

The Montreal Protocol and the phasing out of HCFCs

OVER the years, numerous types of gases have been used for multiple purposes. The constant development from one gas to the other has, in turn, exposed the environment to multiple chemicals that have placed the Ozone layer in danger. Due to this, on September 16th, 1987, over 197 Countries agreed on a treaty that was designed to restore the Ozone layer. As per this treaty, the production of numerous Ozone Depleting Substance (ODS) has been phased out. One of the substances to be phased out is the popular hydro chlorofluorocarbon

(HCFC) gas Chlorodifluoromethane, commonly known as R-22, also called HCFC-22

The phase out of R-22

R-22 is a colourless gas commonly used as a refrigerant and propellant for air-conditioning, heat pumps and refrigeration. This gas is widespread mainly because of its low-cost, availability and effectiveness. R-22 or HCFC-22 has been a favoured refrigerant since the 1960s. However, R-22 has been reviewed due to its impact on the Ozone

layer, it is classified as a greenhouse gas that contributes to Global warming and is used in several blends which contribute significantly to global warming. In addition, the release of R22 through leaks in systems also damages the Ozone.

What this means for Air-conditioning and refrigeration

On the 22nd June 2017, Michael Labacher at a training session conducted by SARACCA (South African Qualification and Certification Committee) at the Air Conditioning And

Refrigeration Academy (ACRA) spoke of the national decrease of R22 importation, since 2015, all South African companies have been facing a constant decrease in the importation of R22, a complete phase-out is estimated by the year 2040. South Africa is well in the lead in the phasing out of HCFC's as the 2013 baseline of 3 163 tons was long surpassed in 2016 when only 2 673 tons were imported and just 2 556 consumed.

This means Air conditioning and refrigerating practitioners now have to use alternative refrigerants.

South Africa is an innovative promoter of CO₂ refrigeration alongside all European countries, Japan and Australia.

There has been a ban on R22 charged systems that are assembled from scratch in South Africa since January 2015, from components assembled

to form a complete system. The regulations on the Government Gazette 37621 of May 2014 dub it illegal for stockpiles of R22 to be stored for a period exceeding 18 months. Companies that have stockpiles are required to register them with the Department of Environmental Affairs

and submit a plan as to how the stockpiles are disposed of.

As a result of the Montreal Protocol, the Ozone hole discovered in Antarctica is gradually recovering and climate projections say between the year 2050 and 2070 the Ozone layer will return to 1980 levels.

Helping hand for teenage girls

CONSULTING engineering firm UWP Consulting chose Women's month – August 2017 – to launch an initiative that has the potential to change the lives of many hundreds of marginalised teenage schoolgirls.

The initiative, known as *Nurture a Girl*, kicked off in Cape Town with an event at Garlandale High School in Athlone.

"We live in a patriarchal society where young women have very little voice, where violence against girls and women of all ages has reached epidemic proportions. How, then, do we expect teenage girls to excel at school and enter meaningful careers?" asks Nonkululeko Sindane, CEO of UWP Consulting and a passionate advocate for women's rights.

The *Nurture a Girl* initiative will reach into communities throughout UWP's office network in South Africa and the Cape Town launch was followed by events at secondary schools in King Williams Town in the Eastern Cape, as well as Mamelodi and Tembisa in Gauteng. A school in Richards Bay is also participating.

In the first phase of the project UWP is sponsoring 50 female learners in need of support at the selected high schools for a year. Two are special needs schools.

The beneficiaries have received personal hygiene kits containing all the items that teenage girls should have. They are being given structured



At Garlandale High School (from left): Nonkululeko Sindane (CEO of UWP Consulting) with Nurture a Girl beneficiaries Shanaaz Chamwaita and Zainuessa Lakay.

opportunities to attend workshops and presentations, receive career advice and mentorship, and to learn basic skills over the year.

The value of the annual sponsorship is R1 050 per beneficiary, but its real value lies in mentoring, ongoing opportunities and life skills.

"We are inviting other companies and individuals to come on board and help us expand the programme," says Nonkululeko Sindane. "Just one girl sponsored is one more opportunity for a better future, one more chance to give a teenager the strength, courage and advice to get a good education and make a difference in the world."

Already this call has been heeded, with 62 girls now involved in the programme

thanks to sponsorships received from others and further growth expected.

It is not only the beneficiaries of the *Nurture a Girl* initiative who benefit, but their schools as well. The programme organised by UWP at Garlandale School in August included a morning of addresses for the whole school by a motivational speaker as well as professionals on drug use, counselling and psychometric services, health and hygiene.

"We chose Garlandale as it is a school that achieves a good matric pass rate despite most of its learners coming from underprivileged areas of the Cape Flats where crime and poverty are part of their daily lives," says Nerissa Ventura of UWP Consulting Cape Town.

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