago this month, scientists reported that human activities had punctured Earth's protective ozone layer. What happened next offers a masterclass in international science-diplomacy.

In May 1985, scientists reported the first evidence of a substantial loss of ozone high in the atmosphere above Antarctica.

Concern had been growing for more than a decade that a class of fluorinated chemicals used in everything from spray cans to solvents to refrigerators might be harming the stratospheric

ozone layer, which is some 15–30 kilometres above Earth's surface and filters out a large amount of harmful ultraviolet radiation from the Sun. At the time, many scientists thought that ozone depletion was a long-term problem that would unfold over the coming century. However, a group at the British Antarctic Survey in Cambridge, UK, led by geophysicist Joe Farman, showed that a hole had already appeared[1].

The shock of this revelation led to a swift global effort and the creation of one of history's most successful environmental treaties, the Montreal Protocol. Policymakers and researchers should revisit how that success was achieved in a world that was, as it is today, sharply divided.

In 1974, the chemists Mario Molina and Sherwood Rowland had highlighted the perils of chlorofluorocarbons (CFCs) for stratospheric ozone[2]. Their work built on earlier studies such as those by James Lovelock[3], who invented a device called an electron capture detector that made it possible to detect extremely low concentrations of atmospheric chemicals. Molina and Sherwood showed that CFCs, which are stable and largely inert — qualities that made them valued in industry — break down high in Earth's atmosphere. This releases chlorine atoms that react with ozone, breaking it down.

These studies came at a time when environmental awareness and regulation was on the rise globally. The United States took one of the first steps, with a ban on CFCs in spray cans in 1978. By that time, governments had begun discussing a collective plan to stop ozone depletion. In March 1985, just weeks before the publication of Farman's team's paper, more than 20 countries signed the Vienna Convention for the Protection of the Ozone Layer. It urged governments to control emissions of ozone-depleting substances (ODS) "to the maximum extent practicable" while another, legally binding agreement was negotiated. This was to be the Montreal Protocol, which was adopted in 1987. Among other actions, states agreed to reduce the production and consumption of certain CFCs to 50% of 1986 levels by 1999.

The treaty laid the foundations for a remarkable success[4]. As of 2024, worldwide emissions of the main ODS are 99% lower than at their peak, in 1989, and the ozone layer is on track to recover to pre-1980 levels by mid-century.

There is still work to do. Governments need to continue monitoring ODS and closing loopholes that allow continued production of certain chemicals that indirectly cause ozone depletion — for example, those used as feedstocks for products such as Teflon. They must also accelerate efforts to systematically recover ODS from discarded refrigerators and other equipment.

Nevertheless, the protocol remains a model for successful action to solve a global problem. In fact, the model was so successful that it was swiftly applied to another problem entering the international consciousness, and in 1992 the United Nations Framework Convention on Climate Change (UNFCCC) was agreed in an effort to prevent "dangerous anthropogenic interference with the climate system".

From start to scale-up

Scholars have spent decades studying the Montreal Protocol, and how and why it worked5. Part of the answer lies in its structure. The agreement is organized around a strategy that is rare in public policy: start gently, learn by doing, win the trust of stakeholders, then scale up. This is complemented by regular science and technology assessments, which have been central to discussions about how best to phase down and then phase out ODS.

High-income countries led the way on taking swift and meaningful action, which included getting industry on board. They also provided financial assistance to low- and middle-income countries (LMICs) so that these, too, could phase out the chemicals. The protocol has a compliance system through which governments monitor each other's performance and pay attention to any nation not meeting its obligations. The result is a functional global partnership anchored in research, trust and experience.

Climate action has not followed the same path. Emissions cuts did start gently, informed by scientific assessments by the Intergovernmental Panel on Climate Change. However, although high-income countries — which are responsible for the bulk of historical emissions — were supposed to take the lead in making cuts, they have been slow to act. Moreover, the support they pledged to provide to help LMICs develop their economies cleanly and sustainably has been — and remains — well below what is needed. And when it comes to accepting the consensus of research, the fossil-fuel industry has been particularly resistant. For many years, it was involved in an organized campaign to undermine and attack climate science and the need for climate action. Even today, there is little trust between the various parties.

Despite this, the UNFCCC and its associated legally binding agreements have had some effect. The Paris climate agreement, adopted in 2015, is beginning to operate like the Montreal Protocol, encouraging countries to do what they can now while increasing their ambitions over time. Climate finance to LMICs is rising, albeit slowly. Global emissions are expected to peak soon, and renewable-energy use is rocketing globally. These are all signs of progress. Read more...

Source/Image: Nature, 14 May 2025

3. Marine cloud brightening may cool the Earth - but could impact the ozone layer

New research shows that a proposed climate intervention method could unexpectedly alter the atmosphere's ozone layer, with potential global effects.

A potential strategy to cool the planet – known as Marine Cloud Brightening (MCB) – could have a significant, and until now overlooked, impact on the middle atmosphere and the ozone layer, according to a new study led by researchers at NOAA's Chemical Sciences Laboratory (CSL) and published in *Science Advances*.

MCB involves spraying fine particles like sea salt into low-lying ocean clouds to make them brighter and more reflective, sending more sunlight back into space and reducing global temperatures. The technique has been considered relatively benign compared to more "invasive" climate intervention proposals like Stratospheric Aerosol Injection (SAI), which involves dispersing reflective particles directly into the middle atmosphere at altitudes 9-16 miles high.

But this new study challenges the perception that impacts of interventions in the lower atmosphere would stay in the lower atmosphere. In this case, the ozone layer could be significantly impacted by marine cloud brightening deployments some 20 km below it.

"MCB, or in fact any other troposphere-based intervention, isn't just affecting surface climate," said lead author Ewa Bednarz, a researcher with the University of Colorado Boulder CIRES affiliated with CSL. "We found it could drive a cascade of dynamical and chemical changes that could reach all the way into the stratosphere, affecting ozone levels in both the lower and middle atmosphere."

Using the UK Earth System Model (UKESM), the research team started with a high-end global warming scenario and simulated a large-scale MCB deployment to lower temperatures to those found in a moderate global warming scenario. The findings were surprising: the impacts of such an MCB deployment changed atmospheric composition and circulation throughout the tropospheric and stratosphere, which increased ozone in some regions of the atmosphere while decreasing it in others.

Winners and Losers in the Ozone Layer

Ozone is a fundamental component of our atmosphere: in the middle atmosphere, its presence shields living beings from harmful ultraviolet (UV) radiation; when produced near

the surface however, often as a byproduct of various atmospheric pollutants, it can be harmful for humans and ecosystems.

In the tropics, the simulated MCB scenario caused an increase in total ozone column (the sum of tropospheric and stratospheric ozone) of up to 5% due to weakened upwelling of ozone-poor air from lower, tropospheric, altitudes and increased ozone production from elevated nitrogen oxides (NOx) produced by lightning.

But at the same time, further north, the story was different. Over the Northern Hemisphere's mid-latitudes, MCB led to a drop in total column ozone of about 3%. This decrease was most pronounced in winter and spring, and was driven by the MCB-induced changes in stratospheric circulation and ozone transport.

The Southern Hemisphere showed a more mixed response. While MCB decreased total column ozone in mid-latitudes during austral winter and spring, it also surprisingly boosted ozone over Antarctica during springtime due to changes in the polar vortex that limited the halogen-based ozone destruction that causes the seasonal Ozone Hole.

Unexpected Atmospheric Chain Reactions

The research highlights how a troposphere-level intervention like MCB could trigger a cascade of atmospheric changes that extend all the way to the middle atmosphere. MCB could cool the surface and upper troposphere, but this in turn would alter wind patterns and affect the strength of the large-scale stratospheric overturning circulation, known as the Brewer-Dobson Circulation. These effects in turn alter how ozone and other gases are transported vertically and across latitudes.

Adding to the complexity, the MCB strategy simulated in the study also triggered a La Niña-like cooling pattern in the eastern Pacific. That pattern further disrupted planetary wave activity and stratospheric transport and mixing, as well as strengthened the Northern Hemisphere polar vortex that is known to promote ozone depletion.

"Once you perturb the surface temperatures, both globally and regionally, it affects the entire atmospheric system," said Bednarz. "These are not isolated layers. They are deeply interconnected."

Beyond dynamics, MCB also influenced the chemistry of the atmosphere. Lightning activity increased in the model due to changes in clouds and precipitation, driving more NOx and ozone production in the tropical upper troposphere and lower stratosphere.

Meanwhile, colder temperatures led to drier air across the troposphere and stratosphere, which also favors ozone preservation in the tropics by reducing water vapor-driven destruction pathways.

More Questions Than Answers

The study doesn't offer a verdict on the viability of MCB, but it highlights an important issue: the assumption that impacts of tropospheric interventions are limited to the troposphere is flawed.

This study expands the horizons of MCB research by highlighting impacts that extend beyond the troposphere; impacts that will require further study to understand the complex chemical and dynamical responses to MCB implementation in the Earth system.

"Our role as scientists is to provide holistic assessments of climate interventions that include more than just their impact on surface temperature." said co-author Daniele Visoni from Cornell University. "Different climate intervention strategies will produce different interactions that may ripple through the entire Earth system, all of which need to be thoroughly evaluated."

The MCB scenario used in the study was intentionally "extreme" and not necessarily representative of a potential real-world deployment. But even so, the authors argue, it highlights plausible risks that must be studied more thoroughly.

As global pressures mount to find climate solutions, interest in climate intervention approaches like MCB has grown. But this study makes clear that the Earth's systems are not easily compartmentalized. Obtaining a full picture of what an intervention could do will require thinking about the system as a whole, including careful modeling, monitoring, and understanding.

"The middle atmosphere, especially the ozone layer, is not an exception, and must be part of that conversation." said Bednarz.

Source/image: NOAA Chemical Sciences Laboratory, 14 May 2025

Related: CIRES

AFRICA

4. L'ONUDI lance la Phase II du projet « Plan de Gestion de l'Elimination des Hydrochlorofluorocarbures – PGEH II

L’Algérie lance la Phase II du Plan d’élimination des HCFC avec l’ONUDI, renforçant son engagement environnemental et sa coopération internationale.

Excellence, Mme Nadjiba Djilali , Ministre de l’Environnement et de la Qualité de la Vie ; Monsieur Mohamed Boukhari, président du Conseil National Economique Social et Environnemental ; le Général-Major Abdelhafid Bakhouche, Directeur Général des Douanes Algérienne ; Madame Manel El Ayoubi, représentante du Ministère des affaires étrangères, de la communauté nationale à l’étranger et des affaires africaines ; Docteur Mohamed Hichem Kara, président de l’Académie algérienne des sciences et des technologies (AAST) ; Monsieur Ahmed Akli, Coordonnateur du bureau ozone et son équipe ; Chers collègues, partenaires, honorable assistance,

Au nom de l’Organisation des Nations Unies pour le développement industriel– ONUDI, je suis ravie d’être ici aujourd’hui à cet événement important pour le lancement de la Phase II du projet « Plan de Gestion de l'Elimination des Hydrochlorofluorocarbures – PGEH II ».

En premier lieu, je souhaiterais adresser mes vifs remerciements au gouvernement algérien à travers ses représentants ici présents, pour tous leurs efforts consentis pour un partenariat réussi.

L’excellente relation entre l'Algérie et l'ONUDI témoigne d'un partenariat qui s’est renforcé au fil des années. Il s’inscrit dans le cadre des stratégies nationales visant un développement industriel moderne tout en protégeant les ressources et les écosystèmes.

À ce jour, l’ONUDI soutient divers projets inscrits dans le cadre de coopération des Nations Unies pour le développement durable avec le gouvernement Algérien. Notamment dans les domaines de la transition vers une économie verte et circulaire, la transition énergétique ainsi que l’innovation pour le passage vers des technologies plus propres en plus des activités relatives au protocole de Montréal.

Je reste convaincue que cette collaboration continuera à produire des résultats significatifs, contribuant à un avenir plus durable pour l’Algérie, en harmonie avec ses engagements internationaux et ses ambitions de développement responsable.

Comme, je remercie sincèrement le Fonds Multilatéral du Protocole de Montréal pour la qualité de la coopération à travers l'ONUDI qui s'est approfondie et élargie au cours des dernières décennies. Elle est fondée sur la reconnaissance commune du rôle crucial que joue la coopération multilatérale pour la mise en œuvre de solutions durables assurant la préservation de la couche d'ozone.

Dans le cadre du Protocole de Montréal, le Fonds Multilatéral a apporté à l'Algérie un soutien financier pour la mise en œuvre d'un Plan de Gestion d'Élimination des HCFC. Ce plan, structuré en deux phases, vise à réduire progressivement l'utilisation des HCFC conformément aux délais fixés par le Protocole de Montréal, avec pour objectif leur élimination totale d'ici le 1er janvier 2030. La mise en œuvre du PGEH a été confiée à l'ONUDI en tant qu'agence principale d'exécution.

La Phase I, lancée en 2013 et achevée en 2024, a bénéficié d'un budget d'environ 1,8 million de dollars US et a permis notamment :

- Premierement : La conversion d'équipements dans des entreprises clés représentant plus de 40% du marché algérien de la climatisation. Le ciblage de ces acteurs a non seulement permis le remplacement de l'utilisation de HCFC-22 par HFC-32 et l'agent gonflant HCFC-141b par le cyclopentane, mais aussi la création d'un effet locomotive qui pousse les autres industries à se conformer aux nouvelles donnes d'un marché mondial en constante évolution.
- Deuxiemement : Le renforcement des capacités matérielles et humaines des douanes afin d'améliorer le contrôle des importations de substances réglementées.
- En troisième lieu : La facilitation des activités liées à l'Amendement de Kigali au Protocole de Montréal.
- Et en dernier : La réalisation d'études et d'enquêtes pour collecter des données sur le secteur des équipements de réfrigération, de climatisation et de pompes à chaleur (RAC) en Algérie.

La Phase II, adoptée en décembre 2024 par le FML, vise à atteindre l'élimination totale des HCFC d'ici fin 2029. Elle dispose d'un budget de 3,75 millions usd réparti en trois tranches, avec un plan opérationnel élaboré conjointement par le Ministère de l'Environnement et de la Qualité de la Vie, le Bureau National de l'Ozone et l'ONUDI. Ce plan prévoit de nombreuses activités, notamment la formation, le renforcement des compétences opérationnelles, et la dotation en outils de travail. La collaboration étroite entre les différentes parties prenantes, sera essentielle pour la réussite de cette phase. Read more...

Source/image: Nations Unies, Algérie, 13 mai 2025

5. L'Assemblée nationale adopte les projets de loi sur l'amendement de Kigali et l'évaluation environnementale et sociale

L'Assemblée nationale a approuvé, jeudi, lors de sa séance publique présidée par M. Ahmedou Mohamed Mahfoudh Mbala, deuxième vice-président de l'Assemblée, deux projets de loi, l'un relatif à la ratification de l'amendement de Kigali au protocole de Montréal à la convention de Vienne pour la protection de la couche d'ozone et l'autre relatif à l'évaluation environnementale et sociale.

S'adressant à l'Assemblée nationale, la ministre de l'Environnement et du Développement durable, Mme Messaouda Baham Mohamed Laghdhaf, a expliqué que le projet de loi n° 015-25 permet la ratification de l'amendement de Kigali au protocole de Montréal adopté à Kigali en octobre 2016.

Cet amendement permettra à la Mauritanie de se conformer au droit international et de passer à une nouvelle génération de gaz moins polluants et plus compatibles avec une politique d'efficacité énergétique, a-t-elle dit, notant que cela permettra d'éviter les coûts liés à un passage tardif aux nouveaux gaz et à leurs équipements, d'autant plus que la génération actuelle de gaz disparaît progressivement du commerce international.

Concernant le deuxième projet de loi sur l'évaluation environnementale et sociale, la ministre a indiqué que la Mauritanie a signé plusieurs conventions internationales pertinentes, telles que la Convention sur la diversité biologique, la Convention-cadre des Nations unies sur les changements climatiques, le Protocole de Kyoto et l'Accord de Paris. Elle a ajouté que ces conventions nécessitent l'intégration de leurs recommandations dans la législation nationale, surtout après le diagnostic de l'arsenal juridique qui a montré la nécessité de faire évoluer les textes pour être en phase avec les défis environnementaux associés aux mutations socio-économiques locales.

Elle a expliqué que le projet de loi vise à renforcer le système national d'évaluation environnementale et sociale en Mauritanie, et assure sa conformité avec les systèmes internationaux en intégrant des outils d'évaluation approuvés au niveau international pour assurer l'efficacité et l'intégration de ces outils dans le système normatif local.

Le texte définit le régime juridique applicable à l'évaluation environnementale et sociale, y compris tous les risques environnementaux et sociaux associés aux projets, plans ou programmes.

Il exige également de mettre en évidence les impacts directs et indirects, temporaires et permanents, et d'identifier les mesures à prendre pour minimiser ou compenser les impacts négatifs.

Les députés ont fait l'éloge des deux projets de loi, soulignant la nécessité de préserver et de protéger l'environnement des effets de la pollution due au réchauffement climatique.

Ils ont souligné l'importance d'une préparation adéquate de la transition vers des réfrigérants n'appauvrissant pas la couche d'ozone, en insistant sur la nécessité de s'appuyer sur l'avis des centres de recherche, des universités et des experts en études environnementales.

Les députés ont demandé la publication d'un résumé des obligations des investisseurs concernant les impacts potentiels sur l'environnement, et ont exigé que les investisseurs soient tenus d'assumer leurs responsabilités sociales dans les zones où ils opèrent, y compris la fourniture de services de base à la population dans les domaines de la santé, de l'éducation, de l'eau et de la construction de routes.

Source/image: L'agence Mauritanienne d'information, 8 Mai 2025

8. Cooling systems in high demand in Nigeria but regulatory gaps persist

The systematic release of gases into the atmosphere due to faulty installations, unsafe disposal at the end of use, or adding gas without leak testing is a common problem in Nigeria.

When Kola Adebayo, an air conditioning technician in Abuja, gets a call to fix a malfunctioning air conditioning system, one of the first questions he asks is if the AC needs servicing or a gas refill.

Mr Adebayo said these problems are persistent in the Nigerian capital.

"Usually, people tell you their ACs are not freezing, and it needs servicing or a gas refill," Mr Adebayo said, hauling a piece of equipment.

In Nigeria, air conditioners have become popular as the appliance, once a luxury for the middle class, has become a necessity in an increasingly hot climate.

The cooling sector is governed by regulations that prohibit the release of refrigerant gases into the air, such as by conducting leak tests after repairing an appliance.

Yet the systematic release of gases into the atmosphere due to faulty installations, unsafe disposal at the end of use, or adding gas without leak testing is a common problem in Nigeria, even though it is illegal.

When the refrigerant gases used in cooling and freezing appliances stay within a closed

circuit, they are safe. But if they leak out into the air as a result of a malfunction or poor service practices, or if the appliance is not properly disposed of at the end of its life, the gases are highly destructive to the earth's sensitive atmosphere.

According to an AP report, the refrigerant gases that make cooling systems work have hundreds to thousands of times the warming potency of carbon dioxide, and the worst of them also damage the ozone layer.

They are "the most potent greenhouse gases known to modern science," one research paper put it, and they're growing fast.

In 2016, officials from over 150 countries signed the Kigali Amendment, agreeing to limit these gases being spewed into the air.

Nigeria, Africa's most populous country, also enacted regulations guiding the use of these gases. But enforcement is a problem, threatening the country's commitments to slash emissions. Read more…

Source/image: Premium Times, 29 April 2025

7. Réduction des gaz à effet de serre : Remise de matériel de froid à trois centres de formation professionnelle du Togo

La cérémonie s'est déroulée le 16 mai 2025 dans les locaux de la direction de l'environnement à Lomé. C'est le représentant du ministre de l'environnement, et des ressources forestières, AWOUGNON Comlan qui a procédé à la remise des équipements et outillages au directeur de cabinet du ministère de l'enseignement technique, de la formation professionnelle et de l'apprentissage, ASSEDI Kossi Ikele au profit du CCL Lomé et les CRETFP Kpalimé et Dapaong.

Estimé à 33 millions de F CFA, le matériel est composé, entre autre, de détecteurs de fuite, des cylindres de stockage de réfrigérants et des boites à outils. C'est un don de l'Organisation des nations unies pour le développement industriel ONUDI pour renforcer les capacités de formation des bénéficiaires. L'idée est de faire de ces centres, des pôles d'excellence d'acquisition de compétences modernes respectueuses de l'environnement. Il intervient dans le contexte de la mise en œuvre du protocole de Montréal, notamment la phase 2 des engagements visant à réduire drastiquement les produits gazeux à effet de serre hydro fluorés PGEH II. Il s'agit des fluide frigorigènes (climatisation, réfrigération), des agents

de gonflage de mousses isolantes et propulseurs dans les aérosols ainsi que des solvants dans certaines applications industrielles qui sont de puissants gaz à effet de serre dont le potentiel de réchauffement global de la planète est très élevé. On parle de milliers de fois plus fort que le gaz carbonique. Il urge donc d'éliminer ces produits nocifs.

La directrice de l'environnement, YAOU Mery, a indiqué que ce don fait suite à une étude diagnostique qui a permis de souligner la nécessité d'équiper ces centres de formation professionnelle d'outils adéquats qui contribuent à la réduction des gaz à effet de serre. Ce faisant, le Togo répond à ses engagements vis-à-vis du protocole de Montréal.

Représentant le ministre en charge de l'environnement, AWOUGNON Comlan, a insisté sur les efforts consentis par le Togo dans la lutte contre l'émission des gaz à effets de serre, notamment ceux hydro-fluorés très nocifs. Il a émis le vœu que les bénéficiaires fassent un bon usage de l'ensemble des équipements et outillages au profit des apprenants présents et futurs.

Au nom des bénéficiaires, le directeur de cabinet du ministère de l'enseignement technique, de la formation professionnelle et de l'apprentissage, ASSEDI Kossi Ikele, a exprimé sa gratitude à l'endroit du ministère en charge de l'environnement et de l'ONUDI pour cette dotation. Il a promis que tout sera mis en œuvre pour que les apprenants acquièrent des compétences techniques modernes dans des conditions conformes et respectueuses des normes environnementales en vigueurs.

Source/image: Ministère de l'Environnement et de la Ressource Forestière, 17 mai, 2025

ASIA AND THE PACIFIC

8. Strengthening Pacific Commitment to the Montreal Protocol: Tonga Hosts Key Regional Meeting on Ozone Protection and Climate Action

Nuku'alofa, Tonga – 5 May 2025 - The Kingdom of Tonga is proudly hosting the **Network Meeting of Pacific Island Countries National Ozone Officers**, held back-to-back with a **Technical Workshop on Strengthening HFC Licensing and Quota Systems** from 5–9 May 2025 at the Fa'onelua Convention Centre in Nuku'alofa.

The event, jointly organized by Tonga's Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) and the United Nations Environment Programme (UNEP) OzonAction, brings together representatives from 14 Pacific Island Countries (PICs), international partners, and technical experts.

The opening ceremony featured distinguished remarks that underscored the importance of the Pacific's leadership in safeguarding the ozone layer and combating climate change.

Mr. James Curlin, Head of UNEP OzonAction (Law Division), joined virtually and lauded the collective progress made by the PIC Network. "With all 14 Pacific Island Countries now having ratified the Kigali Amendment, this region exemplifies unity and ambition. The challenges ahead—particularly in enforcing HFC licensing and quota systems—require practical cooperation, capacity building, and strong national frameworks. OzonAction remains committed to supporting you every step of the way," said Mr. Curlin.

Speaking on behalf of the **Ozone Secretariat**, **Ms. Liazzat Rabbiosi** congratulated the PIC Network on its proactive stance. "This gathering is not just about obligations, but opportunities. Opportunities to share innovations, to embed gender inclusion, and to build data systems that speak to both the past and future of climate-smart policies. Your unity as a network is a model for other regions."

Ms. Tina Birmpili, representing the **Multilateral Fund Secretariat**, echoed this view virtually, stating, "The approval of four regional projects in December 2024, totaling over US$5 million, is a reflection of the trust and commitment the global community places in the Pacific. Efficient coordination, streamlined implementation, and effective reporting will be key to translating this investment into sustainable impact."

Over the course of five days, delegates will engage in plenary discussions, breakout groups, and roundtable dialogues on critical themes including:

- Implementation strategies for the Kigali HFC Implementation Plan (KIP) Stage I
- Streamlining HCFC phase-out and HFC phase-down activities
- Enhancing Monitoring, Reporting, Verification, and Enforcement (MRVE) frameworks
- Gender mainstreaming in Montreal Protocol initiatives
- Capacity building through south-south cooperation

Dr. Taniela Fusimalohi, the Acting Prime Minister, Minister for MEIDECC, and Minister for MOI warmly welcomed delegates and emphasized Tonga's commitment to international environmental agreements. "Tonga is proud to host this milestone meeting, which aligns with our vision of resilience and sustainability," said by Hon. Dr. Fusimalohi. "This is a critical moment for Pacific Island Countries as we strive to meet dual obligations under the Montreal Protocol—freezing HFC consumption and continuing the HCFC phase-out—while embracing regional collaboration and integrated implementation."

This landmark event serves as a foundation for the 2025–2027 implementation period, ensuring Pacific Island Countries are equipped to meet their Montreal Protocol commitments with efficiency, resilience, and regional solidarity.

Source/image: Ministry of MEIDECC, 5 May 2025

Related: Cook Islands secures funding for climate, energy projects, Cook Islands News, 19 May 2025

China steps up management of ozone-depleting substances, HFCs to tackle climate change

BEIJING, April 23 (Xinhua) -- China has unveiled a plan to comprehensively strengthen its management of ozone-depleting substances and hydrofluorocarbons (HFCs) in order to address ozone layer depletion and climate change, the Ministry of Ecology and Environment announced on Wednesday.

According to the national implementation plan on fulfilling the Montreal Protocol on Substances that Deplete the Ozone Layer during the 2025-2030 period, China will regulate nine categories of substances, including HFCs. Notably, eight categories are ozone-depleting substances, while HFCs do not harm the ozone layer but are potent synthetic greenhouse gases that have the potential to contribute to global warming.

The plan puts forward 11 specific tasks in the areas of source control, process management, end-of-pipe treatment, and import and export regulation.

For example, to strengthen management of the use of controlled substances, the production of refrigerators and freezers using HFCs as refrigerants will be banned in China's home appliance sector starting Jan. 1, 2026.

Since joining the Montreal Protocol on Substances that Deplete the Ozone Layer in 1991, China has faithfully fulfilled its international obligations, phasing out about 628,000 tonnes of ozone-depleting substances, accounting for more than half of the total phased out by developing countries, the ministry revealed.

Source/image: China.org.con, 23 April 2025

EUROPE AND CENTRAL ASIA

10. Will the Hole in the Ozone Layer Close?

16 May 2025 - “The Ozone Layer is this protective shield that’s preventing us from being impacted by harmful UV radiation from the Sun,” said Professor Eloise Marais (UCL Geography) on the importance of the Ozone Layer, and the need to continue to protect it.
Listen: BBC Radio 4 “BBC Inside Science” (from 3 mins 25 secs)

Source: UCL News, 16 May 2025 | Image: BBC Inside Science

11. Poland uncovers more HFCs in car LPG tanks

POLAND: Polish customs officials have stopped more refrigerant being smuggled across the border from Ukraine in vehicle LPG tanks.

Officers from the customs department in Hrebenne, a village in southeastern Poland on the border with Ukraine, discovered modified gas tanks during an inspection of two passenger cars.

These were found to contain over 220kg of R134a and R404A refrigerant.

The two vehicles were seized, and criminal proceedings have been initiated against the drivers.

Poland has reported an increasing number of such smuggling attempts in the last 12 months. Most involve smuggling attempts from Ukraine.

Source/image: Cooling Post, 23 May 2025

LATIN AMERICA AND THE CARIBBEAN

12. National Ozone Layer Conservation Workshop kicks off today in Cuba

HAVANA, Cuba, Apr 22 (ACN) A national workshop on the protection of the ozone layer and climate begins today in the western province of Matanzas in three-day sessions, with the support of the Implementing Agency of the United Nations Development Program (UNDP).

The meeting will bring together specialists from the delegations of the Ministry of Science, Technology and Environment, who apply the actions of the National Ozone Program in their territory, reported to the Cuban News Agency, Helen Rodriguez, communicator of the Center for Information Management and Energy Development (CUBAENERGIA).

She added that under the coordination of the Ozone Technical Office (OTOZ), the participants will evaluate the results of the management of the conservation of this kind of umbrella that protects the Earth from the Sun's ultraviolet rays.

The agenda also includes the progress of the national plans for the elimination of hydrochlorofluorocarbons (HCFCs) phase II and the reduction of hydrofluorocarbons (HFCs) until 2045.

In addition, energy efficiency in the Montreal Protocol, in force since 1989, courses on Good Practices in Refrigeration and Air Conditioning and Hydrocarbons; outreach campaigns and gender approach, among other topics.

OTOZ, attached to CUBAENERGIA, celebrates this year the 30th anniversary of its creation and since then coordinates and leads initiatives to eliminate ozone-depleting substances, through technological innovation and international projects. CUBAENERGIA is an entity attached to CITMA's Agency for Nuclear Energy and Advanced Technologies (AENTA).

Source/image: Cuba News Agency, 23 April 2025

NORTH AMERICA

13. Carrier Transicold enhances cold chain training in Africa

USA/RWANDA: Carrier Transicold has delivered transport refrigeration units and connected cold chain solutions to support training courses and sustainable cold chain systems in East Africa.

This latest donation is a continuation of Carrier Transicold collaboration forged with the Africa Centre of Excellence for Sustainable Cooling and Cold Chain (ACES) in 2022.

ACES has taken delivery of Carrier's in-kind donation of a refrigerated box equipped with a Supra HE 6, a Citimax 280 Fresh unit and telematics devices, including Carrier Transicold's Lynx Fleet connected cold chain solution, at its campus in Kigali, Rwanda.

The equipment will enhance courses by providing hands-on experience with refrigeration units for trainees and future trainers. It will also enable trainers to provide an overview of service and maintenance and present the benefits of the Lynx Fleet platform.

"Recognising the crucial role of the cold chain in minimising perishable losses and reducing greenhouse gas emissions, we also see its importance in optimising agricultural and farming

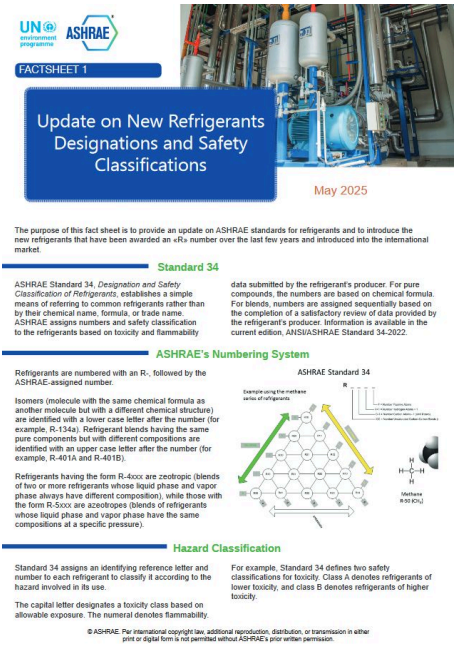
activities," said Victor Calvo, Carrier Transicold's vice president and general manager, international truck trailer.

Carrier Transicold has delivered approximately 450 hours of intensive training for over 65 individuals. The company has been at the forefront of advancing transport refrigeration through ACES courses and a Specialised Outreach and Knowledge Establishment (SPOKE) session in Kenya. These sessions cover refrigerated road transport solutions, telematics tools, connected systems and best practices in cold chain and distribution.

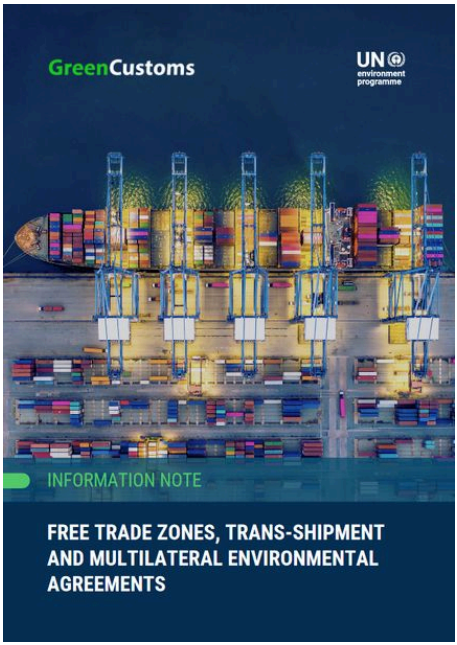
"The availability of Carrier Transicold cold chain equipment and solutions on-site will further enhance our unique courses," said Toby Peters, Centre for Sustainable Cooling director and professor of Cold Economy, University of Birmingham and Heriot-Watt University. "Cooling and cold-chain are critical national infrastructure. Through ACES we bring together multidisciplinary expertise and commercial partners to develop training in how to deliver inclusive, equitable and more sustainable cooling and cold-chain solutions."

Source/image: Cooling Post, 16 May 2025

RESOURCES



FACTSHEET: Update on New Refrigerants Designations and Safety Classifications -



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

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