

SYNTHESIS REPORT: CARBON PRICING APPROACHES IN EASTERN AND SOUTHERN AFRICA

A report submitted under the

**COLLABORATIVE INSTRUMENTS FOR
AMBITIOUS CLIMATE ACTION (CI-ACA)**

April 2019



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.

Table of Contents

Executive Summary	ii
Table of Contents	iv
Glossary of terms	v
1. Introduction.....	1
2. Explicit and Implicit Carbon Pricing.....	4
2.1 Explicit Carbon Pricing.....	5
2.2 Implicit Carbon Pricing.....	6
2.3 Negative Carbon Pricing.....	7
3. Tracking the development of Carbon Pricing	9
4. Carbon Pricing and Equitable Responsibilities.....	11
5. Supply and Demand in Carbon Pricing Schemes	18
5.1 Domestic demand	18
5.2 International Demand	19
5.3 Domestic Supply	20
6. Monitoring, Reporting and Verification	23
7. Legislative aspects of Carbon Pricing.....	24
8. Regional trading	29
9. Overarching recommendations and Conclusion	32

Glossary of terms

CDM	Clean Development Mechanism
CO₂e	Carbon dioxide equivalent
ETS	Emissions Trading Scheme
GHG	Greenhouse gasses
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
NDC	Nationally Determined Contribution
Project Countries	Meaning the countries covered by this study, being Ethiopia, Kenya, Mauritius, Rwanda and Uganda
SDGs	Sustainable Development Goals
VCS	Meaning the Verified Carbon Standard, whilst acknowledging its name change to the lesser known VERRA.
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	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 literature¹ 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 change², 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 fuels³. 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.

¹ *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; *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>.

² 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).

³ 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.

2. Explicit and Implicit Carbon Pricing

The term “Carbon Pricing” denotes a range of financially-focussed approaches aimed at driving GHG mitigation. Explicit Carbon Pricing seeks to apply a direct cost to carbon emissions; while, Implicit Carbon Pricing might include policies and instruments that implicitly prices carbon. Examples of the former encompass carbon taxation or ETS (cap-and-trade); with the latter including measures such as taxes and levies aimed (primarily) at disincentivising certain actions, such as the use of fossil fuels, the indirect consequence of which is a reduction in GHG emissions. Given the poverty levels in developing and LDCs, these countries often implement negative Carbon Pricing, including subsidies or support for fossil fuel production, the indirect consequence of which is an increase in GHG emissions. Although negative Carbon Pricing can lead to higher emissions, developing nations often rely on these policies because, in the absence of the financial support derived through their implementation, the cost of fossil fuels would be unaffordable. This is among the reasons for the perceived reluctance, in many countries, to accept proposals for the removal of fossil fuel subsidies and the implementation of alternatives.

Carbon Pricing is not only government-driven but is increasingly being integrated into private sector business models and investment decisions. Developing countries and LDCs, including the Project Countries, often depend on multi-national companies for investment, technology transfer and skills development. However, the calculations underpinning large-scale project financing and investment often incorporate negative consequences, for project operations and profits, of anticipated implementation of Carbon Pricing mechanisms, by national governments. Therefore, in order to attract foreign investment, it is essential that Carbon Pricing does not act as a deterrent to project financing. Any Carbon Pricing mechanism, whether explicit or implicit, should therefore be designed taking into consideration the investment and development needs of the target country, ideally by ensuring a sufficient price signal while limiting negative impacts on net costs.

The majority of the Project Countries rely on hydroelectricity as their main energy source. The provision of sufficient and constant hydroelectric power is, at its core, dependent on the natural hydrological cycle; which, in-turn, is driven by climatic trends, particularly the consistency in rainfall and surface temperature. Although precipitation projections are more uncertain than temperature projections and exhibit higher spatial and seasonal dependence than temperature projections, the Intergovernmental Panel on Climate Change (IPCC) has indicated that precipitation in Southern and Eastern Africa is likely to increase⁴. Assuming that these projections are correct, the supply of hydroelectricity in the Project Countries is likely to be fairly secure, in the absence of any severe droughts.

From a Carbon Pricing and electricity pricing perspective, the use of hydroelectricity in the Project Countries is ideal, as explicit Carbon Pricing is unlikely to have a direct impact on hydro-power projects and may, on the contrary, result in these projects enjoying an economic cost-advantage over fossil-fuel based power generation. Considering the volatile socio-economic circumstances

⁴ IPCC, 2014: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects*. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, p 1210.

of the Project Countries, a zero/minimal impact of explicit Carbon Pricing will benefit communities unable to afford electricity price hikes which might be caused by the pricing of emissions deriving from fossil fuel-based power generation. Implementing Carbon Pricing may even benefit the Project Countries, given the relative abundance of cost-effective zero-emissions sources of hydro-power.

The above should be seen in the context that climate change is an unpredictable phenomenon, with a deep and inherent complexity which limits the imprecise determination of the scope, nature, location, periodicity and intensity of future impacts. The uncertainties surrounding the interactions of climate change policies, GHG emissions, complex climate and socioeconomic feedback loops, and currently indeterminate tipping-points all combine to further complicate projections. It is in this light, therefore, that one must consider the effects of Carbon Pricing.

For example, in 2012, Uganda (one of the Project Countries), experienced a drought and consequent availability of hydro-power which necessitated the importation of fossil fuels, in order to meet electricity demands⁵. Should a situation such as this repeat itself in one-or-other of the Project Countries, while implicit Carbon Pricing policies (such as a reduction in fossil fuel subsidies) are in place, both private and public institutions will have to bear the cost of unsubsidised fossil fuel resources. This would, inevitably, lead to economic downturn in already constrained economies, and the project team is of the considered view that an extensive economic impact analyses would need to be undertaken in order to establish the effects of Carbon Pricing policies, under a range of different scenarios.

The following sections provide summaries of various Carbon Pricing options, available to the Project Countries:⁶

2.1 Explicit Carbon Pricing

To date 51 Carbon Pricing initiatives have been implemented, or are scheduled for implementation, globally. This figure represents 25 ETS (cap-and-trade) and 26 carbon taxation schemes, expected to cover 11 gigatons of CO₂e or approximately 20 per cent of global GHG emissions⁷. However, the majority of these schemes are implemented or are being designing for implementation in developed countries. With the exception of Kenya and its planed emissions trading platform, the Project Countries have not extensively explored the possibility of implementing explicit Carbon Pricing. The project team aimed to analyse the existing structures and initiatives that have been put in place which might enable the implementation of explicit Carbon Pricing, in the Project Countries, in light of prevailing economic circumstances.

⁵ Energypedia “Uganda Energy Situation” https://energypedia.info/wiki/Uganda_Energy_Situation (accessed on 2019-01-09).

⁶ Please note that each country chapter contains a more comprehensive section discussing both explicit and implicit Carbon Pricing in the Project Countries.

⁷ World Bank and Ecofys. 2018 (May). *State and Trends of Carbon Pricing 2018* World Bank, Washington, DC. Doi: 10.1596/978-1-4648-1292-7, p 8.

The analyses has resulted in the project team being of the view that, under current circumstances, the Project Countries would not be able to bear the resultant economic costs, without external support. Should explicit Carbon Pricing mechanisms be introduced, industries within the Project Countries will be required to implement more costly mitigation technologies, or bear the costs associated with carbon taxes. As such, production costs for manufactured goods will, arguably, increase resulting in the prices for such goods becoming less competitive, in international trade terms, when compared to similar products, from other developing country producers, which are not subject to explicit Carbon Pricing.

However, the possibility exists to introduce a range of exemptions, to the application of explicit Carbon Pricing, e.g., carbon taxation, especially for energy-intensive industries. Beyond broad exemptions, many countries adjust or exempt companies that voluntarily participate in climate change actions. Tax relief systems, such as the South African energy efficiency income tax allowance, provide examples of how industries can reduce the production costs associated with the production of goods and services⁸. Focussing on large-scale emitters offers many advantages, compared to indiscriminate Carbon Pricing approaches which cover entire sectors, without acknowledging the potential for negative economic impacts. Compensation measures to limit negative economic impacts are easier to design and implement, and less effort is required to undertake awareness raising than is the case for generalised approaches.

2.2 Implicit Carbon Pricing

The removal/reduction of fuel subsidies is one of the main forms of implicit Carbon Pricing, considered in this study. Reducing subsidies for fossil fuels is a key measure to strengthen an overall carbon price signal, and there are ongoing efforts to phase out these subsidies in developed economies⁹. Removing/reducing fossil-fuel subsidies increases decarbonisation and divestment in companies that are heavily reliant on fossil-fuels.

However, the socio-economic circumstances in the Project Countries necessitates affordable access to energy resources and fossil fuels in order to drive forward the respective economies¹⁰. The removal of fossil fuel subsidies, and the consequent increase in fuel prices, will create negative impacts on the welfare of communities, including as a result of: a direct impact on households

⁸ The South African energy efficiency income tax allowance is contained in section 12L of the Income Tax Act 58 of 1962 and enables businesses of any kind to claim a tax deduction for the efficient use of energy and for investing in modern energy efficient equipment. The deduction is calculated at 95 cents per kilowatt hour or kilowatt hour equivalent for the difference between the energy used and that which would have been used if the more efficient technologies and processes had not been installed. The tax allowance is only applicable for a consecutive 12 month period, after which it falls away. No limits are applicable to the number of claims or the sizes of individual claims.

⁹ Trilling *et al* *Phase-out 2020: monitoring Europe's fossil fuel subsidies* <https://www.odi.org/sites/odi.org.uk/files/resource-documents/11764.pdf> (accessed on 2019-01-03)

¹⁰ In developing countries, gasoline is typically used for private household transport and in smaller private business vehicles, diesel is used mostly in larger private and public transport vehicles and kerosene is used by households for lighting and cooking, especially by those without access to electricity.

faced with higher prices for fuels consumed for cooking, heating, lighting and private transport; and, an indirect impact through higher prices for other goods and services consumed by households, as higher fossil fuel costs will be reflected in higher production and consumer prices. The project team is of the view that the analyses contained in the respective country chapters indicate that the removal of fossil fuel subsidies in the Project Countries could restrict development in economies already facing trying fiscal circumstances, unless alternatives can be implemented efficiently.

Implicit Carbon Pricing can also have positive implications by driving higher government revenue collection that can be invested in health, education and renewable energy technologies. In order fully assess this statement, the project team is of the view that an economic evaluation of the direct and indirect impacts of the removal of fossil-fuel subsidies, in the Project Countries, is necessary for a comprehensive understanding of the implications of such removal.

2.3 Negative Carbon Pricing

Fossil fuel subsidies are examples of negative Carbon Pricing which may hinder decarbonisation. While efforts to remove fossil fuel subsidies are largely driven by developed economies, recent initiatives by G20 countries seek to work towards their, eventual, removal¹¹. It is noted that the circumstances of the Project Countries differ substantially from those of the G20, particularly as their dependency on fossil fuels is more pronounced, when compared to the G20.

Studies show that fossil fuel and electricity consumption in Sub-Saharan African countries is highly skewed toward higher income households¹². The evidence suggests that providing a US\$1 fossil fuel cost reduction to the poorest 40 percent of the population, under a universal subsidy policy, requires that government spend US\$5 - half of the benefit of which accrues to the richest communities, as they consume greater quantities of energy.¹³ Removing subsidies, which in turn implies an increase in energy prices will have a sizable impact in the poorest segments of the population. For example, an increase of \$0.25 a litre in fuel prices in Sub-Saharan African countries would reduce, on average, the 40 percent poorest households' real income by 5.7 percent. Over half of this purchasing power loss would occur through an indirect effect, such as the pass-through of higher fuel prices into food and transportation costs. This reflects the importance of fuel as an intermediate input in the production process¹⁴.

It is not surprising to find that fossil fuel subsidies tend to benefit richer households, given their higher consumption levels in comparison with lower income households. It can, therefore, be argued that if the objective of fossil fuel subsidies are to provide relief and assist poor communities to access energy sources, such subsidies are not achieving these goals.

¹¹ Gerasimchuk "G20 Countries Must Speed Up Fossil Fuel Subsidy Reforms" (14 December 2018) *International Institute for Sustainable Development* <https://www.iisd.org/blog/g20-fossil-fuel-subsidy-reforms>

¹² Alleyne *Energy Subsidy Reform in Sub-Saharan Africa – Experience and Lessons* (2013) International Monetary Fund, p 27.

¹³ *Ibid.*

¹⁴ Arze del Granado, Javier, David Coady, and Robert Gillingham, 2012, "The Unequal Benefits of Fuel Subsidies: A Review of Evidence for Developing Countries," *World Development*, Vol. 40 (11), 2234–2248.

Fossil fuel subsidies are undesirable on a number of grounds. They are fiscally expensive, and dilute incentives to become more energy efficient. Despite this, governments in developing countries often find it difficult to facilitate fossil fuel subsidy reform due to political and socio-economic circumstances. These difficulties are often founded in nations' lack of confidence in governments regarding the spending of budgetary gains that will occur as a result of removing subsidies, as well as effects on poverty.

In order to alleviate the abovementioned concerns, the project team is of the view that the introduction of implicit Carbon Pricing, in the form of the removal of fossil fuel subsidies, could be facilitated by introducing public information campaigns aimed at explaining the numerous shortcomings associated with subsidies. Furthermore, reforming fossil fuel subsidies, even in the face of an oil price rise, is possible by combining the removal of subsidies with effective pro-poor policies. Successful examples of this approach include India paying for cooking gas for those households which fall below a certain income level¹⁵, or the way Indonesia and Iran have reallocated revenue raised from subsidies to help finance infrastructure development and universal health care¹⁶.

Ultimately, subsidy reform and the consequent implementation of implicit Carbon Pricing in the Project Countries is, neither impossible nor easy. To gain maximum benefits for the climate, while doing the minimum harm to the poor, reforms must be carefully targeted at the regions and sectors where they will be most effective.

¹⁵ Mittal *et al* "Fuel Subsidy Reform in Developing Countries: Direct Benefit Transfer of LPG Cooking Gas Subsidy in India" *Center for Global Development* <https://www.cgdev.org/sites/default/files/fuel-subsidy-reform-developing-countries-india.pdf> (accessed on 2019-01-09)

¹⁶ Merrill Chung "Financing the Sustainable Development Goals through Fossil-fuel Subsidy Reform: Opportunities in Southeast Asia, India and China" *International Institute for Sustainable Development* (2015) <https://www.iisd.org/gsi/sites/default/files/financing-sdgs-fossil-fuel-subsidy-reform-southeast-asian-india-china.pdf> (accessed on 2019-01-09).

3. Tracking the development of Carbon Pricing

The country chapters provides an outline of developments with regards to possible implementation of Carbon Pricing, to date, from both the legal and technical perspectives, in the Project Countries, flowing from which this section summarises the findings with regard to the technical developments. As mentioned below, all of the Project Countries submitted fair NDCs, demonstrating their willingness to participate in climate change initiatives under the multi-lateral regime. The explicit mentioning of Carbon Pricing however, is not present in any of the NDCs. Nevertheless, there has been some preliminary progress on the implementation of Carbon Pricing within certain of the Project Countries. The list of actions and initiatives below outlines the main actions taken, to date, in this regard:¹⁷

- The Ethiopian Development Research Institute and the World Bank recently organised a team to examine the impact of carbon taxation on the growth of Gross Domestic Product (GDP) and income distribution. Researchers analysed carbon taxation applying the CGE as a standard model.
- Kenya announced, in 2016, that it would be launching an emissions trading platform which would be aimed at providing companies with a platform to sell their carbon credit to foreign buyers.
- In 2008 Mauritius announced the introduction of the Maurice Ile Durable (MID) concept. The main objective of the MID is to make Mauritius a world model for sustainable development and to increase the use of renewable energy. In order to finance renewable energy projects MID established the MID Fund, which is capitalised *inter alia* from revenues raised through the taxation of fossil fuels.
- Although not specifically aimed at implementing Carbon Pricing, Rwanda intends to transform its industries by implementing its *Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon*, which makes provision for building carbon trading capacity within the private sector to harness innovative funding opportunities provided by the Clean Development Mechanism (CDM) and voluntary carbon markets.
- With support from the German Ministry for the Environment, the GIZ Global Carbon Markets Programme, based in Uganda, support the development of economic and carbon-pricing instruments that would facilitate NDC implementation among the countries of East Africa.

Considering the above and within the context of the rest of this report, the project team is of the view that, while these initiatives and actions can be regarded as first steps towards the implementation of Carbon Pricing, prevailing economic and socio-economic circumstances pose hurdles to the introduction of fully-fledged Carbon Pricing. The project team is therefore of the further view that the Project Countries should, rather, seek means to reduce their emissions by implementing appropriate mitigation projects, funded by accessing carbon finance. This will not

¹⁷ More detail and references can be found in the Country Chapters.

only reduce their emissions in accordance with their respective NDCs, but also increase foreign investment and associated benefits such as technological innovation and human resources.

4. Carbon Pricing and Equitable Responsibilities

The project team considered the views of the UNFCCC in the framing of this report. The UNFCCC defines carbon pricing as “curbing greenhouse gas emissions by placing a fee on emitting and/or offering an incentive for emitting less”¹⁸. Furthermore, in the context of the “polluter pays principle” carbon pricing effectively shifts the responsibility of paying for the damages of climate change from the public to the GHG emission producers¹⁹. The polluter pays principle links to the principle of common-but-differentiated responsibilities and respective capabilities.

In this regard it is important to note that the Paris Agreement does away with the UNFCCC’s binary distinction between developed and developing countries but continues to be based upon an extension of the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. This provides some flexibility to developing countries, based on their national circumstances. The legal principle of Common But Differentiated Responsibility (CBDR) is a defining feature of the international climate change regime, given that it recognizes that country Parties vary, both in their levels of responsibility for climate change and in their capacities to cope with it. Article 3.1 of the UNFCCC contains a formulative statement of CBDR, as follows (own emphasis):

“The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country parties should take the lead in combating climate change and the adverse effects thereof.”²⁰

Years of negotiations under the UNFCCC have seen the elaboration of CBDR, specifically COP20’s addition of the words “in light of different national circumstances” to the end of the familiar formulation. This is important for successive iterations of NDCs which are required to constitute a progression beyond a country Party’s existing NDC and reflect the party’s highest possible ambition, representing its CBDR and respective capabilities, in light of national circumstances.²¹ A country Party’s NDC can be regarded as a reliable indication it’s the national climate change response; and, as abovementioned all of the Project Countries submitted, prior to COP21. The “fairness” of the submitted NDCs has been assessed in terms of a set of equity approaches, including²²:

- **Capability:** This approach allocates to each country a share of global emissions proportional to its population divided by its per capita GDP;
- **Equal per capita:** This approach derives national shares of global emissions that are proportional to each country's population;

¹⁸ UNFCCC “About Carbon Pricing” <https://unfccc.int/about-us/regional-collaboration-centres/the-ci-aca-initiative/about-carbon-pricing#eq-1> (accessed on 2018-11-26).

¹⁹ *Ibid.*

²⁰ UNFCCC Article 3.1

²¹ Paris Agreement Article 4(9).

²² Du Pont R, *The Paris Agreement global goals: What does a fair share for G20 countries look like?* March 2017.

- **Greenhouse Development Rights:** This approach reflects the 'responsibility-capability-need' IPCC category, and issues emissions allocations based on historical emissions, projected business-as-usual emissions, population and wealth distribution of each country;
- **Equal cumulative per capita:** This approach allocates each country with total cumulative emissions proportional to its cumulative population over a given period; and
- **Constant emissions ratio:** This approach reflects preserves the current (as of 2010) shares of global emissions across countries. This is a grandfathering approach and is considered less equitable than other approaches.

In order to establish the potential for the implementation of Carbon Pricing in the Project Countries, the project team considered various aspects additional to the equity approaches, including:

- Per capita GDP of the project countries;
- Per capita emissions of the project countries;
- Gross domestic product of each country; and
- Annual greenhouse gas emissions of each country;

The project team is of the view that these aspects are fundamental to assessing the fairness and the Common-But-Differentiated Responsibilities of the climate change commitments of the Project Countries. A nexus can then be drawn between the Common-But Differentiated Responsibilities and the feasibility of implementing Carbon Pricing, i.e., the extent to which such implementation can be regard as both fair/equitable and in accordance with the Common-But Differentiated Responsibilities, of the Project Countries, to contribute to the global climate change response.

All of the Project Countries achieved good ratings in the review of the “fairness” of their NDCs, each achieving at least a three star assessment for the fairness of their climate pledges, as shown below. This is a clear indication that the Project Countries consider climate change to be a serious problem which requires action, irrespective of the country’s status, and provides an important background consideration to the analysis presented in this report.

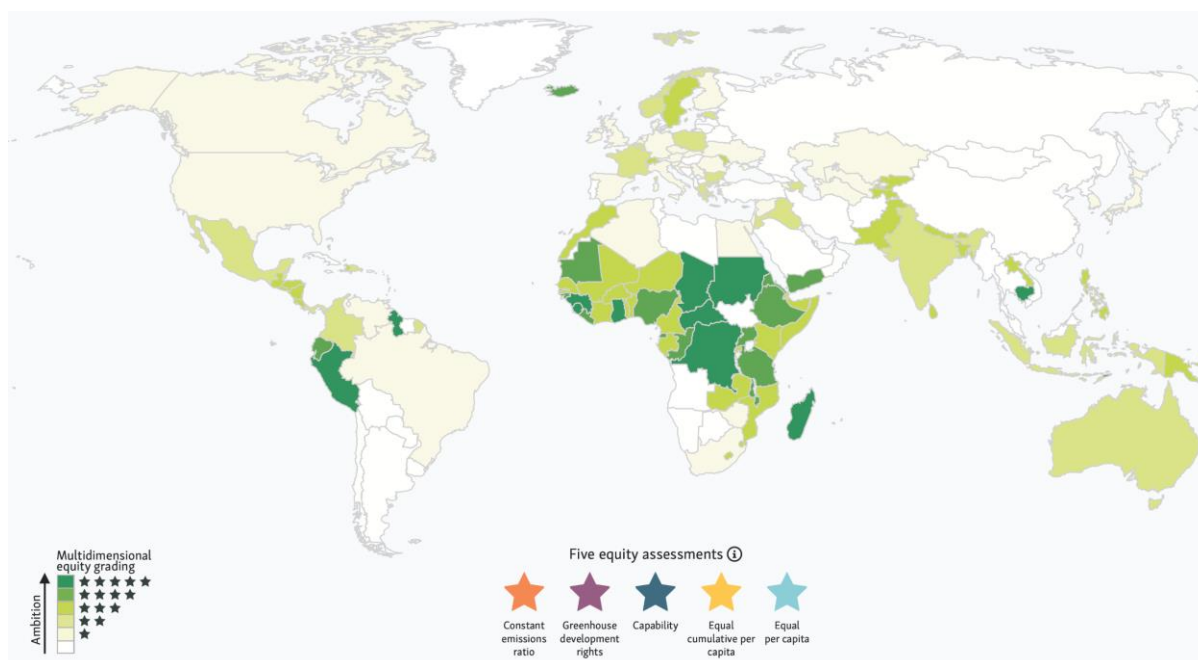


Figure 1: Climate Pledges equity indicator. Source: Paris Equity Check²³

In order to establish the current potential for Carbon Pricing within the Project Countries, it was necessary to analyse and compare their respective national circumstances with those of other developing countries/LDCs. The analysis contained in this report was informed by the national circumstances of the Project Countries, as compared with a peer group selected on the basis of their being in the process of developing domestic carbon pricing systems, as reported by the World Bank in the *State and Trends of Carbon Pricing, 2018*. Countries in the peer group include: Argentina, Brazil, Chile, China, South Africa, Thailand, and Vietnam.

Figure 2, below, shows the equity rating of the Project Countries' NDCs, compared against those of the peer group, as reported by Paris Equity Check. The data presented in Figure 2 shows that the Project Countries, generally, outperform the peer group, with respect to the fairness of their NDCs. Interestingly, while Ethiopia and Uganda are both LDCs, their NDCs scored highest. However, as the majority of developing country NDCs are conditional on receiving support for their implementation, including international climate finance from both public and private sources, accessing such support will play an essential role in facilitating higher levels of climate action in developing countries. As such, developed nations have a critical role to play in the realisation of the fairness associated with developing countries' NDCs. The project team is of the view that working towards the realisation of the Project Countries' NDCs, in the absence of explicit Carbon Pricing mechanisms, will likely prove more economically suitable, for the Project Countries.

²³ <http://paris-equity-check.org/multi-equity-map.html>

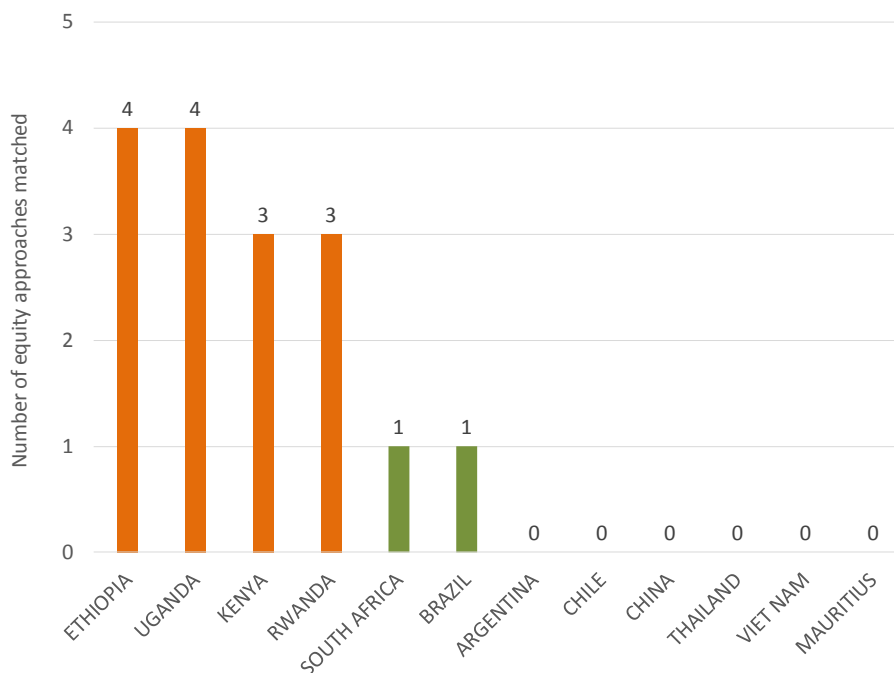


Figure 2: NDC rating against fairness criteria

Figure 3, below, shows that the *per capita* GDP for the Project Countries (with the exception of Mauritius), is significantly lower than the countries in the peer group. The closest compared *per capita* GDP, i.e., those of Kenya and Vietnam, differ by a factor of almost 2; while, the largest difference is that between the GDPs of Ethiopia and Chile, is a factor of 16.

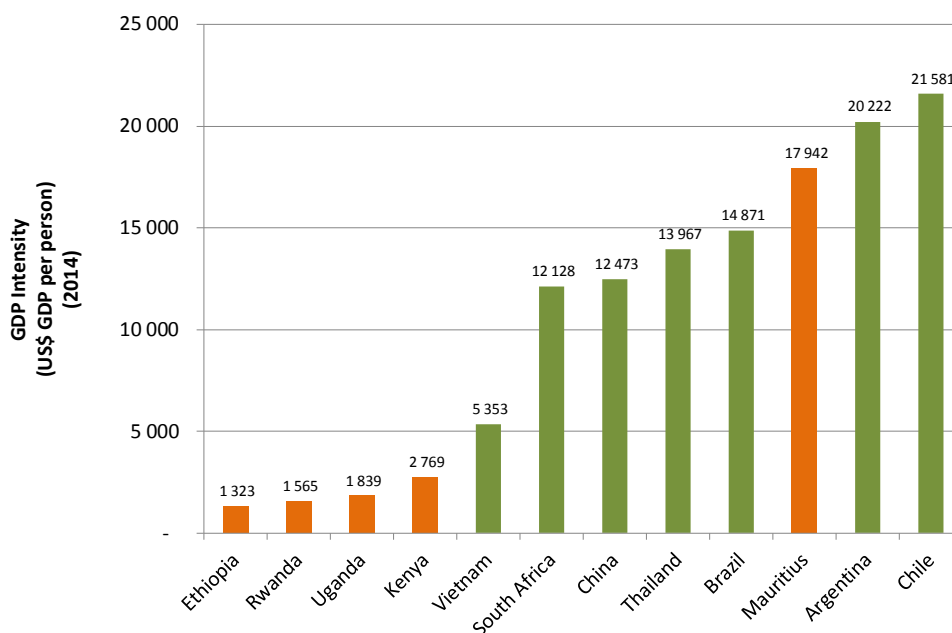


Figure 3: *Per capita* GDP of the Project Countries and other countries implementing carbon pricing schemes²⁴

The differences in *per capita* emissions intensity between the Project Countries and the peer group is even greater than that between their *per capita* GDPs. Figure 4, below, shows that the difference

²⁴ Calculated from 2014 data sourced from <https://ourworldindata.org>

in *per capita* emissions intensity between the closest countries, namely Kenya and Vietnam, is a factor of 6; while, the biggest difference, between Rwanda and South Africa, is a factor of 90.

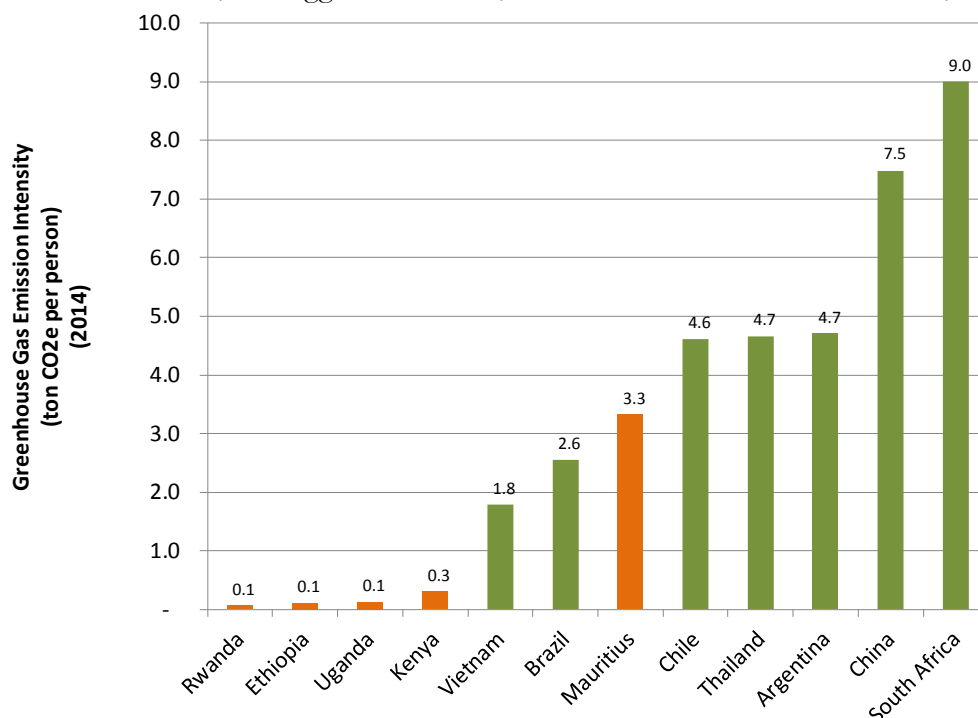


Figure 4: *Per capita* emissions intensity of the Project Countries and other countries implementing carbon pricing schemes²⁵

The data presented above show that the Project Countries, on the one hand, have very fair NDCs, while on the other, exhibit incredibly low emission intensities. It is within this context that the project team is of the view that the implementation of explicit Carbon Pricing mechanisms, e.g., in the form of a carbon tax, should not be considered, unless detailed modelling can show that such implementation will not negatively affect GDP, job creation and economic growth.

The implementation of ETS (cap-and-trade), requires that one consider the scale of the economy, *inter alia* as such implementation carries a significant amount of administrative overhead. Figure 6, below, shows the total GDP of the Project Countries as compared with the peer group. Note that the economies of the former are significantly smaller than those of the latter.

²⁵ Calculated from 2014 data sourced from <https://ourworldindata.org>

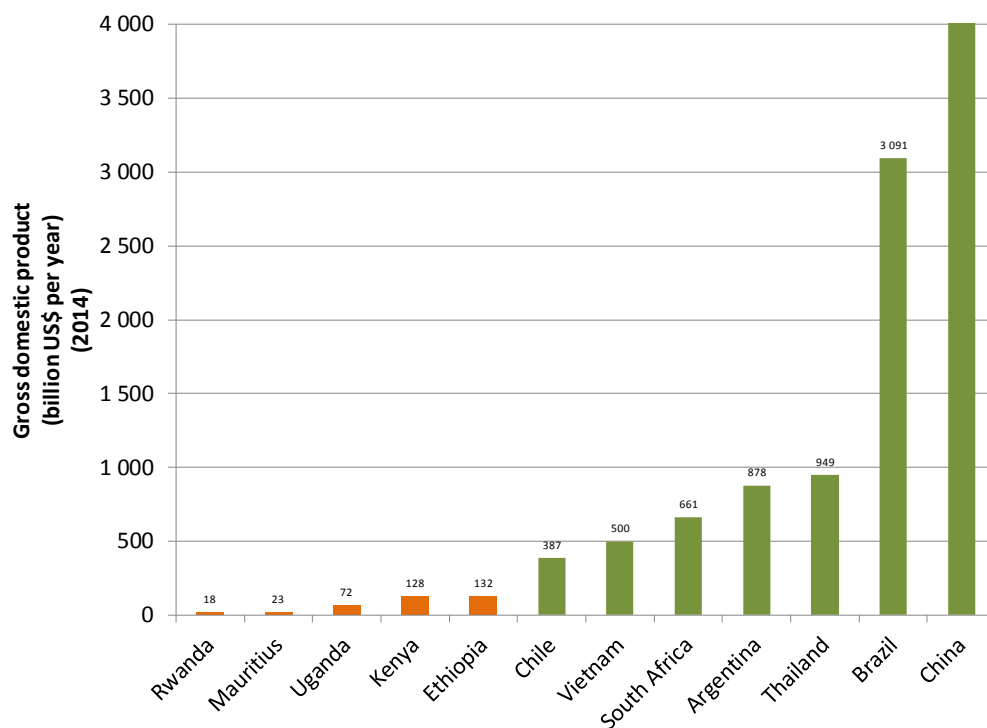


Figure 5: Gross domestic product²⁶

Figure 6, below, shows the total emissions of the Project Countries, as compared with the peer group. The emissions of the closest 2 countries, namely Kenya and Chile, differ by a factor of 6, while the difference, between Rwanda and China, is a factor of 12 500.

²⁶ Note that the value for China in Figure 6 has been truncated in order to make the Figure readable. China's GDP in 2014 was US\$ 17 billion

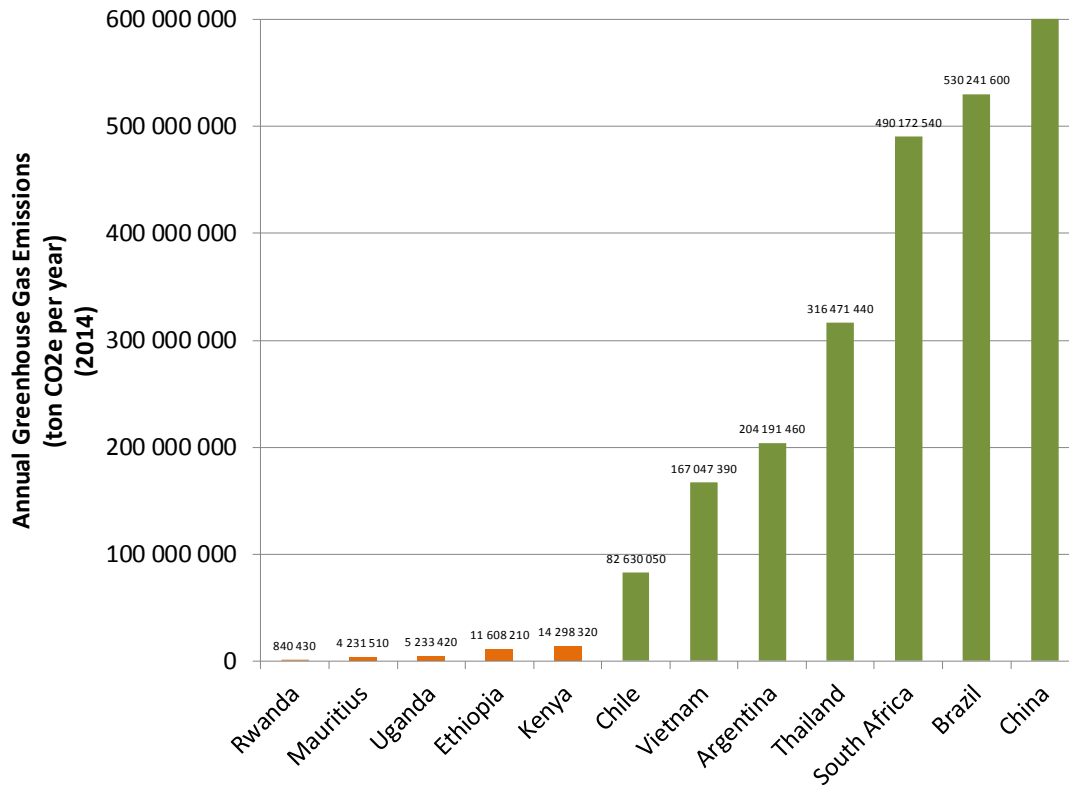


Figure 6: Annual greenhouse gas emissions^{27,28}

The data shows that both the GDP and the absolute emissions of the Project Countries are significantly lower than those of the peer group. It is the view of the project team that, due to the relatively small economies of the Project Countries, Carbon Pricing in the form of ETS (cap-and-trade) should not be implemented unless detailed modelling shows that the respective economies can carry the required overheads, including demonstrating a positive cost-benefit analysis. In addition, dynamic supply and demand levels of emission reduction units are necessary to sustain the operation of an ETS (cap-and-trade). As such, the following section will discuss the supply and demand factors associated with the implementation of Carbon Pricing.

²⁷ Note that the value for China in the graph has been truncated in order to make the graph readable. China’s total emissions in 2014 was 10 billion tons of CO₂e

²⁸ Note that the bar for China in this graph has been truncated for the purpose of showing the lower values of the other countries in scale.

5. Supply and Demand in Carbon Pricing Schemes

Various nations across the globe have implemented Carbon Pricing as a fiscal instrument to stimulate carbon markets and finance mitigation and adaptation efforts. It is submitted that fiscal instruments are eminently suitable as a means to incorporate the environmental externalities, associated with GHG emissions, into the costs of production, with a view to reducing the costs of such externalities. If designed appropriately, they can potentially exploit a range of possible behavioural responses, for reducing externalities, throughout the economy. For example, if the price of fossil fuels is subjected to carbon taxation, this will reduce GHG emissions by:

- Encouraging a shift away from carbon-intensive fuels in power generation.
- Reducing the use of energy-consuming products like vehicles and household appliances.
- Promoting a shift towards more energy-efficient products like cars with advanced fuel-saving technologies.

These instruments have proven to be effective mitigation mechanisms in various developed countries. However, to successfully implement these mechanisms within the Project Countries, hurdles such as limited financial means and capacity will need to be addressed.

With respect to emissions trading, the options available range from traditional ETS (cap-and-trade) approaches, such as the European Union Emissions Trading Scheme (EU-ETS), to Results-based Climate Finance (RBCF) schemes, and bilateral arrangements such as the Japanese Joint Crediting Mechanism (JCM). All of these have a number of components in common:

- **Supply:** The supply of tradeable commodities (carbon credits) must come from a scheme such as the CDM, REDD+ or NAMA. Given that projects under these schemes are required to be implemented in the host country, they represent a potential domestic supply of carbon credits.
- **Demand:** The demand for carbon credits can be created, either domestically or internationally:

To support measures to secure results-based funding and other financing avenues, the country chapters contain country-level assessments of the supply and demand for carbon credits, as well as the state of readiness to implement national and/or regional Carbon Pricing mechanisms. The sections below explain the relevance of supply and demand at the domestic and international levels.

5.1 Domestic demand

Domestic demand can be created in approaches such as the EU-ETS, and similar schemes are being implemented in China and South Korea. South Africa is implementing a hybrid system,

where carbon offsets can be traded into the proposed carbon tax regime as a means of reducing a carbon tax liability. For a system to create domestic demand, a certain amount of infrastructure needs to be put in place. Figure 6, above, shows the absolute emissions the Project Countries in relation to the peer group, which are other developing countries implementing systems that would create domestic demand.

It is clear from the data outlined above, that the peer group countries have markedly more emissions than the Projects Countries. This is predominantly so, as the economies of these countries are emissions intensive. Not a single Project Country (apart from Mauritius which relies on imported petroleum products to meet most of its energy requirements) utilises emissions intensive fuels for power generation. Ethiopia, Kenya, Rwanda and Uganda all utilise hydro- power as their primary source of energy supply. As such, the Project Countries have no need to shift away from emissions intensive fuels in the same way as fossil-fuel reliant countries can, as they already utilise the renewable resources around them. High levels of emissions create a more stable domestic market for carbon credits in ETS (cap-and-trade) approaches. Considering the Project Countries' low emissions, it is the view of the project team that the current potential domestic demand for carbon credits, in the Project Countries, would be insufficient successfully to implement ETS (cap-and-trade).

Furthermore, the majority of the Project Countries rely upon the extraction of natural resources and agriculture as key economic drivers.²⁹ As such, the implementation of Carbon Pricing in the form of carbon taxation would likely be opposed by industries to which the tax applies. Any environmentally-related tax would need to be introduced gradually in order to give the economy the necessary space to adapt. For example, at a preliminary stage, one could aim to reduce fossil-fuel subsidies at levels commensurate with the price increase caused by imposition of the tax.³⁰ The avoided expenditures could be used to ameliorate any negative impacts of Carbon Pricing on the economy. This approach might facilitate a broader participation of the Project Countries in the development of harmonised Carbon Pricing, during later stages.

5.2 International Demand

Schemes like the CDM, REDD+, NAMAs, the JCM, and Results-based Climate Finance can create international demand for emission reduction credits generated in the Project Countries. Such schemes could be in line with the respective NDCs, in the following ways:

- **Agriculture and forestry** –The majority of the NDCs of the Project Countries aim to reduce emissions from the agricultural and forestry sectors. Whereas the CDM does not allow for the generation of permanent emission reduction or sequestration credits from

²⁹ Copper (Uganda), tin ore (Rwanda), soda ash and agricultural products such as tea (Kenya), Gold and Coffee (Ethiopia), sugar (Mauritius)

³⁰ J E Aldy, R N Stavins “The Promise and Probles of Pricing CarbonL Theory and Expenditure” (October 2011) *Harvard Kennedy School Faculty Research Working Paper Series* <https://journals.sagepub.com/doi/abs/10.1177/1070496512442508> (accessed on 2018-11-30).

land-based projects, other schemes do. If a way can be found to create international demand for credits from agriculture and forestry, this could provide significant carbon finance for projects aimed at achieving NDC objectives.

- **Infrastructure:** Schemes like the CDM, NAMAs and the JCM could create offsets that could, if applied to development of infrastructure and augmented by international climate finance, ensure development aligned with low carbon best practice.
- **Energy:** Energy projects have traditionally been a good source of emission reduction credits. The challenge in most of the Project Countries will be to address the issue of suppressed demand in the establishment of national emissions baseline for energy projects under schemes like the CDM. If this challenge can be overcome, then energy sector projects could represent a substantial base of initiatives accessing international carbon finance, through Carbon Pricing mechanisms.

5.3 Domestic Supply

It is submitted that the majority of developing countries and LDCs, including the Project Countries, would be hesitant to implement Carbon Pricing within their jurisdictions. A possible approach to encourage their participation would be to create a lucrative domestic supply of emission reduction units, generated by their own low-cost mitigation opportunities. Increasing domestic supply in the Project Countries would likely facilitate the gradual implementation of Carbon Pricing, with the possibility of establishing a regional mechanism, at a later stage.

Furthermore, developing countries and LDCs have the opportunity to benefit from existing support and financing arrangements offered by developed countries. Considering the economic circumstances of the Project Countries, it would not make sense for these to spend great amounts of scarce financial resources on research and development for Carbon Pricing, particularly if existing systems, based on international best practice, have already been implemented elsewhere, and can serve as examples. Existing resources should, therefore, be focussed on resolving local concerns, considered more urgent than implementing Carbon Pricing, such as access to basic human rights and creating employment opportunities.

The domestic supply of carbon credits is an essential factor to stimulate the carbon market. As discussed above, the Project Countries have all submitted “fair” NDCs, many of which approve of carbon market approaches. However, international assistance from developed countries, including in the form of carbon finance, is a key requirement for achieving NDC objectives. In order to stimulate the domestic supply of carbon credits and to attract international carbon finance, it is important that the Project Countries make international sources of such finance aware of their, respective, mitigation potentials. In addition to the positive environmental aspects of emission reduction projects, the Project Countries should also explain the attendant socio-economic benefits in order to attract investment.

All of the Project Countries, except for Mauritius, have identified agriculture as their most emissions intensive sector, with enteric fermentation being the largest source of emissions. There is, consequently, significant potential in the agricultural sector to reduce emissions, especially enteric emissions. For an estimated 800 million resource-poor farmers, worldwide, ruminant production is a pathway out of poverty.³¹ This is especially so in the Project Countries, where farmers are generally unaware and unable to manage the emissions associated with livestock. With a view to the Project Countries securing funding from foreign investors, there are several climate change adaptation and mitigation recommendations, the implementation of which can lead to reductions in enteric emissions. Such funding can contribute towards achieving NDC objectives. Adaptation and mitigation actions in the agricultural sector can make significant impacts, particularly if they are implemented as part of national and regional policies. Figure 7, below, depicts the sources of enteric emissions.

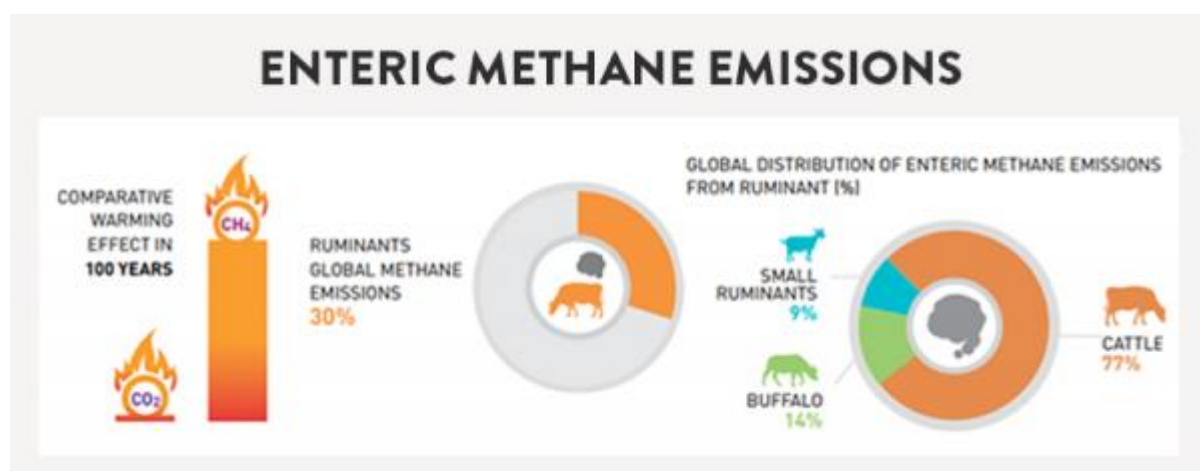


Figure 7: Enteric fermentation emissions

Adaptation measures in livestock systems involve production and management modifications, breeding strategies, institutional and policy changes, science and technology advances, and changing farmers’ perceptions and adaptive capacities. Research is needed to assess the scope and content of such measures, with a view to tailoring them, including based on locations and livestock systems.

A factor limiting the potential for successful change in the agricultural sector to succeed is the disposition and capability of farmers to recognize the wisdom of adaptation and mitigation measures. Because of this, it is important to collect information about farmers’ perceptions to mitigation and adaptation measures. By understanding farmers’ perceptions and including them in rural policy development, there is a greater chance of accomplishing food security and environmental conservation objectives.

There are also opportunities to generate emission reduction units from implementing adaptation measures associated with enteric emissions. There are currently three methodologies which have

³¹ Climate & Clean Air Coalition, “Enteric fermentation” <http://www.ccacoalition.org/en/activity/enteric-fermentation> (accessed on 2019-03-01)

been registered with the VCS (VERRA) which are aimed at reducing the emissions associated with livestock and manure.³² Implementing these methodologies, in the Project Countries, will likely be challenging *inter alia* due to limitations on the required financial resources and MRV capacity and knowledge. However, should financing be available for emissions reduction projects in the agricultural sector, these can provide carbon revenues which can be recycled into the economy, including for further project development. Such projects would also contribute to achieving NDC objectives.

Certain developed countries, that committed to taking the international lead in reducing emissions and mobilising carbon finance for developing countries, have submitted NDCs that do not support equity approaches; and, such countries have also left the Green Climate Fund poorly funded. Considering the data outlined above, developed countries' NDCs often imply a *status quo* in terms of global emissions shares, while most of the very ambitious NDCs are from smaller developing countries. To this point, developed countries need to reassess their commitments towards assisting developing countries in the fight against climate change. Securing better access to carbon finance, by the Project Countries, including fuller carbon market participation and greater stimulation of domestic carbon offset supply, is an essential precondition for the implementation of Carbon Pricing, in such countries. The Project Countries have, on numerous occasions, stated that in order to realise their NDCs, financial assistance would be required from developing nations.

A possible solution to the financial constraints, mentioned above, is the utilisation of Results-Based Funding, which is increasingly prevalent as in the disbursement of international climate finance. Results-Based Funding links payments to outcomes, by disbursing funding *ex-post* and upon the achievement of a set of pre-defined results. Results-Based Funding, therefore, provides strong incentives for the recipients of the funding to achieve the results. The recipients have autonomy in this regard, which can create ownership and encourage innovation. At the same time, the recipients face higher risks and transaction costs, and must have access to upfront capital to be able to respond to the incentives. The governments of the Project Countries all aim to achieve sustainable low-carbon development but lack the necessary financial resources. Results-Based Funding programmes using crediting mechanisms could, either foster or impede transformational change; and, in order to support such change, these programmes would require government endorsement, including to ensure country ownership and alignment with national priorities. Tapping into Results-Based Funding for mitigation projects that generate carbon offsets would allow the Project Countries to stimulate domestic offset supply, assuming an appropriate level of international demand.

Considering the above, and in order to facilitate the generation of emission reduction units, it is essential that the Project Countries develop structured MRV systems, currently absent in most of the countries. The following section highlights this issue.

³² VERRA Methodologies <https://verra.org/methodologies/> (accessed on 2019-03-01).

6. Monitoring, Reporting and Verification

The credible operation of any Carbon Pricing mechanism relies on accurate information and data on emissions. MRV is a key requirement to ensure transparency, essential for guaranteeing the integrity of any Carbon Pricing scheme, and for preventing fraud or manipulation. The requirements for MRV of Carbon Pricing mechanisms may vary depending on the mechanism selected, and on the implementing host country. MRV systems consist of:

- **Monitoring** of emission reductions/removals is typically an ongoing process. The monitoring methodologies are specified in the rules of the Carbon Pricing schemes. Monitoring should happen both on individual company or project, as well as on scheme level.
- Annual **reporting** is required in Carbon Pricing schemes to assist host countries to measure the performance of the Carbon Pricing mechanism against the specified policy goals or targets. The reporting must include all monitored data. Reporting should be aligned with international reporting requirements, such as the prescribed frameworks of the UNFCCC and the Paris Agreement.
- **Verification** provides transparency and trust that the reported information is real, credible and accurate. The frequency of **verifications** of monitored and reporting data may vary.

Clearly defined MRV rules for Carbon Pricing schemes assist participants monitor and report their emissions in a consistent and comparable manner. The Project Countries typically lack the resources to implement the required MRV structures, a factor hindering their development and implementation of Carbon Pricing.

However, given the requirements of the Paris Agreement, it is likely that the Project Countries will need to develop MRV systems, including to assess their national emissions inventories and to measure progress towards fulfilling their international climate change commitments. The UNFCCC has a set of MRV guidelines which may be used in the development of MRV systems, which should be simple and fit-for-purpose, considering each of the Project Country's national circumstances. Once a MRV system for the national inventory is implemented, this can be used as a basis for MRV required for Carbon Pricing systems.

Based upon the lack of MRV structures in the Project Countries, it is submitted that Carbon Pricing will be, neither practical nor feasible prior to development of the necessary MRV structures.

7. Legislative aspects of Carbon Pricing

The outcome of negotiations at COP24 has not provided clarity on the future of an international carbon market under the Paris Agreement. Parties were unable to agree upon the many issues that have arisen under Article 6 (Cooperative Approaches)³³, and the Paris Rulebook currently avoids dealing with the role of the market within the multilateral system. It is, therefore, difficult to predict how the international carbon market will evolve, and whether this evolution will follow the monolithic precedent of the CDM or whether the Article 6 focus on cooperative approaches will produce a fractured market (featuring a series of regional, rather than a single global, market), in which country Parties view Carbon Pricing in terms of their NDCs.³⁴

The uncertainties surrounding Article 6 of the Paris Agreement were highlighted as a hurdle to Carbon Pricing, in the Project Countries, during the interviews conducted with the respective country focal points, on earlier versions of this report and the country chapters.³⁵

One of the other international treaties which relate to the implementation of Carbon Pricing is the Vulnerable Twenty Declaration. Three Project Countries, namely, Ethiopia, Kenya and Rwanda participate in the Vulnerable Twenty (V20) Group of Ministers of Finance (of the Climate Vulnerable Forum, CVF), which is a dedicated cooperation initiative of economies systemically vulnerable to climate change. The CVF serves as a cooperative platform for actions by participating governments; and, the V20 works through dialogue, to tackle global climate change. The importance of the V20's role, for the purposes of the study and the implementation of Carbon Pricing in these Project Countries, was highlighted by various external reviewers of earlier versions of this report.

The V20 was established in an inaugural meeting of the V20 Ministers of Finance of the CVF, on 08 October 2015 at Lima, Peru, in conjunction with the 2015 Annual Meetings of the World Bank Group and the International Monetary Fund. The call to create the V20 originated from the CVF's Costa Rica Action Plan (2013-2015), as a major effort to strengthen participants' economic and financial responses to climate change. The notion behind the V20 as a meeting of Finance Ministers is for a high-level policy dialogue on climate change action, the promotion of climate resilient and low emissions development, with full competence for addressing economic and financial issues beyond the remit of any one organization. The V20 aims outlined in the context of the CVF include:

- promoting the mobilization of public and private climate finance;

³³ Three types of market and non-market mechanisms are anticipated under Article 6 of the Paris Agreement, namely: a cooperative mechanism for transfers between countries of internationally transferred mitigation options (ITMOs); a mechanism for allowing private sector parties to generate and sell emission reduction units; and, a non-market mechanism. For a discussion on the COP24 outcome, see generally Earth Negotiations Bulletin *Summary of the Katowice Climate Change Conference: 2 – 15 December 2018*, at <http://enb.iisd.org/climate/cop24/enb/>.

³⁴ Observers have noted that the trend towards a fractured market, apparent prior to COP24, will only be intensified by the lack of international guidance on the implementation of Article 6. See, for example: International Emissions Trading Association "COP24 fails to deliver on mandate for carbon market cooperation", at www.ieta.org.

³⁵ Interviews were conducted with: Gloria Namande, Uganda, UNDP Project Manager NDC support programme (14 March 2019); and, Anne Nyatichi Omambia, Kenya, Chief Compliance Officer/ Climate Change Coordinator National Environment Management Authority (2 April 2019).

- sharing and exchanging best practices on economic and financial aspects of climate action;
- developing new and improved approaches to climate finance; and,
- engaging in joint advocacy and other collective actions.

Of relevance for this study is the V20 approach to the following:

- *Fossil fuel subsidies*: the V20 has called for market-distorting fossil fuel production subsidies to be removed by no later than 2020; and, has urged the Global Twenty (G20) to set such a clear timeframe for fossil fuel subsidy elimination, which should be replaced, worldwide, without harm to those relying on them for their basic energy needs.
- *Carbon Pricing*: the V20 is committed to working towards putting in place “carbon pricing mechanisms”, by 2025; and, has called on the G20 to lead, with the V20, in a drive towards “ensuring all emissions are subjected to carbon pricing” (own emphasis).

While the intention behind the quoted/emphasised wording is generally ascertainable, in the context of the international carbon market, the relevant V20 documentation does not elaborate on their specific meaning, i.e., which are the carbon pricing mechanisms anticipated to be emplaced, by 2025; and, what is the V20’s plan for “ensuring all emissions are subjected to carbon pricing”? For clarity, the NDC analysis, for each of the Partner Countries that are also V20 members, indicates their high-level interest in participating in the carbon market, as it is currently understood, and in a manner that conforms with current market practice for developing countries, i.e., as host countries for the development of mitigation projects under the likes of the CDM. Consequently, it is submitted as likely that the V20’s intention does not stray very far from the expressions found in the Project Countries’, respect, NDCs. In fairness, though, the V20’s role is still evolving, and it is, therefore, likely that the V20’s carbon market-related initiatives will be important for any future carbon market/Carbon Pricing policy interventions, in these Project Countries.

Although these matters are relevant for any future that Carbon Pricing may enjoy in the Project Counties, it is important to understand that the immediate objectives of this study – namely to assess the potential feasibility and readiness for the implementation of Carbon Pricing (in such countries) are best served by considering *existing* climate change, fiscal, environmental and developmental policy and regulation, in each of the jurisdictions. In this light, the legal analysis seeks, primarily, to identify illustrative examples (rather than being an exhaustive assessment of national legal regimes) of mechanisms, housed in existing policy and regulation, that might be utilised/adapted as means to implement Carbon Pricing, in the Project Countries. The legal analysis encompasses the following:

- A consideration of existing regulatory frameworks – specifically limited to climate change, environmental and developmental law and policy (and certain fiscal instruments) - for the

purpose of ascertaining the extent to which such frameworks make any provision for the implementation of Carbon Pricing.

- A consideration of tax and financial management legislation with a view to determining whether such instruments provide for the possible implementation of a carbon tax or an emissions trading scheme, or a combination of the two; and/or, one or more environmental levies that might provide a basis for the design of a carbon pricing scheme.
- A consideration of relevant constitutional issues, and of those sectoral departments with jurisdiction (including overlapping jurisdiction) for the implementation of Carbon Pricing.

Flowing from the domestic focus of the individual country chapters, the observations, below, apply across all of the Project Countries. Note that, given inherent variations between them— historically, economically, politically, legislatively and environmentally – it is impossible to identify a set of common legal and policy trends. Finding differences in the legal regimes is unsurprising. Consider, for example, Uganda, a land-locked country in East Africa, with a British colonial history (the consequences of which history are clearly evident in the political and legal system); and, Mauritius, a small Indian Ocean island state, with a predominantly French colonial, historical, political and legal legacy. Given this differentiation, the following observations are an initial point of reference for understanding some of the broader intra-country legal and policy considerations, as these pertain to Carbon Pricing.

The point of departure is the focus of the study’s legal and policy analysis, namely to ascertain the extent to which the relevant domestic regimes make any provision for the implementation of Carbon Pricing. In this light, the most important baseline perspective that has emerged, thus far, is that none of the Project Countries are currently moving towards the deliberate implementation of in-country Carbon Pricing. Most, either in their NDCs or in national climate change policy, express specific interest in participating in a future international carbon market, although the understanding meaning of the term, across all of the Project Countries, is of the carbon market, as it currently exists, with no acknowledgement of potential market may evolve pursuant to discussions under Article 6 of the Paris Agreement. This last-mentioned factor is unsurprising because all of the NDCs were originally submitted to the UNFCCC as Intended NDCs, prior to COP21, the conference which gave rise to the Paris Agreement. Significantly, however, the Project Countries’ expectations for the future market, as expressed in the NDCs, are limited to traditional project-based approaches in terms of which countries remain the location for carbon offset-generating mitigation projects and continue as the recipients of carbon financing. It is notable that only one aspect of the Article 6 negotiations contemplates continuation of current market approaches.

The common baseline assumptions of the Project Countries appears to be, therefore, that:

- something akin to the CDM will persist into the future;
- demand for developing country project-based offsets will be revived and maintained; and,
- the Project Countries will be eligible locations for project implementation and recipients of carbon financing.

These are very important considerations, for the study, because the notion of Carbon Pricing as an in-country mechanism, either to support NDC implementation or to realise wider climate

change policy ambition, is simply absent from the Project Countries’ existing legal and policy instruments that have been analysed, to date. It is acknowledged that the study’s legal and policy analysis is intended, partly, as a creative exercise, i.e., one requiring a suitability-assessment of law and policy as a means to implement Carbon Pricing, rather than an analysis of existing regulatory provisioning for such implementation. Notwithstanding this factor, however, the Project Countries’ baseline assumption on the future carbon market is noted and, as a consequence of this assumption, it is submitted that uptake of Carbon Pricing will likely necessitate a significant shift in existing legal and policy.

On the abovementioned basis, it is important to note that the legal and policy analysis has revealed that the Project Countries exhibit wide variation in their existing potential to implement Carbon Pricing, ranging from (at one end of the spectrum) a complete absence of regulatory and policy potential; to the inclusion (in the relevant legal and policy regimes) of specific mechanisms that might be employed, for these purposes, in appropriate circumstances. The latter would include sufficient political will to implement Carbon Pricing and/or relevant economic drivers – on this last point, please refer to the caution expressed throughout this report on the need for comprehensive assessment of the economic impacts of Carbon Pricing, on the Project Countries.

The Project Countries have all implemented various climate change-related and/or green-growth policies - to differing degrees and in various forms - with two of the countries, namely Kenya and Uganda, having devised dedicated climate change legislation, respectively, the Climate Change Act (No. 11 of 2016) and the National Climate Change Bill, 2017.

The Kenyan statute is the closest that any of the Project Countries comes to framing carbon-specific legislation, *inter alia* by making specific (but incorrect) reference to the CDM as a source of climate change finance (the CDM is carbon finance mechanism) and establishing an in-country institutional and administrative infrastructure for the identification and implementation of CDM projects. This Act also exhibits some of the suitability that is the focus of the study’s legal and policy analysis, namely the inclusion of a series of mechanisms or means that have the potential to be adapted to support Carbon Pricing. For example, the Act provides for a very wide ambit of climate change-related authority, including various mitigation considerations and GHG emissions reduction measures (unspecified in the Act), that are anticipated to be formulated and prescribed for implementation. On their face, the provisions of the Act relating to GHG emissions reduction measures are sufficiently broadly framed, at least arguable, as to include Carbon Pricing measures, provided that such measures adhere to the overarching objectives of the Act. Caution must be exercised, however, in reading this potential in the Act as a viable conduit to the development of a Kenyan Carbon Pricing regime. Many other factors will need to be aligned for this objective to be achieved. The point is that, while the Act illustrates the bare potential that the study seeks to identify, it also exhibits none of the practical legal mechanisms that would be required for a Carbon Pricing regime. This is because the Act, in keeping with the thrust of Kenyan national climate change policy, does not contemplate Carbon Pricing as an element of such policy.

The Kenyan Act is a single example of the bare potential that the study seeks to identify. There are existing legal and policy mechanisms – different across the countries and therefore not trends

– the might be adapted as the means to introduce Carbon Pricing, in the specific countries. The MID Fund in Mauritius, for example, imposes a levy on petroleum products, Liquid Petroleum Gas (LPG) and coal and is the closest *existing* legal mechanism, across all of the Project Countries, that could efficiently and swiftly be adapted to implement Carbon Pricing. The MID Fund is, effectively, a carbon tax in all but name. Another example is the Ugandan Excise Duty Act which provides for a list of excisable goods and services. The potential for Carbon Pricing in this Act would see the amendment of the excisable list to require the payment of excise on carbon-related goods and services, the revenue from which might be applied to support the implementation of Uganda’s NDC.

The potential for Carbon Pricing couched within the provisions of Uganda’s newly-minted National Environment Act, 2019,³⁶ illustrates the point that the legal and policy analysis is, partly, a creative exercise. The National Environmental Management Authority (NEMA) administers the Act, section 69(2) of which requires (the modal verb used is ‘shall’) a lead agency (a government department with jurisdiction over an aspect of the environment), in consultation with NEMA, to take measures and issue guidelines to address the impacts of climate change, including for mitigation and adaptation. Given that section 69(2) is both prescriptive and expansive, it can be argued that the lead agency must take a broad range of measures, which could include Carbon Pricing.

Developmental and environmental policy in some of the Project Countries anticipates the implementation of financial and other incentives to support initiatives that are relevant, but not directly connected, to the study, e.g., support for renewable energy in Rwanda and Mauritius. In such instances, the potential exhibited is for such initiatives to be adapted as means to support broader NDC implementation – on the understanding that support for renewable energy implementation already addresses elements of the NDCs. The extent to which such incentives have been developed or implemented, across the Project Countries, is difficult to determine. For example, while the Rwandan Green Growth Strategy mentions the need for fiscal and tax reform to support renewable energy projects, it is unclear whether such reforms have been implemented. Consequently, their utility as means to support NDC implementation is currently questionable.

The existence of environmental incentives, levies and taxes, in the legal and policy regimes of certain of the Project Countries, demonstrates the potential to adapt such mechanisms to support Carbon Pricing. While the design and implementation of Carbon Pricing is, in certain instances, theoretically possible based upon existing law and policy, the project team is of the view that caution must be exercised, in this regard, particularly considering the economic circumstances of the Project Countries (as described elsewhere in this report).

³⁶ The National Environment Act, 2019, Supplement No. 2 to The Ugandan Gazette No. 10, Volume CXII, dated 7th March 2019.

8. Regional trading

The possibility of implementing a regional Carbon Pricing mechanism would be difficult, given the differing legal frameworks within each of the Project Countries. Aligning the various legal frameworks to establish a regional Carbon Pricing mechanism is substantially more complicated, in comparison with a mechanism such as an ETS. However, there are certain existing institutions which may make the design and introduction of such a carbon pricing mechanism easier. One such organisation is the East African Development Community (EAC).

The EAC is a regional intergovernmental organisation of six Partner States, three of which are also Project Countries, namely, Kenya, Rwanda and Uganda. Certain of the foundational requirements, for EAC Partner States, may curtail the level to which these three Project Countries might implement certain Carbon Pricing mechanisms. For example, the *Treaty for the Establishment of the East African Community* provides *inter alia* that the Partner States shall:

- take measures to harmonise and rationalise investment incentives including those relating to taxation of industries, particularly those that use local materials and labour, with a view to promoting the Community as a single investment area, and to avoid double-taxation;³⁷ and,
- adopt policy measures, in accordance with an agreed macro-economic policy framework, to harmonise their tax policies with a view to removing tax distortions in order to bring about a more efficient allocation of resources within the Community.³⁸

The effect of the abovementioned obligations towards harmonisation and rationalisation might be to limit the extent to which these Project Countries might, individually, frame Carbon Pricing in the form of carbon taxation, and this issue would need to be considered, if this sort of intervention becomes part of their national climate change responses

However, the technical circumstances within the Project Countries might make it possible to design a regional carbon pricing mechanism, should the legal frameworks be aligned to allow for such a mechanism to be implemented. Mauritius is the exception to expressed intention, in all of the other NDCs, of reducing emissions by implementing forestry and agricultural projects such as smart agriculture practices, afforestation and reforestation projects and improved forest management practices. Considering that these projects all relate to the preservation of land and tree species, the potential to implement a regional Carbon Pricing mechanism based on the exploitation of these type of projects would be the most likely form.

The land use sector represents almost 25% of total global emissions, with considerable potential for emissions reduction activities to take place in the sector. Improved land use and management, such as low emissions agriculture, agro-forestry and ecosystem conservation and restoration could, under certain circumstances, close the remaining emissions gap by up to 25%. These climate-smart land management practices nearly always come with adaptation co-benefits. This is especially so in developing countries where communities are the most susceptible to the effects of climate

³⁷ *Treaty for the Establishment of the East African Community* Article 80(1)(f).

³⁸ *Ibid.*, Article 80(1)(f).

change. Increasing the efficient use of land resources and inputs could also ensure greater food and water security, and build community resilience while, at the same time, sequestering carbon.

Development of a regional Carbon Pricing mechanism, e.g., a regional ETS (cap-and-trade), has support in international treaty law. Article 6.2 of the Paris Agreement establishes the potential of trading emission reduction credits across borders, between nations or jurisdictions. This can encourage the linking of Carbon Pricing approaches across countries and jurisdictions resulting in the reduction of emissions by a magnitude greater than what is possible solely domestically or nationally. Furthermore, a Carbon Pricing mechanism linked to reducing emissions in the agricultural and forestry sectors can also be reinforced when considering the fact that all of the Project Countries have all ratified the United Nations Convention to Combat Desertification (UNCCD).³⁹ From its inception, the UNCCD has been engaged in enhancing the adaptive capacities of dryland populations to highly variable environmental conditions. This provides the ideal platform to further develop the forestry and smart agricultural practices to reduce emissions.

Some sectors, regions and social groups are more vulnerable to climate change than others due to prevailing ecological and social contexts. Therefore, adaptation measures form a continuum, ranging from simple vulnerability reduction measures, to long-term sustainable adaptation measures that are required in the poorest, and therefore most vulnerable regions such as the project countries covered in these studies.

There have also been developments with regards to formulating a regional plan to combat climate change. The East African Community Climate Change Master Plan (Plan)⁴⁰ is an outcome of a consultative and participatory process for a unified regional approach to combat climate change. The Plan was developed by EAC partner States (the Republic of Burundi, Republic of Kenya, Republic of Rwanda, United Republic of Tanzania, and the republic of Uganda). Although only two of the Project Countries are included, the Plan shows that it is possible to implement regional instruments aimed at addressing climate change. The Plan note the vulnerability of the following regional sectors:

- Agriculture;
- Water Security
- Energy Security
- Ecosystem Services and Biodiversity
- Tourism
- Infrastructure
- Human Health, sanitation and Settlements

³⁹ The new UNCCD 2018-2030 Strategic Framework is the most comprehensive global commitment to achieve Land Degradation Neutrality (LDN) in order to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations to build a future that avoids, minimizes, and reverses desertification/land degradation and mitigates the effects of drought - <https://www.unccd.int/convention/about-convention>

⁴⁰ East African Community climate Change Master Plan 2011-2031 (September 2011) http://meteorwanda.gov.rw/fileadmin/Template/Policies/EAC_Climate_Change_Master_Plan.pdf (accessed on 2018-11-29).

- Trade and Industry
- Education, Science and Technology

East African Community Climate Change Master Plan recommends the following among a list of mitigation interventions in relation to the physical infrastructure sector: creating awareness on the importance of sustainable lifestyles such as car-pooling, and possibly using market incentives/disincentives such as punitive taxes and carbon tax (charges) to enforce such measures. It is worth noting that the abovementioned sectors correspond closely with the sectors set out the Project Countries' NDCs. As discussed above, the agricultural and forestry sectors pose the most significant potential for development of Carbon Pricing in the region. Considering the above, the project team is of the view that regional Carbon Pricing, in the form of an ETS (cap-and-trade), is possible over the long term, notwithstanding serious challenges relating to design and implementation. In all likelihood, it would be necessary to build such as system around existing international treaty law (still evolving in the case of Article 6 of the Paris Agreement), and the NDC objectives of the Project Countries.

The interview process with the respective country focal points also revealed that any regional Carbon Pricing mechanism would benefit from utilising existing institutional structures such as the East African Business Council (EABC) and the East African Centre of Excellence for Renewable Energy and Efficiency (EACREE).⁴¹ The EABC is the regional apex body of private sector association EAC East African Community integration process through trade and investment. The EACREE's goal is to facilitate the creation of an enabling environment for renewable energy and energy efficiency markets and investments in the EAC. Utilising such institutions will enable governments to include private sector participation in the development of a regional Carbon Pricing mechanism. It was also mentioned during the interview process that, to succeed, such a mechanism would need to be linked with national economic policies and clearly outline the anticipated benefits of implementation.

⁴¹ Interview Gloria Namande, Uganda, UNDP Project Manager NDC support programme (14 March 2019).

9. Overarching recommendations and Conclusion

This study aimed to assess the potential of implementing Carbon Pricing in the Project Countries. The project team considered technical and legal aspects related to the possible implementation of Carbon Pricing on both domestic regional levels. Following the technical and legal analyses, the following overarching observations are made:

Technical remarks

- The project team considered both explicit, as well as implicit Carbon Pricing mechanisms. Although the Project Countries' reliance on hydro- power makes the implementation of explicit Carbon Pricing easier, the possible impact of implicit Carbon Pricing and climatic disasters such as droughts on explicit Carbon Pricing must be considered.
- The project team is of the view that the participation, by the Project Countries, in the international carbon market is essential for their successful implementation of Carbon Pricing. Supply and demand of carbon offsets within the carbon market is a critical factors, in this regard. High levels of emissions create a more stable domestic market for carbon credits in something like an ETS (cap-and-trade). Considering the Project Countries' low levels of emissions, it is the project team's twofold view is that: domestic demand for carbon credits in the Project Countries would be insufficient to support ETS (cap-and-trade); and, domestic supply is an essential factor for successful implementation of any Carbon Pricing mechanism. In this regard, existing international mechanisms such Results-Based-Funding should be utilised to attract foreign investment and increase the international demand for emissions reduction units generated in the project countries.
- Functioning MRV systems are not present in any of the Project Countries; and, the project team is of the view that these will require development, including to support fulfilment of the Project Countries' international commitments, regardless of whether one-or-other of them proceed to implement Carbon Pricing. The UNFCCC has a set of MRV guidelines which may be used to guide the development of such systems.
- Within the boundaries of international treaty law, such as Article 6.2 of the Paris Agreement as well as the UNCCD, the possibility exists to create a regional ETS (cap-and-trade), based upon forestry and smart agricultural practices to reduce emissions. This, however, will only be possible should the domestic legal frameworks be aligned to allow for the implementation of such a mechanism.

Legal remarks

- None of the Project Countries are currently moving towards the deliberate implementation of in-country Carbon Pricing. Most of the Project Countries express interest in participating in a future international carbon market, although this is

understood to be the market as it currently exists and there is little acknowledgement of how the market may evolve in terms of Article 6 of the Paris Agreement.

- Notwithstanding the above, the legal analysis has revealed wide variation in the potential of the Project Countries to implement Carbon Pricing, ranging from (at one end of the spectrum) a complete absence of regulatory and policy potential; to inclusion (in the relevant national legal and policy regime) of specific mechanisms that might be employed, for these purposes, in appropriate circumstances, e.g., sufficient political will and/or relevant economic drivers.
- The legal and policy differentiation, across Project Countries, poses significant challenges to the implementation of Carbon Pricing, on a regional level. For example, the countries all have unique tax frameworks and differing climate change designations within the respective governance structures. Aligning the legal frameworks to implement regional Carbon Pricing will, therefore, be challenging.
- Notwithstanding questions around utility of existing mechanisms, the presence of environmental incentives, levies and taxes, in certain of the countries, demonstrates that the potential to adapt such mechanisms as means to support Carbon Pricing. Consequently, while the design of Carbon Pricing policies is, in certain instances, theoretically possible based upon existing environmental levies and within the context of existing climate change policy, the project team is of the view that the eventual implementation of such a mechanism must be cautiously considered, including in light of the economic circumstances of the Project Countries.

Concluding remarks

Implicit forms of Carbon Pricing are the most feasible for the Project Countries, all of which acknowledge the important of the carbon financing and the market in their NDCs. Given the Project Countries' low emissions and the delay in elaborating the rules for Article 6 of the Paris Agreement, the introduction of explicit forms of Carbon Pricing is currently difficult in the project countries. However, on closer reflection and while accepting a broader definition of Carbon Pricing, it is clear that there are a range of active measures and instruments that implicitly price carbon, in the Project Countries, such as Ethiopia's tax on older vehicles. Many of these are in the transport, energy and industry sector, and take the form of duty taxes, fuel taxes, subsidies, feed-in tariffs and other green incentives.

Introducing explicit forms of Carbon Pricing in the Project Counties would also face challenges, however, there is some future potential for such initiatives. Actions such as the labelling of energy efficient goods and services, green building standards and the removal of fossil fuel subsidies can send carbon pricing signals and lay a foundation for the development of explicit Carbon Pricing. Given that some of the Project Countries are implementing measures to increase energy efficiency and renewable energy, there is significant scope to explore how Carbon Pricing can support and expedite such efforts. Such exploration would require good data sets and sound MRV systems, which none of the Project Counties currently have.

Although this Synthesis Report provides an overarching view of the study, it is important to note that the design of any domestic Carbon Pricing mechanism would need to be customized in order to fit into the specific context of the host country. The particular circumstances of each of the Project Countries, along with the legal and policy analysis, is provided in the respective country chapters. Capacity to implement Carbon Pricing is an additional concern, linked to the country circumstances as these remain a challenge in many African countries, not only the Project Countries. Building such capacities will be crucial to ensuring the success of Carbon Pricing that goes beyond simple offsetting. In this regard, training and engagement with an appropriate range of stakeholders is essential for successful implementation, especially of explicit Carbon Pricing.

A consideration for future implementation of explicit Carbon Pricing is the potential to support such implementation through the recycling of revenues generated by existing implicit Carbon Pricing. Depending on national priorities, those resources can either be directed to the national treasury or ear-marked for specific spending purposes such as further advancing a country's climate change agenda. Furthermore, well managed revenues could improve public and private sector support of Carbon Pricing, and as such there will be needing to further engage a multitude of stakeholders with emphasis on entities that are mandated to shape fiscal policy, e.g., Ministries of Finance and revenue authorities in order to secure more buy-in from the Project Countries.

Linked to the recycling of revenues as outlined above, the interview process also enabled the project team to establish that there exists the need to consider the effective governance of Carbon Pricing instruments. This would ensure that carbon revenues are recycled throughout the economy, including so that the implementation of Carbon Pricing does not disproportionality impact on poorer parts of the society.

Lastly, regional collaboration through already existing political, economic- and financial alliances can become promising vehicles to establish and harmonize Carbon Pricing policies, reduce adverse effects and boost joint efforts to build up regional centres that will provide support in the development of Carbon Pricing initiatives. There may be more potential to consider pricing instruments at the regional level, especially as related to the integration of energy systems, which can also help to address efficiency and competitiveness issues. The African continent already has some well-established regional institutions which can help to facilitate such cross-border cooperation on fiscal policies.

Based upon the study, the following roadmap has been developed in order to map the process which would need to be followed in order to implement carbon pricing in the Project Countries in the Long Term:

IMPLEMENTING CARBON PRICING IN EASTERN AND SOUTHERN AFRICA



PRINCIPLES TO CONSIDER:

- ✔ Economic circumstances of countries
- ✔ Emissions profile of countries
- ✔ Participation in Carbon markets
- ✔ International best practice
- ✔ Regional Application

