

Clean Technology Hub

Best Practices for Implementation of Carbon Market

Case Study: Jordan



OVERVIEW

Carbon Markets is the current wave that activates resources and reduces cost to give countries and companies the leeway to a well ordered transition into low-carbon. It is suggested that by trading in carbon credit, it should in effect reduce the cost of implementing National Determined Contributions by more than a half in these countries, that is as much as [\\$250 Billion by 2030](#). Although, Carbon Markets are expected to become superfluous as countries mitigate to hit their [net zero](#) emissions target, hence, the need to trade emissions in effect will subside.

According to the [World Bank](#), Jordan is the first developing country in the world to have constructed digital infrastructures that includes monitoring, reporting and verification (MRV) systems which is a major aspect to the carbon market sector. This system has been designed to link greenhouse gas emission and emission reduction data to both National and International Registries.¹ In essence, the MRV and GHG system will monitor emissions across several sectors including energy, transportation and agriculture.

OBJECTIVE OF STUDY

- To analyze existing carbon market strategy already in place in the country
- To identify potential opportunities for various carbon monitoring, reporting and verification based on the country circumstances and context
- To assess the existing legal and policy framework in the country with respect to carbon market
- To provide an overall assessment of feasibility and readiness for the carbon market for the country.
- To explore how carbon market approaches could support involvement in cooperative climate action such as foreseen under Article 6 of the Paris Agreement

INTRODUCTION

Factually, developing countries have been considered to suffer the most impact of climate change even though they have contributed the least to it². This has led to an increased interest

¹ H. Badamasi “[Jordan Transition to a Low Carbon Economy: A Lesson for Other Developing Nations](#)” [June, 2022] accessed 13th March 2023

² Find Reference

in the numbers of countries mitigating efforts on greenhouse gas emission as the global effect rapidly aggravates.

[Jordan struggles](#) with extreme climate challenges such as rising temperatures, lack of precipitation, increased droughts and water shortages. Also, the country is heavily reliant on fossil fuel import, has limited natural resources and intensely low waste supply.³ In the quest to develop solutions for these challenges, in 2019, Jordan enacted a [climate change bye-law](#) to establish a climate change institution and regulatory framework. Since then, the country has been able to innovatively create and develop the first MRV system to track emissions in the sector such as energy, transportation and agriculture as well as calculate emissions and reduction and link its results to its NDCs.

WHAT IS AN MRV SYSTEM AND WHAT ARE ITS FUNCTIONS

[Measurement, Reporting and Verification](#) (MRV) systems refers to the multi-steps process to measure the amount of greenhouse gas emissions reduced by a specific mitigation activity such as reducing emission from deforestation and forest degradation, over a period of time and report these findings to an accredited third party. The third party then verifies the report so that the result can be certified and carbon credit can be issued.

According to the World Bank, innovations in MRV can support the expansion of climate action worldwide and unleash the possibilities of climate finance and the carbon market place to combat climate change. Many low-income counties new to emission reduction transactions lack the capacity to execute MRV themselves as international firms are usually relied on for execution. This is costly and may undermine the point of sustainability and country ownership. Nonetheless, the functions of the MRV systems can be categorized as:

1. To Track GHG emissions to national GHG inventory
2. Measure the GHG emissions reduction from implemented climate change mitigation projects
3. Record financial and technical support

The system has been known to work in four areas:

- a) Project or Program Level
- b) Ministries or Agencies Level
- c) Sectoral Level

³ UNICEF; [The Cost of the water crisis in Jordan](#): Water stress in Jordan Report

d) National Level

WHAT DOES THE MRV SYSTEM INNOVATION MEAN FOR JORDAN

The MRV system is owned by the Ministry of Environment in Jordan and has been developed with the support of the World Development Bank Group partnership for market readiness. Jordan contributes only [0.4% of total global CO₂ emission](#) which is far less than some developing countries. For instance, Brazil (0.96%), Nigeria (0.23%), Kuwait (0.17%), Turkey (0.64%), Saudi Arabia (0.96%) and Chile (0.17%). Notwithstanding, the country is working strategically on a long-term, low-carbon economic growth by implementing a [10years National Energy Sector Strategy](#). In essence this will cut carbon emissions by 10% by 2030 and reduce its reliance on fossil fuel imports.

In addition, Jordan MRV System software is an open source available for interested countries to embrace with the support and assistance of the [Partnership for Market Readiness \(PMR\)](#). Places like the West Bank, Gaza and Sri Lanka are currently replicating the system. Currently, the Middle East and North Africa region, Africa, Latin America and Asia have indicated interest in open source MRV and registry systems. On the other hand, Chile, Ghana, Singapore and Vanuatu are developing advanced digital infrastructure to support their participation in international carbon markets. ⁴

JORDAN EXISTING PARTNERSHIP ON CARBON MARKET.

Jordan joined the [Partnership for Market Readiness](#) in October 2011 and started formulating a Market Readiness Proposal (MRP) focused on three target areas: Energy (renewables and energy efficiency); Water (water efficiency and wastewater management); and a city-wide approach to GHG emissions management. These areas were identified due to their mitigation potential, Jordan's prior experience with mitigation, institutional and organizational feasibility, responsiveness to price signals and finally, transaction costs.⁵

Jordan used the Partnership for Market Readiness to support specifically the exploration of scaled-up crediting for its Nationally Appropriate Mitigation Action in renewable energy,

⁴<https://www.worldbank.org/en/news/feature/2022/05/24/countries-on-the-cusp-of-carbon-markets>

⁵ [jordan-0](#)

particularly in the water sector by providing energy efficiency in pumping and waste water treatment.

Jordan continues to seek ways to achieve a pro-active, climate risk-resilient environment, to remain with a low carbon but growing economy. This entails healthy, sustainable, resilient communities, sustainable water and agricultural resources, as well as thriving and productive ecosystems in the path towards sustainable development.

According to [Petra](#), The MRV system is expanded to 22 agencies and ministries as part of the Jordan Inclusive, Transparent, and Climate Responsive Investments Program For Results. The initiative will enable the country's MRV system to compute emission reductions for climate-responsive projects to determine their eligibility for the carbon market.

KEY LESSONS FOR NIGERIA IN THEIR MITIGATION EFFORTS

The World Development Bank has been supporting developing countries in their Carbon Market initiative and mitigating efforts. Although, Jordan MRV system is open for other countries to adopt, it will require intensive capital and strategic management and operation for it to operate in Nigeria. Hence Nigeria can partner with the World Development Bank to develop digital infrastructure suitable for her economy.