

Op-Ed: International Day for Preservation of the Ozone Layer: Montreal Protocol - Keeping Us, Our Food and Vaccines Cool

To mark the United Nations (UN) International Day for the Preservation of the Ozone Layer, **Mr. Ahmed ElGharib, Assistant Researcher at the Qur'anic Botanic Garden (QBG), a member of Qatar Foundation (QF)**, highlights QBG's contribution to ozone preservation efforts and environmental protection

In 1994, to commemorate the 1987 signing of the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), the United Nations General Assembly (UNGA) designated September 16 as the International Day for the Preservation of the Ozone Layer. Since then, it has become a global vehicle for environmental preservation, reminding us of the indispensable role we can play as individuals in safeguarding our planet.

The theme of this year's World Ozone Day was the 'Montreal Protocol – Keeping Us, Our Food and Vaccines Cool', a crucial topic considering how the ozone affects food security and logistics, and its ever-increasing importance in boosting energy efficiency in the cooling sector against the backdrop of COVID-19 and proper medication storage and handling in cool temperatures.

The Montreal Protocol and its corresponding Kigali Amendment is regarded as one of the most successful and effective global agreements to date. It began as a worldwide consensus to safeguard the ozone layer in response to scientists' realization in the mid-1970s that the ozone was threatened by the accumulation of gases containing halogens. Nearly a decade later, scientists discovered a 'hole' in the ozone layer above Antarctica. This marked the beginning of a series of efforts to phase out ozone-depleting substances, which warm the Earth's climate.

The ozone layer is vital as it shields us from ultraviolet radiation (UV), a type of electromagnetic energy produced by the sun, and one of the main causes of skin cancer. The ozone absorbs most UV waves, limiting the amount that reaches Earth, thereby protecting humans, animals, and plants.

Under the Kigali Amendment, nations have committed to more stringent phase downs of hydrofluorocarbons (HFCs). While HFCs do not damage the ozone layer, they contribute to climate change and are entirely man-made greenhouse gases used for refrigeration and cooling which, if reduced, are expected to avoid up to a 0.4 degree Celsius increase of global temperatures by end of the century. Replacing HFCs opens the doors to higher standards of energy efficiency in the cooling sector in air conditioning and refrigeration, decreasing negative environmental impacts.



According to the UN Environment Programme (UNEP) Ozone Secretariat, a third of global food production is lost or squandered annually, largely due to a lack of access to cold chains, costing economies billions of US dollars a year, wasting precious resources such as land, water, and energy, and generating an estimated 8% of total greenhouse gases per year globally.

The development of more efficient, cost-effective and eco-friendly cold chain solutions provide producers, such as farmers and pharmaceutical providers, with pre-cooling, refrigerated storage and logistical facilities, ensuring food products and vaccines reach the end user safely. This is a crucial element in finding solutions to food waste, effective health policymaking and the smooth functioning of global economies and supply chains, particularly during times of crisis.

As a responsible major oil and gas producer, signee of the Montreal Protocol and a member of the Vienna Convention for the Protection of the Ozone Layer, Qatar has placed a massive emphasis on protecting the environment. Environmental preservation and development is one of the four main pillars of the Qatar National Vision 2030 (QNV 2030), prompting a number of environmental awareness initiatives, air quality monitoring programs, desert restoration, agricultural work, animal protection projects and, most recently, a remote training course on the Montreal Protocol, held by the Ministry of Municipality & Environment (MME) and praised by UNEP. Qatar recognizes the important role that governmental and non-governmental sectors, as well as members of the community, play in the protection of the ozone layer by requiring the adoption of environmentally-friendly alternatives and technologies that do not negatively impact the ozone, and the implementation of relevant national and regional legislation.

At QBG, community is at the heart of everything we do. Through our environmental awareness campaigns, in line with the UNEP's ozone protection efforts and the environmental pillar of QNV 2030, we work closely with the local community to raise awareness on the importance of ozone recovery and the ways in which it protects our health, economy and climate.

A major factor in ozone protection is global reforestation efforts and tree planting, which capture carbon dioxide emissions in the atmosphere. Our annual Ghars tree-planting campaign aims to plant 2,022 trees in the leadup to the FIFA World Cup Qatar 2022[™]. The campaign is well on track with close to 2,000 trees planted and aims to encourage more members of the community to practice agriculture and tree planting, as well as raise environmental awareness in the face of climate change. As part of its ecosystem restoration efforts to combat desertification and create a greener Qatar, QBG has planted 1,443 native trees in 2021 alone and to date, our team has propagated 7,000 native tree saplings for restoration across Qatar and planted 431 trees in the desert. We have also distributed seeds and wild plant seedlings for the community to plant across natural habitats in the country.



QBG works closely with the MME and other stakeholders to rehabilitate natural habitats in Qatar and replant them with trees, thereby curbing the country's carbon footprint. Through our Fun and Learn, Food Security and Young Researcher educational programs, we also utilize our green expertise to collaborate with educational institutions and provide the next generation with tools needed to become active contributors to the Earth's sustainable development and environmental protection efforts. It is crucial that efforts such as the Montreal Protocol continue, and that we do everything in our power to protect our planet. We, at QBG, are truly committed to contribute to the cause and help create a greener planet for the future generations.

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Qur'anic Botanic Garden:

The Qur'anic Botanic Garden, a member of Qatar Foundation for Education, Science and Community Development, the first of its kind in the world announced to exhibit all the plant species mentioned in the Holy Qur'an, and those in the Hadith and Sunnah (Sayings & traditions of the Prophet Muhammad PBUH). The Qur'anic Botanic Garden was inaugurated by Her Highness Sheikha Moza bint Nasser, Chairperson of Qatar Foundation, on 17 September 2008. To mark the event, she planted the Garden's very first tree, the Sidra (Ziziphus spina-christi Willd, Sidr), which is also the symbol of the Foundation. The Garden exhibits the botanical terms mentioned in the Holy Qur'an, explaining the significance of their mention in the Holy Qur'an, as well as the scientific explanations of composition, application and usefulness to man. It inspires appreciation of nature by encouraging respect and responsibility for our environment.

QBG is a member of Qatar Foundation. More information on QBG's upcoming events and activities can be found on its social media channels on Instagram: Quranic_Botanic_Garden; Facebook: Qur'anic Botanic Garden, and on Twitter at @QuranicGarden.

Qatar Foundation – Unlocking Human Potential

Qatar Foundation for Education, Science and Community Development (QF) is a non-profit organization that supports Qatar on its journey to becoming a diversified and sustainable economy. QF strives to serve the people of Qatar and beyond by providing specialized programs across its innovation-focused ecosystem of education, research and development, and community development.

QF was founded in 1995 by His Highness Sheikh Hamad bin Khalifa Al Thani, the Father Amir, and Her Highness Sheikha Moza bint Nasser, who shared the vision to provide Qatar with quality education. Today, QF's world-class education system offers lifelong learning opportunities to



community members as young as six months through to doctoral level, enabling graduates to thrive in a global environment and contribute to the nation's development.

QF is also creating a multidisciplinary innovation hub in Qatar, where homegrown researchers are working to address local and global challenges. By promoting a culture of lifelong learning and fostering social engagement through programs that embody Qatari culture, QF is committed to empowering the local community and contributing to a better world for all.

For a complete list of QF's initiatives and projects, please visit: <u>www.qf.org.qa</u>

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