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Journal of Caribbean Environmental
Sciences and Renewable Energy



Knowledge Management System for tracking of Greenhouse Gases

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The Journal of Caribbean Environmental Sciences and Renewable Energy
Vol. 2, Issue 2, (2019) doi.org/10.33277/cesare/002.002/01

The United Nations Framework Convention on Climate Change (UNFCCC) was first established in 1992 and focused largely on facilitating the intergovernmental climate change negotiations, it also supports a complex architecture of bodies that serve to advance the implementation of the Convention, [the Kyoto Protocol](#) and [the Paris Agreement](#). In the pursuit of tackling the greenhouse gas (GHG) emissions situation, the emerging field of data science can aid in solving environmental impacts of climate change. This has significantly affected Small Island Developing States (SIDS) in the Caribbean and the Pacific nations.

Through the creation of a Knowledge Management System (KMS) as a mechanism for the storage of information in the Measurement, Reporting, and Verification (MRV), this has been designed to be tested on the nation of Trinidad and Tobago. The primary focus of the MRV is to track the GHG, which is achieved through the suppliers or stakeholders of data entering the GHG information either from calculations on activity data and/or meters available at the facility areas. This system captures the data and utilizes business intelligence techniques to gain insight into the information such as determining reasons for reductions. The KMS is also utilized for data and information such as GHG emissions, document management and workflow processing of the GHG inventory cycle for the country.

What's next?

The author proposes that the KMS will involve the implementation of adaptive modules for the tracking of NDCs. Furthermore, the creation of an optimization algorithm for the carbon reduction strategy is therefore based on particular constraints the optimization algorithm will select for the best possible group of strategies to be implemented. The applications of the KMS can thrive and become a particularly useful tool to other countries across the Caribbean.