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Leveraging the African Continental Free Trade Area to unlock the full potential of carbon markets in Africa

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A Mini-Thesis Proposal submitted in partial fulfilment for the degree LLM in International Trade, Business and Investment Law in the Faculty of Law of the University of the Western Cape.

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DECLARATION

I, **Gil Musa Sinjoki**, declare that the mini-thesis titled '**Leveraging the African Continental Free Trade Area to unlock the full potential of carbon markets in Africa**' is my original work and that all other works used or quoted have been indicated and acknowledged as complete references. This work has not been submitted to any university, college or other institution of learning for any academic or other awards.

Gil Musa Sinjoki

This mini-thesis declaration has been submitted for examination with my approval as Supervisor.

Prof Riekie Wandrag

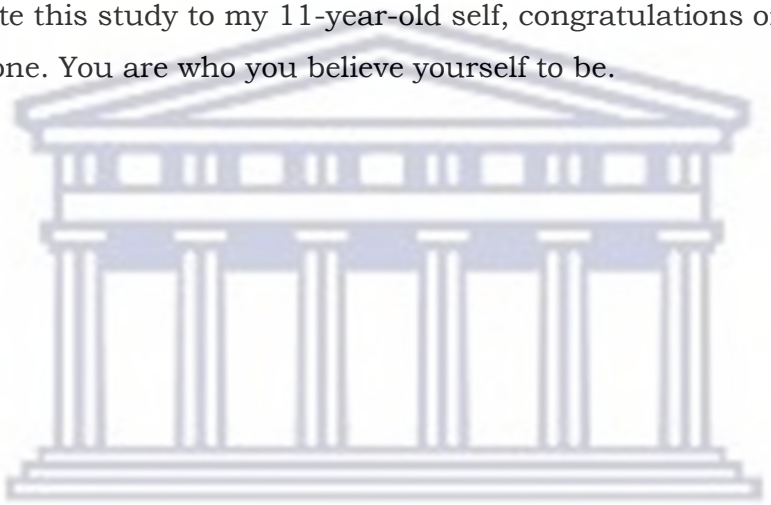
22 November, 2023

DEDICATION

I dedicate this thesis to my late grandfather, Cephas C. Chakunda, the man who inspires me to pursue education and relentlessly chase after my dreams. I continue to carry you in my heart .

I also dedicate this study to the African States who, under the African Continental Free Trade Area, have made astounding progress in their quest to achieve regional integration and development on the continent. Remembering the words of Nelson Mandela who said “It always seems impossible until it's done.”

Lastly, I dedicate this study to my 11-year-old self, congratulations on achieving yet another milestone. You are who you believe yourself to be.



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KEY WORDS

African Continental Free Trade Agreement (AfCFTA), Carbon Markets, Climate Change, Climate Finance, Common Market, Emissions Trading, International Trade, Investment, Just Energy Transition, Regional Integration, Regulatory Framework, Sustainable Development.

ACRONYMS AND ABBREVIATIONS

ACMI	African Carbon Markets Initiative
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AU	African Union
CDM	Clean Development Mechanism
COP	UN Climate Change Conference
COP	United Nations Climate Change Conference or Conference of the Parties of the UNFCCC
DRC	Democratic Republic of Congo
EEA	European Economic Area
ESG	Environment, Social and Governance
EU ETS	European Union Emissions Trading System
EU	European Union
FDI	Foreign Direct Investment
FONERWA	The Rwanda Green Fund
GATT	General Agreement on Tariffs and Trade
GHG	Green House Gases
GST	Goods and Sales Tax
HS Code	Harmonised System Code
ICC	International Chamber of Commerce
IEA	International Energy Agency
IOSCO	International Organization of Securities Commissions
IUCN	International Union for the Conservation of Nature
LSE	London Stock Exchange
NDC	Nationally Determined Contributions

NDRC	National Development and Reform Commission
NER 300	New Entrants Reserve 300
OECD	Organisation for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
REDD+	Reducing emissions from deforestation and forest degradation in developing countries
RGGI	Regional Greenhouse Gas Initiative
RGGI	Regional Greenhouse Gas Initiative
SDG	Sustainable Development Goals
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNDP	United Nations Development Program
UNECA	UN Economic Commission for Africa
UNFCC	United Nations Framework Convention on Climate Change
USD	United States Dollars
VCS	Verified Carbon Standard
WCI	Western Climate Initiative
WEF	World Economic Forum
WTO	World Trade Organization

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ABSTRACT

Plagued by the universal challenge of climate change, African states are faced with the dire issue of sourcing climate finance from sources other than government coffers and very limited donor funds. With the advent of the African Continental Free Trade Area (AfCFTA), the region finds itself in a unique position. It possesses the natural resources to scale up voluntary carbon markets, a multi-million dollar industry. Previously, where the structures did not exist to act as one common market, effecting a greater impact on the industry, the AfCFTA could not have come at a more opportune time. After critically examining the current status of voluntary carbon markets, their potential, the study established that there remain gaps obstructing achieving that potential.

The main challenge is the fragmented nature of carbon market regulation among African states. This has resulted in uncertainty and lack of credibility of the very viable carbon credits. An efficient solution to this challenge would be to formalize the regulation of carbon markets, which would unify the market on the continent. Moreover, this would tackle issues of lack of credibility and clarity which over the course of time have seen investors reluctant to engage in what promises to be a booming sector.

The efforts to formulate a framework, a seemingly tall feat, benefit from the existence of various fully functional carbon markets. The advantage is the ability to critically examine the established carbon trading schemes with an aim to learn from their mistakes and emulate their success, cognisant of the fact that a one size fits all approach would be detrimental. There are various specific market conditions and forces that would have to be taken into consideration such as legal, cultural, historical and in some cases political contexts.

This study critically examined the intersection between the law and carbon markets, to establish that there is an urgent and immediate need for the regulation of carbon markets. Having uncovered this, it proceeds to explore the different approaches taken by successful carbon trading regimes, comparing and contrasting the regional bloc approach by the European Union and a national approach adopted by China. The aim is to extract lessons, and beyond that, determine what course of action/approach would best suit the African States. Assessing the salient provisions of the AfCFTA the study seeks to establish how best to leverage the structures of the

AfCFTA to scale up carbon markets and mitigate their current challenges and weaknesses. The result is recommendations for practical steps that can be taken in order to realize the full potential of carbon markets in Africa, in order to utilize them as a major tool to address the climate finance gap and challenges.

CHAPTER 1 - INTRODUCTION TO CARBON MARKETS

1.1 Introduction And Background

Paris Alignment[1]; that is the goal. Over the last decade, it has become increasingly evident that humanity and its environment are in danger of falling victim to the effects of climate change if care is not taken. In efforts to diagnose the situation, research has identified carbon as the single most destructive element.[2] Naturally, the solution to mitigate the harm to the environment, is to lower the amount of carbon emitted into the atmosphere. As a result, environment related vocabulary has evolved to include concepts such as decarbonisation and, more important to the discussions in this study, carbon trading which is also commonly referred to as trading carbon. Decarbonisation entails the process of stopping or reducing carbon gases.[3] Trading carbon is one the reactive methods of dealing with the danger of climate change.[4] Carbon trading also known as emissions trading on platforms known as carbon markets as set out in Article 17 of the Kyoto Protocol, allows countries that have emission units to spare - emissions permitted them but not "used" - to sell this excess capacity to countries that are over their targets."[5] The premise of this trade system has its roots in the Protocol to the United Nations Framework Convention on Climate

[1] This refers to alignment with the Paris Agreement, a legally binding international treaty on climate change. It was adopted by 196 Parties at the United Nations (UN) Climate Change Conference (COP21) in Paris, France, on 12 December 2015. It entered into force on 4 November 2016. Its overarching goal is to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels."

[2] UN Climate Action, Causes and effects of Climate Change (Accessed 14 May, 2023) available at https://www.un.org/en/climatechange/science/causes-effects-climate-change#
This sentiment is further evidenced by how carbon dioxide is singled (out among all greenhouse gases) in the Kyoto Protocol (Article 3) which introduces and encourages measures to lower carbon dioxide levels in the atmosphere

[3] https://dictionary.cambridge.org/dictionary/english/decarbonization#:~:text=the%20process%20of%20stopping%20or%20reducing%20carbon%20gases Cambridge Dictionary Accessed 28 April 2023

[4] Lederer, Markus. "Carbon Trading: Who Gets What, When, and How?" *Global environmental politics* (2017): 134–140

[5] https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading

Change (Kyoto Protocol)[6] mechanisms, which "have created a unique international framework for market based regulation."[7]

1.1.1 Demystifying Carbon Markets

Carbon markets can be defined as, a system through which carbon credits are bought and sold. What then is a carbon credit? A tradable carbon credit equals one tonne of carbon dioxide, or the equivalent amount of a different greenhouse gas reduced, sequestered or avoided.[8] A carbon market is divided into two: compliance; and voluntary. For the purposes of this study, the focus will be on voluntary markets as compliance markets much like their name suggests, are obligatory and therefore somewhat regulated by the provisions of the Kyoto Protocol. The United Nations Development Programme notes that "the current supply of voluntary carbon credits comes mostly from private entities that develop carbon projects, or governments that develop programs certified by carbon standards that generate emission reductions and/or removals."[9] Emissions reduction involves regulators setting thresholds for the production of carbon. When an entity reduces its emissions and produces below their regulated carbon allowances, they trade the difference under what is known as a cap-and-trade regime. Under the cap and trade scheme, entities under the ambit of the scheme have prescribe carbon emittance allowances known as the cap. The prescribed allowance represents a singular tonne of greenhouse gas. In the event that the regulated entities exceed the cap, they are liable to pay for every amount of greenhouse gas emitted beyond the cap.[10]

The voluntary nature of the market is a double-edged sword as it also becomes the source of many of its challenges. There are no imposed obligations to reduce emissions therefore by default no legal standard to which the transactions are held.

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[6] The Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol), adopted at the Third Session of the Conference of the Parties (COP3) in Kyoto, Japan, on 11 December 1997.

[7] Sorrell S, Sijm J. "Carbon Trading in the Policy Mix." *Oxford Review of Economic Policy* (2003).

[8] UNDP What are carbon markets and why are they important? https://climatepromise.undp.org/news-and-stories/what-are-carbon-markets-and-why-are-they-important#:~ accessed 30 April 2023

[9] https://climatepromise.undp.org/news-and-stories/what-are-carbon-markets-and-why-are-they-important# Accessed 30 April 2023

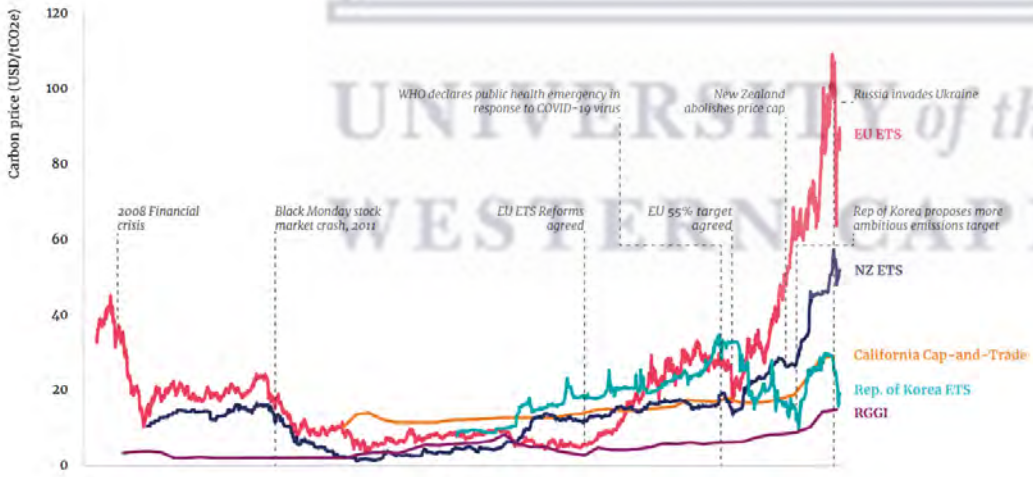
[10] United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) Low Carbon Green Growth Roadmap for Asia and the Pacific https://www.unescap.org/sites/default/files/5.%20FS-Cap-and-trade-scheme.pdf – accessed 14 March 2024

Bayon, Hawn and Hamilton argue that "the fragmented and opaque nature of the voluntary market can, in a large part, be attributed to the fact that it is partially composed of deals that are negotiated on a case by case basis…"[11] While *prima facie*, this presents positively as it would mean the market dictates the terms of the trade, this is actually not the case. In fact, the markets are then saturated with innumerate transactions, each dictating its own rules and trading different "products" that are not held to any specific standard. The result? Mayhem and one could even go as far as to say exploitation of parties and no consumer protection. The lack of regulation translates to a lack of certainty, stability and credibility to the system, and if there is one deterrent to investment, it is this.[12][13] Owing to the lack of credibility, the voluntary markets present what is perhaps any environmentalist's nightmare; greenwashing.[14] Although there is no standard definition for greenwashing,[15] according to TerraChoice, greenwashing can be defined as "the act of misleading consumers regarding the environmental practices of a company or the environmental performance and positive communication about environmental performance."[16] Basing on this definition, there is room for the consumers in the carbon markets to be misled in terms of the quality and characteristics of their product. Under contract law, this invokes the principle of reliance. Already there are indicators of how pivotal the space law would take up in carbon markets is. While a case can be made for the need for the development of a legal framework within the voluntary carbon market space, it is also evident that said framework would have to be agile and flexible enough not to stifle innovation in the of the different products on offer.[17]

The development of regulatory frameworks for carbon markets has in the last two decades taken different approaches. While countries such as China are focusing on

[11] Bayon R., Hawn A, & Hamilton K" Voluntary carbon markets: an international business guide to what they are and how they work" Routledge. (2012) 12
[12] Bui B, de Villiers C, Business strategies and management accounting in response to climate change risk exposure and regulatory uncertainty, The British Accounting Review, Volume 49, Issue 1 (2017) Page 4-24
[13] https://energychamber.org/africa-must-embrace-carbon-trading/ African Energy Chamber Africa Must Embrace Carbon Trading Accesses 15 May, 2023
[14] The term Greenwashing was coined first in 1986, by an environmentalist Jay Westervelt
[15] De Freitas Nett S. V., Sobral M. F. F., Ribeiro, A. R. B., & Soares, G. R. D. L. "Concepts and forms of greenwashing: A systematic review. Environmental Sciences Europe," (2020) 1-12.
[16] http://sinsofgreenwashing.org/findings/the-seven-sins/ Accessed 30 April 2023
[17] United Kingdom Government Low Carbon Construction Innovation and Growth Team Final Report 37

their national mechanisms,[18] carbon trading has since made its debut into the regional cooperation arena. The European Union (EU) has seen merit in acting as a regional bloc in the carbon markets and has set a precedent yet to be followed by many, potentially by Africa. According to the 2022 World Bank Report, the largest carbon market is that of China, duly fitting as they are the world's largest emitter of Green House Gases (GHG).[19] The Report accords the EU the coveted status of "largest carbon market by traded value."[20] The EU Emissions Trading Scheme also recorded the highest price hike within the carbon markets between January 2021 and January 2022, the monthly average allowance price for the EU-ETS more than doubled, increasing from US$46 per ton to US$95 per ton (in inflation adjusted 2022 U.S. dollar terms).[21] Average global prices are reported to have increased by 40% in 2021 but momentum fluctuated all through 2022.[22] The fluctuation can partly be attributed to the nebulous global energy markets in 2022 especially following the Russian invasion of Ukraine. Estimates place the value of the revenue from carbon markets for the year 2022 at US$851 billion.[23] With a pot price of this magnitude, Africa can ill afford not to become a player in the carbon markets. Trends also predict that there is likely to be an increase in the revenue of the carbon markets, particularly because countries are under pressure to meet Paris Agreement



Graph showing Price evolution in select ETSs from 2008 to 2021. EU ETS is the only regional ETS and has seen a huge margin price increases recently. Source: World Bank. State and Trends of Carbon Pricing 2022. State and Trends of Carbon Pricing; Page 21

[18] Ba, F., Thiers, P. R., & Liu, Y. "The evolution of China's emission trading mechanisms: From international offset market to domestic Emission Trading Scheme. Environment and Planning C: Politics and Space". (2018) 1214–1233
[19] Climate Watch Historical GHG Emissions. Washington, DC: World Resources Institute. (2022) https://www.climatewatchdata.org/ghg-emissions Accessed April 2030
[20] "World Bank State and Trends of Carbon Pricing" (2022) 18
[21] US Energy Information Administration December 2022 Report https://www.eia.gov/todayinenergy/detail.php?id=55000 accessed 30 April 2023
[22] Source: Reuters https://www.reuters.com/business/energy/global-carbon-markets-value-surged-record-851-bln-last-year-refinitiv-2022-01-31/ Accessed 30 April 2023
[23] Source: Reuters https://www.reuters.com/business/energy/global-carbon-markets-value-surged-record-851-bln-last-year-refinitiv-2022-01-31/ Accessed 30 April 2023

1.1.2 Importance of Carbon Markets to Africa

The continent of Africa as a whole and individual states have come to appreciate the importance of carbon markets. This is evidenced by all African countries (with the exception of Libya) being signatories to the Paris Agreement. Increased participation in COP[24] Conferences as well as commitments to Nationally Determined Contributions (NDCs)[25] by African countries shows their willingness to contribute to the fight against climate change. Moreover, in launching the African Carbon Markets Initiative (ACMI)[26], the continent has taken a step further in acknowledgement of the importance of carbon markets and the role they play in decarbonisation. Launched in collaboration with a number of Agencies such as the UN Economic Commission for Africa (UNECA), the ACMIhas set ambitious targets for the African voluntary carbon markets. Of note is the ACMI's acquiescence that the carbon markets have the potential to "unlock billions for the climate finance needs of African economies while expanding energy access, creating jobs, protecting biodiversity, and driving climate action."[27] In ACMI'sRoad Map Report,[28] the recurring theme is highlighting the role that voluntary markets play in the commercialisation of Africa's assets as well as its journey to a just energy transition.

Precisely how Africa would benefit from carbon markets, is best understood by assessing its current position. Africa has a large natural capital and is cited as one of the "world's most biodiverse regions…, hosting a quarter of global biodiversity…"[29]

[24] United Nations Climate Change Conference

[25] Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of its long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs. Accessed 30 April 2023

[26] Africa Carbon Markets Initiative https://climatechampions.unfccc.int/africa-carbon-markets-initiative Accessed 30 April 2023. Launched at COP 27, the ACMI is as its name suggests an initiative, steered by a committee of CEO's, carbon market experts and African leaders. Its core mandate is to scale up Africa's participation in the voluntary carbon markets industry. It's inaugural action has been to publish a Roadmap which besides laying out the current status of voluntary carbon markets on the continent, identifies 13 programs that can be pursued to scale up activity in the voluntary carbon markets

[27] Africa Carbon Markets Initiative https://climatechampions.unfccc.int/africa-carbon-markets-initiative Accessed 30 April 2023

[28] Africa Carbon Markets Initiative: "Roadmap Report November 2022 Harnessing carbon markets for Africa"

[29] UN report The State of Biodiversity in Africa: A Mid-term Review of Progress towards the Aichi Biodiversity Targets (2016)

The carbon markets present an opportunity to place value on and commercialise this asset with countries such as Kenya and Madagascar are already pioneering such innovative efforts. The Green Belt Movement Project in Kenya saw the re-afforestation of indigenous trees in efforts to sequester carbon, while the Andasibe-Mantadia Biodiversity Corridor Project in Madagascar generates credits in a preventative manner as it involves an avoided deforestation factor.[30] These projects have a three tiered impact as they directly impact local communities by preserving vital eco-systems, providing employment to local communities, not forgetting generating revenues through the sale of carbon credits. [3132]

African States in their individual capacities have already made commitments under the Paris Agreement; however, it is no secret that the developing African region cannot solely rely on available climate finance to meet these obligations. The World Economic Forum (WEF) estimates that Africa will need totals US$2.8 trillion to finance NDCs between now and 2030.[33] "Collectively, they represent more than 93% of Africa's GDP."[34] Naturally, African governments have committed public funds towards NDCs initiative, this is estimated to total US$264 billion, an underwhelming approximate 10% of the total need.[35] This leaves a financing vacuum for Africa to achieve its set targets towards a just energy transition, coupled with already alarming levels of energy poverty. Voluntary global markets could play an active and crucial role in substantially narrowing this gap in a time conscious manner. Once again, the multi-dimensional impact model is seen as challenges in energy poverty will be addressed, revenues will be generated to finance achievement of NDC targets, creation of jobs within the voluntary carbon markets[36] space as well as reducing

[30] Bryan, E., Akpalu, W., Yesuf, M., & Ringler, C. "Global carbon markets: are there opportunities for Sub-Saharan Africa?" (2008).
[31] Women Aid International "The Green Belt Movement, Reforestation in Kenya" http://www.womenaid.org/press/info/development/greenbeltproject.html Accessed 14 May 2023
[32] Critical Ecosystem Partnership Fund Andasibe-Mantadia Biodiversity Corridor Project Final Report, Safeguard Policy Assessment Page 5
[33] World Economic Forum, How Leaders Close Climate Finance Gap https://www.weforum.org/agenda/2022/11/heres-how-leaders-close-climate-finance-gap accessed30 April 2023
[34] Climate Policy Initiative; Landscape of Climate Finance in Africa (2022)
[35] Based on latest NDCs submission by 53 African countries. It is important to acknowledge that adaptation needs are likely to be underestimated due to a lack of data and technical expertise to estimate the true cost of adaptation measures Climate Policy Initiative 2022
[36] World Economic Forum" The Voluntary Carbon Market: Climate Finance at an Inflection Point Briefing Paper" January (2023) 5

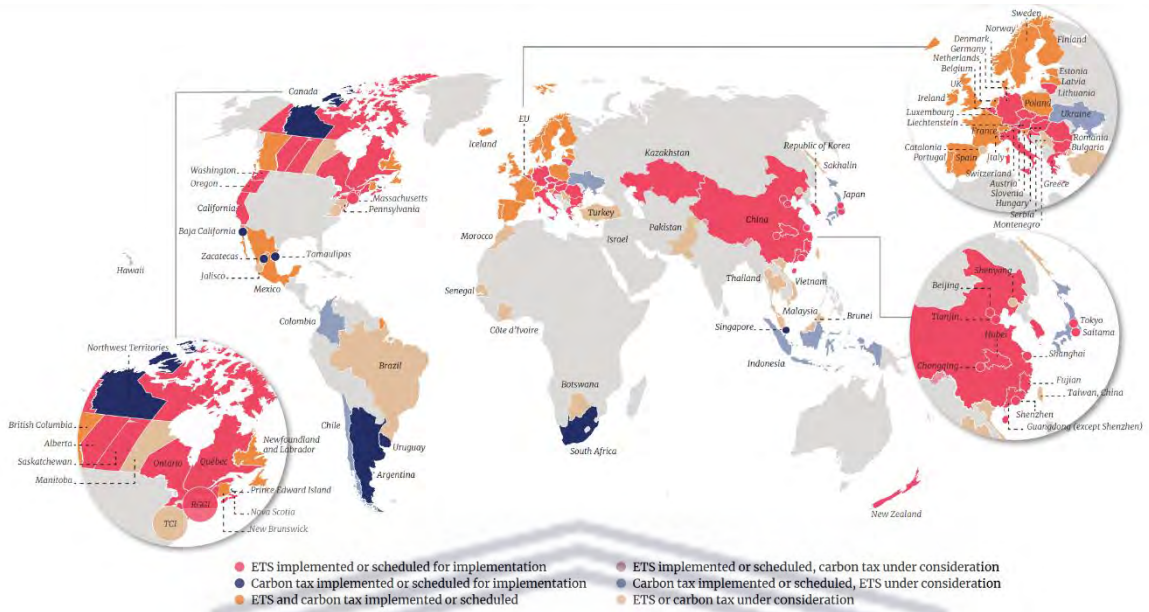
energy insecurity levels, ushering in the era of Africa's just energy transition as indicated by the preliminary success of The Rwanda Green Fund (FONERWA)[37].[38]

1.2 Problem Statement

The issue of carbon markets is not novel to the international and domestic markets and there have been many a discourse on the subjects. Recent times have seen a rise of demand in the carbon markets as pressure on the international arena mounts to be Paris aligned and meet the net-zero emission targets. African countries therefore find themselves in a unique position. "With nearly one-fifth of the world's population today, Africa accounts for less than 3% of the world's energy-related carbon dioxide (CO2) emissions to date"[39] and has the lowest emissions per capita of any region and there is potential to leverage this position.

While Africa is to be applauded for launching the ACMI, this will not be the panacea to unlocking the full potential of voluntary carbon markets on the continent. At present, only 2% of global carbon projects are in Africa[40] and this is due to the unpredictability and uncertainty of carbon markets which translates to perceived high-risk profile attributed to the continent. Investors cite weaker policies and fragmented regulatory frameworks as the deterrent. The meritorious argument that one would make, is that the establishment of a legal framework, albeit a demanding and complicated process, would be to the region's immeasurable benefit.

[37] IMF Country Report No. 22/381 Rwanda
[38] UNFCC Rwanda Green Fund (FONERWA) https://unfccc.int/climate-action/momentum-for-change/financing-for-climate-friendly-investment/rwanda-green-fund-fonerwa Accessed 15 May 2023
[39] United Nations Fact Sheet on Climate Change : Africa is particularly vulnerable to the expected impacts of global warming https://unfccc.int/files/press/backgrounders/application/pdf/factsheet_africa.pdf (accessed 21 April, 2023)
[40] McKinsey Vivid Economics Carbon Credit Database, drawing on Verra, Gold Standard, ACR, CAR, Plan Vivo (2022)



Visual representation of the state of carbon markets worldwide. It is glaringly evident that Africa has little to no activity in most parts with the exception of South Africa, Botswana, Cote d'Ivoire and Senegal. Interestingly although the afore mentioned countries show activity, it actually has not been implemented but is scheduled or under consideration. Source: World Bank. 2022. State and Trends of Carbon Pricing 2022. State and Trends of Carbon Pricing; Page 16

This research seeks to analyse the potential of leveraging the African Continental Free Trade Area (AfCFTA) and the synergy of the African regional bloc, to strengthen African country participation in the carbon markets subscribing to the UN 2030 Sustainable Development Goals (SDG) principle *nemo reside "Leave No Man Behind."*[41] In these discussions, the rationale for establishing a legal system will become apparent, all the while highlighting the environmental and financial benefits that carbon trading would unlock becoming the impetus to developing a regional legal framework, borrowing from the lessons of the EU ETS. The carbon market was estimated to be valued at US$760 billion in 2021[42] and yet Africa contributed minimally to this figure. Since time immemorial, Africa's narrative has been one of a "follower", as many of the trailblazing initiatives were led by developed countries. Carbon markets present the perfect opportunity to realise the potential of the AfCFTA

[41] United Nations Sustainable Development Goals Universal Values https://unsdg.un.org/2030-agenda/universal-values/leave-no-one-behind Accessed 30 April 2023

[42] Statista: Carbon Market Size Value https://www.statista.com/statistics/1334848/global-carbon-market-size-value/ Accessed 30 April 2023

to spur economic development, by developing a legal framework that allows the region to be front and centre in the development of this burgeoning market.

1.3 Objectives Of The Study

The primary objective of this study is to demonstrate an immediate and pertinent need as well as immense benefit in the regulation of carbon markets while exploring the synergies of doing so as a regional bloc under the AfCFTA.

1.3.1 The Specific Objectives of the study are:

- to review and understand the current state of the carbon markets in Africa compared to global markets;
- to ascertain whether there is merit and benefit for African countries to participate in carbon trading;
- to establish the rationale behind establishing legal frameworks in carbon markets;
- to prove that there is an urgent and immediate need for the regulation of carbon markets if they are to benefit the African continent;
- to review the framework of the AfCFTA and how its potential can be maximised in the scope of carbon markets; and
- to provide recommendations for the AfCFTA on the development of a Regulatory framework for carbon markets under the AfCFTA as a tool to regulate carbon markets in the region, borrowing from the lessons of EU ETS.

1.4 Motivation And Significance Of The Study

Africa is uniquely positioned to exploit its low green-house gas emission status and develop carbon projects and a thriving carbon market. The investments into the projects together with the revenues from the carbon markets would then be channelled towards establishing green energy solutions for the African continent and other economic activities. The causal effect of this would be felt across the board as it would affect Foreign Direct Investment (FDI) inflows, positively affecting national balance of payments. These projects would create a job market that would lower the rising unemployment statistics on the continent. All this rides on the tail of the advent of the AfCFTA. It therefore becomes imperative to explore whether there is any plausible rationale to forfeiting nationalist efforts in favour of regionalism in

pursuit of establishing thriving carbon markets in Africa. Developing any legal framework is a demanding and complicated exercise and more so for carbon markets, a specialised and developing area in the climate and sustainability field. Arguably, taking advantage of the political momentum that the AfCFTA has garnered so far, could allow for the development of a regional regulatory framework, which seems to fit under the purview of the mandate of the free trade area.

1.5 METHODOLOGY

This study will be based on desktop and secondary source study. In the systematic review of the texts and information sources, critical analysis will be employed to draw out the benefits of carbon markets. Multiple emissions trading systems will be examined to establish the rationale behind establishing a legal framework. The information sources will include library research and internet publications. Largely owing to the fact that a lot of the research that has been done on carbon markets is not based on the African context, many of the literature will be based on European, Asian and American Markets.

In the conducting of this study, primary sources of information were used in the form of legal instruments. These include but are not limited to the Paris Agreement, the Kyoto Protocol as well as the relevant Protocols of the AfCFTA. Comparative analysis will be done with the one other bloc that has successful created and implemented an ETS through regional integration, namely the EU. Results of this analysis will inform the "blueprint" and lessons that AfCFTA could follow to develop its own framework.

1.6 CHAPTER OUTLINE

In a bid to follow a chronological and coherent presentation of ideas the study will be divided into 5 chapters as follows:

Chapter 1 - Overview

This chapter serves as the overview of the study. It paints a picture of the entire research, giving insight into the background, problems statement, the significance of the study as well as the methodology. All the ideas presented in this chapter are

cursory and indicative of the arguments to be made throughout the study. The objective is to lay the foundation for the subsequent chapters and present to the status, relevance and benefit to Africa of carbon market.

Chapter 2 – Why does law matter?

After having gained an understanding of what carbon markets are, their status in Africa as well as how they would benefit the region, this chapter will explore what role law plays in these markets. Here the different areas of law will be discussed to gain an understanding of how they feed into the bigger picture and why it becomes necessary to regulate carbon markets. The chapter will include discourse of private vs public law both on an international and domestic level. The role of international trade law will be a key discussion point.

Chapter three – The European Union and Others

This chapter involves a critical analysis of the EU ETS right from conceptualisation to implementation. It aims to highlight the errors, gaps as well as the positives. The objective of the chapter is to gain an understanding of the nuances of establishing an ETS as an independent State as opposed to doing so under a bloc. The chapter will provide case studies and the outcome will be the realisation of the synergies of multi-jurisdictional regulating *vis-a-vis* independent State regulation.

Chapter Four – The role of the AfCFTA

This chapter will be written on the premise of the understanding of the importance of developing a carbon market regulatory framework factoring in different contexts and cultural backgrounds. The chapter explores the challenges that would be particular to Africa and how the AfCFTA could mitigate them. In this chapter, the relevant Protocols of the AfCFTA will be analysed with the aim of determining how they interact with carbon markets and would prove to be catalyst for its imminent thriving on the continent.

Chapter 5 – Recommendations and Conclusion

This chapter will make recommendations for course of actions, drawing conclusions from the research and summarising the study.

CHAPTER 2 – WHY DOES LAW MATTER?

2.1 Introduction

To better understand why law matters, it becomes imperative to understand what law is in its most basic sense. According to the Cambridge dictionary, law is defined as a "a rule, usually made by a government, that states how people may and may not behave in a society". To further understand it, this definition broken down explains how, for a law to exist, there must be firstly a rule, implemented by a competent authority intended to govern behaviours in a society. This definition already gives insight into why law is needed in the society but for the purposes of this study, it is essential to particularly focus on the role it plays in the carbon markets. The law is important because it is a tool that dictates how people should operate within a given market. Naturally, this raises the question of what then happens in the absence of the law to govern this behaviour? With relation to markets, there are two main arguments purporting to understand the effects, both seeking to understand the relationship between the regulatory role of the law and economics.[43]

The first school of thought is that of economic sociologists who are of the belief that legal aspects are interwoven into all economic activity.[44] In acquiescence with the view of economic sociologist who advocate for regulation of markets, the Commission on Legal Empowerment of the Poor goes so far as to posit that the absence of law can be credited for the prevalence of poverty.[45] While seeming extreme, there is a case to be made for regulation playing a role in ensuring markets thrive and are sustainable, which in turn equals a booming economy better able to look after its citizenry. The point of friction remains the importance attributed to the role that the regulations plays.

On the other side of the coin are mainstream economists who generally are of the view that the interaction of market forces results in self-regulation, also known as the invisible hand[46]. Interestingly, while the mainstream advocates for

[43] May, C. Market Exchange and the Rule of Law: Confidence in Predictability. Hague J Rule Law 10, 365–388 (2018)
[44] Ford, Laura, and Richard Swedberg. Law in economy and society: Introductory comments. Economic Sociology - European Electronic Newsletter 10 (2009) 3-7
[45] UNDP 'Making the Law Work for Everyone', Volume 1, Report of the Commission on Legal Empowerment of the Poor, United Nations Development Programme, New York 2008
[46] Vaughn, K.I. Invisible Hand. In: Eatwell, J., Milgate, M., Newman, P. (eds) The Invisible Hand. The New Palgrave. Palgrave (1989) Macmillan, London 168

unregulated markets, in the same breath, this approach still looks to the law for settlement of its disputes and definitions of key terms. Ultimately, unregulated markets fall prey to the market ills of unstandardised quality and fluctuating prices. Standardisation within any market establishes what economists refer to as "liquidity and depth".[47] Understood in this context, liquidity simply translates to the ability to translate assets to cash without changing the assets price which in turn results in ability to enter into more transactions and scale up growth in the market.[48] While it cannot be denied that free markets have a role to play, economists now argue that it is critical to have markets regulated and this will continue to be the case.[49]

Underpinning the theory by economic sociologists and ironically the mainstream economists is the phenomenon known as the rule of law. It can be argued that one of the key components of ongoing efforts to not only establish but promote any economic growth is the rule of law.[50] However, the rule of law becomes merely an ideal if there are nolaws supporting it to which the markets can then subscribe or be subject to. Carbon markets interact with various disciplines within the legal sphere, cross-cutting and converging at different junctions to create a seemingly complex web which the study will endeavour to untangle in this discussion, cognisant of both the domestic and international law aspects. It is imperative to understand that ultimately, "the definition of carbon rights and the legal nature of carbon credits depend on local laws" which vary from country to country." [51]This is not a hindrance as many would initially assume. Bogoyevic argues that, in fact, carbon markets are pluralistic in nature, advocating for bespoke regulatory regimes that in being drawn up account for the different contexts they are developed to operate in, be it legal, cultural, historical.[52].

[47] The International Organization of Securities Commissions Voluntary Carbon Markets Discussion Report (2022)
[48]M. G. hayes The Liquidity of Money. Cambridge Journal of Economics, 42(5), (2018). 1205–1218
[49] G A. Akerlof and R J. Shiller Phishing for Phools: The Economics of Manipulation and Deception 2015 Princeton
[50] Barro RJ Determinants of economic growth: a cross-country empirical study. NBER Working Paper 5698. National Bureau of Economic Research, Cambridge 1996
[51] C. Streck Who Owns REDD+? Carbon Markets, Carbon Rights and Entitlements to REDD+ Finance. *Forests*. (2020) https://doi.org/10.3390/f11090959 accessed March 13 , 2024
[52] Bogojevic S. Emissions Trading Schemes: Markets, States and Law. United Kingdom: Bloomsbury Publishing. (2013)

2.2.1 The Constitution

If indeed an argument is to be made for the regulation of voluntary carbon markets, the starting point would be to ensure that the constitution of each nation as a sovereign, firstly allows for the emergence and existence of such a market and secondly, that the government or regulatory body is empowered by the constitution to assume the oversight role. This is the first point at which carbon markets intersect formally with the law.

It is imperative that the relationship between constitutional law and carbon markets is enabling. An interesting case for understanding this is the constitutional limitations imposed on carbon markets in the State of California in the United States of America. Admittedly, this veers away from voluntary carbon markets but becomes a necessary tangent to drive the point home. Entrenched in California's Constitution under Proposition 26 and Proposition 13 are anti-tax provisions which challenge the legality of the carbon cap and trade allowance auctions, making its existence and future very uncertain[53]. In the event that a court were to sit and declare that the current cap and trade program in California which presents as a cap-and-trade allowance auction actually constitutes a tax as opposed to a fee as they argue it to be, the entire system would be unconstitutional. Presented with determining the classification of the allowance auction, a trial court held that the regulatory mitigation fee in the cap-and-trade system was just that, a fee not a tax in *Morning Star Packing Company vs California Air Resources Board.*[54] The decision was further appealed, once again leaving the fate and legality of carbon markets in California in limbo.

While it is highly unlikely that setting up regulatory regimes for voluntary carbon markets would face such constitutional constraints, due diligence should be exercised to ensure that the legality of establishing the regulations and, by extension, the markets themselves, is never questionable. In some instances, this may involve enacting enabling legislation for the regulators and their markets to operate under while in other cases, it may be up to the courts to decide. In a ground-breaking case,

[53] Coghlan, A. and Cullenward, D., State Constitutional Limitations on the Future of California's Carbon Market Working Paper 2016
[54] California Chamber of Commerce v. California Air Resources Board ., (2017)

Pirá Paraná Indigenous Council and Association of Indigenous Traditional Authorities of river Pirá Paraná "ACAIPI" v. Ministry of Environment and Sustainable Development and others, the Colombia Constitutional Court is set to preside over its first voluntary carbon markets case in 2023.[55] The case will set precedent on parameters for carbon credit projects in the context of indigenous peoples and territories they occupy.[56] Understanding that most carbon credit projects involve preservation of forests and initiatives such as afforestation, the intersection between said initiatives and the rights of indigenous people creates a nuanced carve-out in constitutional law, imposing a very delicate balance that governments must strive to maintain. Even more delicate is the balancing act as the indigenous people are afforded freedoms and protection in international law under instruments such as the UN Declaration on the Rights of Indigenous Peoples.[57] Although the lesson is drawn from Colombia, it very apt in the context of Africa which has groups of indigenous people scattered throughout its borders from Kenya's Sengwer in the East,[58] Niger and Chad's Wodaabe in the West, Namibia's Himba in the South right across to the Tuareg in North Africa.[59]

2.2.2 Contracts

At its core, the carbon market is presided over by the rules of contract law. Stripped bare, a carbon market is essentially made up of a series of "consistent and fault tolerant execution of an arbitrary sequence of predefined actions (steps)

[55] Pirá Paraná Indigenous Council and Association of Indigenous Traditional Authorities of river Pirá Paraná "ACAIPI" v. Ministry of Environment and Sustainable Development and others https://climatecasechart.com/non-us-case/1pira-parana-indigenous-council-and-association-of-indigenous-traditional-authorities-of-river-pira-parana-acaipi-v-ministry-of-environment-and-sustainable-development-and-others/ accessed March 13, 2024

[56] Pulitzer Centre 'Colombia's Constitutional Court Will Examine Carbon Credit Conflict for the First Time" 18 May 2023 https://pulitzercenter.org/stories/colombias-constitutional-court-will-examine-carbon-credit-conflict-first-time Accessed June 3,

[57] Assembly, UN General. United Nations declaration on the rights of indigenous peoples. UN Wash 12 (2007)

[58] Indigenous Peoples have lived in the Embobut forest in Kenya since at least the 19th century. The Kenya Forest Service (KFS), under the Ministry of Environment and Forestry, is forcibly evicting the Sengwer from the forest; the authorities accuse the Sengwer of damaging the forest. Interestingly even when they seem to be acting against the interests of climate change, their freedoms and rights are still protected further highlighting the intricacy in the balance. https://www.amnesty.org/en/what-we-do/indigenous-peoples/#:~:text=Indigenous%20Peoples%20have%20lived,no%20evidence%20of%20this. Accessed June 3, 2023

[59] Indigenous Peoples in the African region Twelfth Session of the UN Permanent Forum on Indigenous Issues Issued by the UN Department of Public Information, May 2013 https://www.un.org/esa/socdev/unpfii/documents/2013/Media/Fact%20Sheet_Africa_%20UNPFII-12.pdf Accessed June 4, 2023

according to an explicitly specified control flow description (script)."[60] This is quite the apt definition as it gives insight into the functions of contract law. It creates expectations, ensures credibility and provides redress in case of breach. The Carbon Green Investments (CGI) in Zimbabwe is a prime case study for the interaction between contract law and carbon Markets. The year was 2010 and an entrepreneur Wentzel founded CGI and sought to preserve forestland amounting to nearly 790,000 hectares in rural Zimbabwe.[61] In a shocking turn of events, after investing millions of dollars into the CGI projects (such as the Kariba), many blue-chip clients found themselves in conundrum, as it has come to light that CGI and its partner overestimated the value of preservation by Kariba and, ultimately, the volume of credits generated. Consequently, clients such as Gucci, Nestle and McKinsey, have also overstated their progress in carbon reduction. To make matters worse, it seems that CGI and its partner, a Swiss Entity South Pole, have further misrepresented their projects as unlike was initially claimed that proceeds would go to rural farmers involved in the projects, the proceeds have instead been directed to the two entities.[62] [63][64]Speaking on the matter, a carbon markets expert is quoted to have said "no one who buys a five-kilo pack of potatoes at the supermarket wants to end up having only one kilo."[65]

This analogy presents a vivid description of the pivotal role of contract law within the carbon markets; that of ensuring that each party is held accountable for their obligations and to specific performance albeit individually negotiated *in casu*.[66] Contract law would empower parties to negotiate aspects of individual transactions

[60] Wächter, H. and Reuter, A. 'The contract model' (1991) 83-85.
[61] Bloomberg Carbon Offset Market Faces Chaos as African Mega-Project Collapses (2023) https://www.bloomberg.com/news/articles/2023-10-27/shaky-zimbabwe-project-puts-whole-carbon-market-at-risk Accessed March 12, 2024
[62] South Pole Cuts Ties with Zimbabwe Carbon Offset Project Kariba https://carboncredits.com/south-pole-cuts-ties-with-zimbabwe-carbon-offset-project-kariba/ accessed 13 March, 2024
[63] South Pole ends agreements with Carbon Green Investments (CGI), owner of Kariba REDD+ project https://www.southpole.com/news/statement-27october Accessed 13 March, 2024
[64] Zimbabwe's carbon credit takeover spooks locals, investors https://www.france24.com/en/live-news/20230623-zimbabwe-s-carbon-credit-takeover-spooks-locals-investors Accessed 13 March, 2024
[65] Faulty Credits Tarnish South Pole's Billion-Dollar Carbon Offsets, Bloomberg Linea 2023 https://www.bloomberglinea.com/english/faulty-credits-tarnish-south-poles-billion-dollar-carbon-offsets/ accessed 3 June, 2023
[66] Mehling, M.A. "Bridging the Transatlantic Divide: Legal Aspects of a Link Between Regional Carbon Markets in Europe and the United States." Sustainable Development Law & Policy, Winter 2007, 46-51, 83-84.

such as price set for each volume traded, the volumes traded and even *force majeure* clauses which the recent Covid-19 pandemic has revolutionised.

In the example of CGI Zimbabwe, the value of law in carbon markets is made even more apparent by the realisation that often times, the players in the market are legal persons domiciled in different jurisdictions. This is a domain of international private law. Governments may want to take a back seat in voluntary carbon markets as they are better classified as being in the private sector. It can be argued that because the transactions dominating in the voluntary market spaces have a cross-border element, governments are compelled to act. International organisations such as The Hague Conference on Private International Law (the Hague Conference), the United Nations Commission on International Trade Law (UNCITRAL) and the International Chamber of Commerce (ICC) were established to streamline and foster unification of rules and practices governing contracts, commercial transactions and disputes arising in private international transactions. The instruments used by these institutions to govern said transactions are signed and ratified or acceded to by States and yet they superintend the individual players in the transactions and not the State *per se*. However, because issues such as accepting and enforcing foreign arbitral awards arise (commonly governed by the New York Convention[67]), governments cannot be fully divorced from private sector markets and their regulation. The nexus between law and markets continues to evolve deeper. In essence, it is in the best interest of any sovereign State to regulate carbon markets as it is relevant to the "conduct of current affairs.[68]"

2.2.3 Taxes

Tax is a great bone of contention between governments and businesses, and one of the biggest motivators for implementation of many regulations. In the discussion of the relationship between carbon markets and tax law, care should be

[67] United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958) Article I " *This Convention shall apply to the recognition and enforcement of arbitral awards made in the territory of a State other than the State where the recognition and enforcement of such awards are sought, and arising out of differences between persons, whether physical or legal. It shall also apply to arbitral awards not considered as domestic awards in the State where their recognition and enforcement are sought."*

[68] Julian G. Ku, The Crucial Role of the States and Private International Law Treaties: A Model for Accommodating Globalization, 73 Mo. L.R 1063 (2008)

taken not to confuse the tax discussed herein with carbon tax. Carbon tax "directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuels."[69] In general, implementing and effecting carbon taxes is relatively easy as they can ride on the back of already existing fuel taxes. Alternatively, they can be incorporated into the royalties paid by gas drilling and coal mining companies. More recently a case has been made to include carbon tax in international travel such as aviation[70] and sea travel[71]. The challenge with carbon tax however, is that it transfers the burden of the tax onto the consumer through increased prices.[72]

In juxtapose, tax in the voluntary carbon markets is a subject matter a bit more complicated than this and in some instances may require the reimagining of the fiscal policies under which they will operate. To better understand the relationship with taxes, it has been divided into direct and indirect taxes. Direct tax is levied on the income and profits of an entity while indirect taxes are imposed on services and goods.[73] Both these taxes are structured and defined differently from jurisdiction to jurisdiction. Of the two, perhaps direct taxes take a less complex approach (as the name suggests) and this has also translated to carbon markets. Direct tax is simply levied on any and all income to a business. Therefore, if a business owning a carbon project were to sell its credits, regardless of the platform or instrument[74] used, any and all income from said sale would be taxed. In the crafting of their fiscal policy, Singapore has taken this approach and gone a step further. The edict provides that were a company incurs expenses purchasing carbon

[69] As defined by the World Bank https://www.worldbank.org/en/programs/pricing-carbon#:~:text=A%C2%A0carbon%20tax%C2%A0directly%20sets%20a%20price%20on%20carbon%20by%20defining%20a%20tax%20rate%20on%20greenhouse%20gas%20emissions%20or%20%E2%80%93%20more%20commonly%20%E2%80%93%20on%20the%20carbon%20content%20of%20fossil%20fuels. Accessed June 4, 2023

[70] An example is the Aviation Carbon Tax Project and partly funded by Irish Government Economic and Evaluation Service. See Aviation Carbon Tax Project Summary of Key Findings Report December (2021)

[71] Parry I., Heine D., Kizzier K., and Smith T., IMF Working Paper Carbon Taxation for International Maritime Fuels: Assessing the Options WP/18/203 (2018)

[72] International Monetary Fund Finance and Development 'What Is Carbon Taxation? - Back to Basics' (2019) https://www.imf.org/en/Publications/fandd/issues/2019/06/what-is-carbon-taxation-basics Accessed June 4

[73] Atkinson, A.B., Optimal taxation and the direct versus indirect tax controversy. Canadian journal of Economics, (1977) 590-606.

[74] Platforms and instruments are discussed later on in this chapter and in Chapter 3 and 4)

credits, this expense should be deductible as an expense. In essence, government foregoes a portion of its fiscal revenue in such a scenario.[75]

Indirect taxes present a more complicated setup. This is because, the amount of tax or applicable fiscal rates to a particular carbon trade, are determined by whether carbon credits are deemed a good or a service. To add on to the conundrum, there is a rigid dichotomy in tax laws governing businesses and individuals. Carbon markets create the mammoth tasks of either attempting to classify the transactions according to existing laws or alternatively, amending laws to make room for their distinct nature. Once again, the uncertainty and lack of clarity in this emerging market resurfaces with each country opting for a different approach. Initially Singapore had defined carbon credits as a service, the rationale being it was a supply of rights which under Singapore Law decodes to a supply of a service. [76] Therefore, the goods and sales tax applicable was that of a supply in service.[77] As recently as November 2023, Singapore has adjusted its stance on the subject matter. As it stands, according to the revenue authority, the sale or transfer of a carbon credit, "…is treated as neither a supply of goods nor a supply of services…"[78] Effectively, good and sales tax (GST) is not levied on revenues from carbon credit sale transactions. As an 'importer' of carbon credits that is acquiring carbon credits from a source outside of Singapore, the purchaser was liable for GST as they were classified as imported services. The same rationale has been adopted, with purchase of carbon credits falling outside the scope of services and not GST chargeable.

Having made mention of individual versus corporate tax policies, it begs mentioning that legislators and policy makers may be faced with the decision of whether to grant tax deductions to individuals that may participate in carbon markets. This would depend on how the regulatory framework is setup, that is does it allow individuals to purchase carbon credits, which at present there are no limitations to.[79] Surely if

[75] Inland Revenue Authority of Singapore https://www.iras.gov.sg/taxes/goods-services-tax-(gst)/specific-business-sectors/carbon-credits Accessed June 4, 2023
[76] KPMG Understanding the tax costs of carbon trading in Singapore https://assets.kpmg.com/content/dam/kpmg/sg/pdf/2022/10/understanding-the-tax-costs-of-carbon-trading-in-sg.pdf Accessed June 4, 2023
[77] Goods and Services Tax Act (GST Act) 1993 Section21 (3) (j)
[78] Inland Revenue Authority of Singapore https://www.iras.gov.sg/taxes/goods-services-tax-(gst)/specific-business-sectors/carbon-credits Accessed June 4, 2023
[79] UNFCC Carbon Offset Platform https://unfccc.int/climate-action/united-nations-carbon-offset-

businesses can enjoy tax deductions from their purchase of these credits, individuals should enjoy the same benefit. Or shouldn't they?

In essence, the way in which tax laws, informed by fiscal policies and carbon markets node is neither linear nor universal. Instead, it should be considered in *casu,* cognisant of the motivations and intended purpose behind each fiscal policy. Additionally, there should be flexibilities in the fiscal regime that allow for pivots as was the case for Singapore, as carbon markets are a complex evolving market.

2.2.4 Property Rights

Voluntary Carbon Markets purport to trade carbon credits. By definition, trade refers to the "sale and purchase of assets and securities..." [80] and asset is a "something having value, such as a possession or property, that is owned by a person, business, or organization..."[81] Thus inevitably the critical issue of ownership of carbon credits arises. It becomes imperative for the efficient operation of the markets, that the property rights (the underlying claim often referred to as carbon rights) over the tradeable credits are not in any way nebulous.[82] Essentially, carbon rights acquire their definition from local law and as can be expected, differs from jurisdiction to jurisdiction.[83] Across the board of carbon markets (both voluntary and compliance) so pertinent is the issue of carbon rights that one of the pre-requisites for consideration in the World Bank's Forest Carbon Partnership Facility is "the status of rights to carbon and relevant lands to establish a basis for successful implementation of the ER Program" (Indicator 30.1, Section 5.2).[84]Because carbon rights and carbon credits are inextricably linked, legal constructs are used to effectively establish the link between the two. These legal constructs take the form of customary or ancestral rights (e.g., in the case of indigenous people), tree ownership or the ability to perform an ecosystem service.[85]

platform#:~:text=CERs%20are%20units%20(carbon%20credits,or%20to%20support%20these%20projects.

[80] Defined according to Indian Economic Times https://economictimes.indiatimes.com/definition/trade Accessed November 18, 2023
[81] Defined according to the Cambridge Dictionary https://dictionary.cambridge.org/dictionary/english/asset Accessed November 18, 2023
[82] M. Gillenwater, D. Broekhoff, M Trexler, J. Hyman & R. Fowler "Policing the voluntary carbon market," Nature Climate Change, Nature, vol. 1(711), (2007) 85-87
[83] Streck, C., 'Who owns REDD+? Carbon markets, carbon rights and entitlements to REDD+ finance. Forests, 11(9), (2020)
[84] Forest Carbon Partnership Facility. FCPF Carbon Fund, Methodological Framework; Version 3.0; World Bank: Washington, DC, USA, 2020 (Section 5.2, Indicator 30.1)
[85] Streck, C., 'Who owns REDD+? Carbon markets, carbon rights and entitlements to REDD+ finance. Forests, 11(9), (2020)

To better understand the rationale for classifying carbon rights as property rights, is an analysis of the legal nature of carbon credits through English law. Therein, carbon credits can exist as a personal right *(in personam).* However, this presents a challenge in that the general rule is that rights *in personam* cannot be transferred.[86] Earlier it was established that a carbon trade, is the sale or purchase (transfer in right) of a resource that is owned…Therefore as it stands, carbon credits cannot therefore be defined *in personam* as fundamentally there could no transfer of rights. Alternatively, still under English law, carbon credits could be ascribed a property right, *in rem.* This status is better suited for the function that carbon credits were created for, to be traded and hence the underlying claim can be transferred from seller to buyer.[87]

The passing of the rights underlying carbon credits presents yet another fascinating dimension in which this market and the law intersect. However, it goes without saying that as this is still an emerging market, there are many questions that are yet to be further explored to come up with answers. As such, many different jurisdictions have taken different approaches to the passing of this right spurred on by their unique legislative frameworks as well as motivations behind the policies. Seeing as this paper is geared towards addressing carbon markets in the African context, it seems befitting to start with an example in Central Africa. In 2018, the Democratic Republic of Congo (DRC) passed a Homologation Decree under which all primary carbon rights are owned by the government by virtue of owning the national forest. However, there is room for private project developers to have these rights transferred to them through what is referred to as "certificate d'homologation".[88] Presumably, this stance was taken in a bid to preserve the Congo River Basin, "an essential carbon sequestering ecosystem" that accounts for approximately 12.5% of the world's surviving rain forests.[89] Here, the government of the DRC exemplifies the phrase of hitting two birds with one stone, as they not only protect the vulnerable and endangered ecosystem of the global rainforest but also generate revenues from

[86] Hillis B., 'Voluntary carbon market trading: Key risks and mitigations'(2022) https://www.reedsmith.com/en/perspectives/energy-transition/2022/06/voluntary-carbon-market-trading-key-risks-and-mitigations Accessed 7 June 2024

[88] Government of the Democratic Republic of Congo. Arrêté Ministériel Fixant La Procédure d'homologation Des Projets REDD+; Kinshasa, Congo, 2018.

[89] https://www.thallo.io/the-drc-a-case-for-the-carbon-markets-and-another-call-to-scale/ Accessed 10 June 2023

projects such as Jadora's Isangi Project in the DRC's Yangambi forest.[90] These positive impacts are effected through a piece of legislation that essentially transferred rights from one party to the next within the carbon markets value chain.

While the DRC, (whatever its motivations were which we can only speculate) saw it fit to make a carve out in its legislation for the transfer of the rights to private project developers through a certificate, Vietnam took a different stance. In Vietnam, the Prime Minister has to approve any transfer of rights pertaining to greenhouse gas emissions. This is expressly asserted by the Law on Environmental Protection.[91] Presenting yet another variant of how laws and carbon markets coincide, and perhaps proving how imperative it is that existing legislation and new regulations are consonant, is Mexico. In Mexico deforestation is an illegal activity therefore,[92] it becomes impossible to claim a right arising from avoided deforestation, as essentially this would be a right arising from abiding by laws and not engaging in illegal activity. If such flawed reasoning were to be followed, the world would erupt into chaos, with everyone claiming their due from being upstanding citizens. Therefore, to circumvent this challenge carbon credits from avoided deforestation belong to the government. Instead, owners of private land through sequestration activities, can hold carbon rights.[93]

[90] Isangi REDD+ VCS-CCB Project Description Summary https://s3.amazonaws.com/CCBA/Projects/Isangi_REDD%2B_Project/Jadora+Isangi+REDD%2B+Project+PDD+Summary+-+english+(1).pdf accessed 10 June 2023

[91] Sharma, S.; Shivakoti, G.; Thang, T.N.; Dung, N.T. Is Vietnam Legally Set for REDD+? In Redefining Diversity & Dynamics of Natural Resources Management in Asia; Elsevier: Amsterdam, The Netherlands, (2017) Volume 3, 205–218.

[92] General Law for Sustainable Forest Development 2018 which replaced the General Law for Sustainable Forest Development 2003 in Mexico https://climate-laws.org/document/general-law-for-sustainable-forest-development_9584 accessed 10 June 2023

[93] Streck, C., 'Who owns REDD+? Carbon markets, carbon rights and entitlements to REDD+ finance. Forests, 11(9), (2020)

2.2.5 Financial Markets Features

a) Commodities versus Assets

At present, from preceding discussions, it appears that the regulation of carbon markets, if any, has been taken up by Environmental Ministries. The question to ponder is ; should Finance Ministries not be involved as well?

Having established that a carbon credit can be traded, how it is traded, the accounting mechanisms attributed and other financial considerations then come to the fore. The primary consideration when veering into the discipline of finance is, are carbon credits a commodity or asset. Whichever classification is assigned comes with its own legal ramifications. Some finance practitioners have argued that the classification also impacts the value of the carbon credit.[94] The premise of categorizing carbon credits as a commodity is that nature forms a part of 'immanent market-world'[95] and yet is a neglected part of it.[96] To then correct the negative impacts of being previously neglected, is bringing to the fore of the existing and thriving market the neglected nature. This is done by creating new markets and financial instruments that will attach a price to those aspects of nature. [97] Additionally in the era of the Clean Development Mechanism (CDM)[98]carbon credits were classified as commodities as they were generated for one purpose, that is to be "used through Kyoto compliance mechanisms".[99] By definition, among other characteristics commodities are "… a basic good used in commerce ……..products that are meant to be consumed…"[100] and carbon credits satisfy this criterion.

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[94] Labre, M. ' Voluntary carbon credits: Why they are not a commodity' https://viridios.ai/insights/voluntary-carbon-credits-asset-class/ Accessed 11 June 2023

[95] A. Huff, Brock A "Accumulation by restoration: Degradation neutrality and the faustian bargain of conservation finance" (2017) https://doi.org/10.1177/25148486231168393 Accessed 11 June 2023

[96] A. Huff "Frictitious commodities: Virtuality, virtue and value in the carbon economy of repair." (2021) https://doi.org/10.1177/25148486211015056 accessed 11 June 2023

[97] A. Huff Frictitious commodities: Virtuality, virtue and value in the carbon economy of repair." (2021) https://doi.org/10.1177/25148486211015056 Accessed 11 June 2023

[98] CDM is a mechanism under the Kyoto Protocol, which, in accordance with Article 12 of the Kyoto Protocol, allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO2.

[99] Labre, M. ' Voluntary carbon credits: Why they are not a commodity' https://viridios.ai/insights/voluntary-carbon-credits-asset-class/ Accessed 11 June 2023

[100] Definition according to Investopedia https://www.investopedia.com/terms/c/commodity.asp accessed 11 June 2023 Better as it has a reference, but still not an academic source

More recently however, there is push for them to classified as an intangible asset. The argument for this is based on the characteristics of carbon markets such as injection of capital by investors, trading, asset origination *et al* normally attributed to carbon markets. Additionally, the COP 21 which birthed the 2030 Agenda for Sustainable Development and the Paris Agreement meant that the voluntary carbon markets play a broader role than just climate action. They have the potential to contribute to the selling or purchasing companies' Environmental, Social and Governance (ESG) portfolio, by preserving vital ecosystems = environment and providing employment to local communities = social, making them a powerful sustainable development tool.[101] This becomes important as it has a direct bearing on the prices of the voluntary carbon credits. Other factors that influence the prices of the credits include project type, the standard under which a project is registered, project size, host country of the project, ESG benefits, SDG contributions, and vintage.[102] [103] The price being affected by these factors can be taken to be an indicator that voluntary carbon credits are an idiosyncratic asset class. The ability to classify carbon credits attributes to them more transparency. This is because it impacts how the assets are "…valued and traded, how they are settled and warehoused, how risk is managed, and even how financial accounting and reporting is employed."[104] In turn, these attributes also have legal implications and afford insight to legal questions such as, can security be taken over said assets?

b) Security and Collateral

Ordinarily, every jurisdiction has legislation specifically governing issues of security and collateral. This legislation dictates how security is created, how it is validated,

[101] Labre, M. ' Voluntary carbon credits: Why they are not a commodity' https://viridios.ai/insights/voluntary-carbon-credits-asset-class/ Accessed 11 June 2023
[102] What is the Voluntary Carbon Market? https://carboncredits.com/what-is-the-voluntary-carbon-market/#:~:text=Voluntary%20credits%20tend%20to%20be,be%20used%20in%20compliance%20markets.&text=Several%20factors%20impact%20the%20price,co%2Dbenefits%2C%20and%20vintage. Accessed 11 June 2023
[103] Carbon vintage refers to "the year an emission reduction occurred or the offset was issued." https://carbonbetter.com/story/carbon-offset-vintages/#:~:text=fully%20vetted%20credits.-,Why%20Vintage%20Matters,-Much%20like%20fine Accessed 11 June 2023
[104] Labre, M. ' Voluntary carbon credits: Why they are not a commodity' https://viridios.ai/insights/voluntary-carbon-credits-asset-class/ Accessed 11 June 2023

its perfection and the rules of enforcing a right to security.[105] The general rule is that the law governing the security over an asset, is that of the jurisdiction where the asset is domiciled, regardless of where the owner is or where the party assuming security over the asset is.[106] However, as discussed earlier, if credits as classified as intangible assets would these same rules apply? It becomes imperative under financial market regulation to determine if credits will be accepted as collateral especially considering their complicated nature as well as their somewhat volatile prices considering their "idiosyncratic asset class".[107] Many considerations come in to play such as, supposing the financial market regulations allow for them to be taken as security, what documentation would preside over this transaction. If under the local laws, an asset ascribed property status can have a charge over it, perhaps a deed of hypothecation serves as sufficient security interest over the carbon credit. Alternatively, credits could be placed with a custodian whereby there was a custody agreement in place. In the event of the borrower defaulting, the lender would make a claim on the assignment made by way of security in the custody agreement[108]. The perfection of such a security arrangement would be dictated by local laws.

In Australia, carbon credit units as personal property are governed by the Personal Property Securities Act 2009 (PPS Act), the Carbon Credits (Carbon Farming Initiative) Act 2011 (CFI Act 2011), and the Australian National Registry of Emissions Units Regulations 2011 (ANREU Regulations 2011).[109] Under these acts, an individual may use the credit units they hold as collateral pursuant to the perfection of the security as laid out by the regulations. There is a bevy of options which cover a multitude of scenarios. The PPS Act has rules for prioritising security interests and provides under Section 52(1) that " A security interest in collateral that is currently perfected by control has priority over a security interest in the same collateral that is currently perfected by another means."[110] For emissions units, perfection by

[105] McMillan LLP "Carbon Credits as Collateral"https://www.lexology.com/library/detail.aspx?g=4fc874d8-a2ee-41d3-b694-740a13893dd3 Accessed 11 June 2023
[106]Goode, R. Security in cross-border transactions. Tex. Int'l LJ, (1998) 33, 47.
[107] Ricketts T. Carbon Pulse (2023) https://carbon-pulse.com/201311/ Accessed November 18, 2023
[108] P. Sutton 'Financing and taking security over emission allowances' 27 June 2022 https://www.reedsmith.com/en/perspectives/energy-transition/2022/06/financing-and-taking-security-over-emission-allowances Accessed 11 June 2023
[109] Australian Government Clean Energy Regulator https://www.cleanenergyregulator.gov.au/OSR/ANREU/Using-emissions-units-as-security Accessed 11 June 2023
[110] Personal Property Securities Act 2009 - Sect 57 Priority of security interests perfected by control, subsection 1

control can either be done by either becoming the registered holder of the units in question or becoming an authorised representative of the account in which they are held. The PPS Act is so extensive that it includes provisions on security interest that are not perfected when a grantor declares bankruptcy, outlining that they would vest in the grantor and be available to the liquidator as any other assets would.[111] In the event of the grantor declaring bankruptcy is a company, this is successfully dealt with by Section 588L of the Corporations Act 2001. Herein, in the event of bankruptcy, the provision " vests a security interest in a grantor company that was perfected by registration when the registration time was the later of six months before the company's winding up or 20 business days after the security agreement giving rise to the security interest came into force."[112] [113]

c) Stock Exchanges

The extent to which carbon markets have permeated the financial sector and can no longer be seen as an exclusively environmental discipline, is shown by the participation of financial regulating bodies such as the London stock exchange. Admittedly, one of the main challenges facing any climate actions is financing.[114] Realising and acknowledging this gap, the London Stock Exchange (LSE), in a bid to facilitate the scaling of financing for climate projects, has launched a voluntary carbon markets initiative. [115] True to one of the functions of any stock exchange, the rationale behind this new product is to enable both companies and funds alike, to raise capital.

[111] Australian Government Clean Energy Regulator https://www.cleanenergyregulator.gov.au/OSR/ANREU/Using-emissions-units-as-security Accessed 11 June 2023

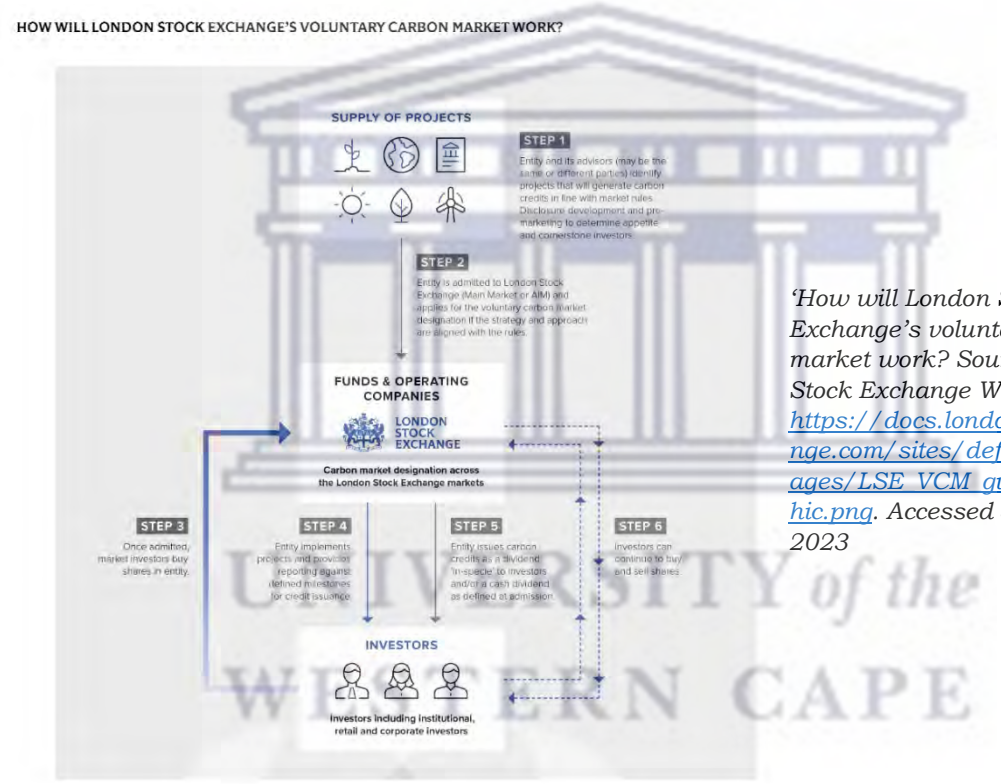
[112] Australian Government Clean Energy Regulator https://www.cleanenergyregulator.gov.au/OSR/ANREU/Using-emissions-units-as-security Accessed 11 June 2023

[113] Personal Property Securities Act 2009 - Sect 267 Vesting of unperfected security interests in the grantor upon the grantor's winding up or bankruptcy etc.

[114] The London School of Economics and Political Science 'The global climate finance challenge' https://www.lse.ac.uk/granthaminstitute/news/the-global-climate-finance-challenge/ Accessed June 29, 2023

[115] London Stock Exchange's Voluntary Carbon Market https://www.londonstockexchange.com/raise-finance/equity/voluntary-carbon-market Accessed June 25, 2023

Although scholars such as William Lazick opine that "conventional wisdom" is wrong in attributing raising capital as the primary function of stock markets,[116] the effectiveness of stock markets in being a fundraising tool cannot be ignored. Expanding on how the voluntary carbon markets on the platform would work, the LSE provides a 6-step process.



'How will London Stock Exchange's voluntary carbon market work? Source: London Stock Exchange Website https://docs.londonstockexchange.com/sites/default/files/images/LSE_VCM_guide_infographic.png. Accessed June 25, 2023

Step 1 and 2 of this process makes mention of vetting of carbon projects and the criteria for this is that the projects must subscribe to market rules. It takes no rocket scientists to know that abiding by rules requires that the rules to adhere to must exist in the first instance! In the case of African countries which are likely to look to voluntary carbon markets as a tool to decrease the climate finance gap[117] it would be wise to explore avenues such as listing on stock exchanges across the continent.

[116] Lazonick, W. 'The functions of the stock market and the fallacies of shareholder value. Corporate governance in contention', (2017) Chapter 6, 117-151
[117] See discussions in chapter 1 'Importance of Carbon Markets to Africa'

However, in order to effectively and efficiently implement such solutions, there needs to exist rules in the market that would be the threshold.

Moving on to the following steps of the LSE Voluntary Markets, steps 3 to 6 all cover interactions between the stock exchange listings and investors. The prototype alludes to 3 types of investors namely, institutional, retail and corporate investors. This shows how wide the spectrum of participants on the exchange platform would be, from individuals to legal persons and anything in between. As with any other product, it becomes imperative to ensure 'consumer protection', a role that would be played by the securities regulator to ensure that markets are transparent, fair and efficient. Based on the OECD regulator in this instance, carbon markets would only be able to perform within an articulated framework and regulatory policy[118]. The need for clear-cut and explicit regulations becomes even more evident to protect said investors from falling victim to the wiles of listed entities, even more so in the age where greenwashing[119] poses a threat to the integrity of the market.[120]

Altogether, stock exchanges are already a highly regulated platform, and if carbon markets are to stand a chance in this financial market, naturally the issue of regulation is one that cannot be shied away from.

2.3 International Trade

Voluntary carbon markets, by nature, allow for cross jurisdictional transactions and trades. By this, some would argue that they then fall under the purview of the rules of international trade and by extension, the World Trade Organization (WTO).[121] Emissions trading broadly helps to understand the interaction between climate change and WTO law. It becomes even more complicated to navigate the relationship

[118] OECD 'The Governance of Regulators' OECD Best Practice Principles for Regulatory Policy, OECD Publishing (2014)
[119] Green washing : the act of misleading consumers regarding the environmental practices of a company or the environmental performance and positive communication about environmental performance. See Chapter 1 for full background of the term.
[120] Spash, C. L., & Theine, H. Voluntary Individual Carbon Trading. SRE - Discussion Papers No. 2016/04 (2016).
[121] Voigt, C. (2008). WTO Law and International Emissions Trading: Is there Potential for Conflict? Carbon & Climate Law Review, 2(1), (2008) 54–66

between climate change and WTO law as at present. The General Agreement on Tariffs and Trade (GATT) does not have express provisions on climate change and its policies,[122] in the same way that for example it specifically addresses cinematographic films.[123] Furthermore, and of good measure, carbon credits are not reflected in the tariff classification and Harmonized System (HS) code[124] despite their cross-border nature. According to the WTO Appellate Body, products can be defined as "commodities produced by labour, intellectual effort, or natural process that can be transported from place to place."[125] Applying this definition, should carbon credits be classified as a good, considered that essentially they are being traded as one, then they would explicitly fall under the purview of the WTO rules. This presents a challenge as the legal definition of carbon credits differs from jurisdiction to jurisdiction meaning there can be no uniform application of the WTO rules. It bears weight to mention however, that in the event the treatment of carbon credits seemingly deviates from WTO law, there exists carve outs in the provisions of WTO law, "that allow outside, non-trade interests to be assessed and balanced against trade imperatives."[126] Article XX of the GATT, aptly titled "General Exceptions," provides that if not applied in an "arbitrary or unjustifiable" manner, States may impose measures "necessary to protect human, animal or plant life or health"[127] and or "relating to the conservation of exhaustible natural resources…"[128] It goes without saying that regardless of the legal classification in each jurisdiction, because carbon credits are a tool being employed to combat climate change, they qualify under the exceptions of GATT.

This carve out provided by the WTO becomes imperative and its impact more relevant when considering how many economic sectors are impacted by issues of climate change. These include agriculture, forestry, fisheries and tourism and more often

[122] Leal-Arcas, R. The World Trade Organization and Carbon Market Clubs. Georgetown Journal of International Law, 52 (2021)
[123] General Agreement on Tariffs and Trade 1994, Apr. 15, 1994 Article IV
[124] 'HS Code is an international customs classification system developed by the World Customs Organization. The HS contributes to the harmonization of Customs and trade procedures'
[125] Appellate Body Report, United States—Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada, para 58-59, WTO Doc. WT/DS257/AB/R (adopted Feb. 17, 2004)
[126] Leal-Arcas, R. The World Trade Organization and Carbon Market Clubs. Georgetown Journal of International Law, 52 (2021)
[127] General Agreement on Tariffs and Trade 1994, Apr. 15, 1994 Article XX (b)
[128] General Agreement on Tariffs and Trade 1994, Apr. 15, 1994 Article XX (g)

than not, these are critical sectors for developing countries.[129] Naturally, it seems logical to assume that once they appreciate the value of carbon markets in closing the climate finance gap, many governments will pursue establishing carbon markets in order to channel the funds to their critical industries to develop or maintain a comparative advantage. This is not too farfetched as countries in the global south such as Zimbabwe are fervently looking to regulate their carbon markets in order to scale them[130] while Rwanda embarks on collaborative efforts with Sweden in a bilateral climate financing initiative.[131]

It therefore seems rational to anticipate that in an initial bid to attract investment into climate projects, developing country governments would look to the tried and tested strategies such as fiscal instruments and perhaps subsidies. In so doing, considerations of WTO law would be taken into account, and it is crucial to not be found wanting in this regard. This would potentially be in contravention of the GATT for fiscal policies and in potential contravention of the Agreement on Subsidies and Countervailing Measures[132] for subsidies.

2.4 Conclusion

From the above discussion on the very nature of carbon markets, it goes without saying that that law plays an integral part in the entire ecosystem. First, it can be argued that intrinsically, any and every market inherently intersects with the law and the two cannot be exclusive purely from an economic perspective. Beyond this however, law becomes the tool by which the products in the market are not only defined but owned and attributed rights. Their definition becomes the first point at which they interact with international law which cannot preside over them until it is clear whether carbon credits are a good or a service. The ownership and ultimately transfer of ownership in trade also finds its basis in the law and the legal status that

[129] WTO Press Release: WTO and UNEP launch a report explaining for the first time the connections between trade and climate change (2009) https://www.wto.org/english/news_e/pres09_e/pr559_e.htm Accessed November 18, 2023

[130] https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/agriculture/051723-zimbabwe-looks-to-revamp-carbon-credit-trade-wants-more-revenues Accessed June 29, 2023

[131] Republic of Rwanda Press Release 8 December 2021 - Kigali, Rwanda 'Rwanda and Sweden Signed a partnership to boost climate resilience in the Eastern Province' https://www.environment.gov.rw/fileadmin/user_upload/Moe/Publications/Press_releases/Press_Release_COMBIO_Final_Version.pdf Accessed June 29, 2023

[132] Agreement on Subsidies and Countervailing Measures

carbon credits are afforded. Hinging on the law beyond this is the rules of playing within the markets and how players within the markets interact with each other. The applicable tariffs if any in the carbon market are also derived from the law. In the event that carbon markets are to intersect with other markets such as financial markets, once again the law steps in to preside over the rules of such engagement. Should there be lack of clarity or misconduct among players in the marker, dispute resolution, an arm of the law, is called upon to save the day. In essence, the role of the law albeit nebulous in certain aspects of carbon markets, cannot be ignored. It therefore becomes imperative that this role is explored to the fullest. Thereafter and seemingly paradoxically, it should be formalised in an agile manner so as not to stifle the innovation of an emerging market. At the close of this chapter, in the context of carbon markets, law matters because economics; because the constitution; because contracts; because taxes; because property rights; because financial market features; and because international trade. Advocating for the establishment of legal regimes in common markets, Knolls postulates that the law "embodies compromise" as one of the active roles it plays is "bridging requirements from different worlds of equivalence." [133] She incorporates the arguments of Boltanski (2005)[134] that seek to establish that the purpose of law is to bridge the gap where contradictions between different worlds exist, and thus the question "Why does law matter?" is answered.

Having argued a case for the necessity of the law and a regulatory framework in carbon markets, the next challenge addressed in the ensuing chapter, is to critically examine already established markets and draw lessons and comparisons where applicable.

CHAPTER 3 – THE REGIONAL BLOC VS A NATIONAL APPROACH

3.1 Introduction

Having established the important role of law in carbon markets, this chapter explores the available different avenues that the African regional bloc could potentially follow in setting up a regulatory framework for carbon markets. Buffet, a renowned

[133] Knoll, L "The Hidden Regulation of Carbon Markets." Historical Social Research, , (2015) vol. 40 132–49. LJ
[134] Boltanski, L, and Chiapello E . The new spirit of capitalism. (2005)

businessman and philanthropist is known to have said "it's good to learn from your mistakes. It's better to learn from other people's mistakes." This is the purpose of this chapter. In this chapter, the regional approach to carbon market implemented by the Europe Union (EU) is critically analysed and, thereafter, compared with the national approach pursued by China. The goal is to extract the lessons, realise the gaps and understand the positive aspects of each approach in a bid to find the best fit for the African regional bloc.

Borrowing from the writings of Begovic's[135] which seek to challenge the normative view of carbon markets to establish a pluralistic view, this chapter explores the different context under which the two approaches to carbon market regulation were implemented. This pluralistic view advocates for tailored regulatory regimes that in being developed are cognisant of "legal, cultural and historical"[136] contexts under which they are to operate. Having understood the nuances of each approach, the outcome would be the realisation of synergies achieved in acting as a regional bloc vis-a-vis as individual States.

Arguably the most renowned and established regulatory framework for carbon markets is the one developed by the European Union (EU). Such assertions are reinforced by a number of factors such as the fact that the EU houses the biggest carbon market, accounting for 87% of the global market.[137] Established in 2005 and serving as the corner stone to the EU's climate change combat policy,[138] the EU Emissions Trading System (ETS), being the first ever established ETS was worth 751 billion euros in 2022.[139] Extending beyond the borders of the EU, this carbon market also includes countries which are part of the European Economic Area (EEA) such as Norway, Iceland and Liechtenstein enabling them to be part of the EU's single

135 Bogojevic S. Emissions Trading Schemes: Markets, States and Law. United Kingdom: Bloomsbury Publishing. (2013)
136 Bogojevic S. Emissions Trading Schemes: Markets, States and Law. United Kingdom: Bloomsbury Publishing. (2013)
137 Reuters 'Global carbon markets value hit record $909 billion last year ' https://www.reuters.com/business/sustainable-business/global-carbon-markets-value-hit-record-909-bln-last-year-2023-02-07/#:~:text=The%20world's%20biggest%20carbon%20market,87%25%20of%20the%20global%20total. Accessed July 2, 2023
138 EU Emissions Trading System (EU ETS) https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en Accessed July 2, 2023
139 Reuters 'Global carbon markets value hit record $909 billion last year' https://www.reuters.com/business/sustainable-business/global-carbon-markets-value-hit-record-909-bln-last-year-2023-02-07/#:~:text=The%20world's%20biggest%20carbon%20market,87%25%20of%20the%20global%20total. Accessed July 2, 2023

market.[140] Since its inception, other regional carbon markets have come to being namely the North American carbon market which is split into the Regional Greenhouse Gas Initiative (RGGI) and the Western Climate Initiative (WCI).[141] According to the UNFCC, as at 2018, Asia-Pacific was contemplating collaborative efforts in the pursuit of potential and opportunities of a regional carbon market.[142] Parallel to the emerging regional ETS's are also national and/or subnational trading systems such as those identified in South Korea, Japan, China, Switzerland, New Zealand, the United States, and Canada.[143] It goes without saying that this is not an exhaustive list and developing countries such as Brazil, Vietnam[144][145] and India (which has passed a The Energy Conservation Amendment Bill whose provisions enable the establishment of a carbon market),[146] have also shown initiative in this regard. It is therefore apparent, that just as is true in the adage on skinning cats, there are various ways to approach the regulation and oversight over carbon markets. China is the preferred comparison primarily because most of the countries that have an established emissions trading scheme are developed countries. For example, Australia[147], Singapore[148] and the United States of America[149]. China on the other hand, is classified as a developing country under the World Trade

[140] EU Emissions Trading System (EU ETS) https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en Accessed July 2, 2023
[141] North American Carbon Markets https://theincubex.com/north-american-carbon-markets-wci-rggi/ Accessed July 2, 2023
[142] UNFCC NEWS 'Asia-Pacific Explores the Potential for a Regional Carbon Market' https://unfccc.int/about-us/regional-collaboration-centres/the-ciaca/asia-pacific-explores-the-potential-for-a-regional-carbon-market Accessed July 2, 2023
[143] European Union 'International carbon market' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/international-carbon-market_en#:~:text=Canada%2C%20China%2C%20Japan%2C%20New%20Zealand%2C%20South%20Korea%2C%20Switzerland%20and%20the%20United%20States Accessed July 2, 2023
[144] World Bank Blogs ' Meeting Vietnam's climate financing challenge' https://blogs.worldbank.org/climatechange/meeting-vietnams-climate-financing-challenge Accessed July 2, 2023
[145] Vietnam's Carbon Market: Progress Report https://www.vietnam-briefing.com/news/vietnams-carbon-market-2023.html/ Accessed July2, 2023
[146] India Ministry of Power "Creation of Carbon Markets' https://pib.gov.in/PressReleasePage.aspx?PRID=1883921 Accessed July 2, 2023
[147] Australian government: About Carbon Markets: https://www.cleanenergyregulator.gov.au/Infohub/Markets/Pages/About-Carbon-Markets.aspx Accessed 13 March, 2024
[148] National Climate Change Secretariat Singapore: Carbon Trading and Services https://www.nccs.gov.sg/singapores-climate-action/carbon-services-and-trading/ Accessed 14 March, 2024
[149] US Environmental Protection Agency: Emissions trading resources: https://www.epa.gov/emissions-trading-resources

Organization (WTO) (albeit self-identification)[150] and the International Monetary Fund (IMF)[151]. China would therefore provide a more apt and relevant threshold for comparison for developing countries in Africa. Additionally, considering the regulation of carbon markets is to be considered under the ambit of a Regional Trade Agreement (RTA), it is only fitting that lessons from one of the world's leading exporter[152] are considered.

3.2 The European Union – A regional Approach

Despite most of the countries in the EU being considered as 'developed' according to the UN country classification[153] the connotations of this being access to resources and expertise, the road to establishing a fully functional EU ETS was a long one. In fact, the process was anticipated to be so lengthy that it was broken down into phases, and still, it continues to progress. It all began in 1991 when the Kyoto Protocol set emission targets that were legally binding. Three years later, the EU came together and published a green paper[154] setting down some preliminary ideas on the EU ETS. Quite extensive in nature, the paper covered a wide spectrum of areas such as the economic rationale for a regional scheme, protection of the internal market, technical regulation, environmental agreements and energy taxation. Pursuant to this paper and ensuing discussions among relevant parties, the EU ETS Directive[155] (establishing the ETS and outlining the 'rules of engagement') was issued. While the Directive was adopted in 2003, two years after the first draft of the

[150] WTO: Who are the developing countries in the WTO? https://www.wto.org/english/tratop_e/devel_e/d1who_e.htm accessed 13 March, 2024
[151] IMF: Country Composition of World Economic Groups https://www.imf.org/en/Publications/WEO/weo-database/2023/April/groups-and-aggregates Accessed 13 March, 2024
[152] Nicita. A, Razo .C, United Nations Trade and Development 'China: The rise of a trade titan', 2021 https://unctad.org/news/china-rise-trade-titan Accessed 13 March, 2024
[153] The UN considered data collated and aggregated by the World Economic Situation and Prospects (WESP) s to map out trends in various facets of the world economy and bases the classification of countries on this. The 2022 country classification is available here https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2022_ANNEX.pdf Accessed July 2, 2023
[154] "A green paper refers to a document published by the European Commission to stimulate discussion on given topics at European Union (EU) level. They invite the relevant parties (bodies or individuals) to participate in a consultation process and debate on the basis of the proposals they put forward." The EU Green Paper is available at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52000DC0087 Accessed July 2, 2023.
[155] Directive 2003/87/EC Of The European Parliament And Of The Council of 13 October 2003

directive was tabled, the system was only later launched in 2005.[156] This shows how extensive negotiation was and how difficult it was to come to a point that accommodated all parties.

3.2.1 Phase 1 – Testing One Two Three

The launching of the EU ETS ushered in the first phase which spanned for two years from 2005 to 2007 [157] - also interpreted to be the trial period.[158]As the name suggests, this period was intended to be a pilot phase, to provide experience as well as build up systems (such as technical infrastructure for monitoring evaluation verification) that would be employed in the ETS going forward.[159] Ellerman and Joskow posit in their appraisal of the EU ETS[160], that the rationale and impetus for a trial period was the realisation of what they refer to as a "performance gap." In essence, the EU upon self-examination realised they lacked the ability to meet their commitments under the Kyoto Protocol; a key consideration to be remembered in later discussions in this chapter. The implementation of the ETS was but the overcoming of the first hurdle in a hurdling race. It is reported that in the initial period, the "total allowances issued exceeded emissions"[161] resulting in supply outweighing the demand, a surplus. The cause of this economic nightmare was the absence of reliable emissions data, which meant the system was based on estimates. In 2007 records show that the price of allowances dismally crashed to zero from a starting price of approximately 30 euros.[162]

[156] European Union 'Development of EU ETS (2005-2020)' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en Accessed July2, 2023

[157] European Union 'Development of EU ETS (2005-2020)' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en Accessed July2, 2023

[158] Ellerman, A. D., Marcantonini, C., & Zaklan, A. The EU ETS: The first eight years. In 11th International Conference on the European Energy Market (EEM14) (2014, May) IEEE, 1-5

[159] A. D Ellerman, P L. Joskow. 'The European Union's Emissions Trading System in perspective' Pew Center on Global Climate Change Massachusetts Institute Of Technology (2008) 7

[160] A. D Ellerman, P L. Joskow. 'The European Union's Emissions Trading System in perspective' Pew Center on Global Climate Change Massachusetts Institute Of Technology (2008) 7

[161] European Union 'Development of EU ETS (2005-2020)' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en Accessed July2, 2023

[162] Julien Chevallier. "The European carbon market (2005-2007): banking, pricing and risk-hedging strategies" (2010)

Lessons from phase 1

Although only spanning a 'short' two years, phase 1 provides invaluable lessons in the development of a carbon market albeit translated to the context of voluntary carbon markets. First, there needs to be an examination of capabilities and capacity. In this instance, the angle at which this is approached, whether at taking the bottom-up approach of country to Africa as a regional bloc or vice versa is immaterial. The fact of the matter is voluntary carbon markets require specialised skills, knowledge and technical infrastructure.[163] What remains is determining whether the African bloc has the technical capacity, relevant experience and financial forte to regulate carbon markets, especially if acting collectively or as individual States. This deduction is made purely from the view point that no voluntary carbon markets framework has existed, that considers the specific legal, political and environmental context of the African Continental Free Trade Area (AfCFTA). Similarly, Ellerman and Joskow contend that the motivation behind the trial period for the EU ETS was that there was virtually no experience for carbon trading in Europe with the limited 'experimental' experience of the United Kingdom and Denmark.[164] Bogoyevic drives this narrative home as he advocates in his writing that a pluralistic view of carbon market regulation should be taken. In his musings, this is a bespoke regime that is cognisant of "legal, cultural and historical" contexts where it is applied.[165]

The second lesson, connate to the first, is the need for and importance of reliable data relating to carbon markets. Thankfully, present day carbon data has evolved drastically from the time of the ETS trial period. This does not negate the fact that reliable data tracking and verification systems need to be in place if voluntary carbon markets are to flourish.[166] In sooth, data infrastructure and information systems play a crucial role in establishing a transparent and credible carbon market all the while combating information asymmetry to the market players. Not only does

[163] Ziegler, T. Assessing Credibility in the Voluntary Carbon Market (2023) IIIEE, Lund University https://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=9133772&fileOId=9133777 Accessed November 18, 2023

[164] A. D Ellerman, P L. Joskow. 'The European Union's Emissions Trading System in perspective' Pew Center on Global Climate Change Massachusetts Institute Of Technology (2008) 7

[165] Bogojevic S. Emissions Trading Schemes: Markets, States and Law. United Kingdom: Bloomsbury Publishing. (2013)

[166] Betz, R., & Sato, M. Emissions trading: lessons learnt from the 1st phase of the EU ETS and prospects for the 2nd phase. In National Allocation Plans in the EU Emissions Trading Scheme (2010), 351-359,

the data infrastructure become a pillar of the markets, it could also foster innovation within the private sector to participate more in the market by developing systems and technologies that serve the market and allow it to function efficiently in line with the verification, certification, compliance reporting, quality assurance and accounting which is at the centre of essentially any carbon market. [167] At present, two verification systems (commonly referred to as registries) dominate the market namely Verified Carbon Standard (now Verra) and Gold Standard.[168] Each registry has its own rules, standards and criteria that governs "how project developers originate their carbon credits through methodological approaches to carbon reduction, avoidance, and removal"[169] processing, recording and storing voluminous data. In an emerging carbon market, estimated to have increased revenues by 44% to over US$795 million in the year 2022 and anticipated to increase further in the future, there is much room for technical innovation and new players in the space, especially at the advent of the 4th Industrial Revolution.[170] Coincidentally, data infrastructure is not a novel discipline on the African continent as according to a study done by the African Development Bank (AfDB), by the year 2019, it was estimated that US$9.5 million in capital investments would have been injected into big data start-ups.[171] Carbon markets therefore present a prime opportunity for Africa to alter the narrative and harness the fourth industrial revolution and the opportunities it brings[172].

3.2.2 Phase 2 - Stabilisation and Operationalisation

The period between the year 2008 and 2012 marked the second phase of the implementation of the ETS. Incidentally, this coincided with Kyoto Protocol's 1st commitment period, under which the EU as a bloc had committed to 8% emissions

[167] G. Torras Vives 'Why data infrastructure is key for a transparent carbon market' https://blogs.worldbank.org/climatechange/why-data-infrastructure-key-transparent-carbon-market Accessed July 4, 2023
[168]AO Fatunbi and P Sarfatti FARA Proceeding of the First Biennial Africa Climate Smart Agriculture Stakeholders The conference, Accra, Ghana. 1-2 December 2020. (2021) 225
[169] G Spilker, N Nugent, 'Voluntary carbon market derivatives: Growth, innovation & usage' Borsa Istanbul Review,Volume 22, Supplement 2, (2022) 109-118
[170] Trading Insights from 2022 https://xpansiv.com/trading-insights-from-2022/#:~:text=Prevailing%20Indicators%20of%20Long%2DTerm,6%25%20below%202021's%20record%20total. Accessed November 18, 2023.
[171] The notion of the African continent already participating and embracing the 4IR is meticulously put forward and explored by the African Development Bank in the 'Potential of the fourth industrial revolution in Africa' Report. (2019)

reduction.[173] Of note, is the fact that under the trial period, were only 15 of the EU countries with Norway, Iceland and Liechtenstein joining in phase 2; a consideration to be remembered for discussions on lessons from the implementation of the EU. Also, within Phase 2, a Union Registry was setup, which took the place of national registries. Its main purpose was to collate, aggregate and record all EU ETS allowances issued. In no particular order, other developments in this phase comprised the inclusion of aviation industry under the ETS, businesses being permitted to purchase international credits, and the inclusion of nitrous oxides under GHG's.[174] During this period emissions allowances were usually distributed for free, while a small portion made it to auction platforms.[175] The United Kingdom became the first EU member state holding an auction for its allowances and several countries followed suit.[176] Essentially the second phase of the EU ETS can be accorded the theme of amelioration in line with Kaizen's theory; continuous improvement. Some scholars in their discourse refer to this stage as the period of "stabilization and further operationalisation."[177] More significant however, is the fact that the infant EU ETS had to live through and survive the 2008/9 economic crisis. It is argued that so grave was the impact of this crisis on the industries producing carbon, that it accounted for approximately 66.22% in emissions abatement in the EU during this period.[178] The reduction in emission resulted in a surplus of allowances and credits as many countries emitted well below their capped amounts and sought to dispose of the extra allowances and monetise them. The effect on the price of carbon was inimical[179] as evidently, carbon prices are also subject to the laws of supply and demand.

[173] European Commission 'Kyoto 1st commitment period (2008–12)' https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-made-cutting-emissions/kyoto-1st-commitment-period-2008-12_en Accessed July 2, 2023
[174] European Commission ' Union Registry' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/union-registry_en Accessed July 4, 2023
[175] Bel, G., & Joseph, S. Industrial emissions abatement: untangling the impact of the EU ETS and the economic crisis. Barcelona: Barcelona University. (2014)
[176] 'EU ETS: carbon markets' https://www.gov.uk/guidance/eu-ets-carbon-markets Accessed July 4, 2023
[177]M. Mehling 'The EU ETS: Lessons Learned and Perspectives' PMR Brazil Project Seminar Exploring Carbon Pricing Instruments for Brazil Brasilia | 1-2 December 2016 https://www.gov.br/fazenda/pt-br/orgaos/spe/pmr-brasil/seminarios-para-sensibilizacao/1o-seminario/apresentacoes-1-seminario/sessao-04-michael-mehling Accessed July 4, 2023
[178] G. Bel, & S. Joseph "Emission abatement: Untangling the impacts of the EU ETS and the economic crisis." Energy Economics, 49, (2015) 531-539.
[179] European Commission 'Development of EU ETS (2005-2020) ' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en Accessed July 4, 2023

Lessons from Phase 2

Analysing the second phase of the EU ETS, a common thread of change runs through its fibres as it underwent significant evolution. They key take away from this is quite simple, Rome was not built in a day! Similarly, it is impractical (and bluntly put quite irrational) to expect to build a perfect regulatory framework in the first instance. Instead, over time and perhaps with some trial and error, a functional framework emerges as it evolves with a morphing market. This is especially true with carbon markets that are still an emerging market and are not yet fully established and largely technology driven. It therefore becomes imperative that any form of regulation purporting to superintend such a market, allows for pivots to be made in stances taken and does not stifle innovation within the said market. For example, at present, discussions on block chain and their role in carbon markets are incipient. While some argue that blockchain could be the solution to the lack of integrity and transparency ills of carbon markets, because blockchain itself is also quite novel and in many cases at experimental stages, others are of the view that it over promises and under delivers.[180] Despite what one's personal feeling towards the blockchain are, it would be an injustice to carve a regulatory framework that is not agile enough to cater to technological innovations such as these. Additionally, at the inception of the EU ETS, not all the countries involved today were part of it, with Norway and others acceding later on. The lesson here is start, there will always be room for improvement! An invaluable lesson for the African regional bloc. To borrow the words of the infamous American financier JP Morgan, "the first step towards getting somewhere is to decide you're not going to stay where you are."[181] If indeed the African region is determined to not only meet its NCD's under Kyoto, but achieve a just energy transition, all the while developing its economies and taping into the potential of carbon markets, it is crucial that action starts now.

Perhaps the biggest factor affecting the performance of the EU ETS in the second phase was the 2008 economic crisis as discussed earlier. This is an indication that 'external forces will have a significant impact on how carbon markets perform and actually determine the price of carbon. In fact, carbon markets rely largely on

[180] Sipthorpe, A., Brink, S., Van Leeuwen, T., & Staffell, I. Blockchain solutions for carbon markets are nearing maturity. One Earth, 5(7), (2022) 779-791
[181] JP Morgan

the performance of other industries such as energy. So, intricate the relationship between carbon markets and 'external factors' such that the recent geopolitical crisis between Russia and Ukraine[182] impacted energy supply chains and by extension the price of carbon. The Russian- Ukraine conflict exposed many a country to energy price and supply volatility whose general impact was exorbitant energy prices and energy insecurity.[183] As a direct result of a ban of Russian energy imports, the price of carbon allowances in the EU dropped 60 euros per metric tonne of CO_2.[184] This led countries, especially in the European region, to resorting to fossil fuel-based energy to meet the demand. In a phenomenon referred to as 'backsliding', certain countries such as Germany, the Netherlands and Italy, looked to return to coal (one of the major carbon emitters) as a fuel sought to combat the energy crisis.[185] The EU's rate of coal consumption increased by approximately 10% in the first half of 2022.[186] Naturally, because of the directly proportional relationship between carbon emission, carbon price also increased with record high of 100.34 euros per metric ton of CO_2 reported in February 2023.[187]

While the lesson here is that carbon markets will respond both negatively and positively to external market forces, there unfortunately seem to be no remedy of this at present. Considering that Africa could act as a block, one would assume that it could perhaps, adopt a strategy similar to that of the Organization of the Petroleum Exporting Countries (OPEC). OPEC is able to control the prices of oil in the market by increasing supply when prices are deemed too high and vice versa when they are low. Its mission is to "…ensure the stabilization of oil markets in order to secure an efficient, economic and regular supply of petroleum to consumers, a steady income

[182] The United Nations records that Russia Invaded Ukraine on February 24, 2022, marking the beginning of the disruption of gas supply chains from Russian and resulting in an energy crisis particularly for Europe. United Nations News https://news.un.org/en/story/2023/03/1134122 Accessed 6 July 2023

[183] International Energy Agency 'Russia's War on Ukraine' https://www.iea.org/topics/russias-war-on-ukraine Accessed July 6, 2023

[184] Article 3(a) of the EU ETS Directive defines an emission allowance as "an allowance to emit one tonne of carbon dioxide equivalent during a specified period." Statista ' European Union Emission Trading System (EU-ETS) carbon pricing from January 2022 to June 2023'

[185] https://www.euronews.com/my-europe/2022/11/03/energy-crisis-eu-heads-to-cop27-as-countries-switch-from-gas-to-coal Accessed July 6, 2023

[186] IEA (2022), Coal Market Update – July 2022, IEA, Paris https://www.iea.org/reports/coal-market-update-july-2022, License: CC BY 4.0

[187] European Union Emission Trading System (EU-ETS) carbon pricing from January 2022 to June 2023 https://www.statista.com/statistics/1322214/carbon-prices-european-union-emission-trading-scheme/#:~:text=EU%2DETS%20allowance%20prices%20in%20the%20European%20Union%202022%2D2023&text=The%20price%20of%20emissions%20allowances,of%20CO%E2%82%82%20in%20February%202023. Accessed July 6, 2023

to producers and a fair return on capital for those investing in the petroleum industry."[188] However, because of the double-edged nature of carbon markets, this would be counter-productive. Admittedly, the approach would allow Africa to realise the most financial gain and yet it could prove detrimental on the environmental aspect and therefore remains unsuitable in this instance. While it is commendable for Africa to 'exploit' (read commercialise) carbon markets as a tool to close the climate financing gap, it is also in the bloc's interest to participate in the market even when prices are lower as this still could, with the evolution of the markets, contribute to NDC's as well as combat climate change plaguing the continent. It is imperative that policy makers do not perpetrate the narrative that the indicator for a successful carbon market is a high price while low prices become symptomatic of market failure.

3.2.3 Phase 3 – An Operational Era

Beginning in 2013, 8 years from the inception of the EU ETS, the second phase was scheduled to end in 2020.[189] It is characterised by significant reform in regulations and has come to mark the switch from the trading scheme's formative and training years towards a systematically operative and fully functional carbon market and instrument.[190] New rules introduced in this era include:

- a single, Europe-wide applicable cap on emissions with a reduction of 1.74% per year until the end of phase 3. This is known as the Linear Reduction Factor and took the place of the previous system of national caps and harmonised the policies;
- auctioning was declared the default method for allocating allowances. This was achieved through a phase-out out process of the free allocations. EU allowances were auctioned in accordance with the EU ETS Auction Regulation. This allowed the price of carbon to be a true reflection of the interaction between supply and demand;
- allocation rules applying to the free allowances were streamlined with the result that free allocations to industries other than power generation were

[188] Organization of the Petroleum Exporting Countries https://www.opec.org/opec_web/en/about_us/23.htm Accessed July 6, 2023
[189] European Commission 'Development of EU ETS (2005-2020)' https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en Accessed July 9, 2023

[190] International Emissions Trading Association Green House Gas Market Report 12th Edition (2015)

determined by a calculated benchmark and any further allowances had to be acquired through auction ;

- more sectors and gases included; and
- the New Entrants Reserve (NER300) which was established to syphon revenue from auctions to fund investment into innovative low carbon technologies such as renewable energy as well a carbon capture and carbon storage expertise.[191]

Lessons from Phase 3

Perhaps the most striking lesson from the third phase of the implementation of the EU ETS, is the fact that the testing, experimental, exploratory era is not in vain. Having learned numerus lessons from the initial stages of the scheme, the EU was able to harness the lessons, taking corrective measures where necessary, to achieve a fully functional carbon trading system. Having taken a bottom-up approach, in the third phase the EU was able to discard unfavourable national-centric policies such as national caps in favour of a harmonised EU cap, only after having explored the former and realised it was not a suitable fit. Acting as a regional bloc, the EU was also able to streamline its emissions reductions targets and achieve a common goal through the implementation of the Linear Reduction Factor. Acting as a bloc and each initially committing to an 8% emissions target under the first commitment period (and ensuing periods) of the Kyoto Protocol[192] [193], naturally, implementing policies and regulations in a synchronous manner was advantageous. This ensured that, in fulfilment of the *nemo reside* principle[194]; no man was left behind.

Another precept from the EU ETS, comes from the establishment of the New Entrants Reserve (NER 300). This fund allowed for the specific allocation of resources towards developing technologies that would further combat climate change. Paving the path

[191] M. Mirzaee Ghazani & , M. A. Jafari "The efficiency of CO2 market in the phase III EU ETS: analysing in the context of a dynamic approach" Environmental Science and Pollution Research, 28(43), 61080-61095. (2021).
[192] United Nations 'Kyoto Protocol - Targets for the first commitment period' https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period Accessed July 9, 2023
[193] Kyoto Protocol to The United Nations Framework Convention On Climate Change Annex B (1998)
[194] United Nations Sustainable Development Goals Universal Values https://unsdg.un.org/2030-agenda/universal-values/leave-no-one-behind Accessed 30 April 2023

to a low-carbon and ensuring compliance to the NDC's at present seems to be a long and expensive road particularly for global south countries faced with the climate-finance gap. The NER 300 presents a blue-print for a remedy to this challenge. While it goes without saying that a copy-paste approach would not suffice, the underlying rationale remains the same. The revenues from carbon markets can be channelled towards low carbon technologies and perhaps the most relevant in the case of Africa, being renewable energy. Even while engaging in fossil-fuel intensive activities, the International Energy Agency records 600 million people (mostly in Africa) without access to electricity in 2022.[195] If indeed Africa is to achieve a just energy transition, it becomes critical to explore the technologies that could potentiality eradicate energy poverty simultaneously ushering in the era of cleaner energy.

3.3 A Nationalist Approach – A Case Study of China

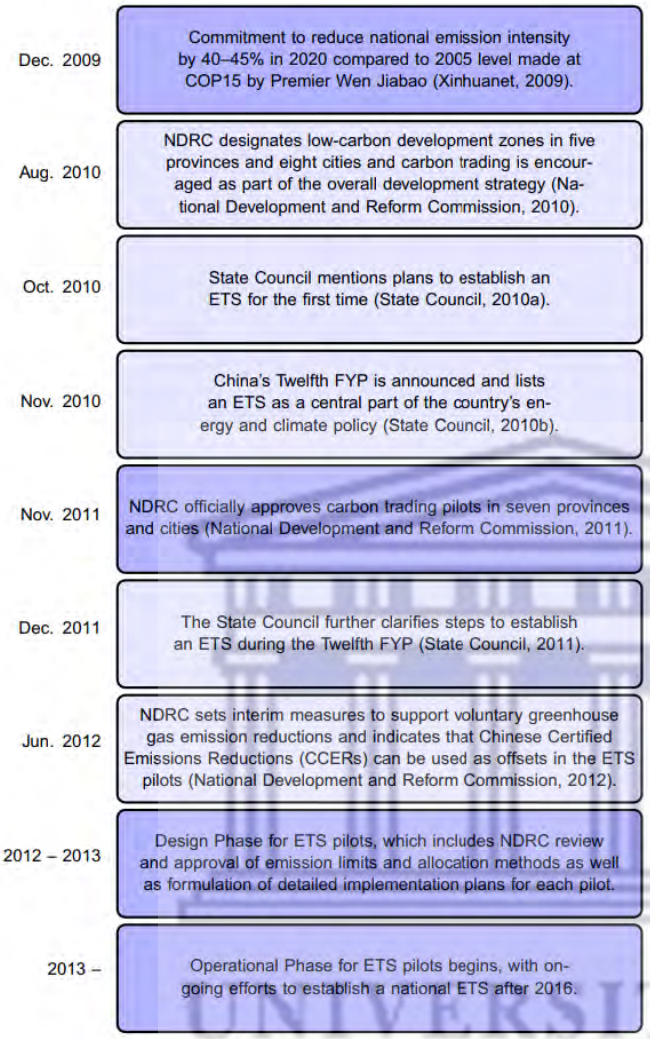
With the insurgence of carbon markets as a tool to combat climate change, some countries have chosen to act independently and implement national rather than regional trading schemes. Considering that each country has pledged NDCs under the Kyoto Protocol, emission trading schemes have somewhat emerged as the preferred tool to achieving these targets. This is because ETS are regarded as a cost-efficient tool to emissions' abatement. [196] Estimates indicate that carbon trading could significantly reduce the cost of independent implementation of NDCs advancing the rationale for their use.[197] Holding the title of the world's largest exporter and ranked as the second biggest economy globally with a GDP of US$17.96 trillion as of 2022, is the People's Republic of China (China)[198], which has also opted for the nationalist approach. What could arguably be the most significant statistic about China in the context of carbon markets, is its ranking among top GHG

[195]IEA Africa Energy Outlook 2022, IEA, Paris https://www.iea.org/reports/africa-energy-outlook-2022, (2022)
[196] 45. X. Zhang, , T. Y. Qi, X. M. Ou, & X. L. Zhang, "The role of multi-region integrated emissions trading scheme: A computable general equilibrium analysis." Applied Energy, 185, (2017)1860-1868
[197] The World Bank 'Countries on the Cusp of Carbon Markets' https://www.worldbank.org/en/news/feature/2022/05/24/countries-on-the-cusp-of-carbon-markets Accessed July 9, 2023.
[198] World Bank national accounts data, and OECD National Accounts data files https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=CN Accessed July 9, 2023

emitters. Accounting for over 25% of global emissions, China is the highest GHG emitter by sheer volume.[199]

Previously, China's action plan for combating climate change was characterised by State directed investment in conjunction with regulatory interventions.[200] Climate policy in China is not a novel concept, where historically, it has taken the form of 5 year plans imposing national energy intensity targets. The crux of previous policies was focused on fossil energy use, with the aim of promulgating energy conservation measures through energy efficiency.[201] More recently, this policy stance has seen a shift with China reconnoitring market-based tools as evidenced by the numerous provincial trading schemes in the Republic. It was not until October 2010, that China announced its plans to establish an ETS, marking a paradigm shift in the climate policy in China.[202]

[199] World Resources Institute https://www.wri.org/insights/interactive-chart-shows-changes-worlds-top-10-emitters Accessed July 9, 2023
[200] F. Jotzo, & A. Löschel "Emissions trading in China: Emerging experiences and international lessons" Energy Policy, 75, (2014)
[201] D. Zhang, V. J. Karplus, , C. Cassisa, & X. Zhang, "Emissions trading in China: Progress and prospects." Energy policy, 75, 9 (2014)
[202] D. Zhang, V. J. Karplus, , C. Cassisa, & X. Zhang, "Emissions trading in China: Progress and prospects." Energy policy, 75, 9 (2014))



Roadmap illustrating the evolution of China's climate policy. Source : D. Zhang, V. J. Karplus, , C. Cassisa & X. Zhang, "Emissions trading in China: Progress and prospects." Energy policy, 75, 9 (2014)

The time between this announcement and the designing of the ETS was approximately 2 years, where between 2012 and 2013, the National Development and Reform Commission (NDRC), a body responsible for the development and implementation of economic and social development strategies, reviewed and approved ETS implementation plans. [203] Similar, to the EU ETS, China also executed a testing phase. As opposed to the phase-by-phase approach in the EU, China sanctioned seven provincial pilot schemes[204] in Beijing, Tianjin, Shanghai, Chongqing, Hubei, Guangdong and Shenzhen. Each ETS pilot implemented detailed regulations and rules independent of the other, with the aim of informing the

[203] J. Dong , Y. Ma, H. Sun "From Pilot to the National Emissions Trading Scheme in China: International Practice and Domestic Experiences" Sustainability. 8(6) 2016
[204] X. Chen, J. Xu; 'Carbon Trading Scheme in the People's Republic of China: Evaluating the Performance of Seven Pilot Projects.' Asian Development Review; 35 (2): (2018)131–152.

regulation of national ETS to be later established.[205] Almost 6 years after approving the pilot projects under provincial ETS's, China only started in National ETS in 2017,[206] once again proving that the road to an effective and fully operational carbon markets is a long-learning-by-doing process.[207]

Lessons from China

Much like the EU ETS, although structured a bit differently, the starting point and first lesson of the Chinese ETS is a testing phase. This means, regardless of whether one is regulating carbon markets at national or regional bloc level, a measured approach is necessary. In the case of China, they opted for numerous pilot projects in different cities. The pilot schemes were deliberately structured to cover a wide spectrum of economic environments[208]. These ranged from high income and well-developed metros such as Beijing and Shanghai, with economies characterised by the services and manufacturing, special economic zones such as Shenzen, while the other end of the spectrum was regions such as Hubei, which are relatively less developed and is heavily reliant on secondary industry.[209] Each provincial pilot was empowered to establish an ETS based on its unique economic circumstances as well as other policy considerations such as coal consumption[210]. While some design features were similar in the pilot projects, the efficacy of this testing phase, was that it allowed it allowed China to observe "an important experiment and learning opportunity that will shape a potential future national ETS".[211] By experimenting in this way, China was able to develop a contextually relevant and superlative ETS while 'making mistakes on smaller scale'. The caveat however, is that China being the world's largest exporter,[212] had structures and provinces that operated

[205] J. Dong , Y. Ma, H. Sun "From Pilot to the National Emissions Trading Scheme in China: International Practice and Domestic Experiences" Sustainability. 8(6) (2016)
[206] S. Feng, S. Howes, Y. Liu, K. Zhang & J. Yang "Towards a national ETS in China: Cap-setting and model mechanisms "Energy Economics, 73 (2018) 43-52.
[207] S. Qi, B. Wang & J. Zhang "Policy design of the Hubei ETS pilot in China" Energy Policy, 75, (2014)
[208] F. Jotzo, & A. Löschel "Emissions trading in China: Emerging experiences and international lessons" Energy Policy, 75, (2014)
[209] Qi, S., Wang, B., & Zhang, J. Policy design of the Hubei ETS pilot in China. Energy Policy, 75, 31-38. (2014).
[210] F. Jotzo, & A. Löschel "Emissions trading in China: Emerging experiences and international lessons" Energy Policy, 75, (2014)
[211] 44. D. Zhang, V. J. Karplus, , C. Cassisa, & X. Zhang, "Emissions trading in China: Progress and prospects." Energy policy, 75, 9 (2014) 9-16
[212] United Nations Conference on Trade and Development UNCTAD 'China: The rise of a trade titan' https://unctad.org/news/china-rise-trade-titan Accessed July 11, 2023

independently enough economically and governance-wise to support such a decentralised structure. The reality for many an African country, is that this disseminated approach would not work. Therefore, second lesson from the Chinese ETS, is to consider and factor in contexts peculiar to the jurisdiction under which a carbon market will operate.

Another major lesson is the prerequisite of a legal basis for an ETS to be established. In the case of China, each province had to pass different legal instruments that would allow for the implementation of each provincial ETS.[213] These took different forms for example, Beijing had the Resolution on Beijing to Carry Out Carbon Trade Pilot under the Premise of Strictly Controlling Total Carbon Emissions (Beijing Municipal People's Congress Standing Committee) (31 December 2013) while Shenzen found its legislative basis in the Regulation on Carbon Emission Management for the Shenzhen Special Economic Zone (Shenzhen Municipal People's Congress) (30 December 2012).[214] Because in China national law supersedes provincial law, it was imperative that the instruments enacted at provincial level were supported at national level, and this was ensured by the NDRC which approved the pilot projects between 2011 and 2012.[215]

China also provides interesting insight on the interaction of other policies with climate policy. Prior to China deciding to make the shift to market-based climate policies such as an ETS, there existed other regulations which promoted China's approach of improving energy efficiency. Between 2006 and 2010, China launched a mandatory energy saving and emission reducing program under its 11th Five-year plan.[216] This program had an effect on energy, climate and even fiscal policy. It therefore becomes imperative that the nexus between the policies allows for their

[213] X. Chen, J. Xu "Carbon Trading Scheme in the People's Republic of China: Evaluating the Performance of Seven Pilot Projects" Asian Development Review; 35 (2) (2018) 131–152. doi: https://doi.org/10.1162/adev_a_00117 Accessed July 11, 2023
[214] X. Chen, J. Xu; Carbon Trading Scheme in the People's Republic of China: Evaluating the Performance of Seven Pilot Projects. Asian Development Review; 35 (2) (2018) 131–152. doi: https://doi.org/10.1162/adev_a_00117 Accessed July 11, 2023
[215] J. Dong , Y. Ma, H. Sun "From Pilot to the National Emissions Trading Scheme in China: International Practice and Domestic Experiences" Sustainability. 8(6) (2016)
[216] D. Zhang, , V. J. Karplus, C. Cassisa & X. Zhang "Emissions trading in China: Progress and prospects." Energy policy, 75, 9-16 (2014)

parallel existence in order to avoid contradictions and redundancy.[217] This is especially important in the case of China that had made a pivot into market-based mechanisms such as the ETS. A prime example of this is that because under the energy efficiency focused policy that China focused on earlier, electricity prices are regulated, under the pilot programs, they were able to include indirect emissions. Essentially, an increase in electricity prices cannot be passed to the consumer, accounting for indirect emissions provided an incentive for commercial users to reduce consumption as increased consumption now factored in the cost of an added emission allowance.[218] In essence, already existing policies whether in the climate space or in other sectors such as energy, have the potential to create barriers or opportunities for the scaling of carbon markets. It is therefore imperative that policy intersections are monitored in order to avoid "inconsistency and overlap, potentially causing confusion and reducing effectiveness."[219]

3.4 Repudiating the national approach in favour of the regional approach

In the recapitulation of the preceding discussions, it is somewhat apparent, that in the context of Africa, a regional approach would be better. This does not give licence for a copy and paste approach as it would still have to be tailored to suit the African economic context, interact as seamlessly as possible with existing policies, all the while addressing Africa's specific needs and motivations for regulating a carbon market. The arguments for opting for a regional approach are numerous and begin with perhaps the most obvious. The EU-ETS is already a multi-national agreement that factors in the fact that the parties to it are sovereign states in their own right. Further, the EU prototype factors in the disparities in economic circumstance as it accounts for different levels of development and size for example East with smaller less developed countries such as Romania and Bulgaria in comparison to Western Europe comprising of the more economically advanced Benelux countries. The EU ETS provides a glimpse into bridging economic, institutional and political differences towards a specific goal especially in the face of limited resources and expertise in the context of Africa. Furthermore, acting as a regional bloc allows for the avoidance of

[217] Zhang, D., Karplus, V. J., Cassisa, C., & Zhang, X.. Emissions trading in China: Progress and prospects. Energy policy, 75, 9-16 (2014)
[218] Zhang, D., Karplus, V. J., Cassisa, C., & Zhang, X.. Emissions trading in China: Progress and prospects. Energy policy, 75, 12 (2014)
[219] Zhang, D., Karplus, V. J., Cassisa, C., & Zhang, X.. Emissions trading in China: Progress and prospects. Energy policy, 75, 14 (2014)

a flurry of pilot projects as was the case in China. This fragmented approach with numerous pilot projects could indeed be described as a misallocation of limited resources. Additionally, one of the present challenges of carbon markets is their fragmented nature.[220] [221] The fragmented structure of carbon markets is associated with its own set of challenges such as uneven carbon pricing, which in turn could result in competiveness losses.[222] These loses would see certain countries with robust carbon market regulation policies gaining a competitive edge on the carbon market while other countries trail behind. Acting as a regional bloc presents a unique opportunity for the African States to develop in the carbon markets space at a similar pace, addressing the critical issue of closing the financing gap at a continent-wide level. Additionally, with latest figures reporting that 54 countries have signed the AfCFTA Agreement and 46 countries of them having deposited their instrument of ratification[223], there is a case to be made for the political momentum that the regional bloc has garnered. However, it would be imprudent to ignore the fact that most countries are yet to assess the implications the AfCFTA would have on national economies, resulting in slow implementation of the free trade area[224]. Adopting a regional approach to regulating carbon markets could serve as a catalyst to the implementation of the AfCFTA, as it would address as very urgent and pertinent challenge that the continent is facing – the climate finance gap. The success of the framework would boost confidence in the free trade area, among the private sector, the governments and the general citizenry. These are all key stakeholders in the overall success of the AfCFTA which at present is at a very nascent stage of its operations.

It becomes imperative to highlight that while the regional bloc emerges the better fitting approach in the context of African carbon markets, some lessons can still be taken from China's national approach. Chief among these lessons, is the interaction between other policies and the climate policy which includes carbona markets. This is particularly crucial in the case of considering a carbon markets policy as part of

[220] E. Lanzi, J. Chateau, & r. Dellink "Alternative approaches for levelling carbon prices in a world with fragmented carbon markets" Energy Economics, 34, (2012).
[221] H. M. Ahonen, Kessler, J., A. Michaelowa, A. Espelage, & S. Hoch "Governance of fragmented compliance and voluntary carbon markets under the Paris Agreement" Politics and Governance, (2022)
[222] E. Lanzi, J. Chateau, & r. Dellink "Alternative approaches for levelling carbon prices in a world with fragmented carbon markets" Energy Economics, 34, (2012).
[223] About the AfCFTA https://au-afcfta.org/about/ Accessed 25 June 25, 2024
[224] W. Sharkdam., & J. M. Ali, The african continental free trade area (AFCFTA) and regional economic integration: prospects and challenges. Zamfara Journal of Politics and Development, (2022). 3(1), 15-15.

the AfCFTA. The framework developed for regulating carbon markets must be coherent and consistent with all other protocols of the AfCFTA, such as Trade in Good, Customs and Trade Facilitation and the Investment Protocols.

3.5 Conclusion

Taking into account the developing status of most if not all of the African states that make up the regional bloc, the current political momentum the AfCFTA has garnered so far and keeping in sight the fragmented almost non-existent regulatory frameworks of most individual states in the bloc, it is advisable to explore the regional bloc approach in formulating a regulatory framework for the carbon markets. Naturally, acting of states in their individual capacities would cause the further division of an already unharmonized market, counterproductive to what the intention is globally. Moreover, the regional approach would allow for the pooling together of resources, financial and technical, in an exemplary effort of regional integration to fight the very real challenge the climate financing gap plaguing the region. Ultimately, the regional approach allows for the realisation of synergies such as the compatibility of systems promoting integrity and allowing for easier trade/ exchange between systems and supporting continental cooperation in climate change towards a just energy- transition. As the cherry on top, the formulation of regulatory framework under a regional approach confers the added advantage of politically credible framework in the eyes of a multi-lateral trading eco-system.[225] Having established that a regional approach is the most suitable, it remains to explore how exactly this task would fit into the mandate and structures of the AfCFTA.

[225] J. Frankel "How to set greenhouse gas emission targets for all countries. *Combatting Climate Change: a CEPR Collection*" (2021)

CHAPTER 4 – THE ROLE OF THE AFCFTA

4.1 Introduction

One of the flagship initiatives of the African Union (AU) Agenda 2063 is the African Continental Free Trade Area (AfCFTA). The Agenda is a strategic framework that "seeks to achieve inclusive and sustainable socio-economic development over a 50-year period".[226] The AfCFTA is a comprehensive free trade agreement set up to include pivotal areas of the continent's economy such as trade in services, trade in goods and investment protection. The main aim of the AfCFTA is to eliminate barriers to trade and create a single African market by deepening the economic integration of the continent. Rooted in the principles enunciated in the Abuja Treaty, the free trade agreement came into force in March 2019, pursuant to the deposits of instruments of ratification by 22 Member States of the African Union.[227] Perhaps one of the most important features of the AfCFTA is that it brings together 8 Regional Economic Communities (RECs) and numerous Regional Trade Agreements (RTAs) that arguably so far, have contributed to the fragmented regulatory frameworks on the continent, even within regional blocs.

As discussed earlier, it is important that if a regulatory framework is to be established, it should factor in the different legal, cultural and political contexts under which it would operate. It therefore becomes imperative to understand the current state and thereafter the particular challenges applicable in the African context. From this basis, it becomes easier to identify how acting within the framework of the AfCFTA mitigates the said challenges. The interaction of the AfCFTA mandate, salient protocols and structures with the carbon markets will present an ideal starting point to understand how the regulatory framework would be formulated and map a plan of action, allowing the regional bloc to become the catalyst to maximising the full potential of carbon markets.

[226] African Union 'Agenda 2063: The Africa We Want' https://au.int/en/agenda2063/overview Accessed July18, 2023
[227] African Union 'About the AfCFTA: Brief Overview' https://au-afcfta.org/about/ Accessed July 18, 2023

4.2 The Current Status of Voluntary Carbon Markets in Africa

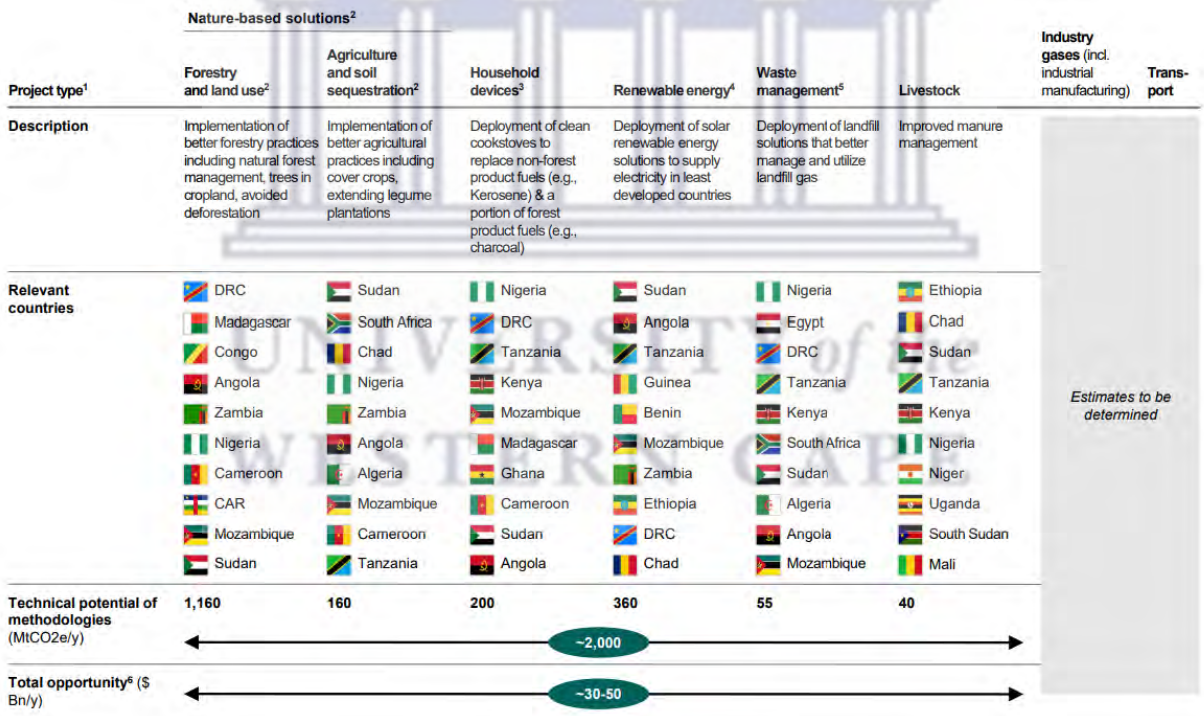
Although exhibiting presence in many African States, carbon markets have not yet realised their potential, nor are they near the performance standards of other regions. Within the first eight months of 2021, carbon markets had generated approximately US$748 million engendered from the sale of 239.3 million credits. This reflected a 58% year to date increase from the previous year.[228] It is imperative to note, that such exponential growth was recorded against the backdrop of many economies and companies trying to recover from the devastating effects of the Covid-19 pandemic.[229] Of the US$2 billion voluntary carbon markets revenue recorded in 2021[230], Africa only accounted for a nominal share of approximately 11% of the retired credits.[231] This performance is even more disappointing when considering that between 2016 and 2021, African carbon markets were growing at a slightly faster pace than global markets. The Compounded Annual Growth Rate (CAGR) for African markets was 36% vis a vis 31% for the global markets.[232] In a continent of over 50 countries, as at 2022, 5 countries namely DRC, Ethiopia, Kenya, Uganda and Zimbabwe, accounted for approximately 65% credits issued over the preceding 5 years. With the Voluntary Carbon Market projected to be worth an estimated US$30–50 billion by 2030[233], African states can ill afford to incessantly punch below their weight.

4.3. The opportunity for Africa

There exists on the continent numerous opportunities to generate carbon credits and generating revenues for climate financing and apportioning to Africa, 'a slice of the

[228] Ecosystem marketplace, State of the Voluntary Carbon Markets 2021 Instalment 1. Based on data for January to August 2021
[229] The World Bank '2021 Year in Review in 11 Charts: The Inequality Pandemic' 2021
[230] A. Porsborg-Smith, J. Nielsen, B. Owolabi, and C. Clayton Boston Consulting Group ' The Voluntary Carbon Market Is Thriving' (2023)
[231] United Nations Economic Commission for Africa 'Carbon markets trade carbon credits.' https://www.uneca.org/eca-events/sites/default/files/resources/documents/abf2023/230219-africa-business-forum_background-reading-on-carbon-markets.pdf Accessed July 18, 2023
[232] McKinsey Vivid Economics Carbon Credit Database, drawing on Verra, Gold Standard, ACR, CAR, Plan Vivo, 2022
[233] C. Blaufelder, C. Levy, P. Mannion, and D. Pinner., "A blueprint for scaling voluntary carbon markets to meet the climate challenge", McKinsey Sustainability, January 29, 2021. "The low-end estimate of $5 billion to $30 billion represents a scenario where buyers purchase the historical surplus of carbon credits and then acquire the lowest cost credits available; the high-end estimate of more than $50 billion represents a scenario in which most buyers opt to purchase credits from local suppliers only, even at a premium."

pie'. In fact, so real is the opportunity that is has been dubbed the "sub-Saharan Africa Advantage".[234] This advantage is deemed to be conferred from nature-based solutions which term devised by the International Union for Conservation of Nature (IUCN) alludes to "leveraging nature and the power of healthy ecosystems to protect people, optimise infrastructure and safeguard a stable and biodiverse future."[235] The UN has already declared Africa as toping biodiversity charts by region, accounting for up to a quarter of the world's biodiversity.[236] Additionally, 31% of woodlands and 17% of the world's forests. These figures are an indication of the potential to implement natural based solutions, commercialising the natural assets that Africa has been endowed with, using carbon markets as the tool. The ACMI estimates that, using currently available nature bases solutions and methods, there is scope to generate approximately 2,000 MtCO2e (metric tonnes of carbon dioxide equivalent) which by the year 2030, could be worth up to US$ 40 billion.[237] This is before tapping into new technologies, innovations and other climate change mitigation initiatives.



234 T. Ferdinand, J. del Ser 'Inclusive and Nature-based Carbon Markets: A Path to Resilient Livelihoods in Sub-Saharan Africa' Opportunity Brief October 2022 https://bfaglobal.com/wp-content/uploads/2022/10/CarFi-Brief-October-2022.pdf Accessed July 22, 2023

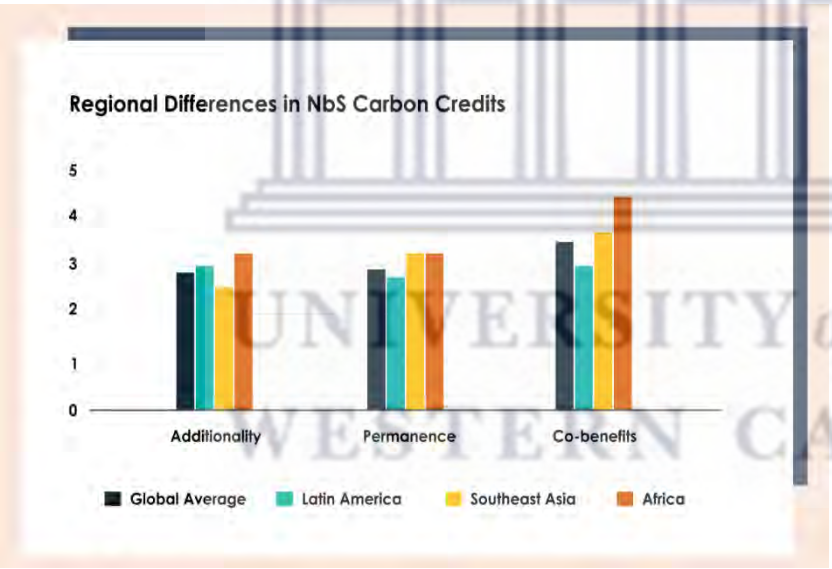
235 International Union for Conservation of Nature (IUCN) , "Nature-based Solutions", 2022

236 UN report The State of Biodiversity in Africa: A Mid-term Review of Progress towards the Aichi Biodiversity Targets (2016)

237 African Carbon Markets Initiative Roadmap Report 'Harnessing carbon markets for Africa' 2022

Table showing Opportunities in existing avenues for generate carbon credits in Africa. Source: African Carbon Markets Initiative Roadmap Report ' Harnessing carbon markets for Africa' 2022.

At present, nature-based solutions benefit from positive PR (that includes creation of employment) and are among the preferred carbon sequestration method.[238] It is arguably the tri-partite factor of carbon sequestration, bio-diversity preservation and livelihood generation(often referred to as co-benefits), that makes them the obvious choice for carbon credit buyers. In the age of ESG where compliance is crucial for large corporates (who are perhaps the biggest buyers of carbon credits[239]), the Sub-Saharan Africa Advantage is a welcome position. For projects registered under the Gold standard, it was recorded that carbon projects with co-benefits attracted a 35% premium in comparison to other projects.[240] Nature based projects in Africa, also score higher than most other regions in terms of additionality and permanence. Additionality means "the



Source: Inclusive and Nature-based Carbon Markets: A Path to Resilient Livelihoods in Sub-Saharan Africa' Opportunity Brief October 2022

emissions reductions or removals would not have occurred without revenue from the sale of carbon credits"[241] while permanence is a concept that refers to durability and

[238] T. Ferdinand, J. del Ser ' Inclusive and Nature-based Carbon Markets: A Path to Resilient Livelihoods in Sub-Saharan Africa' Opportunity Brief October 2022 https://bfaglobal.com/wp-content/uploads/2022/10/CarFi-Brief-October-2022.pdf Accessed July 22, 2023

[239] Carbon credit agencies such as Swiss South Pole have recorded companies such as Nestle, Gucci, Marriot, Google et al as major buyers for carbon credits https://www.southpole.com/clients#&sector=23 Accessed July 22, 2023

[240] The Gold Standard, "The Real Value of Robust Climate Action", (2014)

[241] A. Downey, 'Additionality Explained' (2022) https://www.sylvera.com/blog/additionality-carbon-offsets Accessed July 23, 2023

establishes that "emission credits would remain valid indefinitely",[242] indicating that the reductions cannot be reversed. These are key tenets of carbon credits as they invariably improve the quality of a carbon credit, ultimately impacting the price of the credit.[243] The table below shows African nature-based project ratings in the areas of additionality, permanence and co-benefits, scored against the ratings of other regions. The empirical evidence shows that the Sub-Saharan Africa Advantage is material and does confer an inherent competitive edge when efficiently and effectively exploited.

4.4 Immediate challenges to scaling and maximising carbon Markets in Africa

Summed up, voluntary carbons are unable to reach their potential heights because they are regarded as a risky investment. It is no secret that any capital exporting entities, be it corporations or natural persons, do so in a bid to generate earnings. Whether discussed in the context of private economics or debated by International Investment Law Scholars such as Sornarajah, one of the main characteristics of investment is "generation of wealth".[244] Regrettably, the narrative proliferated and to a larger extent true, is that carbon markets as they stand in Africa today, inhibit the said generation of wealth due to constraints explored in this chapter.

Perhaps the biggest challenge stunting the growth of voluntary carbon markets, is uncertainty. Demystified, this uncertainty relates primarily to definition and verification of carbon markets. The definition of voluntary carbon markets in itself presents a monstrosity requiring further breaking down into bite size chunks.

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[242] OECD Environment Directorate and International Energy Agency 'Forestry Projects: Permanence, Credit Accounting and Lifetime' Information Paper COM/ENV/EPOC/IEA/SLT(2001)11

[243] Sustainable Fitch, 'Tightening Voluntary Carbon Markets to Drive Up Costs Ineffective Offsets Expose Buyers to Long-Term Risks' 2021 https://www.sustainablefitch.com/_assets/special-reports/tightening-voluntary-carbon-markets-to-drive-up-costs.pdf Accessed July 23, 2023

[244] M. Sornarajah, "The International Law of Foreign Investment" 5th ed. (Cambridge University Press, 2021

4.4.1 Standardising terms and establishing taxonomy[245]

Under Voluntary Carbon Markets, credits are characterised by the projects they are derived from. In turn the type of project is determined by the region in which it is situated, all factors that are then assessed under the umbrella of which verification standard they are registered under.[246] Generally, the price of carbon credits outside economic models (e.g., supply and demand), is impacted by the type of project that is nature-based (e.g., forestry) vs renewable energy generating. Several other variables also influence the price such as vintage year which typically follows the rule that older projects equal lower carbon prices. As mentioned earlier, size, location and verification body of the project are other variables to be considered. A report by the International Organization of Securities Commissions (IOSCO) suggests that there is merit in standardising the attributes sought by the carbon credit purchasers. Standardisation and establishing taxonomies result in a more stable pricing for the product by limiting the variables.[247] This has actually been proven to be feasible as Xpansiv, a carbon exchange, has developed the Global Emission Offset (GEO) contract. Under this instrument, all credits delivered under it have to be underpinned by projects with specific characteristics. [248] Buyers of carbon credit tend to be specific about that type of credits they are interested in acquiring with some favouring nature based. Standardisation, therefore allows for efficient trading of carbon credits as well as more stable pricing as buyers are aware of the specific characteristics of each credit, making the market place more accessible.

4.4.2 Regulatory Challenges and the lack of legal clarity

At best, the current regulatory framework for carbon markets is fragmented. As discussed in Chapter 2, the legal status of carbon markets is often determined on a jurisdiction-to-jurisdiction basis. Much like many jurisdictions, the United States has opted to trade carbon credits as

[245] According to the Meriam Webster Dictionary taxonomy relates to systematics. It is the practice and science of categorization or classification

[246]C. Blaufelder, C. Levy, P. Mannion, & D. Pinner, 'A blueprint for scaling voluntary carbon markets to meet the climate challenge' McKinsey, (2021).

[247] The International Organization of Securities Commissions (IOSCO)'Voluntary Markets' Working Paper CR/06/22 November 2022, 17

[248] CME Group 'CBL Global Emissions Offset futures (GEO)' https://www.cmegroup.com/education/articles-and-reports/cbl-global-emissions-offset-futures-faq.html Accessed July 22, 2023

commodities.[249] Conversely, in the EU, carbon credits are not considered financial instruments. The attributed legal status is important as it determines the applicable regulations and which regulator carbon credits fall under. Other legal issues arising include those in relation to the land rights and ownership of the credits as discussed in Chapter 2. In some countries, land rights are owned but the State which would then have to cede the right to sell carbon credits to the private developers. Once again, under DRC's Homologation Decree, by virtue of owning the forests, all primary carbon rights are owned by the government.[250] Perhaps the Homologation Decrees does not extensively address the issue of carbon credits, however, providing a stark contrast, is the nation of Zimbabwe. According to Bloomberg, Zimbabwe made assertions of bidding to become Africa's carbon trading hub.[251] Interestingly, as at 2023, Zimbabwe does not have a legislative framework for carbon credits. As a matter of fact, carbon trading is only referenced in the Electricity (Solar Water Heating) Regulations, 2019 Statutory Instrument 235 of 2019. Carbon credits are referenced in the definition of carbon finance after the substantive provision in which carbon finance is then effective dealt with is Article 10 (5) that reads "an owner or occupier to whom these regulations apply may investigate the inclusion of the relevant solar water heating system into a project to be registered under any carbon finance mechanism that may be established from time to time including the Clean Development Mechanism." Even more shocking is the legal void considering Zimbabwe recently established a carbon exchange platform in Victoria Falls.[252] This is just but one example of the extent to which the legal frameworks on the continent deal insufficiently with what could be the greatest climate finance tool.

[249] Comments on Regulation of Environmental Commodities and Further Definition of "Swap" in Proposed Rules Under The Dodd-Frank Wall Street Reform and Consumer Protection Act https://www.sec.gov/comments/s7-16-11/s71611-54.pdf Accessed November 18, 2023

[250] Government of the Democratic Republic of Congo. Arrêté Ministériel Fixant La Procédure d'homologation Des Projets REDD+; Kinshasa, Congo, 2018.

[251] Bloomberg https://www.bloomberg.com/news/articles/2023-05-24/zimbabwe-bids-to-be-africa-s-carbon-credit-trading-center Accessed July 22, 2023

[252] Zimbabwe Environmental Law Association 'The Rights-Based Approach to Climate Interventions' https://zela.org/the-rights-based-approach-to-climate-interventions/#_ftn1 Accessed July 22, 2023

4.4.3 Quality Assurance, credibility and integrity

As with any service or good, the buyer is always in need of assurance that indeed they are receiving value for their money. The repercussions in carbon markets are perhaps more dire than your average markets. Lack of quality assurance in carbon markets has given rise to issues such as greenwashing and double counting,[253] which ultimately has a negative impact on the integrity of the market. In turn lack of integrity in the market equals stunted growth. The fragmented nature of voluntary carbon markets means that carbon credits are recorded on several registries that are not consolidated. In such cases, the risk run is that two parties may then claim the same carbon removal.[254] Additionally, perhaps a more worrying incident of double counting could arise in the intersection of voluntary carbon markets with the regulated??. Supposing a carbon credit is purchased by a company, can the same credit be accounted against a country's NDC's? The waters remain murky in the interactions between voluntary carbon markets and Article 6 mechanisms. The fragmentation of carbon markets also challenges their integrity as it raises the issue, much like in any financial market, of fraudulent activity. With the current structure of multiple registries, the markets are exposed to the risk of the sale of credits that have already been sold, belong to another or actually do not exist.[255] The cross border nature of said transactions further heightens this risk.[256] Interpol posits that lack of transparency and oversight as well as poor regulation of voluntary carbon markets creates an exposure to the peril of criminal activity.[257] One approach to mitigating this risk is centralised registries which facilitates more efficient monitoring of transactions in the market.[258] In the context of Africa, where carbon markets would be pursued not only for their climate and/or financial benefit, but because of the developmental impact they would bring to local

[253] The International Organization of Securities Commissions (IOSCO)'Voluntary Markets' Working Paper CR/06/22 November 2022, 13
[254] The International Organization of Securities Commissions (IOSCO)'Voluntary Markets' Working Paper CR/06/22 November 2022, 17
[255] INTERPOL and The World Bank, Chainsaw Project: An INTERPOL perspective on law enforcement in illegal logging, (undated), pp.45- 46. Available at http://www.interpol.int/Public/EnvironmentalCrime/Manual/WorldBankChainsawIllegalLoggingReport.pdf
[256] The International Organization of Securities Commissions (IOSCO)'Voluntary Markets' Working Paper CR/06/22 November 2022, 14
[257] Guide to carbon trading crime - Interpol (2013)
[258] The International Organization of Securities Commissions (IOSCO)'Voluntary Markets' Working Paper CR/06/22 November 2022, 15

communities, it becomes imperative that there is transparency in that regard. The qualm arises in issues of remuneration of the project suppliers, and how much financing is channelled to the actual reduction program. To avoid any discrepancies, irregularities or opacity in the realised developmental impact, regular reporting is necessary, thus maintaining the integrity of the projects and by domino effect, integrity and stability of the markets as well as carbon prices.

4.5 Understanding how the founding principles of AfCFTA support the establishment, regulation and scaling of African carbon markets.

The AfCFTA is one of the flagship initiatives of the AU, and by this virtue, it ascribes to the founding objectives and principles of the AU. In fact, this is articulated in the Preamble of the Agreement Establishing the African Continental Free Trade Area, that expressly acknowledges that the establishment of this Free Trade Area (FTA), is "…aimed at integrating Africa's markets in line with the objectives and principles enunciated in the Abuja Treaty".[259] The Abuja Treaty is the founding document establishing the African Economic Community which has since come to be known as the AU. It also becomes the cornerstone of the AfCFTA, as its establishment is premised on the provisions of the Abuja Treaty. Article 3 of the Abuja Treaty lays out the principles of the Economic Community. Under it, the article lists 8 principles and most pertinent to the FTA and by extension, carbon markets are two. Article 3(c) makes mention of "inter-State co-operation, harmonisation of policies and integration of programmes". Never has a principle been more fitting almost as if it we devised with the emergence of carbon markets and anticipated the need for collaboration among African states. Promulgating the idea of co-operation, Article 3(d) articulates the promotion of harmonious development of activities among member states. Even more specific to issues of the environment, the objectives of the AU refer to harmonisation of environmental protection policies. Essentially, the principles on which the AfCFTA is established, fully allow and even encourage the mandate of the FTA to endogenously devise mechanisms, policies and regulatory frameworks that through co-operation, will scale economic development and environmental protection initiatives, to the benefit of the regional bloc.

[259] Preamble of the Agreement Establishing the African Continental Free Trade Area

4.6 AfCFTA protocols applied to carbon markets

Having garnered an understanding of some of the immediate challenges of the carbon markets in Africa, it becomes easier to map the potential role of the AfCFTA as well as drawing the nexus with its protocols, both establish and in the pipeline. But first, we need to recognise the scope of the FTA. According to the Agreement establishing it, the scope of the AfCFTA covers "…trade in goods, trade in services, investment, intellectual property rights and competition policy."[260] It also encompasses issues of trade facilitation and has established operational instruments under it which will be explored further in this discussion. The overarching objective of the AfCFTA is to liberalise trade, all the while creating a common market to deepen economic integration on the continent,[261] which objectives the carbon markets can ride on, to scale their operations.

4.6.1 Addressing the issue of lack of legal clarity and regulatory fragmentation

The ramifications of the lack of legal clarity, are difficulties in the legal qualification of voluntary carbon markets.[262] The result of effective regulation becomes an enabling environment for voluntary markets, that can then be scaled. The AfCFTA is presented with the opportunity to establish shared principles of defining as well as verifying carbon credits. Here, all legal issues pertaining to carbon markets (discussed in Chapter 2) would effectively be defined and outlined, including issues to do with ownership rights of carbon credits, their legal status as well as "…including the rights to revenues from commercialization of carbon credits for project developers, investors, local communities, and regional governments."[263]This has a direct bearing on the growth and performance of carbon markets, as it addresses the issue of uncertainty and renders the carbon credits credible. With regulation, markets

[260] Agreement Establishing the African Continental Free Trade Area Article (6)
[261] O. S. Suleman, "The African Continental Free Trade Area; a Strategy for Improving Trade in Africa in the 21st Century" African Scholar Journal of Humanities and Social Sciences (JHSS-6), 20(6), (2021) 146-158.
[262] Ernst & Young 'Voluntary Carbon Market: Challenges and Promises of the Green Transition Tool' https://www.ey.com/en_pl/law/voluntary-carbon-market Accessed July 23, 2023
[263] African Carbon Markets Initiative Roadmap Report ' Harnessing carbon markets for Africa' 2022, 31

are less likely to fall victim to market ills of fluctuating and manipulated prices as well as unstandardised quality.[264] Article 8 of the Agreement Establishing the African Continental Free Trade Area provides for adoption of additional instruments that fall withing the scope of trade in goods, trade in services, investment, intellectual property rights and competition policy.[265] Therefore, relying on the provisions of the Agreement Establishing a Continental Free Trade Area, a a sui generis regulation protocol can be established, aProtocol on the Regulation of Carbon Markets.

Beyond this, there exists an opportunity for the AfCFTA to play a somewhat regulatory role. One of the challenges facing carbon markets in Africa is fragmentation in terms of quality assurance and verification. With the current fragmented structure of registries in carbon market, the market is fully exposed to numerous risks including fraud and double counting of credits. This could easily be remedied by the architecture of a central registry under which all credits are recorded, eliminating the risks of the same credit being registered in more than one registry. Although seemingly a tall feat, the AfCFTA arguably has a blue print for such infrastructure. Operating under the AfCFTA is the Pan-African Payments and Settlement System, (PAPSS). This innovative instrument was designed to enable secure and efficient flow of money across the borders of Africa.[266] The platform, linked to Central Banks of countries, brings together multi-tiered stakeholders, from fintech organisations, commercial banks and service providers. At present, its users include 8 central banks, 6 switches and 28 commercial banks.[267] Similarly, a central registry for carbon markets would service carbon credit suppliers, buyers, middlemen, regulators and verification bodies. Likely to be data intensive, the carbon markets central Registry is not far removed from the capabilities or mandate of the AfCFTA who arguably already have a fully functional precedent.

[264] G A. Akerlof and R J. Shiller Phishing for Phools: The Economics of Manipulation and Deception (2015) Princeton
[265] Agreement Establishing the African Continental Free Trade Area Article (8)

[266] African Continental Free Trade Area 'The Pan-African Payments and Settlement System' https://au-afcfta.org/operational-instruments/papss/ Accessed July 23, 2023
[267] African Continental Free Trade Area 'The Pan-African Payments and Settlement System' https://au-afcfta.org/operational-instruments/papss/ Accessed March 13, 2024

4.6.2 Facilitation of African context markets and the ease of doing business.

Voluntary Carbon Markets are relatively new and can be classified as an emerging market. Unsurprisingly, penetrating this market as a supplier has proved challenging for numerous reasons. Firstly, carbon projects are capital intense investments.[268] As a result, there are few project developers operating in Africa. Statistics show that of the 100 developers on the continent, over the last 10 years, only 15 accounted for 70 % of the total credits, and 70% have been active in one country only.[269] Additionally, the ease of doing business, although differing from country to country, is generally quite low. According to the Ease of Doing Business Index 2020, 85% of African countries scored in the lower half with only Mauritius and Rwanda representing in the top 50.[270] Under the Trade Facilitation Annex to the Protocol on Trade in Goods , the objectives are to "simplify and harmonise international trade procedures."[271] One could therefore argue that the mandate is to streamline processes allowing for increased ease in doing business on the continent. Beyond this, perhaps the solution would be to develop a bespoke carbon market place, that is tailored to the African context, in parallel to the already existing global one. More often than not smaller projects are, due to lack finances and capital, unable to meet the standards of accrediting bodies at an international level, thereby forfeiting any revenues altogether. Costs of monitoring, reporting and verification of credits have been recorded to accumulate to up to half of the prices of the credits, rendering verification unfeasible. Estimates peg the size threshold for financially viable projects at 10,00 hectares after considering the costs of monitoring, reporting and verification by internationally accredited bodies such as the Gold Standard. [272] Conversely, smallholder farms of approximately 2 hectares account for 80% of agricultural land in some

[268] African Carbon Markets Initiative Roadmap Report ' Harnessing carbon markets for Africa' 2022, 21

[269] McKinsey Vivid Economics Carbon Credit Database, drawing on Verra, Gold Standard, ACR, CAR, Plan Vivo (2022)

[270] World Bank. 2020. Doing Business 2020. Washington, DC: World Bank.

[271]Agreement Establishing the African Continental Free Trade Area

[272] T. Ferdinand, J. del Ser ' Inclusive and Nature-based Carbon Markets: A Path to Resilient Livelihoods in Sub-Saharan Africa' Opportunity Brief October 2022, 23 https://bfaglobal.com/wp-content/uploads/2022/10/CarFi-Brief-October-2022.pdf Accessed July 22, 2023

areas.[273] Essentially, there is less scope for large scale projects, leaving a gap in the market that could be filled by the smaller projects, which still being nature based would have the tripartite co-benefits, a missed opportunity.

4.6.3 An Investment protocol to attract FDI for carbon projects cost of capital

Much like in every other region, the anticipated costs for addressing climate change are exorbitant. The International Monetary Fund notes that few African countries have the financial capacity or fiscal space to tackle climate change independently.[274] Naturally, sovereign funds would then not be able to support carbon projects to the extent required, which necessitates the need for foreign direct investment. It becomes imperative that the investment landscape creates and sustains an enabling environment that will make African countries an attractive location for these projects. This becomes the last piece to the puzzle as already the "Sub-Saharan Africa advantage" acts as an incentive for investors and yet an uncertain legal and regulatory environment could be the deterrent that bars all progress. It becomes the obligation of host states to accord a most favoured nation standard, national treatment, fair and equitable treatment, full protection and security, expropriation and compensation, repatriation of profits and any other standards as dictated by International Investment Law Standards as applicable[275]. This Investment Protocol would facilitate and promote trade, as in its implementation, the result is "establishing a transparent and sound continental legal framework…"[276] As a result, the protection of standards is ensured. The introduction of a common investment protocol is welcome as it, to some degree, being recently negotiated, addresses qualms on the right to regulate and balancing the rights of investors with the needs and policies of the state. This is done in numerous ways for example the inclusion of

[273] African Carbon Markets Initiative Roadmap Report ' Harnessing carbon markets for Africa' 2022

[274] International Monetary Fund (IMF). "Closing the Gap: Concessional Climate Finance and Sub-Saharan Africa." In Regional Economic Outlook: Sub-Saharan Africa—The Big Funding Squeeze, (2023)

[275] APEC Committee on Trade and Investment (CTI)Handbook on Obligations in International Investment Treaties

[276] Protocol on Investment to the Agreement Establishing the African Continental Free Trade Area – Zero Draft (Nov 2021)

sustainable development obligations on the investor[277] and "…policy space to promote sustainable investment…"[278] Other key interests of investors are addressed in the Protocol, with a particular focus on investment facilitation which is set to "streamline investment administration", simplify processes and requirements for employee permits, all the while guaranteeing uninhibited flow of funds.[279] Considering Investment is one of the protocols of the AfCFTA, it becomes efficient that FDI in the carbon markets space is negotiated at this level as well, as the interests of the investors and the reservations of host states are likely to be the same, regardless of the particular niche in which the FDI will be channelled into.

4.6.4 Funds and innovation.

It has been established that voluntary carbon markets would be a cash cow for the region, that could facilitate the closing of the climate financing gap where governments have committed 264 billion in sovereign funds to climate finance, this would only account for 10% of the actual estimated need.[280] While it is important to channel the revenue towards immediate financing and development needs, the need to innovate cannot be ignored. Similar to the model implemented by the E.U, a portion of revenues generated from carbon markets can be channelled towards research and development of new low carbon technologies, specifically designed for or adapted to the African context in order to combat climate change. These would be preparatory steps towards a Just Energy Transition, for the day Africa completes navigates away from fossil-fuel energy and usher in an era of green energy. It would seem the AfCFTA is equipped to take the reins as custodian of such fund. The argument for this finds its premise in the existence and establishment of the AfCFTA

[277] Protocol on Investment to the Agreement Establishing the African Continental Free Trade Area – Zero Draft (Nov 2021) Art 34

[278] Ayele, Y., Belete, M., & te Velde, D. W. The AfCFTA Protocol on Investment: issues and potential impacts (2023).

[279] Ayele, Y., Belete, M., & te Velde, D. W. The AfCFTA Protocol on Investment: issues and potential impacts (2023).

[280] Based on latest NDCs submission by 53 African countries. It is important to acknowledge that adaptation needs are likely to be underestimated due to a lack of data and technical expertise to estimate the true cost of adaptation measures Climate Policy Initiative 2022

Adjustment Fund.[281] The fund is yet another one of AfCFTA's innovative operative instruments, created to support and offer cushion parties to the FTA in the interim as they adjust to the initial effects of liberalised trade. With a pot price of approximately US$10 billion over the next 10 years, the fund managed together with the African Export Import Bank, could serve as a blue print for an initiative similar to the NER300 of the European Union. The fund administrators could be mandated to invest into the development of low carbon technologies that address challenges and deficiencies specific to the African context and even generic ones such as renewable energy.

4.6.5 A unified Fiscal Policy

One of the issues dealt with at length by free trade agreements, are issues of tariffs and fiscal policy in relation to trade. Under the first phase of the AfCFTA, the aim is to reduce and ultimately phase out tariffs on goods exchanged within Africa[282], which effectively stands as adopting the same fiscal policy on good traded within the bloc. If this can be done for a certain type of goods, this is an indication that the same rational, can be tailor made to tax issues as pertaining to carbon markets. As discussed in Chapter 2 of this study, the treatment of tax under voluntary markets will require imaginative thinking. Will the taxes be levied on carbon credits or on the project owners, in the form of direct or indirect taxes? Are there any tax rebates that will be offered to carbon projects setup as an incentive to attract investors? In line with the principle of harmonizing policies and integration of programs, it would be advantageous for the AfCFTA to draw up guidelines on the fiscal policy of carbon markets within the bloc. In this was the price of carbon is also stabilised, as buyers are aware that whether they approach Zimbabwean credit suppliers of suppliers in the Congo, the terms of trade are similar.

Additionally, Interpol has since established, that carbon markets are particularly susceptible to criminal exploitation, if different tax rules apply to cross border trades across multiple jurisdictions.[283] The European Union has

[281] The AfCFTA Adjustment Fund https://au-afcfta.org/operational-instruments/the-afcfta-adjustment-fund/ Accessed November 18, 2023
[282] A. Cofelice, "African continental free trade area: Opportunities and challenges." The Federalist Debate, 31(3), (2018) 32-35
[283] Guide to carbon trading crime - Interpol (2013), 18

fallen victim to this fraud known as carousel fraud or Missing Trader Intra-Community fraud.[284] Essentially, this type of fraud "…exploits how VAT is treated in multi-jurisdictional trading in Europe" and ultimately robs government of its revenue.[285] In the context of Europe, carousal fraud in a period of 18 months resulted in an estimated losses of 5 billion Euros.[286] These fraud incidents later influenced the way VAT was treated in the EU, with VAT now being charged on the seller rather than on the buyer. Anticipating scaling of carbon markets, African states can ill-afford losses of this magnitude. The solution, is to establish a solid regulatory framework that is consistent from one jurisdiction to the next,[287] and this can be achieved by creating a fiscal policy and regulatory framework under the banner of the AfCFTA. Essentially, the AfCFTA could play a central role in creating an investment framework that provides clarity, attractiveness, consistency and certainty in the carbon market, especially in the areas of credit ownership rights, fiscal treatment as well as the relationship between voluntary carbon markets and the compliance market.[288]

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4.7 Conclusion

The state of the regulation of carbon markets remains fragmented, their potential unrealised. Yet, an opportunity lurks. The AfCFTA could be the tool that allows the African region, to raise capital to finance its climate needs and reduce the existing climate finance gap. The role to be adopted by the AfCFTA in carbon markets, mirrors that of the European Commission in the establishment of the EU ETS. The role is

[284] Guide to carbon trading crime - Interpol (2013), 18
[285] K. Macken, , Strengthening Credibility in the EU ETS Following Security and Fraud Related Incidents 2-3 (June 2011) (conference paper available at http://inece.org/conference/9/papers/Macken_Ireland_Final.pdf).
[286] Europol press release, "Carbon Credit fraud causes more than 5 billion euros damage for European Taxpayer", 9 December 2009. Available at https://www.europol.europa.eu/content/press/carbon-credit-fraud-causes-more-5-billion-euros-damage-european-taxpayer1265
[287] Ashley Seager, Brussels Targets Carbon Trading Fraud Ahead of Copenhagen Summit, THE GUARDIAN, Sept. 29, 2009, http://www.guardian.co.uk/business/2009/sep/29/carbon-trading-carousel-fraud-eu Accessed 23 July 2023
[288] Climate Action Platform Africa 'Introduction to Carbon Markets- AU Business Forum 2023 https://www.uneca.org/eca-events/sites/default/files/resources/documents/abf2023/230219-africa-business-forum_background-reading-on-carbon-markets.pdf Accessed July 23, 2023

characterised by innovation and agility but more than anything capacity to play the regulatory and policy advisory roles. Interestingly in the context of the AFCFTA, although still nascent, its principles and objectives, numerous protocols and operating instruments have proven salient and relevant for it to become the vehicle by which the full potential of carbon markets on the African continent is realised. Having fully grasped that indeed there is a role to be played by the AfCFTA, the mere acknowledgment does not suffice, and therefore it is imperative to channel the lessons learned, gaps identifies and synergies realised to chart the way forward.

CHAPTER 5 – CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The concept of carbon markets, barely a novel concept, has been around since the inception of the Kyoto Protocol. It would however be imprudent to discount their recent "rise to fame" propelled by the need to address climate change becoming more urgent and persistent.[289] Carbon markets have gained increasing importance globally, more so for Africa, because they present a unique opportunity to tackle three of the continent's most pressing challenges; namely climate change, climate financing gap as well as developmental impact. More than this, carbon markets are the personification of Africa's natural resource advantage, one that could be explored to re-write the narrative of always trailing behind the global north. Even more timeous is the emergence of carbon markets as it aligns with the advent of the AfCFTA, another bold African initiative set to positively affect the trajectory of trade of the continent to bring about massive development impact, and place Africa in significant standing on the multilateral trading system.

The overall aim of this study was to explore the need for regulation within the carbon markets in Africa, and then establish that developing a regulatory framework under the AfCFTA affords synergies that individual State regulation would not. Recapitulating the preceding discussions, this chapter seeks to consolidate the findings and further propose recommendations for a thriving carbon market in the region. Serving as mere guidelines, the recommendations are intended to challenge thinking and steer conversations of policy and regulatory development away from the budding individualistic approach. Numerous countries in Africa have made known their intentions to develop regulatory frameworks, and the recommendations would provide an alternative approach to the one under consideration by countries currently pursuing regulation at state level as opposed to a regional approach.[290]

Divided into two sections, this chapter will summarise the key objectives of the study which are:

[289] See Chapter 1
[290] See Chapter 4

(i) to review and understand the current state of the carbon markets in Africa compared to global markets
(ii) to ascertain if there is merit and benefit for African countries to participate in carbon trading
(iii) to establish the rationale behind establishing legal frameworks in carbon markets
(iv) to prove that there is an urgent and immediate need for the regulation of carbon markets if they are to benefit the African Continent
(v) to review the framework of the AfCFTA and how its potential can be maximised in the scope of carbon markets

The second part of the chapter addresses the sixth objective and proffers recommendations for a possible regulatory framework for voluntary carbon markets under the banner of the AfCFTA, having borrowed valuable lessons from the EU ETS.

5.2 Summary of Findings

Chapter 1 laid out the foundation, providing a contextual background and demystifying carbon markets. Commonly referred to under the umbrella term of carbon markets, there are in fact, two types of carbon markets. This chapter preliminarily discussed the regulated carbon markets and the voluntary carbon markets, distinguishing the two in order to establish that the study would focus on the voluntary markets.[291] Chapter 1 also presented the status of carbon markets on a global scale and gave a general overview of why they are important.[292] In its discourse, the chapter also presented arguments of scholars in relation to the need for regulation of markets and served and painted the indicative picture for the argument of the regulation of carbon markets, which was to be explored at a later stage. In essence, the chapter presented ancillary structure of the entire study.

Chapter 2 involved an in-depth study to why the law matter in relation to carbon markets. This was in a bid to prove that indeed there is a need for the regulation of carbon markets for numerous reasons. The first and perhaps foundational argument present, was the inherent interaction of law and any economic activity. The discussions here explored economic theories of the relationship with law and indeed

[291] See Chapter 1, Section 1.1
[292] See Chapter 1,Section 1.2

any market. It was established that although there exist different schools of thought among economists, social versus mainstream, both factions seem to agree that the interaction of any economic activity and law cannot be avoided. The bone of contention remains the degree to which this interaction must be applied.[293] Beyond this, it was established that carbon markets interact with various aspects of the law, right from the "aggregate of fundamental principles or established precedents that constitute the legal basis of a polity", the constitution, in which they find their permission to exist.[294] Further, carbon markets at varying stages of their existence and operationalisation fraternise with legal disciplines including contract, tax and property rights[295]. An integrally complex instrument, carbon markets also extend to aspects of financial markets and have legal connotations and carbon credits that are traded in this market find their legal identity as well as the rules under which they are traded in this discipline.[296] At its close, the chapter established that beyond the national aspects of law, carbon markets were implicated in International Trade Law which further strengthened the case advocating for them to be regulated.[297] The resounding conclusion was that law plays an integral part in the entire voluntary carbon markets ecosystem and the natural course of action would be to streamline this interaction by regulation.[298]

Chapter 3 explored the different approached to regulation of carbon markets. Because generally there has not emerged a successful "codified" regulation of voluntary markets separately, the chapter explored regional vs nationalist approaches to the regulation of non-voluntary carbon markets in general. Voluntary markets are in nature extremely technical and yet novel concept, hence this application proved relevant. On a regional level, the EU ETS was studied phase by phase with lessons extracted at each phase. [299]Owing to the lack of precedent on the African continent, the study of China's national approach was examined to provide a contrast.[300] Although there were some commonalities in the lessons of derived from the critical analysis of the two systems (such as the process of establishing a

[293] See Chapter 2
[294] See Chapter 2, Section 2.1
[295] See Chapter 2, Section 2.2, 2.3, 2.4
[296] See Chapter 2, Section 2.4
[297] See Chapter 2, Section 2.5
[298] See Chapter 2, Section 2.6
[299] See Chapter 3, Section 3.1
[300] See Chapter 3, section 3.2

framework being a long process that involved trial and error), the regional approach proved to be a better fit for African countries, as it allowed for certain synergies which the national approach omitted.[301]

Chapter 4 represented the crux and culmination of the entire study. Providing an in-depth discussion of the state of voluntary carbon markets in Africa, the potential was later explored, highlighting the Sub-Saharan Africa Advantage and providing empirical evidence supporting it.[302] The chapter later identified the immediate challenges curbing the scaling of carbon markets in the region. Establishing these challenges proved efficient in outlining the role that the AfCFTA would need to assume to in order to drive carbon markets to their full potential. This chapter was pivotal as it drew a nexus between the gap in carbon markets and salient provisions, initiatives and operational instruments of the AfCFTA, providing the "how" and in what capacity AfCFTA would have to act to realise full potential of the markets.[303] The conclusion was that not only is it theoretically sound to advocate for the AfCFTA to champion regulation of carbon markets as a regional bloc, but the AU initiative already possesses the capabilities and capacity to effectively take on this role.

5.3 Recommendations

The overarching recommendation is resounding and yet simple. The AfCFTA should endeavour to initiate a regional voluntary carbon markets regulatory framework under its banner, and position itself as the most fitting to champion this exercise. Having already garnered immense political momentum, it becomes efficient and beneficial to ride this wave, and proffer a constructive, judicious and timely solution. The increase in governance scaling initiatives enacted under the AfCFTA would result in a unified regulatory framework under the FTA which would ultimately be advantageous to the region as a whole. Admittedly, there are significant areas of risk in adopting this approach, however pursuant to the preceding study, the net benefit compared with further delayed climate change mitigation and opportunity cost of realising a source of revenue for climate finance, points to regulation as the better alternative. Additionally, the regulation of the voluntary carbon markets under the

[301] See Chapter 3, Section 3.3
[302] See Chapter 4, Section 4.1, 4.2
[303] See Chapter 4, Section 4.5

FTA would provide a sandbox for the later regulation of regulated carbon markets which would have a greater interaction and impact on International Trade, the entire purpose of the AfCFTA. Under the AfCFTA, there is scope for the region to move towards a fully functional and an efficient, systematically operative carbon market that addresses pressing and real challenges of its people.

Perhaps preceding the natural conclusion to this study, a key recommendation would be the advancing and advocating for voluntary carbon markets as an effective tool to address issues of climate change, and simultaneously narrow the climate financing gap for African countries. Climate change is a dual faced challenge. It manifests as both an environmental and economic challenge, therefore, it becomes imperative to include economic tools in addressing it. To date, broadly on the African continent, climate change has been addressed as a one dimensional problem, with most countries allocating it under the purview of environment ministries and legislative pieces, however, the challenge is to include finance ministers, regulators and actors in this exercise as carbon markets have presented a double-edged sword solution.

It is no secret that carbon markets are technically intensive. The natural inclination would be to accumulate technical expertise and then proceed to regulations, especially in the case of African countries which arguably lack or would strain technical and financial resources in the event they individually pursue regulation. However, if the European Union and others who have regulated carbon markets are a stencil to emulate and learn from, the lesson would be that regulation of carbon markets is an ever-evolving process, a lengthy one at that. The commendation then becomes to proceed or rather in this case initiate regulation despite inefficiencies and refine along the way. The caveat however, would be to establish a regulatory framework that is agile enough to allow for pivoting as and when the need arises.

An agile regulatory framework formulates another recommendation to be taken under consideration, as agility is a pre-requisite in the ever-evolving voluntary carbon markets. As the markets continue to expand, new technologies will be developed, as even at present, there are preliminary discussions on the introduction of block chain to carbon markets. An agile regulatory framework ensures that innovation is not stifled in the market, which is crucial in the mitigation of climate change, which cannot and does not subscribe to one solution.

5.4 Conclusion

In conclusion, voluntary carbon markets are not a panacea for climate change mitigation or narrowing the climate finance gap. They do however present a viable and effective alternative. The onus remains on every individual, corporate and body to continuously explore and develop alternative solutions to a problem that faces the entire human race, global north and south. The voluntary carbon markets are just but one mere tool to achieving this universal goal, and there irrefutably lies merit in exploiting them to the fullest. Interestingly, Bogoyevic in her discourse on carbon markets sums up her argument in a Picasso quote, "our visions of what is, guides our approach of what is to be." A more accurate directive for the potential development of a regulatory framework under the AfCFTA could not be found. In essence, viewing regulation as the tool to unlock the potential of carbon markets and investing the necessary resources on this premise, will prove to be just that; the key to unlock the potential.

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