How Jamaica is helping to Heal the Ozone Layer – “32 Years & Healing”

Dane Rookwood installs and repairs refrigeration and air conditioning units for a living. Working with cooling gases is part of his everyday routine.

But like many in his trade in Jamaica, the gas he once worked with was Hydro-chlorofluorocarbons (HCFC), a class of gas that tears into the earth's protective ozone layer.

The Ozone, a region of atmosphere 10 to 50 kilometres above the Earth’s surface contains a protective shield that absorbs ultraviolet radiation. Without this barrier, the powerful sun will damage human DNA, cause burns and skin cancer, disrupt the climate and trigger environmental, social and economic tsunamis.

By 1993, Jamaica, among most countries on earth, took action by acceding to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer.

Since (2012) the United Nations Development Programme (UNDP) has been supporting the government to meet its international obligations under the Protocol to phase out harmful ozone depleting gases - primarily targeting industries that manufacture ozone depleting gases, or that import them for use in the refrigeration and air conditioning sector.

Under the HPMP Phase Out Management Project implemented by the National Environment and Planning Agency (NEPA) and funded by the Montreal Protocol through UNDP, Rookwood and more than 100 other refrigeration and air condition (RAC) technicians in Jamaica have been trained to use the ozone-friendly Hydro-fluorocarbons (HFCs). They have also been given new equipment and tools to retrofit their trade in order to work with the new ozone friendly gases.

As a result, the air conditioning and refrigeration sector in Jamaica is now on the frontline of change having been supported to gradually switch from gases which harm the Ozone Layer.

The retrofitting and training combined with Jamaica's stellar work in importation controls has decreased the amount of gas traded in Jamaica.

Since training and retrofitting his trade under the project, Rookwood has been switching to the ozone friendly HFC. He says he is down to 50% of the harmful HCFCs, using only what is required to service existing units in Jamaica that still run on the older gas.

"Customers are very happy with the use of the gas (that preserves the ozone layer)" he said. They are seeing an extended life span on their compressors, and their units work cooler and better. I recommend that everyone should go to the new hydrocarbon natural gas. It will make your (AC) unit work better," Rookwood recommends.

Seal Sprayed Solutions, a foam manufacturing enterprise participated in a pilot under the project, retrofitting its entire operations. Foam, used in beds, cushions, furniture and buildings, also traditionally had ozone depleting compounds. Now this major enterprise in Jamaica is entirely run on ozone friendly foam compounds.

The combination of technical and regulatory work is making its mark, and collectively, with other countries in the world, helping to heal the Ozone Layer.

According to ozone.unep.org, the latest Scientific Assessment of Ozone Depletion completed in 2018, shows that parts of the ozone layer have recovered at a rate of 1-3% per decade since 2000.

Jamaica has played her part.

According to the National Ozone Officer in the National Environment and Planning Agency (NEPA), Vivian Blake, Jamaica had phased out CFCs to meet its 2010 target four years ahead of schedule. The Protocol had required that countries be at a certain level in 2010. Jamaica hit that target in 2006.

By the end of 2018, many local importers of hydrocarbon gases did not use their assigned quota of HCFC, Blakes outlines. Limited import quotas of the harmful gas is permitted as a practical measure to ensure existing inescapable commitments can be met, including servicing units which still use the HCFC gas. Blake explains that nine out of 15 importers of these gases did not utilise their import quotas for 2018. This means among this nine, there was zero importation of HCFCs.

For Blake, NEPA and the UNDP team, the 2018 result that really resonates is the overall performance in meeting importation targets for HCFCs.

In Jamaica's agreed phase out schedule, the nation was required to be down to 241 metric tonnes of HCFC imports between 2015 and 2019.

At the end of 2018, Jamaica had imported just 55 metric tonnes - which put the country 186 metric tonnes ahead of its 2019 target.

In outlining some of Jamaica's other notable achievements over the 32 years of global Ozone Layer healing actions, Blake says the programme has been able to phase out Chloro- fluorocarbons (CFCs) - the antecedents to the HCFCs "which were seriously ozone depleting. They were high on the scale."

Horace Nelson, who was one of the persons who trained technicians under the project, says there are many benefits to organizations retrofitting their cooling units to run on ozone friendly gases. "We want to replace them with something that has no effect on the ozone or global warming potential. Those old AC units (using the ozone harming gases) have high current and are not as cool. The ozone friendly refrigerants will make your systems run much more efficient, use less electricity and make your inside temperature much cooler," Nelson explained.

With many successes under the HCFC phase out plan, Jamaica is now onto the next phase with support from the UNDP. They are now implementing enabling activities paving the way for the ratification of the new Kigali Amendment which entered into force on 1 January 2019.

Under the Kigali Amendment, the whole world is seeking to move away from HFCs which, although good for the ozone have been discovered to have potential effects on global warming. In this new dispensation, the Kigali Amendment will provide fresh guidelines for the importation of HFCs.

However, there is still much work to do. Blake reveals that unfortunately banned substances are being reintroduced into trade globally and scientists have now detected them in the atmosphere.

Thirty-two years after the world’s collective journey to heal and restore the earth’s protective ozone layer, Jamaica remains firmly committed to playing a leading and active role in the process – hand in hand with the global family of nations.