

# **SYNTHESIS REPORT: CARBON PRICING APPROACHES IN EASTERN AND SOUTHERN AFRICA**

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## Executive Summary

Increasing international industrial greenhouse gas (GHG) emissions and the degradation of carbon sinks have, in recent years, contributed to scientific certainty around climate change, particularly mitigation, as a global concern. Numerous resources have shown that developing and least developed countries (LDCs) are the most vulnerable to the anticipated impacts of climate change, even though such countries typically have small to immaterial sources of GHG emissions. Subsequently, with pollution and climate change being a classic problem of environmental externality, there is a substantial need for governments to take corrective action in this regard. Given the seriousness of these problems, it is critical that governments address the drivers of anthropogenic climate change, including through the implementation of policy instruments that exploit, in a least-cost manner, various behavioural and economic responses that can contribute to the alleviation of such impacts. Carbon Pricing is one such policy instrument that has been used, in various jurisdictions, to help mitigate GHG emissions and support adaptation efforts.

The development and implementation of Carbon Pricing provides governments with an option to address the economic externalities associated with GHG emissions and, incidentally, the pollution and environmental degradation cause by various sectoral activities. However, to date there has been only limited use of Carbon Pricing on the African continent. This study aims to explore possibilities to implement Carbon Pricing, within the Project Countries; and, encompasses technical and legal analysis and observation which suggests the currently limited use, or total absence, of Carbon Pricing in such countries. The project team aimed to identify the hurdles associated with the implementation of the Carbon Pricing and possibilities to overcome such hurdles, in order to implement Carbon Pricing on both national and regional levels, by the Project Countries.

Some of the hurdles and possible means to overcome such hurdles which were identified include the following (generally applicable across the Project Countries):

- Lack of financial resources available in order to fund emissions reduction projects which have the potential to stimulate national Carbon Markets. In this regard, the project team identified project-based Results-Based-Funding as a possible means to access appropriate project financing.
- In order to stimulate the Carbon Market and facilitate the implementation of successful and explicit Carbon Pricing mechanisms, domestic and international supply and demand for emissions reduction units needs to be increased.
- Domestic legal frameworks should be amended and enhanced to facilitate the implementation and administration of Carbon Pricing mechanisms.
- The lack of capacity and expertise to develop and implement Carbon Pricing is a major hurdle. Capacity-building is, therefore, a critical component to be addressed, at both domestic and regional levels.

In addition to the above, the project team is of the view that, due to the economic circumstances within the Project Countries, the introduction of traditional Carbon Pricing approaches may cause further economic difficulties. However, should mitigation costs be borne by external partners or country Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, including in accordance with the principle of common-but-differentiated responsibilities and respective capabilities, negative impacts of Carbon Pricing may be ameliorated or averted. Considering the above, the project team is of the further view that economic forecast assessments need to be conducted, in order to establish the economic impacts of the implementation of Carbon Pricing, in the Project Countries.

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## Glossary of terms

<b>CDM</b>	<b>Clean Development Mechanism</b>
<b>CO<sub>2</sub>e</b>	Carbon dioxide equivalent
<b>ETS</b>	Emissions Trading Scheme
<b>GHG</b>	Greenhouse gasses
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>LDC</b>	Least Developed Country
<b>NDC</b>	Nationally Determined Contribution
<b>Project Countries</b>	Meaning the countries covered by this study, being Ethiopia, Kenya, Mauritius, Rwanda and Uganda
<b>SDGs</b>	Sustainable Development Goals
<b>VCS</b>	Meaning the Verified Carbon Standard, whilst acknowledging its name change to the lesser known VERRA.
<b>UNCCD</b>	United Nations Convention to Combat Desertification
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change

# 1. Introduction

Climate change presents pressing and pervasive economic, structural, environmental and social risk requiring proactive and comprehensive responses. Among the *suite* of accepted financial approaches that can be marshalled in response to climate change is Carbon Pricing. To date, the necessary policy and market responses have been largely insufficient and ineffective. This is especially so in developing countries and LDCs, which are the most susceptible to the negative effects associated with climate change. In particular, the Project Countries (Ethiopia, Kenya, Rwanda, Mauritius, and Uganda), generally-speaking, tend to lack the regulatory frameworks and financial means successfully to implement sophisticated Carbon Pricing mechanisms, without strong external support.

There is a vast body of literature<sup>1</sup> covering various economic, social and environmental considerations of various Carbon Pricing mechanisms. Even though these analyses often find Carbon Pricing to be the most economically efficient way to address the externalities associated with climate change<sup>2</sup>, it is noted that most studies have been conducted from the perspective of developed countries. The structural and economic realities found within developing countries and LDCs require reconsideration of traditional approaches. Although some low-to- middle income countries are currently assessing the wisdom of national Carbon Pricing mechanisms (for example, Bangladesh, Côte d'Ivoire, Pakistan, Senegal, Ukraine), there is, so far, little empirical data on the utilisation of such approaches in these countries.

Carbon Pricing has, potentially, negative and positive effects. While the main objective of Carbon Pricing, in more developed countries, is to stimulate cost-effective mitigation, such initiatives can also help achieve broader outcomes. For example, the Beijing pilot Emissions Trading Scheme (ETS) is also a key regulatory instrument for reducing air pollution; and, in Chile, a carbon tax was introduced as part of a package of environmental taxes intended to drive mitigation and to limit negative environmental and health impacts from fossil fuels<sup>3</sup>. While these examples are informative, it is submitted that the circumstances in such countries differ significantly from those in the Project Countries. For most of the Project Countries, emissions *per capita* are currently low but expected to rise over the next decade. In this context, the value of Carbon Pricing may lie less in the potential to reduce emissions, and more in the prospects offered for curbing expected emissions growth. As such, a different approach may be necessary to identify the opportunities and barriers surrounding the possible implementation of Carbon Pricing in the Project Countries.

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<sup>1</sup> *The Economic, Environmental and Political Consequences of Carbon Pricing Case studies in pricing-based carbon controls* [https://fcpp.org/files/1/PS131\\_CarbonPricing\\_FB27F2.pdf](https://fcpp.org/files/1/PS131_CarbonPricing_FB27F2.pdf); *A Practical Guide To The Economics Of Carbon Pricing* <https://www.policyschool.ca/wp-content/uploads/2016/02/Carbon-Pricing-McKittrickFINAL.pdf>; *The Political Economy of Carbon Pricing: a Panel Analysis* <https://www.eprg.group.cam.ac.uk/wp-content/uploads/2016/11/1627-Text.pdf>.

<sup>2</sup> Metcalf, G.E., & Weisbach, D. (2009). "The design of a carbon tax" *Harv. Environ. Law Rev.*, 33(2), 499–556; also see Reuven S. Avi-Yonah; David M. Uhlmann, "Combating Global Climate Change: Why a Carbon Tax is a Better Response to Global Warming than Cap and Trade" 28 *Stan. Envtl. L. J.* 3 (2009).

<sup>3</sup> World Bank and Ecofys. 2018. "State and Trends of Carbon Pricing 2018 (May)", by World Bank, Washington, DC.



As the Project Countries are, either developing countries and LDCs they often lack the human resources and knowledge required to develop and implement novel laws and policies. As such, the development of Carbon Pricing approaches and carbon markets will require various types of support, at different levels, including:

- (i) to identify and assess available Carbon Pricing options, and how these align with national circumstances, objectives, policy and law;
- (ii) to elaborate concrete proposals for the establishment of Carbon Pricing instruments;
- (iii) to adopt national Carbon Pricing instruments; and,
- (iv) to implement Carbon Pricing mechanisms.

It is against this background that the Regional Collaboration Centre (RCC) Kampala in collaboration with GIZ and the United Nations Environmental Programme (UNEP) commissioned this study, *inter alia* with the intention of ascertaining the potential for implementing Carbon Pricing approaches in the Project Countries – all of which are located in Eastern and Southern Africa. This study, therefore, aims to gather information, from the Project Countries, on the feasibility of, and readiness for, the introduction of Carbon Pricing/carbon market mechanisms, with particular focus on existing legal frameworks.

Fundamentally, the study aimed to address the following (for each of the Project Countries):

1. existing carbon pricing instruments or related instruments already in place;
2. potential opportunities for carbon pricing in the region based on national circumstances and context;
3. potential options scenarios and use of carbon pricing revenues to mitigate potential adverse impacts;
4. Carbon Pricing linkages with the Nationally Determined Contribution (NDC) and potential/opportunities to meet sector-wide NDC mitigation targets (e.g. energy, waste, and transportation);
5. alignment of carbon prices and policies, including assessing the existing legal and policy framework in the countries with respect to carbon pricing and analyse the *status quo* of Monitoring Reporting and Verification (MRV) structures for enabling Carbon Pricing instruments; and,
6. providing conclusions, with an overall assessment of the feasibility of, and readiness for, implementing Carbon Pricing in the Project Countries and the East and Southern African regions.

The project team understands that the study will play an important role in assessing the potential, readiness and needs of the Project Countries with regard to the possible use of Carbon Pricing. Consequently, the study also expresses a view on the levels and types of support required to enable the development of Carbon Pricing within the respective jurisdictions of the Project Countries. It is also envisaged that this study will act as a decision-making guide for interested donors in this field to support implementation of Carbon Pricing instruments, in line the Country Parties'

individual needs and priorities towards achieving the objectives of their, respective, NDCs and the Sustainable Development Goals (SDGs).

The study's point-of-departure includes recognition that Carbon Pricing can, broadly speaking, be done either explicitly or implicitly. The former might encompass: setting a fixed price on carbon in the form of a tax; implementing an ETS (cap-and-trade); or, pricing carbon into an economy via hybrid tax-and-trade systems – such as that commencing in South Africa on 1 June 2019 – or carbon-delimited results based financing and other forms of carbon-focussed development funding. The study's analysis of individual Project Countries, included in the separate country chapters, also evaluates the potential for implicit Carbon Pricing, such as the removal of negative Carbon Pricing policies, e.g., fossil fuel subsidies.

The main difference between the two most-favoured forms of explicit Carbon Pricing, namely carbon taxation and ETS, is that while the former fixes the price of carbon in the economy, the latter (particularly when based on cap-and-trade) determines the volume of emissions. Carbon taxation is, generally, simpler to implement as it does not have to deal with ETS-specific issues, such as benchmarking and allocation. Given the technical and legal analyses which were conducted by the project team, the possible implementation of Carbon Pricing in the form of carbon taxation would be substantially easier to establish, as the financial and human resources required to implement ETS (cap-and-trade) in the Project Countries were, in-the-main, found to be insufficient. However, while carbon taxation would be easier to implement, a major hurdle associated with such a system is that the economies of the Project Counties would likely be unable to bear the economic implications.

This report has been prepared in conjunction with the country chapters which are attached hereto as annexures. This report is, therefore, a synopsis of the findings presented in the country chapters and is aimed at providing an overarching view on the possibility of implementing carbon pricing in the Project Countries, as well as at a regional level.

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