

Journal of Conflict Management & Sustainable Development



Fostering Climate Justice for Sustainable Development

Hon. Prof. Kariuki Muigua

The Proposed Regulation of Artificial Intelligence and Robotics in Kenya: An Appraisal of the Kenya Robotics and Artificial Intelligence Association Bill, 2023

Michael Sang

Towards Net Zero Carbon Construction in Africa:
A Systems Thinking

Dr. Cyrus Babu Ongondo

Realizing Equitable Benefit Sharing in Kenya

Hon. Prof Kariuki Muigua

The Case for Reform of Kenya's Firearms Licensing Law:
Lessons from Comparative Experience

Michael Sang

Mandate and Jurisdiction of the Land Acquisition Tribunal,
Kenya

Bernard Kibet Sang

Carbon Credits Trading: A New Frontier in Climate Change

Brian Okoth

Book Review: Actualizing the Right to a Clean and Healthy
Environment

Anne Wairimu Kiramba

The Case for Decriminalization of Attempted Suicide in Kenya:
Lessons from Comparative Experience

Michael Sang

Volume 11

Issue 3

2024

ISBN 978-9966-046-15-4

Carbon Credits Trading: A New Frontier In Climate Change

By: **Brian Okoth***

The atmosphere is to the earth what peach fuzz is to the peach¹.

Abstract

The impacts of Climate Change are global in scope and unprecedented in scale. As we all know, carbon dioxide, the most important greenhouse gas produced by combustion of fuels, has become a cause of global panic as its concentration in the Earth's atmosphere has been rising alarmingly. This has created an opportunity for the trade of carbon credits both within and outside of the regulated area, thereby creating a global "carbon market". There have been joint rallying calls both at the international, regional and national arenas to combat these ravaging effects through Climate Action. Kenya hosted the inaugural Africa Climate Summit whose historic call to action was the collective sense of global decarbonization. The objective of the paper is to discuss the basic concepts and importance of carbon credit. It also emphasizes on the methods used to save the environment. It enunciates on the nuances of voluntary carbon markets, regulatory carbon markets and carbon offsetting. Additionally, it reiterates Kenya's commitment to the Kyoto Protocol and Article 6 of the Paris Agreement pursuant to the enactment of the Climate Change (Amendment) Act 2023 which formalized existence of carbon markets in Kenya.

** Brian Okoth is a Lawyer at the Dispute Resolution Department at TripleOKLaw Advocates LLP. He holds a Bachelor of Laws degree from Kabarak University, and a Post graduate diploma in Law from Kenya School of law. He is a Certified Professional Mediator with Mediation Training Institute East Africa. Brian is keen on creating a niche in Climate Change and Sustainability practice, both in research and scholarly works and Climate Change litigation. Email: brianokothlaw@gmail.com*

¹ Paula Dipema, Executive Vice President for Recruitment and Public Policy Chicago Climate Exchange during her address to the Japan Society Corporate Conference: Risks and Opportunities in the Emerging Emissions Trading Market

Keywords: Climate Change, Kyoto Protocol, Carbon Credits, Carbon Trading, Carbon Offsets and Carbon Markets.

1. Introduction

As of 2021, Kenya's forest cover stood at 8.8%², falling short of the minimum target of 10% set by Kenya's 2010 Constitution. In the wake of impending Climate Change that is adversely affecting the Horn of Africa, there has been a rallying call on Kenyans to plant more trees by the Government to combat Climate Change.³ The President has made the National Landscape and Ecosystem Restoration Program a priority since assuming the Presidency in September 2022, and is targeting a forest coverage of 28%.⁴ On September 4th - 6th 2023, Kenya hosted the Africa Climate Summit and the Africa Climate Week in Nairobi to discuss sustainable solutions to global climate challenges under the theme dubbed "*Driving Green Growth and Climate Finance Solutions for Africa and the World*."⁵ The summit culminated in a Nairobi Declaration, an eleven-point call to action proclaiming African States' unified stance on climate action ahead of the 28th United Nations Climate Change Conference (COP28). At the Summit, African leaders called for a significant overhaul of the global financial system to facilitate climate action financing.⁶ Their demands included improved access to concessional loans, the fulfilment of a 14-year-old promise by developed nations to mobilize USD 100 billion annually for climate adaptation and mitigation, and the establishment of a carbon markets initiative to fund

² Kenya Institute of Public Policy Research and Analysis (KIPPRA)

³ <https://nation.africa/kenya/news/president-ruto-reaffirms-bid-to-plant-15-billion-trees-in-a-decade-4290168> (visited on 25th March 2024)

⁴ <https://www.unep.org/news-and-stories/speech/kenyas-first-lady-leading-nature-restoration-agenda> (visited on 21st March 2024)

⁵ Africa Climate Summit 2023

⁶ <https://www.un.org/africarenewal/magazine/september-2023/africa-climate-summit-nairobi-declaration-makes-strong-push-accelerated> (visited on 23rd March 2024)

renewable energy infrastructure.⁷ The Nairobi Declaration was emphatic on demands that major polluters commit more resources to help poorer nations.⁸ It urged world leaders to rally behind the proposal for a global carbon taxation regime including a carbon tax on fossil fuel trade, maritime transport and aviation, that may also be augmented by a global financial transaction tax.⁹

To meet the emission reduction targets outlined in the Paris Agreement, Africa requires a substantial USD 2.8 trillion by 2030.¹⁰ Achieving this goal requires a substantial increase in climate investments, equivalent to nearly 93% of the continent's current GDP¹¹. Additionally, African nations often pay up to eight times more for financing from multilateral lending institutions compared to developed countries.¹² This imbalance results in recurring debt crises, leaving little or no resources for climate action.¹³ However, during the summit, donor nations and multilateral organizations pledged approximately USD 26 billion for climate investments.¹⁴ Notable commitments included the United Arab Emirates' "non-binding letter of intent" for USD 4.5 billion towards clean energy and USD 450 million for carbon credits.¹⁵ Denmark also announced a USD 232

⁷ Africa Clean Sweeps into \$900B Global Carbon Credit Economy by carboncredits.com

⁸ The African Leaders Nairobi Declaration on Climate Change and Call to Action by African Development Group

⁹ Explainer: What is Carbon Tax, Pros and Cons, and Implementation all over the world by Mitota P. Omolere

¹⁰ Landscape of Climate Finance in Africa by Climate Policy Initiative

¹¹ <https://climatepromise.undp.org/news-and-stories/africa-meet-its-climate-goals-finance-essential> (visited on 26th March 2024)

¹² <https://fsdafrica.org/news/current-levels-of-climate-finance-in-africa-falling-dramatically-short-of-needs/> (visited on 26th March 2024)

¹³ Ibid

¹⁴ <https://www.unido.org/news/unido-advancing-climate-action-africa-climate-summit> (visited on 27th March 2024)

¹⁵ *Carbon Herald* UAE Investors Pledge \$450 Million For African Carbon Credits by Dimana Doneva

million pledge for the Green Climate Fund's second replenishment.¹⁶ The United Kingdom, United States, Canada, Finland, and Germany also pledged several financing and debt swaps for green projects. The African Development Bank committed USD 1 Billion towards adaptation with a pledge to invest USD 25 billion in climate financing by 2025¹⁷. Other commitments were made by The Bezos Earth Fund (USD 22.8 Million), Climate Asset Management (USD 200 million), Masdar (USD 10 Billion) and Camco (USD 100 Million).¹⁸

At COP 28, President Ruto launched a major new African clean energy initiative which involved a series of transactions worth over USD 4 Billion that came under the initiative and involved international investors including the UAE's Masdar and AMEA Power.¹⁹ President Ruto's new 'Africa Green Industrialization Initiative' builds upon the UAE's existing USD 4.5 billion 'Africa Green Investment Initiative', which aims to finance 15 GW of renewable energy capacity in Africa by the end of the decade and unlock catalytic investments in Africa's green industrialization.²⁰ President Ruto has called for the establishment of a New Global Financing Pact which ensures no country is ever forced to choose between its development aspirations and necessary climate action.²¹ This

¹⁶ GCF Replenishment Sends Some Signals – Just Not the Right Ones by Liane Schalatek [Heinrich Boll Stiftung]

¹⁷ <https://www.afdb.org/en/news-and-events/the-african-development-bank-pledges-us-25-billion-to-climate-finance-for-2020-2025-doubling-its-commitments-19090> (visited on 1st March 2024)

¹⁸ Africa's first Climate Summit: "Urgent and Collaborative Climate Action Required to Achieve Goals of the Nairobi Declaration" by Shaban Senyange

¹⁹ <https://www.africa-energy.com/news-centre/article/masdar-and-amea-lead-uaes-10bn-african-renewables-push> (visited on 24th February 2024)

²⁰ Ibid

²¹ Project Syndicate; Rethinking Climate Finance for Developing World <https://www.project-syndicate.org/commentary/kenya-ruto-proposal-for-global-green-bank-is-worth-considering-by-kenneth-roff-2023-06> (visited on 26th March 2024)

underscored Kenya's commitment towards climate change and sustainability programs.

2. Carbon Trading Explained

Carbon Markets are trading systems in which carbon credits are sold and bought within a defined framework²². Companies and individuals use Carbon Markets to compensate for their greenhouse emissions by purchasing carbon credits from entities that produce or contribute to greenhouse gas emission.²³ One tradable carbon credit equals one ton of carbon dioxide. Carbon trading programs have two key components: a limit (or cap) on pollution, and tradable allowances equal to the limit that authorize allowance holders to emit a specific quantity (e.g., one ton) of the pollutant.²⁴ This limit ensures that the environmental goal is met, and the tradeable allowances provide flexibility for individual emissions sources to set their own compliance path.²⁵ When a company buys a carbon credit, usually from the Government, they gain permission to generate one ton of Carbon dioxide emissions.²⁶ With carbon credits, carbon revenue flows vertically from companies to regulators, though companies who end up with excess credits can sell them to other companies.²⁷

When a credit is used to reduce, sequester or avoid emissions, it becomes an offset and is no longer tradable, hence carbon offset. Offsets flow

²² Carbon Markets: An International Business Guide by Arnaud Brohé, Nick Eyre, Nicholas Howarth

²³ Ibid

²⁴ Ibid

²⁵ Understanding Carbon Credits by Gurmit Singh

²⁶ Econometric Analysis of Carbon Markets: The European Union Emissions Trading Scheme and the Clean Development Mechanism by Julien Chevallier

²⁷ A New Currency: Climate Change and Carbon Credits by David F. Victor and Joshua C. House, *Harvard International Review* (Vol. 26, Issue 2)

horizontally, trading carbon revenue between companies.²⁸ When one company removes a unit of carbon from the atmosphere as part of their normal business activity, they can generate a carbon offset.²⁹ Other companies can then purchase that carbon offset to reduce their own carbon footprint.³⁰ The Kyoto Protocol of 1997 and the Paris Agreement of 2015 (COP 21), both of which Kenya is a party, are international agreements that laid out international Carbon dioxide emissions goals in furtherance of United Nations Framework Convention on Climate Change (UNFCCC).³¹ Article 6 of the Paris Agreement³² allows parties to use international trading of emission allowances to help achieve emissions reduction targets. The COP 28 held in 2023 ended with an agreement to end the fossil fuel era through equitable transition underpinned by deep emissions cuts. It was also agreed in the conference that there would be an increase in climate finance starting with a baseline of USD 100 Billion per year. Some of the international carbon markets include Canada, China, Japan, New Zealand, South Korea, Switzerland and the United States. The EU Emissions Trading System is also a trading platform.

3. Kenya's New Carbon Trading Regulations

The Climate Change (Amendment) Act 2023³³ came with a raft of new legislative amendments to the principal Act that greatly affected the Climate landscape in Kenya. It introduced the existence of codified carbon markets in Kenya. Part IV A talks about regulation of Carbon Markets in

²⁸ Carbon Trading Under the Kyoto Protocol: Risks and Opportunities for Investors by Jennifer P. Morgan, *Fordham Environmental Law Review* Vol. 18 No. 1 Fall 2006, pp. 151-184

²⁹ *Ibid*

³⁰ *Ibid*

³¹ Climate Change and Kyoto Protocol: An Overview by Anil Gupta; *Handbook of Environmental and Sustainable Finance* pg. 3-23

³² Article 6, Paris Agreement 2015

³³ Climate Change (Amendment) Act 2023

Kenya which involves *inter alia* streamlining national policies with international laws and policies relating to climate change and carbon markets and regulates trade in carbon credits³⁴. Carbon trading projects are now required to undergo mandatory environmental and social impact assessment. The Act enunciates the introduction of community development agreements to regulate the relationship and obligations of the project proponents with impacted communities in carbon trading projects. Community development agreements must expressly provide for: i) an annual social contribution of at least 25 per cent of the aggregate earnings of the previous year to the community, to be managed and disbursed for the benefit of the community; ii) sharing of the benefits from carbon credits between the project proponents and the impacted communities; and iii) development of communities around the project.

It further provides for the establishment of a National Carbon registry in Kenya which shall be open to the public.³⁵ The registry shall include (a) registers of the carbon credit projects and programs implemented to reduce greenhouse gas emissions in Kenya; (b) the Reduced Emissions from Deforestation and Forest Degradation Carbon; (c) authorizations granted for participation in any initiative, project or program under this Act; (d) the carbon budget and the greenhouse gas reduction units; (e) the amount of carbon credits issued or transferred by Kenya; (f) the amount of carbon credits issued to emission reduction projects and programs recognized by Kenya from a national greenhouse gas registry account; (g) the transfer of carbon credits and any carbon credits issued or recognized by Kenya from a national greenhouse gas registry account ; (h) a record of corresponding adjustments where applicable, with respect to carbon credits; (i) the cancellation of carbon credits and any other carbon credits issued or recognized by Kenya from a national greenhouse gases registry

³⁴ *Ibid*, Part IV A

³⁵ *Ibid*

account; and (j) any other carbon credits issued or recognized by the Kenya from a national greenhouse gases registry account.³⁶

Consequently, under the amended Act, it is now an offence punishable by a fine of Five hundred Million shillings or imprisonment for not more than 10 years or both to willingly conduct unauthorized trade in carbon credits, give misleading information relating to environmental or financial gains from the carbon market, engage in money laundering through carbon trading, knowingly sell carbon credits to unauthorized entities, or fail to maintain carbon credit records.³⁷

There is a Proposed Carbon Credit Trading and Benefits sharing Bill 2023 tabled before Parliament that seeks to ensure fair and equitable sharing of benefits among stakeholders while promoting Carbon Trading in Kenya.³⁸ The object of the Bill is to establish a regulatory framework for the trading of carbon credits and benefit sharing in carbon credit trading, to establish the Carbon Credit Trading and Benefit Sharing Authority, and to provide for its functions and to provide for the registration and regulation of the carbon credit trading business. The Bill proposes³⁹:

- i. The introduction of carbon trading permits for persons intending to carry on carbon credit trading business in either the voluntary carbon market or the carbon compliance market. Carbon credit trading business under the Carbon Trading Bill includes the business of operating a carbon trading exchange.
- ii. The introduction of benefit-sharing ratios between the Carbon Trading and Benefit Sharing Authority, the national government,

³⁶ Ibid

³⁷ Ibid

³⁸ Ibid

³⁹ Carbon Credits Benefits Sharing Bill, 2023

- the relevant county government, the community, and the project proponent depending on the carbon resources.
- iii. The establishment of a Carbon Credit Trading Register for carbon credit trading permits, carbon credit trading projects, community development and benefit-sharing agreements, as well as carbon credit trading purchase agreements.
 - iv. The introduction of greenwashing offences against making of: a) false statements in the required environmental and social impact assessment; and b) false representations or concealment of material facts to procure or attempt to procure a carbon credit trading permit.
 - v. The establishment of a Carbon Trading and Benefit Sharing Authority mandated to issue carbon trading permits, provide policy direction and guidance to both levels of governments on carbon credit trading business, regulate carbon credit trading business in Kenya, ensure fair and equitable sharing of benefits among stakeholders, ensure development of investor protection standards with respect to carbon credit trading business, and promote the development of the carbon credit trading sector in Kenya.

The establishment of a Carbon Credit Trading Tribunal with jurisdiction over disputes arising out of regulatory functions under the Carbon Trading Bill, with all disputes arising from carbon credit trading operations under a carbon credit trading agreement being referred to alternative dispute resolution mechanisms in the first instance and thereafter to arbitration in accordance with the United Nations Commission on International Trade Law Arbitration Rules.

4. Participation In Global Carbon Markets

There have been recent calls for carbon credits to be traded on African based exchanges.⁴⁰ Kenya is yet to tap the full potential of the carbon credit market valued an estimated \$2 billion (Sh284 billion) despite being on the forefront as a potential hub for the multi-billion trade.⁴¹ In line with this, Kenya's Capital Market Authority (CMA) has indicated that it intends to regulate platforms through which carbon credits are traded in Kenya, guided by international securities commission policies on the regulation of carbon markets and the role regulators should play. The CMA has also stated that it would provide the Nairobi Securities Exchange (NSE) with the relevant support to open a carbon credits exchange. This comes against the backdrop of a 2022 Memorandum of Understanding signed by NSE, the Nairobi International Finance Centre Authority and Air Carbon Exchange (a Singapore based global carbon exchange), to jointly develop Kenya's first carbon exchange⁴²

The Top 4 Carbon exchanges in the World include: Aircarbon Exchange (ACX), which was launched in Singapore in 2019 as a digital exchange platform for airlines to trade carbon credits. ACX has a client base of more than 130 organizations.⁴³ They consist of corporate entities, financial traders, carbon project developers, and other stakeholders, Carbon Trade Exchange, which is one of the earliest players in the global carbon market, dating back to 2009.⁴⁴ Unlike other carbon exchanges, CTX is a member-based spot exchange with various participants. They range from

⁴⁰ Kenya's Carbon Markets: The Goose That Lays the Golden Egg? By Nkatha Murungi, IFC Review

⁴¹ <https://nairobiawmonthly.com/targeting-a-2-billion-african-carbon-market-with-common-trade-rules/> (visited on 29th March 2024)

⁴² <https://kenyanwallstreet.com/cma-to-support-creation-of-kenyas-carbon-credit-markets/> (visited on 29th March 2024)

⁴³ A Complete Guide to the Global Carbon Market: Profiting in a Low Carbon World by Dr. M. A. Hashmi

⁴⁴ Carbon Trade Xchange

individual brokers and project developers to big corporations. They can list their credits directly to CTX from their Registry account and then trade digitally from anywhere, Toucan Protocol and Xpansive⁴⁵.

5. Understanding Voluntary And Regulated Markets

Carbon credits are issued by national or international governmental organizations.⁴⁶ The number of credits issued each year is typically based on emissions targets. Credits are frequently issued under what's known as a "cap-and-trade" program as previously stated above. Regulators set a limit on carbon emissions – the cap.⁴⁷ That cap slowly decreases over time, making it harder and harder for businesses to stay within that cap.⁴⁸ When it comes to the sale of carbon credits within the carbon marketplace, there are two significant, separate markets to choose from. One is a regulated market, set by "cap-and-trade" regulations at the regional and state levels.⁴⁹ This Market is mandatory. The other is a voluntary market where businesses and individuals buy credits (of their own accord) to offset their carbon emissions.⁵⁰ This market is optional. When it comes to the regulatory market which was created after the Kyoto Protocol of 1997, each company operating under a cap-and-trade program is issued a

⁴⁵ <https://carboncredits.com/the-top-4-carbon-exchanges-for-2023/> (visited on 24th March 2024)

⁴⁶ Carbon markets: A historical overview by Raphael Calel

⁴⁷ Carbon Markets and Technological Innovation by Thomas A. Weber and Karsten Neuhoff, *Journal of Environmental Economics and Management* (JEEM) Vol. 60 Issue 2

⁴⁸ This approach is part of the European Union's (EU) Emission Trading Scheme (ETS), which the EU members use to meet their Kyoto Protocol commitments. For more information, see CRS Report RL34150, Climate Change and the EU Emissions Trading Scheme (ETS): Kyoto and Beyond, by Larry Parker

⁴⁹ Market making via regulation: The role of the state in carbon markets by Markus Lederer, *Regulation and Governance* Vol. 6 Issue 4

⁵⁰ Voluntary Carbon Markets. An international business guide to what they are and how they work by Janet Fisher, *Journal of Integrative Environmental Sciences* [2010]

certain number of carbon credits each year. Some of these companies produce less emissions than the number of credits they're allotted, giving them a surplus of carbon credits.⁵¹ Conversely, some companies (especially those with older and less efficient operations/technology) produce more emissions than the number of credits they receive each year can cover. These businesses are looking to purchase carbon credits to offset their emissions because they must. When companies meet their emissions "cap," they look towards the regulatory market to "trade" so that they can stay under that cap. Carbon allowances are sold by companies which did not exceed their quotas and bought by those which have exceeded their cap.⁵² The voluntary market works a bit differently. This market was initiated after the UNFCC⁵³ 2000. Companies in this marketplace have the opportunity to work with businesses and individuals who are environmentally conscious and are choosing to offset their carbon emissions because they want to. There is nothing mandated here. It might be an environmentally conscious company that wants to demonstrate that they're doing their part to protect the environment, or it can be an environmentally conscious person who wants to offset the amount of carbon they're putting into the air when they travel. This market allows organizations and individuals with CO₂ emitting activities to take voluntary climate action by privately contributing to certified carbon removal and avoidance projects.⁵⁴

⁵¹ Carbon Markets Around the Globe Sustainability and Political Feasibility by Sven Rudolph and Elena Aydos

⁵² <https://www.eon.com/en/innovation/future-of-energy/energy-and-beyond/compliance-vs-voluntary-carbon-markets-explained.html> (visited on 29th March 2024)

⁵³ United Nations Framework Convention on Climate Change, (UNFCC)

⁵⁴ <https://www.climatepartner.com/en/knowledge/insights/the-essential-guide-to-carbon-offsetting> (visited on 3rd March 2024)

6. Carbon Offset Projects: Types And Benefits

Carbon offset refers to any activity that compensates for the emission of carbon dioxide (CO₂) or other greenhouse gases (measured in carbon dioxide equivalents [CO₂]) by providing for an emission reduction elsewhere.⁵⁵

Many different types of businesses can create and sell carbon credits by reducing, capturing, and storing emissions through different processes.⁵⁶ Some of the most popular types of carbon offset returning projects that companies will engage in include: Investing in renewable energy by funding wind, hydro, geothermal, and solar power generation projects, or switching to such power sources wherever possible, Improving energy efficiency across the world, for instance by providing more efficient cook stoves to those living in rural or more impoverished regions, Capturing carbon from the atmosphere and using it to create biofuel, which makes it a carbon-neutral fuel source, Returning biomass to the soil as mulch after harvest instead of removing or burning. This practice reduces evaporation from the soil surface, which helps to preserve water.⁵⁷ The biomass also helps feed soil microbes and earthworms, allowing nutrients to cycle and strengthen soil structure, Promoting Forest regrowth through tree-planting and reforestation projects, Switching to alternate fuel types, such as lower-carbon biofuels like corn and biomass-derived ethanol and biodiesel and Destruction of potent industrial greenhouse gases such as halocarbons.

Consumers are increasingly aware of the importance of carbon emissions. Consequently, they're increasingly critical of companies that don't take

⁵⁵ Carbon Emission Reduction—Carbon Tax, Carbon Trading, and Carbon Offset by Wen Hsein Tsai

⁵⁶ Ibid

⁵⁷ Voluntary Carbon Offsets: Overview and Assessment by Jonathan L. Ramseur

climate change seriously hence the need for companies to embrace carbon markets.

7. Advantages For Kenya And Its Businesses

Carbon Credits trading has a myriad of benefits not only to the country but also to the corporations, industries and organizations. These include:

- ✓ Carbon trading enables Kenya to achieve its climate obligations, hence fostering international climate action through global collaboration.
- ✓ Carbon markets help to channel financial resources to support emissions reduction or removal activities globally, which would otherwise not be implemented due to factors such as insufficient policy and economic incentives.
- ✓ It accelerates climate action and advances global climate ambition, by unlocking cost-effective mitigation activities to realize the Paris Agreement goal.
- ✓ Carbon credits also provides various co-benefits to local communities where the projects are hosted, such as sustainable development through the creation of green jobs, sustainable energy, environmental and biodiversity protection, and climate adaptation and resilience.
- ✓ It is a source of revenue for the country and organizations.
- ✓ Carbon credits trading is beneficial as it will create more practice areas like venturing into Climate change and sustainability Litigation.
- ✓ Carbon credits promote clean technologies in industries that contribute significantly to greenhouse gas emissions i.e. as the demand for clean energy sources rises, so does the drive to innovate and develop sustainable alternatives.

8. Conclusion

As the world faces an unprecedented environmental crisis, the concerted effort to transition toward a sustainable future is more potent than ever. Carbon credits trading is a nuanced yet feasible method of combating global warming. It has the ability of achieving economic and environmental goals thus achieving sustainable future through decarbonization. It acts as an environmental currency, which permits companies to emit a specific amount of carbon dioxide or other greenhouse gases. This system enables organizations to manage and monitor their carbon footprint while incorporating a financial incentive for eco-friendly practices. Integrating carbon credits into corporate sustainability efforts has a ripple effect, transforming businesses into drivers of positive environmental change. As responsible citizens, industry leaders, and change-makers, we must seize this transformative opportunity and commit to preserving our planet for future generations. A sustainable greener future is inevitable.

Bibliography

Carbon Markets: An International Business Guide by Arnaud Brohé, Nick Eyre, Nicholas Howarth

A Complete Guide to the Global Carbon Market: Profiting in a Low Carbon World by Dr. M. A. Hashmi

Carbon markets: A historical overview by Raphael Calel

Carbon Emission Reduction – Carbon Tax, Carbon Trading, and Carbon Offset by Wen Hsein Tsai

Voluntary Carbon Offsets: Overview and Assessment by Jonathan L. Ramseur

Paula Dipema, Executive Vice President for Recruitment and Public Policy Chicago Climate Exchange during her address to the Japan Society Corporate Conference: *Risks and Opportunities in the Emerging Emissions Trading Market*

Kenya Institute of Public Policy Research and Analysis (KIPPRA)

<https://nation.africa/kenya/news/president-ruto-reaffirms-bid-to-plant-15-billion-trees-in-a-decade-4290168> (visited on 25th March 2024)

<https://www.unep.org/news-and-stories/speech/kenyas-first-lady-leading-nature-restoration-agenda> (visited on 21st March 2024)

Africa Climate Summit 2023
<https://www.un.org/africarenewal/magazine/september-2023/africa-climate-summit-nairobi-declaration-makes-strong-push-accelerated> (visited on 23rd March 2024)

Africa Clean Sweeps into \$900B Global Carbon Credit Economy by carboncredits.com

The African Leaders Nairobi Declaration on Climate Change and Call to Action by African development Group

Explainer: What is Carbon Tax, Pros and Cons, and Implementation all over the world by Mitota P. Omolere

Landscape of Climate Finance in Africa by Climate Policy Initiative

<https://climatepromise.undp.org/news-and-stories/africa-meet-its-climate-goals-finance-essential> (visited on 26th March 2024)

<https://fsdafrica.org/news/current-levels-of-climate-finance-in-africa-falling-dramatically-short-of-needs/> (visited on 26th March 2024)
<https://www.unido.org/news/unido-advancing-climate-action-africa-climate-summit> (visited on 27th March 2024)

Carbon Herald UAE Investors Pledge \$450 Million For African Carbon Credits by Dimana Doneva GCF Replenishment Sends Some Signals – Just Not the Right Ones by Liane Schalatek [Heinrich Boll Stiftung]

<https://www.afdb.org/en/news-and-events/the-african-development-bank-pledges-us-25-billion-to-climate-finance-for-2020-2025-doubling-its-commitments-19090> (visited on 1st March 2024)

Africa's first Climate Summit: "Urgent and Collaborative Climate Action Required to Achieve Goals of the Nairobi Declaration" by Shaban Senyange
<https://www.africa-energy.com/news-centre/article/masdar-and-amea-lead-uaes-10bn-african-renewables-push> (visited on 24th February 2024)

Project Syndicate; Rethinking Climate Finance for Developing World
<https://www.project-syndicate.org/commentary/kenya-ruto-proposal-for-global-green-bank-is-worth-considering-by-kenneth-rogo-off-2023-06> (visited on 26th March 2024)

Econometric Analysis of Carbon Markets: The European Union Emissions Trading Scheme and the Clean Development Mechanism by Julien Chevallier

A New Currency: Climate Change and Carbon Credits by David F. Victor and Joshua C. House, Harvard International Review (Vol. 26, Issue 2)

Carbon Trading Under the Kyoto Protocol: Risks and Opportunities for Investors by Jennifer P. Morgan, Fordham Environmental Law Review Vol. 18 No. 1 Fall 2006, pp. 151-184

Climate Change and Kyoto Protocol: An Overview by Anil Gupta; *Handbook of Environmental and Sustainable Finance* pg. 3-23

Article 6, Paris Agreement 2015

Climate Change (Amendment) Act 2023

Carbon Credits Benefits Sharing Bill, 2023

Kenya's Carbon Markets: The Goose That Lays the Golden Egg? By Nkatha Murungi, IFC Review <https://nairobiawmonthly.com/targeting-a-2-billion-african-carbon-market-with-common-trade-rules/> (visited on 29th March 2024)

<https://kenyanwallstreet.com/cma-to-support-creation-of-kenyas-carbon-credit-markets/> (visited on 29th March 2024)

Carbon Trade Xchange <https://carboncredits.com/the-top-4-carbon-exchanges-for-2023/> (visited on 24th March 2024)

Carbon Markets and Technological Innovation by Thomas A. Weber and Karsten Neuhoff, *Journal of Environmental Economics and Management (JEEM)* Vol. 60 Issue 2

This approach is part of the European Union's (EU) Emission Trading Scheme (ETS), which the EU members use to meet their Kyoto Protocol commitments. For more information, see CRS Report RL34150, Climate Change and the EU Emissions Trading Scheme (ETS): Kyoto and Beyond, by Larry Parker

Market making via regulation: The role of the state in carbon markets by Markus Lederer, *Regulation and Governance* Vol. 6 Issue 4

Voluntary Carbon Markets. An international business guide to what they are and how they work by Janet Fisher, *Journal of Integrative Environmental Sciences* [2010]

Carbon Markets Around the Globe Sustainability and Political Feasibility by Sven Rudolph and Elena Aydos

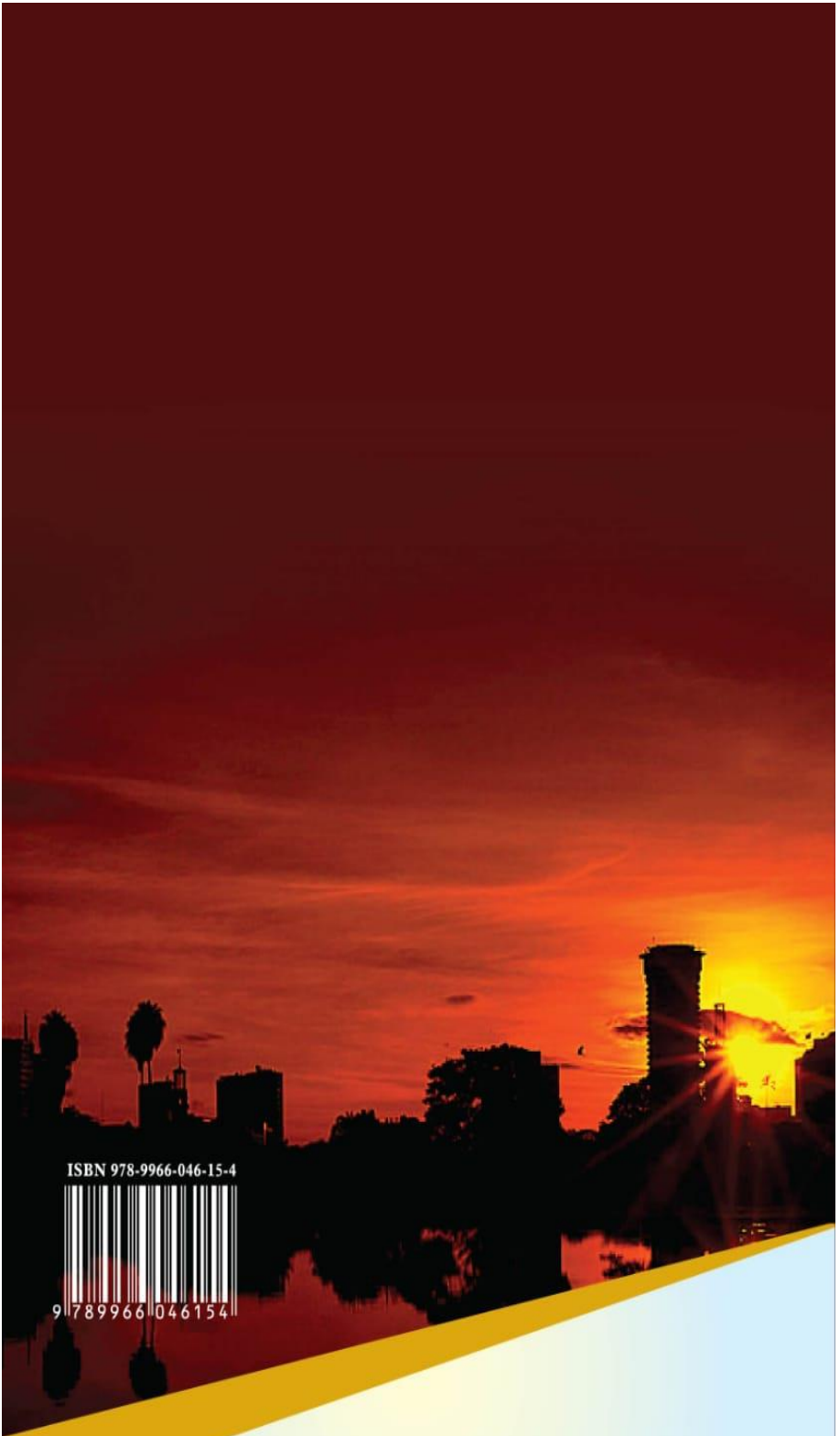
Carbon Credits Trading: A New Frontier in Climate Change: Brian Okoth

(2024) Journal of cmsd Volume 11(3)

<https://www.eon.com/en/innovation/future-of-energy/energy-and-beyond/compliance-vs-voluntary-carbon-markets-explained.html> (visited on 29th March 2024)

United Nations Framework Convention on Climate Change, (UNFCC) <https://www.climatepartner.com/en/knowledge/insights/the-essential-guide-to-carbon-offsetting> (visited on 3rd March 2024)

Carbon Emission Reduction – Carbon Tax, Carbon Trading, and Carbon Offset
by Wen Hsein Tsai



ISBN 978-9966-046-15-4



9 789966 046154