

OzoNews

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

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GLOBAL

1. 82 million tonnes of CO₂ emissions-equal to 19.2 million cars driven for a year-potentially avoided in 2024, due to UNIDO's projects under the Montreal Protocol

Around 82 million metric tonnes of Carbon dioxide (CO₂) equivalent emissions, roughly comparable to the emissions from 19.2 million passenger vehicles driven for a year, were avoided due to the United Nations Industrial Development Organization (UNIDO)'s projects under the Montreal Protocol in 2024.



Disclosing the latest statistics, Alois Mhlanga, Chief of UNIDO's Climate Innovation and Montreal Protocol division said that the CO₂ emissions were comparable to the energy needs of 11 million homes in the US or equal to 1.3 billion tree saplings grown for ten years.

Considered as one of the global environmental successes, the Montreal Protocol has helped prevent approximately 443 million cases of skin cancer, 2.3 million skin cancer deaths, and 63 million cases of cataracts in the United States alone, for people born in the years 1890–2100, according to an estimate by the US Environmental Protection Agency.

In 2023, the CO₂ emissions figures were 41 million tonnes, and this year's figure almost doubled owing to the project approvals in countries with high consumption of hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs). These are groups of industrial chemicals, primarily used in the air-conditioning and refrigeration, aerosols, foams, and solvents sector. While HCFCs cause damage to the ozone layer, the HFCs are ozone friendly but are powerful greenhouse gases causing global warming.

The Kigali Amendment to the Montreal Protocol, which is ratified by over 160 countries till date, seeks to reduce the use of HFCs by up to 80% in the next 20 years. A global implementation of the Kigali Amendment is expected to reduce the global warming by 0.5°C by the end of this century and combined with energy efficiency measures, the benefits could double. This contributes substantially to the goals of the Paris Agreement on Climate Change to limit global warming to well below 2.0°C.

"As an implementing agency of the Montreal Protocol, UNIDO is committed to build and strengthen ecosystems (policies, regulations, institutions, technologies and practices) to provide member-states with the opportunity to forge low-carbon economies," Mr. Mhlanga said. Since 2010, UNIDO has supported over 448 enterprises in 98 countries to transition to climate-friendly production processes under the Montreal Protocol, he added.

For further information: Alois MHLANGA, Chief, Climate Innovation and Montreal Protocol division

Source/Image: [UNIDO](#), 24 February 2025

2. Cooperation among MEAs Secretariats and international enforcement organizations to reinforce Customs Officers' Capacity



The Hague, the Netherlands, 20 February 2025 – UNEP OzonAction contributed to the discussion of customs related issues from the perspective of the implementation of the Montreal Protocol at the recently held 19th meeting of the Green Customs Initiative (GCI) from 19 to 20 February 2025 in the Hague, the Netherlands. The meeting was hosted by one of its partners, the Organization for the Prohibition of Chemical Weapons (OPCW).

The GCI aims to enhance the capacity of customs and border control officers to enforce and foster compliance with obligations of trade-related multilateral environmental agreements and corresponding national legislation.

Key highlights of the meeting included partners sharing relevant activities and identifying potential areas for cooperation. The meeting also featured the presentation of the draft report on customs, trade, and gender, as well as an information note on customs and free trade zones. Additionally, the 2025 GCI priorities and the workplan were discussed, among other issues.

About GCI

The GCI, launched in 2004, is a partnership of international entities cooperating to prevent the illegal trade in environmentally-sensitive commodities and substances and to facilitate their legal trade. Its objective is to enhance the capacity of customs and other relevant border control officers to monitor and facilitate legal trade and to detect and prevent illegal trade in environmentally sensitive commodities covered by relevant trade related Multilateral Environmental Agreements (MEAs) and international conventions.

These commodities include ozone depleting substances (ODS), hydrofluorocarbons (HFCs), toxic chemicals, hazardous wastes, endangered species, and certain living-modified organisms. The objective of the GCI is achieved through awareness-raising on all relevant international agreements and providing assistance and tools to the customs community. Green Customs Initiative is designed to complement and enhance existing customs training efforts under the respective agreements.

OzonAction and GCI

UNEP OzonAction's involvement with the GCI is through its mandate, the Montreal Protocol on Substances that Deplete the Ozone Layer. Through the Compliance Assistance Programme, OzonAction has organized a series of customs training workshops and joint

workshops in partnership with National Ozone Units to build their capacity and cooperation in monitoring and controlling illegal trade. A variety of guidelines, awareness, and training materials for Customs and Enforcement Officers were produced by OzonAction in collaboration with the Ozone Secretariat.

For more information:

- [Green Customs Initiative Partners | Green Customs](#)
- UNEP OzonAction - [Tatiana Terekhova](#), Capacity Building Manager

Source/image: [UNEP OzonAction](#), 20 February 2025

3. How R-290 Cooling is Transforming the Automotive Sector and Fighting Super Pollutants

Cutting hydrofluorocarbons (HFCs) is essential in the fight against climate change and improving public health. Projects supported by the Climate and Clean Air Coalition (CCAC), such as the Green Automobile Air Conditioner Technology Demonstration Program, are leading the charge in creating sustainable solutions with lasting impact.



By tackling emissions from mobile air-conditioning systems, these initiatives not only help reduce global warming but also improve air quality and reduce heat-related risks. One of the latest advancements emerging from these efforts is the safe and energy efficient use of R-290 (propane) as a refrigerant in all-electric vehicles.

The adoption of R-290 as a natural refrigerant is particularly noteworthy because it offers a low global warming potential (GWP) and excellent thermodynamic properties for the combined cycles of heating and cooling electric vehicles. These characteristics make it a sustainable choice compared to conventional refrigerants with benefits extending to improved passenger comfort, longer battery life, and greater vehicle driving range—key factors in making electric vehicles more appealing to consumers and operators alike. Applying R-290 in the automotive industry requires engineered solutions for its flammability characteristics and life cycle refrigerant management, both promoted by the CCAC.

Automotive air conditioning systems using high-GWP R-134a refrigerant are a major source of emissions that force climate change, yet adoption of alternatives remains slow in price-sensitive markets. With CCAC funding support approved in 2014, Tata Motors Ltd, Mahle and Institute for Governance & Sustainable Development set out to create a prototype air-conditioning system that significantly reduced HFC emissions.

To solve this problem the cross functional project team created the first commercially viable, safe and cost-saving mobile air conditioning system to use R-152a, a slightly flammable refrigerant with low GWP used in a new design called “Secondary-Loop”. “The small charge of a flammable refrigerant is safely contained in components outside the occupied space with hot and cold non-flammable antifreeze, circulated inside the occupied space for comfort and safety,” explained Dr. Stephen O. Andersen, Director of Research at IGSD.

The pilot project, ‘A Greener Auto Air Conditioner to Save the World’, has been successfully developed and validated on a TATA Motors Utility Vehicle, with a dual AC system in 2019.

“One of the reasons for the extraordinary success of the demonstration is that the small project team from TATA and Mahle was backed up by hundreds of engineers working for each company who were able to solve any problem with specialized skills and machine shop

resources”, said Timothy Craig who co-directed the work for Mahle with Sangeet Kapoor as co-director for TATA.

The team demonstrated a system that not only lowered emissions but also enhanced energy efficiency. It went on to win the prestigious SAE International, 2019 Environment Excellence in Transportation (E2T) award.

Their efforts were also recently recognized with the SAEINDIA Foundation Award FY23-24, highlighting among others the success of the CCAC Secondary-Loop Air Conditioning Demonstration Project, which played a key role in developing climate-friendly cooling for electric vehicles. This award shows how innovation and collaboration can lead to meaningful advancements in sustainable transportation. [Read more...](#)

Source/image: [Climate and Clean Coalition Secretariat](#), 10 February 2025

AFRICA

4. Energy sector contributes most of SA's carbon emissions



The greatest greenhouse gas emitter in South Africa is the energy sector. Photo: Reuters

The energy sector remains the main contributor to [greenhouse gas emissions](#) in South Africa, according to the country's ninth national greenhouse gas inventory report.

The 598-page [report](#), which is required by the [United Nations Framework Convention on Climate Change](#), was published by Forestry, Fisheries and the Environment Minister [Dion George](#) earlier this month.

The report, which tracks emissions from all sectors of the economy, covers the period 2000 to 2022, providing estimates of the current emission levels and trends in the country.

George's [department](#) said South Africa is required by the UN framework convention to provide in its national inventory “on a gas-by-gas basis, and its units' mass, estimates of anthropogenic [human-caused] emissions of [carbon dioxide](#), [methane](#) and nitrous oxide, by

sources and removals by [\[carbon\] sinks](#)". An accurate, complete and updated greenhouse gas emissions inventory is a "good foundation for effective mitigation responses".

The primary uses of the inventory report are to support informed policy and decision-making on viable climate mitigation response measures "for the country to achieve the envisioned transition to a lower carbon economy and climate-resilient society".

Gas trends

Carbon dioxide is the largest contributor to South Africa's emissions, accounting for 81.9% in 2022. Most of it is from the energy sector, which accounted for an average of 92.3% of total carbon dioxide emissions between 2000 and 2022.

This was followed by the industrial processes and product use sector contribution, which accounted for an average of 7.2% to carbon dioxide emissions between 2000 and 2022, while the agriculture sector contributed an average of 0.5%.

Methane emissions climbed from 12.9% to 13.2% between 2000 and 2022, with the report noting that in the agriculture sector, specifically [enteric fermentation](#), and the waste sector, specifically solid waste disposal, were the major contributors to the total methane emissions in 2022.

Enteric fermentation refers to a [natural part of the digestive process of ruminants](#), including cattle, sheep and goats, where microbes decompose and ferment feed present in the digestive tract to produce energy and protein along with methane. Enteric methane is a by-product of this process and is expelled by the [animal through burping](#).

The report found that [nitrous oxide](#) emissions rose from 3.4% to 3.5% between 2000 and 2022. The main contributor of these emissions is the agriculture sector followed by the energy sector, which contribute 73.4% and 14.8%, respectively.

[Fluorinated gases](#) emissions were only estimated for the industrial processes and product use sector in South Africa, with the report finding that these rose from 0.2% to 1.3% between 2000 and 2022.

"These emissions have increased since 2011 because of the addition of hydrofluorocarbons emissions from air conditioning, foam blowing agents, fire protection and aerosols. There is no data prior to 2005, so this time series is not consistent. The [replacement of ozone depleting substances](#) did contribute to this increase."

Energy sector

Energy emissions in 2022 accounted for 78% and 86% of total emissions, the report said. Most of the energy sector's emissions were from energy industries (60%) and transport (14%), while the least emissions were from solid fuels (0.6%) and oil and natural gas activities (0.03%).

Energy sector emissions fell by 2.5% for the period 2000 to 2022. Emissions from the other sectors category decreased the most (by 62%) during this period mainly because of the residential sector.

"This is likely due to increased electrification over the years, as well as an increase in the use of renewable energy. Emissions from domestic aviation and petroleum refining also

decreased significantly, 70% and 73% respectively, since 2000,” the report said.

Although energy sector emissions fell slightly from 2000 to 2022, emissions from electricity production rose by 11.5% because of an 8.7% increase in power generation in that period.

Since 2020, energy emissions have declined by 0.2%. In 2021, emissions increased by 3.5% but then dropped again in 2022 to pandemic levels. “This decrease is due to a 6.5% decrease in emissions from the energy industries sub-sector which, on average, accounts for 67% of the energy sector emissions.”

Industrial processes and product use sector

Emissions from this sector in 2022 accounted for 6.4% of the country’s emissions. The largest source category was the metal industry, which contributed 51.2% to the total sector emissions.

The mineral industry and the products used as substitutes for ozone-depleting substances sub-sectors, contributed 19.8% and 19.4%, respectively, to the industrial processes and product use sector emissions.

Since 2000, industrial processes and product use sector emissions have fallen by 6.7%, the report noted. “The decline can be attributed to the decline in metals production (-39.0%), specifically iron and steel and aluminium. This can be ascribed to the deteriorating economy. The chemicals industry also declined (-31.4%).”

Meanwhile, the production of cement and the use of fuels and solvents in cement-making caused a rise in carbon dioxide emissions by 2 081Gg (gigagrams) of carbon dioxide equivalent since 2000, with the report noting that the local demand for cement had “increased dramatically” from 2000.

The sector’s emissions had climbed by 23.1% since 2020, mainly because of the restoration of production in the minerals (26.8%) and metals (26.83%) industry post-Covid, while the report noted that 2020, which marked the start of the pandemic, was used by some industries for maintenance.

“A contribution was also made by the increased replacement of ozone depleting substances by fluorinated gases (12.5%). The chemicals industry had lower emissions (- 22.5%) due to lower production.” [Read more...](#)

Source/image: [Mail & Guardian](#), 22 February 2025

ASIA AND THE PACIFIC

5. AREMA Training Pods Drive Sustainable Regional HCFC Phaseout in PICs



A collaborative initiative between the Air Conditioning and Refrigeration Equipment Manufacturers Association of Australia (AREMA) and the Australian government is making great strides in **phasing out hydrochlorofluorocarbons (HCFCs) in 12 Pacific Island Countries (PICs)**. AREMA - along with its members (Daikin and Danfoss) and its partners (AG Coombs and the Air Conditioning and Mechanical Contractors Association of Australia) - has generously donated purpose-built "training pods" equipped with tools and resources for good servicing practices (GSP) of refrigeration and air-conditioning systems.

These pods not only facilitate training on good servicing practices but are also being integrated into formal education through the Technical Vocational Education and Training (TVET) curriculum in countries that have a TVET system for refrigeration and air-conditioning. This approach ensures the sustainable capacity building of technicians in the servicing sector, crucial for phasing out HCFCs and phasing-down hydrofluorocarbons (HFCs), both controlled substances under the Montreal Protocol, used as refrigerants.

Nine countries have received these training pods: Cook Islands, Kiribati, the Federated States of Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu.

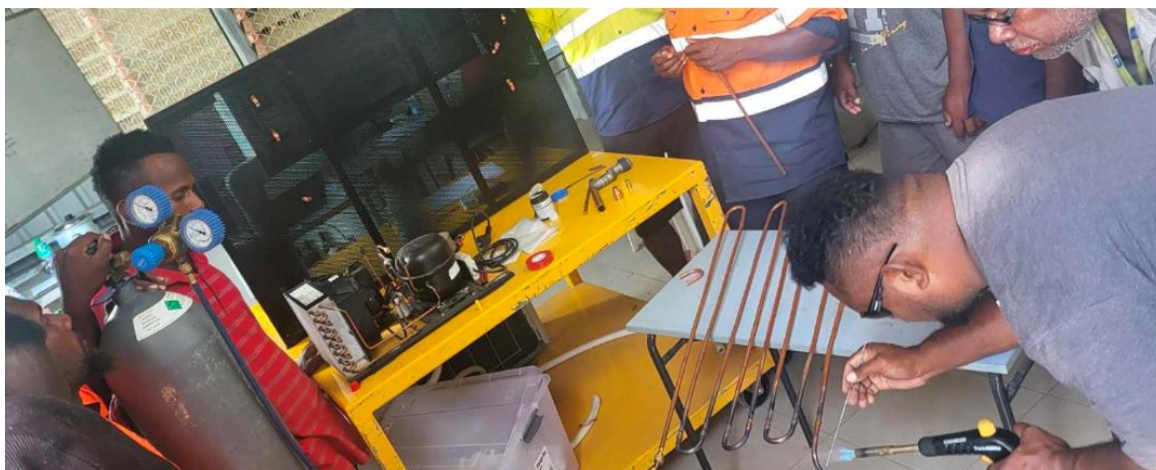


Photo 2: Solomon Islands RAC technicians participate in the training pod demonstration training

This initiative has been widely recognized for its positive impacts on technical capacities across the Pacific. The training pods have enhanced the value of GSP practical sessions and improved the technical skills of technicians in the region. The equipment in the training pods and the training materials developed for the train-the-trainers program are aligned to ensure an integrated approach to skills development for both the trainers and the technicians.

"We deeply appreciate AREMA's initiative in providing these invaluable training pods. The hands-on experience has significantly enhanced our technical skills, knowledge, and confidence and empowered us to not only effectively phase out HCFCs but also phase down HFCs while ensuring the safe and efficient operation of refrigeration and air-conditioning systems in our islands. The training pods serve as a valuable resource, and we believe they

will continue to play a crucial role in equipping upcoming technicians,” said Mr. Afaese Dr. Luteru Tauvale, Assistant Chief Executive Officer, Meteorology Division, Ministry of Natural Resources and Environment, Samoa

UNEP OzonAction expressed its gratitude for the support from the Australian Government, AREMA and industry, recognizing its vital role in achieving shared environmental objectives. They emphasized the significant and lasting impact of the initiative in the Pacific region and expressed their eagerness to continue the collaboration. The Australian Government is continuing to partner with Pacific Island countries to assist them to phase-out and phase-down their use of Montreal Protocol controlled substances in the refrigeration and air conditioning sector.



Photo 3: Tonga RAC technicians participate in the training pod demonstration training.

“UNEP deeply values the invaluable support from the Australian Government, AREMA and industry and recognizes the vital role it plays in achieving shared environmental objectives,”
said Mr. James Curlin, Head of OzonAction, UNEP Law Division.

By providing technical assistance to meet Montreal Protocol obligations, this initiative supports the Regional HCFC Phaseout Management Plan (HPMP) Stage II for Pacific Island countries, which is financed by the Montreal Protocol’s Multilateral Fund and implemented by UNEP OzonAction.

[About AREMA](#)

The Air Conditioning and Refrigeration Equipment Manufacturers Association of Australia (AREMA) is a not-for-profit industry association representing the interests of the Australian refrigeration and air conditioning industry.

[About UNEP OzonAction](#)

UNEP OzonAction provides technical assistance to developing countries to assist them meet their obligations under the Montreal Protocol.

6. 'Kigali Amendment to Montreal Protocol needed to reduce hydrofluorocarbons'

Kathmandu, Feb 23: Minister for Forest and Environment Ain Bahadur Shahi Thakuri has said that the Kigali Amendment to the Montreal Protocol was needed to reduce the production and consumption of hydrofluorocarbons, a major cause of global warming.



Responding to the questions raised in today's House of Representatives (HoR) meeting, Minister Shahi said the proposal should be amended soon to protect the ozone layer and reduce the climate change impacts.

According to the United Nations, the Kigali Amendment to the Montreal Protocol will reduce the production and consumption of hydrofluorocarbons (HFCs) by more than 80 per cent over the next 30 years and the amendment can avoid up to 0.4°C of global warming by the end of this century if fully implemented.

Calling for its amendment, Minister Shahi stated that it was in line with the Vienna Convention for the Protection of the Ozone Layer and Nepal is its party since 1994.

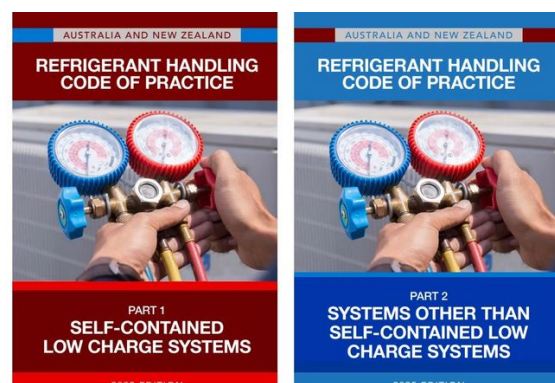
Likewise, Nepal has also ratified four amendments (London, Copenhagen, Montreal and Beijing amendments) to the Montreal Protocol made in different times.

The HoR meeting today unanimously passed the proposal tabled by Minister Shahi seeking general discussion on the Kigali Amendment to the Montreal Protocol.

Source/image: [The Rising Nepal](#), 24 February 2025

7. New Refrigerant Handling Codes of Practice Introduced in Australia and New Zealand

The refrigeration and air conditioning industry in Australia and New Zealand now has updated standards with the release of the 2025 editions of the Refrigerant Handling Codes of Practice. These revised codes, which replace the previous 2007 versions, reflect significant advancements in regulations, safety protocols, refrigerant technologies, and industry best practices.



Compliance with the updated codes is mandatory for all professionals holding a refrigerant handling licence or refrigerant trading authorisation through the Australian Refrigeration Council (ARC). The legislative framework has been amended accordingly to reference the new editions.

The updated codes serve as essential guidelines for technicians, covering the entire lifecycle of refrigeration and air conditioning systems. They outline best practices from design and

manufacturing to shipping, installation, commissioning, servicing, decommissioning, and refrigerant recovery. The revisions incorporate new regulatory requirements, technical advancements, and industry insights gathered through an extensive consultation process.

The codes are divided into two parts, each addressing different categories of systems. Part 1 focuses on self-contained low-charge systems, which are defined as units that do not require any modifications to the refrigeration circuit during installation and contain less than 2kg of fluorocarbon refrigerant. Part 2 applies to all other stationary and transport refrigeration and air conditioning systems, ensuring that professionals working with a wide range of equipment adhere to the latest industry standards. Automotive air conditioning systems remain subject to a separate code developed specifically for that sector.

Freely accessible through the ARClick website, the updated Refrigerant Handling Codes of Practice are a key resource for technicians at all levels of experience. While apprentices receive copies during their training, experienced professionals are encouraged to review the latest editions to ensure their practices align with current safety and environmental standards. These guidelines provide critical instructions for reducing refrigerant emissions, enhancing operational safety, and supporting environmental sustainability.

The development of the 2025 editions was made possible through collaboration between industry stakeholders and government bodies. The Department of Climate Change, Energy, the Environment and Water played a central role in supporting the project, with contributions from the ARC and the Air Conditioning and Refrigeration Permit Scheme Industry Advisory Group. The revised codes are intended to help industry professionals adapt to evolving technologies and regulatory frameworks while reinforcing best practices that protect both technicians and the environment.

Source/image: [Refindustry Refrigeration Tech Hub](#), 21 February 2025

EUROPE AND CENTRAL ASIA

8. PFAS impact discussions March on

FINLAND: The dates and agendas for the evaluations of the impact of fluorinated gases under proposed new European PFAS restrictions have now been published by the European Chemicals Agency (ECHA).



The impact of a PFAS ban, which could affect nearly all HFO and HFC refrigerants, as well as many vital RACHP components, will be considered by the ECHA's risk assessment committee (RAC) from 3-7 March, and the socio-economic analysis committee (SEAC) from 11-14 March.

The meetings are the latest in a timetable of sector impact investigations following a proposal in 2023 by Denmark, Germany, the Netherlands, Norway and Sweden seeking a new chemical definition of PFAS chemicals.

The new chemical definition of PFAS could lead to a ban on practically all HFC and HFO refrigerants, as well as the fluoropolymers used in a number of critical refrigeration components, like seals and gaskets.

PFAS substances – perfluoroalkyls and polyfluoroalkyls – are known to be highly persistent in the environment, contaminating groundwater, surface water and soil, and causing serious health effects such as cancer and liver damage.

The proposal claims that the manufacture, placement on the market and use of PFAS are not adequately controlled and need to be addressed through the European REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulations.

In addition to fluorinated gases, the March meetings will also consider impacts on the transport and energy sectors.

These are expected to result in an opinion of the RAC and a draft opinion of the SEAC committees. A consultation will follow on the draft opinion of the SEAC. This will provide an opportunity for all interested third parties to provide relevant information regarding socio economic aspects to be considered in the final SEAC opinion.

The conclusions agreed at RAC and SEAC meetings are provisional until the committees finalise the evaluation of the entire restriction proposal (including all sectors of use) and adopt their opinions. These opinions will then be communicated to the public.

Source/image: [Cooling Post](#), 18 February 2025

9. IIR Webinar – Domestic hydrocarbon heat pumps, key to a decarbonised future

As the world accelerates towards decarbonisation, heat pumps are emerging as a global solution for cleaner, more efficient residential cooling and heating.

With governments phasing out fossil fuel-based systems and tightening regulations on synthetic refrigerants, the industry is turning to natural alternatives, with hydrocarbons (HCs) leading the way.

But how widespread is the adoption of hydrocarbon-based heat pumps?

What are the opportunities, challenges, and future trends for this technology?

Join IIR's webinar, where industry experts will present insights from the recently published IIR Technical Brief on Domestic Heat Pumps Using Hydrocarbons.

For more information: International Institute of Refrigeration

Source/image: [IIR](#), 19 February 2025

LATIN AMERICA AND THE CARIBBEAN

10. Handover of Equipment to the Hydrometeorological Service Under the HCFC Phase-out Management Plan (HPMP) Stage II



Left to Right: Director of Council for Technical and Vocational Education Training (CTVET), Patrick Chinedu Onwuzirke; Ministry of Agriculture -Hydrological Officer, Zainool Rahaman; Minister of Agriculture, Zulfikar Mustapha; UNDP Guyana Resident a.i., Berdi Berdiyev; EEEL Programme Analyst - UNDP Guyana, Colin Mattis; Chief Hydromet Officer, Dr. Garvin Cummings

UNDP

Georgetown, Guyana – 10 February 2025 - The United Nations Development Programme (UNDP) has officially handed over specialized equipment to the Hydrometeorological Service of the Ministry of Agriculture as part of the HCFC Phase-out Management Plan (HPMP) Stage II project. Hydrochlorofluorocarbons (HCFCs), once widely used in refrigeration and air-conditioning systems, have significantly contributed to ozone depletion and climate change. The phase-out of these substances is a key part of Guyana's commitment under the Montreal Protocol, and this initiative marks a major milestone in the country's transition toward sustainable and climate-friendly cooling technologies.

With funding from the Multilateral Fund for the Implementation of the Montreal Protocol, UNDP and the Government of Guyana have collaborated to provide state-of-the-art equipment designed to enhance national technical capacity and promote environmental sustainability. The equipment handed over—including refrigerant identifiers, recovery and recycling machines, leak detectors, flushing kits, and prototype refrigeration and air-conditioning training systems—is crucial in ensuring proper refrigerant management, reducing harmful emissions, and equipping local technicians with the skills required to transition to environmentally friendly alternatives.

The Hydrometeorological Service will distribute these tools to seven technical training institutions across the country, supporting capacity building and compliance with international standards. This initiative not only strengthens Guyana's ability to meet its Montreal Protocol obligations but also ensures that future generations of technicians are well-equipped to handle sustainable refrigeration and air-conditioning solutions in alignment with global best practices.

This investment reinforces Guyana's commitment to the Montreal Protocol, which mandates the phased reduction of HCFC consumption, including a 35% reduction by 2020, a 97.5% phase-out by 2025, and complete elimination by 2030. By integrating new, energy-efficient technologies, Guyana is not only protecting the ozone layer but also enhancing energy efficiency in its refrigeration and air-conditioning sector, reducing the environmental impact of

refrigerants, and preparing a skilled workforce to meet evolving industry demands. This initiative also aligns with Guyana's Low Carbon Development Strategy (LCDS) by fostering sustainable business practices, lowering electricity consumption, and contributing to the reduction of greenhouse gas emissions. The Ministry of Agriculture recognizes that sustainable refrigeration and air-conditioning solutions are vital for national economic growth. The newly introduced equipment will enhance monitoring and regulation of HCFCs, ensuring that Guyana meets its environmental targets while fostering a competitive, modernized cooling industry. By strengthening technical training and expanding access to climate-friendly cooling technologies, Guyana is positioning itself as a regional leader in sustainable refrigeration and air-conditioning practices.

This initiative directly supports several Sustainable Development Goals (SDGs), including:

SDG 7 (Affordable and Clean Energy): By promoting energy-efficient cooling technologies, the project contributes to reduced electricity consumption and lower operational costs for businesses and consumers.

SDG 9 (Industry, Innovation, and Infrastructure): Investing in modern refrigeration technology and technician training strengthens local industry and prepares the workforce for emerging global standards.

SDG 13 (Climate Action): Phasing out HCFCs and promoting sustainable alternatives aligns with Guyana's climate commitments, reducing greenhouse gas emissions and supporting global efforts to mitigate climate change.

The handover of this equipment underscores the strong partnership between UNDP and the Government of Guyana in advancing climate action and sustainable development. As Guyana continues to implement key environmental initiatives, such collaborations will be crucial in securing a cleaner, more resilient future for all.

11. First Mobile Air Conditioning Training Conducted by the Department of the Environment

Source/ Image: [UNDP Guyana](https://www.undp.org/guyana), 10 February 2025



The Department of the Environment and the National Ozone Unit, within the Ministry of Sustainable Development & Climate Change, are currently hosting the first-of-its-kind training program for refrigeration technicians on Mobile Air Conditioning (MAC) systems.

This training, being held from February 17-19, is designed to enhance the skills and knowledge of refrigeration and air conditioning (RAC) technicians in servicing, repairing, and maintaining MAC systems.

This initiative highlights the Department of the Environment's commitment to remaining compliant with the Montreal Protocol and ensuring that RAC technicians are well-versed in emerging and sustainable technologies. By fostering continuous education and technical capacity-building, the Department is taking a proactive step to reduce the negative environmental impact of refrigeration gases on the ozone layer while enhancing national expertise in the sector.

With a robust training plan, the initiative aims to:

- Equip RAC technicians with the necessary expertise to efficiently service MAC systems, reducing the leakage or release of harmful gases.
- Increase awareness of different refrigerant types, including R-134a and R-1234yf, their properties, and their environmental impacts, so that the sector can transition to less harmful gases.

The training covered a wide range of topics, including:

- Introduction to Mobile Air Conditioning (components and functions)
- System Diagnostics and Troubleshooting
- Hybrid and electric vehicle air conditioning systems
- Emerging technologies in MAC systems
- Maintenance and Repairs
- Best practices for handling refrigerants and ensuring compliance with international environmental agreements

The Department of the Environment extends its gratitude to all participants and the Association of Refrigeration & Air Conditioning Technicians (ARACT) who have contributed to this groundbreaking training. As the automotive industry continues to evolve, the Department and Ministry remain steadfast in their mission to promote sustainability and environmental responsibility.

Source/image: [Breaking Belize News](#), 20 February 2025

FEATURED



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