

Belize National Report relevant to Ozone Research

Introduction

Belize accessed to the Vienna Convention on July 06, 1997, Montreal Protocol, London and Copenhagen Amendments were ratified on January 09, and the Montreal and Beijing Amendments were ratified on January 07, 2008. Belize ratified the Kigali Amendment on October 3rd, 2023. By joining these international agreements, Belize committed to phasing out ozone-depleting substances, aligning with global efforts to protect the Earth's ozone layer. This ratification underscored Belize's dedication to environmental stewardship and sustainability, emphasizing the importance of collective action in safeguarding our planet for future generations.

Belize does not manufacture any ozone depleting substances or refrigeration equipment and therefore implementation of the convention has been through the restriction of imports into the country and export from the country. The Montreal Protocol requires developing countries to phase-out consumption of Ozone Depleting Substances and equipment using ODS to prescribe levels required by the Protocol. Belize is a low volume consuming (LVC) country with 2.8 ODP tons (~49.8 metric tons) of HCFC baseline consumption. Belize has been able to achieve Montreal Protocol targets on time without any complications due to successful awareness creation and legislative processes.

Recognition of Belize contribution

On October 6th, 2019, an award was bestowed upon the singular Caribbean nation that has demonstrated a profound appreciation for the pivotal role of customs and enforcement officers in the enforcement of trade restrictions and the prohibition of Hydrochlorofluorocarbons (HCFCs). The Global Montreal Protocol Award for Customs and Enforcement Officers honored the National Ozone Officer of Belize's National Ozone Unit within the Department of the Environment. This prestigious accolade is designed to acknowledge and motivate customs and enforcement officers and their respective organizations for their effective efforts in preventing illicit or undesirable trade involving HCFCs. The award serves to bolster regional and international collaboration and awareness within the customs and enforcement community, thereby reinforcing compliance with the Montreal Protocol's trade regulations. Given the adverse effects of HCFCs on ozone layer depletion and global warming, Belize has committed to a phased reduction plan, aiming to eliminate HCFC usage by 2030. Consequently, HCFC traders in Belize are mandated to obtain export/import licenses for HCFC shipments, ensuring strict adherence to regulatory measures.

OBSERVATIONAL ACTIVITIES

The National Meteorological Service has a weather station network comprised of 62 automatic weather stations (AWSs) strategically located across the country. Currently, 27 of these stations record solar radiation measurements. There are plans to include air quality sensors at some stations through collaboration with the Department of the Environment (DoE).

At the moment, the National Meteorological Service and the Department of the Environment do not possess any ultraviolet radiation measuring or ozone monitoring stations.

Future aspects of Research

Exploring the prospects of atmospheric research in Belize sparks great interest, particularly in understanding and mitigating the impacts of climate change on this ecologically diverse nation. Given Belize's susceptibility to extreme weather events and its rich biodiversity, future research endeavors could delve into examining localized climate patterns, assessing air quality, and monitoring greenhouse gas emissions. Additionally, with rising concerns about ozone depletion and its repercussions on human health and ecosystems, further studies on atmospheric chemistry and ozone monitoring are imperative. Collaborative efforts with international research institutions could enhance data collection and analysis, facilitating informed policy decisions aimed at safeguarding Belize's environment and promoting sustainable development. Embracing emerging technologies like remote sensing and atmospheric modeling holds promise for advancing atmospheric research capabilities, ultimately contributing to a deeper understanding of Belize's atmospheric dynamics, and supporting efforts to build climate resilience.

Belize interest for Monitoring Station

Belize demonstrates a compelling interest in establishing a monitoring station dedicated to gathering data on pollution linked with damage to the ozone layer.

Such a station would serve as a crucial tool in assessing and addressing environmental concerns associated with ozone-depleting substances (ODS) and their impact on Belize's fragile ecosystems. With its rich biodiversity and pristine natural habitats, Belize is particularly vulnerable to the harmful effects of ozone depletion, which can exacerbate climate change and threaten both human health and wildlife. By establishing a monitoring station, Belize can enhance its capacity to monitor ODS levels, track atmospheric changes, and evaluate the effectiveness of ozone protection measures.

This initiative aligns with Belize's commitment to environmental stewardship and sustainable development, providing valuable insights into local and regional ozone dynamics while supporting international efforts to protect the ozone layer. Furthermore, having a dedicated monitoring station would enable Belize to actively participate in global initiatives such as the Ozone Research Managers meetings, demonstrating its proactive stance in combating ozone depletion and safeguarding the well-being of present and future generations.

Conclusion

In conclusion, the establishment of a monitoring station in Belize dedicated to gathering data on pollution linked with damage to the ozone layer is not only necessary but also holds immense benefits for the country and ozone research on a global scale. Such a station would serve as a cornerstone in Belize's efforts to protect its environment and public health from the harmful effects of ozone-depleting substances. By closely monitoring atmospheric changes and ODS levels, Belize can better understand local and regional ozone dynamics, assess the effectiveness of ozone protection measures, and contribute valuable data to international ozone research efforts. Moreover, the presence of a monitoring station would enhance Belize's participation in global initiatives like the Montreal Protocol, reinforcing its commitment to environmental stewardship and sustainable development. Ultimately, investing in a monitoring station is an investment in the future well-being of Belize and the preservation of the Earth's ozone layer for generations to come.

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