

A person stands on the edge of a dark, layered rock formation, their arms raised in a gesture of triumph or achievement. The background is a dramatic sunset with a bright sun low on the horizon, casting a golden glow over the scene. The sky is filled with soft, wispy clouds. The overall mood is one of accomplishment and hope.

Achieving *Climate Justice* for Development

Kariuki Muigua

Achieving Climate Justice for Development

Kariuki Muigua, Ph.D; FCI Arb; C.Arb

Achieving Climate Justice for Development

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Table of Contents

Dedication	vi
Acknowledgements	ix
Preface.....	ix
Author’s Note	xii
List of Cases	xvi
List of Statutes/Legislation/Official Government Documents	xvii
List of Conventions/Declarations/UN Documents	xix
List of Abbreviations.....	xxi
CHAPTER ONE.....	1
Introduction to Climate Change and Climate Justice	1
1.1. Introduction.....	1
1.2. Causes of Climate Change: Natural and Human-Induced Factors.....	2
1.3. Effects of Climate Change on Livelihoods	3
1.4. Defining Climate Justice	6
1.5. Pillars of Climate Justice	10
1.6. Addressing Climate Change for Peace and Sustainability	11
1.7. Climate Change in Africa	16
1.8. Conclusion.....	18
CHAPTER TWO	20
Climate Change and Sustainability	20
2.1. Introduction	20
2.2. Climate Change and Sustainable Development Goals: The Link.....	22
2.3. Promoting Environmental Justice as a tool for Climate Change Mitigation and Adaptation.....	24
2.4. Conclusion.....	28
CHAPTER THREE	31
Legal and Institutional Framework on Climate Justice in Kenya.....	31
3.1. Introduction	31
3.2. Conceptualizing Climate Justice.....	31
3.3. Legal Framework on Climate Justice	33
3.3.1. International Legal Framework	34
3.3.2. Regional Legal Framework	37
3.3.3. National Legal Framework.....	41

3.4. Fostering Climate Justice: Prospects and Challenges.....	43
3.5. Conclusion.....	50
CHAPTER FOUR	51
Entrenching Gender in Climate Change Mitigation and Adaptation	51
4.1. Introduction	51
4.2. Gender and Climate Justice.....	52
4.3. Gendered Impacts of Climate Change.....	53
4.4. Actualizing Gender Equity for Environmental Sustainability: Prospects and Problems.....	57
4.5. Way Forward	62
4.6. Conclusion.....	66
CHAPTER FIVE.....	67
Climate Justice and Environmental Conflicts	67
5.1. Introduction	67
5.2. Effects of Climate Change on Livelihoods	68
5.3. Climate Change as a Catalyst for Environmental Conflicts	70
5.4. Addressing Climate Change for Peace and Sustainability	75
5.5. Conclusion.....	78
CHAPTER SIX	80
Tapping into Africa’s Blue Economy: Challenges and Promises	80
6.1. Introduction	80
6.2. The Blue Economy in Africa.....	83
6.3. The Blue Economy in Africa: Challenges and Promises	87
6.4. Way Forward	90
6.5. Conclusion.....	93
CHAPTER SEVEN	95
Embracing Green Economy for Climate Change Mitigation.....	95
7.1. Introduction	95
7.2. The Concept of Green Energy	97
7.3. Green Growth in Africa: Opportunities and Challenges.....	99
7.4. The Journey towards Green Energy: Prospects and Challenges	106
7.5. Way Forward	111
7.6. Conclusion.....	118

CHAPTER EIGHT	119
Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya	119
8.1. Introduction	119
8.2. Environmental Impact Assessment, Audit and Monitoring Framework in Kenya	121
8.3. Environmental, Social and Governance (ESG).....	125
8.4. Sustainability Audit: Scope and Indicators	128
8.5. Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya.....	132
8.6. Greenwashing: A hindrance to Achieving Sustainability?.....	134
8.6.1. Greenwashing: Meaning and Drivers	134
8.6.2. Combating Greenwashing for Sustainability	136
8.7. Conclusion.....	144
CHAPTER NINE	145
Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience	145
9.1. Introduction	145
9.2. Role of Science, Technology and Innovation in Achieving Sustainable Development.....	147
9.3. Realizing Sustainable Development through Science, Technology and Innovation: Promises and Problems	152
9.4. Way Forward	158
9.5. Conclusion.....	160
CHAPTER TEN	162
Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation	162
10.1. Introduction	162
10.2. The Role of Law and Courts in Climate Change Mitigation.....	167
10.3. Challenges and Limitations of Climate Change Litigation	171
10.4. Potential Future Developments in Climate Change Litigation.....	182
10.4.1. Lawyers as Agents of Social Engineering/Change	183
10.4.2. Promoting Rule of Law and Adoption of Human Rights Approaches to Climate Justice.....	188
10.4.3. Adopting the Concept of Sustainable Development as a Way of Practice.....	190

10.4.4. Need for Continuous Professional Development and Retraining in Climate Change Matters.....	191
10.4.5. Role of Law Society of Kenya in Shaping a Climate Change-Conscious Lawyer	192
10.5. Conclusion.....	195
CHAPTER ELEVEN.....	200
Climate Financing: Which Way for Africa?	200
11.1. Introduction	200
11.2. Climate Finance: An Overview	201
11.3. Unlocking Climate Finance: Promises and Pitfalls.....	206
11.4. The African Leaders Nairobi Declaration on Climate Change and Call to Action: Financial Proposals for Africa	213
11.5. Way Forward	216
11.6. Conclusion.....	220
CHAPTER TWELVE.....	222
Contemporary Issues in Climate Justice	222
12.1. Introduction	222
12.2. Linking Alternative Dispute Resolution (ADR) and Environmental, Social and Governance (ESG) Tenets for Sustainable Development.....	223
12.2.1 Introduction.....	223
12.2.2. The Nexus between ADR and ESG	226
12.2.3. Way Forward	231
12.2.4. Conclusion.....	233
12.3. Fostering Sustainable Tourism in Kenya	234
12.3.1. Introduction.....	234
12.3.2. The Concept of Sustainable Tourism	237
12.3.3. Sustainable Tourism in Kenya: Prospects and Pitfalls	240
12.3.4. Way Forward	249
12.3.5. Conclusion.....	251
12.4. Climate Smart Agriculture	252
12.4.1. Conclusion.....	255
CHAPTER THIRTEEN.....	257
Conclusion and Way Forward	257
13.1. Introduction	257
3.2. Combating Climate Change for Sustainability	258

13.3. Adopting Effective Legal Framework on Low Carbon Development..	264
13.4. Enhancing Low Carbon Development for Sustainability: Promises and Drawbacks.....	274
13.5. Confronting Climate Change in Africa: Prospects and Challenges	283
13.6. Way Forward	290
13.7. Conclusion.....	293
 SELECT BIBLIOGRAPHY	 296
Books/e-Books/Chapters/Reference Books/Reports/Theses	296
Journal Articles/Papers Presentations/ Working Papers/Workshops.....	298
Internet Sources/Web Pages.....	312

Dedication

Dedicated to those
Who came up with the idea
of Environmental Justice
And to those who refined
the concept of
Climate Justice

May you prosper
through this and through
future generations.

Dedicated to those
who direct their minds
to combating climate change
And ensure that
Achieving Climate Justice
for Development
becomes a reality

Dedicated to those
who work hard to ensure
the voices of all
the peoples of this Earth
are heard
and taken into account
when decisions affecting them
are made

Dedicated to those
who advocate
for a clean and healthy environment
for all

And to those who fight
for the vulnerable

and marginalized
communities

Dedicated to those
who believe we must
restore
the health of Planet
Earth

And that all of us
have an equal responsibility
To take care of
Mother Earth

Dedicated to all those
who create awareness
of the need to combat
Climate Change
And take urgent action
to save
Mother Earth

Dedicated to the present
and future
generations

To the unborn
who are entitled to enjoy
the resources
of Mother Earth
In a Clean and Healthy
Environment

Dedicated to those
who know
that we can create
what we think
And that in the face

of adversity, pain
and suffering
we should trudge on
Crawl on
Walk on
And never, ever give up.

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I am very grateful to those who introduced me to the idea that whatever can be conceived in the mind can be achieved. And that there are no limitations in life. Any limitations that manifest themselves are those in our minds.

I am grateful to know that I can always dream big dreams. And that those dreams will one day become a reality.

Finally, I wish to extend gratitude to my family. As I have said before they have stood by me in fine weather and in dark, rainy and stormy days. They have been with me through happy times and through the rough journey of grief and sorrow.

They assure me that after this dark night the warm rays of the sun will show up and warm our hearts and souls.

And that tomorrow, is worth looking forward to.

Preface

Climate Justice is vital in ensuring effective climate change mitigation and adaptation towards Development. It has emerged to deal with the justice concerns brought about by climate change.

The concept of Climate Justice acknowledges that climate change has adverse impacts especially on nations and communities that contribute the least to its threat. It seeks to promote justice in climate related concerns.

Climate Justice insists that communities have the right to be free from climate change, its related impacts and other forms of ecological destruction. It affirms that governments are responsible for addressing climate change in a manner that is both democratically accountable to their people and in accordance with the principle of common but differentiated responsibilities.¹

The idea of Climate Justice is significant for the entire world since it seeks to achieve an agenda that links the struggle for a prosperous, safe future for all with a fight against inequalities and exclusion.²

This book is informed by the need to achieve climate justice for development. It explores the idea of climate justice and discusses the efficacy of the measures adopted towards achieving climate justice for development.

The book not only adds to the already existing debates in this area but also offers solutions for achieving climate justice for development. The discussion also explores the global and regional approaches to achieving climate justice for development.

¹ Bali Principles of Climate Justice. Available at <https://acrobat.adobe.com/id/urn:aaid:sc:EU:99098795-8c02-4a51-a4f5-dede4417440b> (Accessed on 13/10/2023).

² Foundation for European Progressive Studies., 'United for Climate Justice.' Available at <https://feps-europe.eu/wpcontent/uploads/downloads/publications/short%20united%20for%20climate%20justice%20-%204.pdf> (Accessed on 13/10/2023).

This book is aimed at the students, general practitioners, researchers, decision-makers and academics, among others, interested in keeping themselves updated in the study and practice Climate Justice for Development.

Achieving Climate Justice for Development is an ideal whose time is now.

Kariuki Muigua
Nairobi Kenya,
October 2023.

Author's Note

Climate change is a pervasive global phenomenon that arises from the excessive release of greenhouse gases, hence exacerbating global warming and precipitating alterations in the Earth's climate patterns. Climate change is influenced by both natural and anthropogenic influences. Natural processes, like ocean currents, volcanic eruptions, and solar radiation, have a substantial role in shaping the Earth's climate. Various anthropogenic activities, like the combustion of fossil fuels, the clearance of forests, and the extensive use of fossil fuel resources, also have a significant role in the phenomenon of climate change.

Vulnerable populations, particularly those with lower levels of consumption, experience disproportionate impacts as a result of climate change. Fossil fuels are responsible for more than 75% of global greenhouse gas emissions and around 90% of carbon dioxide emissions, establishing them as the primary and most significant contributor to pollution that drives global warming. The impact of climate change on livelihood systems is particularly pronounced among socioeconomically disadvantaged and severely vulnerable populations.

Vulnerable populations are disproportionately subjected to significant environmental hazards as a result of variables such as socioeconomic disadvantage, geographical location, and social marginalisation. These populations are deficient in the requisite resources to effectively address and mitigate the adverse consequences of climate change, which are further intensified by societal and systemic inequities. Research suggests that women are disproportionately affected by the adverse consequences of climate change compared to men.

Climate change is widely recognised as a "threat multiplier" as it exacerbates the underlying factors that contribute to conflicts in their traditional manifestations. According to existing research, there is evidence to suggest that places in close proximity to herding groups exhibit a higher prevalence of violence. Additionally, this proximity has been found to elevate the probability of conflicts arising on farmlands situated near these herding communities.

In summary, climate change is a substantial worldwide issue that necessitates collaborative endeavours from all sectors of the economy and stakeholders.

The notion of climate justice pertains to the recognition and rectification of the disproportionate and inequitable impacts of climate change, with a specific focus on nations and people that have the least contribution to its causes. Climate justice is a concept that establishes a connection between human rights and development in order to adopt a human-focused approach. Its objective is to protect the rights of those who are most susceptible to the impacts of climate change and ensure that the advantages and disadvantages resulting from climate change are distributed fairly and impartially. The concept encompasses multiple dimensions of justice, such as distributive justice, procedural justice, and justice as acknowledgment. Distributive justice pertains to the unequal effects of climate change on nations with lesser responsibility, whereas procedural justice seeks to redress distributive climate injustices through the establishment of participative, equitable, inclusive, and accessible mechanisms. The concept of justice as acknowledgment aims to amplify the voices of historically marginalised individuals in the context of climate change, which is exacerbated by underlying structural inequalities.

Climate justice holds great importance on a global scale as it establishes a connection between human rights, development, and climate action. It adopts a people-centric approach, recognising that not all individuals have contributed to climate change in equal measure. Its primary objective is to address the various injustices arising from climate change, including social, gender, economic, intergenerational, and environmental disparities.

The notion of climate justice places significant emphasis on the ethical and social ramifications of climate change, with a particular focus on its impact on developing countries. This entails the examination of not only the immediate consequences, but also the actors accountable for precipitating these challenges. It is imperative for states to assume a proactive obligation in implementing impactful measures to address climate change and guarantee the capacity of all individuals to adapt. In order to attain climate justice, it is imperative that climate action is in accordance with established human rights agreements, pledges, norms, and principles.

The primary objective of the Sustainable Development Goals (SDGs) is to attain sustainable management and optimise the utilisation of natural resources by the year 2030, with a particular focus on establishing sustainable consumption and production patterns. This will aid in fulfilling the requirements of both present and forthcoming generations. The Sustainable Development Goals (SDGs) advocate for the incorporation of climate action measures into economic growth frameworks and emphasise the need for environmentally sustainable practices throughout the extraction of natural resources.

Africa has a significant susceptibility to the impacts of climate change, mostly attributed to endemic poverty, a heavy reliance on rain-fed agriculture, intricate governance structures, restricted access to financial resources, inadequate infrastructure, degradation of ecosystems, suboptimal management of natural resources, occurrences of disasters, and ongoing conflicts. Climate change has profound impacts on the African continent, leading to significant challenges such as food poverty, heightened pressure on water resources, deterioration of human health, displacement of populations, and hindrance to socio-economic growth.

Despite making a relatively little contribution to global warming and having the lowest emissions among regions, Africa is confronted with a significant and escalating collateral impact from climate change. This poses substantial risks to several aspects of its economy, infrastructure investments, water and food systems, public health, agriculture, and livelihoods. The United Nations Framework Convention on Climate Change emphasizes the increasing influence of climate change on the African continent. It underscores the unequal distribution of benefits and costs, wherein rich nations disproportionately gain from businesses and technology that contribute to climate change, while developing countries bear the majority of the adverse consequences.

Climate change poses a significant challenge to Africa's attainment of the Sustainable Development Goals, necessitating immediate action to address this issue and advance the continent's Sustainable Development agenda. The implementation of Nationally Determined Contributions (NDCs), which are climate action commitments made by African states, plays a crucial role in promoting socio-economic development across the continent.

The concept of environmental sustainability is characterised by a state of equilibrium, adaptability, and interdependence, wherein human civilization is able to meet its requirements without surpassing the carrying capacity of the ecosystems that support it. The concept of Sustainable Development aims to promote development that is sustainable in social, economic, and environmental aspects. The concept encompasses the notion of intergenerational equity, which stipulates that the preservation of natural resources should be prioritised for the advantage of both current and future generations, achieved via meticulous planning and management.

The issue of climate change on a global scale has prompted collaborative endeavours utilising many legal mechanisms, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. These devices have the objective of mitigating climate change by achieving stabilisation of greenhouse gas concentrations and fostering sustainable development. By acknowledging and tackling these concerns, we may strive towards the attainment of a cleaner and healthier environment, as well as a future that is more robust and resilient.

It is against the foregoing that this book makes key contribution to the efforts geared towards achieving climate justice as a prerequisite for sustainable and inclusive development.

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List of Abbreviations

UNFCCC	United Nations Framework Convention on Climate Change
GGA -	Global Goal on Adaptation
ACS	Africa Climate Summit
EMCA	Environmental Management and Co-ordination Act
SDGs	Sustainable Development Goals -
CSR	Corporate Social Responsibility
EEZ	Exclusive Economic Zones
IUU	Illegal, Unregulated and Unreported
WMDs	Weapons of Mass Destruction
AfCFTA	Agreement Establishing the African Continental Free Trade Area
LPG	Liquefied Petroleum Gas
ABA	American Bar Association
GHG	Greenhouse Gas
UNGA	United Nations General Assembly
NDCs	National Determined Contributions
GCF	Green Climate Fund
GGA	Global Goal on Adaptation
SDRs	Special Drawing Rights
AfDB	Africa Development Bank
ESG	Environmental, Social, and Governance
ADR	Alternative Dispute Resolution
ILO	International Labour Organization
EAC	East African Community
GSTC	Global Sustainable Tourism Criteria
CBT	Community-Based Tourism
CDM	Clean Development Mechanism
NCCAP	National Climate Change Action Plan
CERs	Certified Emission Reductions

CHAPTER ONE

Introduction to Climate Change and Climate Justice

1.1. Introduction

Climate change mitigation has taken centre stage in many development plans and activities around the world due to the disastrous effects that climate change has had not only on economies but also on people's livelihoods. Kenya has not been left behind, either in mitigation measures or in suffering the effects of this change. It has been acknowledged that if the world is to achieve the United Nations 2030 Agenda for Sustainable Development Goals, then much more needs to be done in a coordinated way that not only focuses on all sectors of the economy but also brings all stakeholders on board. This book adds to the existing literature on this topic but mainly focuses on Kenya. Its diverse topics will be useful not only to environmental law researchers and students but also to policymakers in their efforts towards mitigating climate change and building a climate- resilient economy for the sake of current and future generations.

In very simple terms, climate change is the result of excessive greenhouse gas (GHG) emissions, which contribute to global warming and ultimately to climate change. More particularly, climate change is caused upstream by the aggregate concentration of GHG poured into the atmosphere by all States, not just a single country.¹

¹ Rocha A, 'Suing States: The Role of Courts in Promoting States' Responsibility for Climate Change' in Maria da Glória Garcia and António Cortês (eds), *Blue Planet Law: The Ecology of our Economic and Technological World* (Springer International Publishing 2023) <https://doi.org/10.1007/978-3-031-24888-7_8> accessed 5 October 2023.

1.2. Causes of Climate Change: Natural and Human-Induced Factors

There are two broad categories that may be applied to the factors that contribute to climate change:- both naturally occurring and induced by human activity.² Natural processes, such as ocean currents, volcanic eruptions, shifts in the earth's orbit around the sun, and fluctuations in solar radiation, have a significant impact on and may profoundly alter the climate of the world.³ Burning fossil fuels for power, vehicles, trains, aircraft, and residences, as well as the flaring of gasoline at oil fields and other activities, among other things, has been proven to be a major contributor to the production of man-made greenhouse gases, which are also implicated in the current change in climate. In addition, the way land is used and the rate of deforestation both contribute to climate change.⁴

Increased carbon emissions as a result of the intensive use of fossil fuels are one of the most prominent triggers of human-induced climate change. Other key triggers include the conversion of forested areas into agricultural land to fulfil the rising demand of consumers and the improper use of freshwater reservoirs. The issues posed by climate change have been made worse as a result of these variables.⁵

Although changes in average temperatures have been recorded at various times throughout history, it has been pointed out that vulnerable groups with less consumption, both at the level of countries

² Onoja, U. S.; Dibua, U. M. E.; Enete, A. A. Climate Change: Causes, Effects and Mitigation Measures-a Review. *Global Journal of Pure and Applied Sciences* 2011, 17 (4), 469-479.

³ Ibid.

⁴ Ibid.

⁵ AA, D. S. with. "Human-induced climate change causes global environmental injustice." *Daily Sabah*. <https://www.dailysabah.com/turkiye/human-induced-climate-change-causes-global-environmental-injustice/news> (accessed 2023-06-03).

and among social groups, suffer more than others. This is true both at the level of countries and among social groups.⁶

Over 75 percent of the world's greenhouse gas emissions and almost 90 percent of all carbon dioxide emissions are attributed to fossil fuels, which include coal, oil, and gas. This makes fossil fuels the single greatest source of pollution that contributes to global warming.⁷ When greenhouse gases are emitted into the atmosphere, they create a blanket that covers the Earth and traps the heat of the sun. This contributes to increased temperatures throughout the world and a shifting environment. At this moment in time, the rate of global warming is accelerating at a rate that has never been seen before in human history. The gradual rise in temperature is causing noticeable shifts in weather patterns and upsetting the delicate equilibrium that normally exists in the natural world. This places a significant threat not just on humans but also on every other type of life that exists on our planet.⁸

1.3. Effects of Climate Change on Livelihoods

Climate change has become a worldwide concern as a result of the harm it does to the environment and human lives. Climate Change is a significant issue that has an impact on many facets of the environment and human existence.⁹ The objectives of Sustainable Development and the eradication of poverty are intertwined with the battle against climate change.¹⁰

⁶ Ibid.

⁷ United Nations, *Causes and Effects of Climate Change*. United Nations. <https://www.un.org/en/climatechange/science/causes-effects-climate-change> (accessed 2023-06-03).

⁸ Ibid.

⁹ Muigua, K., *Nurturing Our Environment for Sustainable Development*, Glenwood Publishers, Nairobi – 2016; Muigua, K., Kariuki, F., Wamukoya, D., *Natural Resources and Environmental Justice in Kenya*, Glenwood Publishers, Nairobi – 2015.

¹⁰ United Nations, *Support Sustainable Development and Climate Action*. United Nations. <https://www.un.org/en/our-work/support-sustainable-development-and-climate-action> (accessed 2023-06-04); *Poverty-Environment Action for Sustainable Development Goals*. UNEP - UN Environment Programme.

CHAPTER ONE: Introduction to Climate Change and Climate Justice

One of the most important aspects of human growth is working towards a state of overall enhanced and maintained well-being for all people. The way in which Climate Change and its related stresses support or destabilize livelihood systems is a significant factor in human development. This is especially true for the livelihood systems of individuals who are economically disadvantaged and highly vulnerable.¹¹

Due to factors like poverty, location, and social discrimination, vulnerable groups are exposed to serious environmental risks; however, they lack the resources necessary to deal with and combat the negative effects of climate change, which exacerbate social and structural injustices.¹²

It is possible to draw a connection between the changing environment and many forms of discrimination, including those on the levels of class, ethnicity, and the global community. This discrimination is not just a sort of emotional response; rather, it is a strategy that assures the replication of inequality in its background and facilitates the reproduction of inequality within the group.¹³

<http://www.unep.org/regions/asia-and-pacific/regional-initiatives/poverty-environment-action-sustainable-development> (accessed 2023-06-04); 170 actions to combat climate change - act now! <https://sites.ungeneva.org/170actions/climate/> (accessed 2023-06-04); Carbon emissions anywhere threaten development everywhere | UNCTAD. <https://unctad.org/news/carbon-emissions-anywhere-threaten-development-everywhere> (accessed 2023-06-04).

¹¹ UNDP, Climate Change. "Human Development: towards Building a Climate Resilient Nation." *Zimbabwe Human Development Report* (2017).

¹² AA, D. S. with. "Human-induced climate change causes global environmental injustice." Daily Sabah. <https://www.dailysabah.com/turkiye/human-induced-climate-change-causes-global-environmental-injustice/news> (accessed 2023-06-03).

¹³ AA, D. S. with. "Human-induced climate change causes global environmental injustice." Daily Sabah. <https://www.dailysabah.com/turkiye/human-induced-climate-change-causes-global-environmental-injustice/news> (accessed 2023-06-03).

CHAPTER ONE: Introduction to Climate Change and Climate Justice

Women are more likely to be in charge of tasks like food production, food preparation, and water transportation, all of which are subject to direct influence from climate-related events like droughts. As a result, women are more likely to be negatively impacted by Climate Change than men.¹⁴

There is a growing consensus that climate change constitutes a "threat multiplier" because of its involvement in aggravating the root causes of conflicts in their conventional forms. The most glaring example is the manner in which alterations in climate change affect competition for ever-decreasing supplies of resources. According to studies conducted on the so-called "heat-aggression relationship," there is a 10–20 percentage point increase in the likelihood of armed conflict connected with each 0.5-degree Celsius rise in the temperature of the surrounding environment.¹⁵

According to the findings of research that was published in 2021, there are normally more occurrences of violence in regions that are next to communities of herders that travel periodically. Second, the research indicates that the likelihood of a dispute occurring on farmlands that are in close proximity to a herding community is increased by a factor of 35% whenever a usual and unfavourable decrease in rainfall is observed by the herding community. The researchers come to the conclusion that there is no influence on conflict when a group that does not herd animals has the same decrease in rainfall.¹⁶

¹⁴ Ibid.

¹⁵ How is climate change driving conflict in Africa? - World | ReliefWeb. <https://reliefweb.int/report/world/how-climate-change-driving-conflict-africa> (accessed 2023-06-04).

¹⁶ Does climate change cause conflict? International Growth Centre. <https://www.theigc.org/blogs/does-climate-change-cause-conflict> (accessed 2023-06-04).

1.4. Defining Climate Justice

It has been pointed out that climate change has had uneven and unequal burdens across the globe with nations and communities that contribute the least to climate change suffering the most from its consequences.¹⁷ In 2022, Pakistan which contributes less than 1 % of global greenhouse gases which lead to climate change suffered extreme flooding which resulted in the deaths of over 1,700 people, destroyed around 2 million homes, and swept away almost half the country's cropland.¹⁸ There is a general consensus in the scientific community that the flooding was made worse by climate change since global warming makes air and sea temperatures rise resulting in more evaporation taking place thus increasing the intensity of rainfall¹⁹. The melting of glaciers in the country's northern region, again due to the increase in global temperatures, compounded the problem by releasing even more water and debris into the floods.²⁰ Further, it has been observed that the Horn of Africa, a region with very little contribution to the climate change problem, is facing a severe drought following the worst performing rains in 73 years and five successive failed rainy seasons.²¹ Further, it has been pointed out that the frequency and severity of the drought is likely to increase affecting more than 36 million people due to food insecurity, with women and girls disproportionately affected by the direct and indirect impacts of the drought.²² Further, small island

¹⁷ Sultana. F., 'Critical Climate Justice' Op Cit.

¹⁸ Giles. M., 'The Principles of Climate Justice at CoP27.' Available at <https://earth.org/principles-of-climatejustice/#:~:text=That%20response%20should%20be%20based,the%20consequences%20of%20climate%20change>. (Accessed on 28/07/2023).

¹⁹ Ibid.

²⁰ Ibid.

²¹ United Nations Development Programme., 'Can Groundwater act as a Catalyst for Sustainable Development in Africa's borderlands?' Available at https://www.undp.org/africa/africa-borderlands-centre/blog/can-groundwater-act-catalyst-sustainable-development-africasborderlands?gclid=EAIaIQobChMIpM6GnoGxgAMV1uZ3Ch0bkAPOEAMyAAEgLKG_D_BwE (Accessed on 28/07/2023).

²² Ibid.

CHAPTER ONE: Introduction to Climate Change and Climate Justice

nations in the Caribbean and Pacific islands such as Vanuatu and the Solomon Islands have suffered from severe impacts of climate change cyclone that killed residents, displaced thousands and damaged infrastructure.²³ Despite their little contribution to climate change, sea level rise, increasing temperatures and frequency and intensity of tropical cyclones, and storm surges are some of the climate change impacts facing island nations, some of which are in low-lying areas of just 5 meters above sea level at the highest point making them more vulnerable to these impacts.²⁴

It is thus evident that the climate change has adverse impacts especially on nations and communities that contribute the least to its threat. The concept of Climate Justice acknowledges this concern. It recognizes that some countries mainly the large industrialized economies of Europe and North America have benefitted much more from the industries and technologies that cause climate change than have developing nations in places such as Africa, Asia, the Caribbean Islands and the Pacific Islands which due to an unfortunate mixture of economic and geographic vulnerability, continue to shoulder the brunt of the burdens of climate change despite their relative innocence in causing it.²⁵ It seeks to promote justice in climate related concerns. Climate justice links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly.²⁶ It entails understating climate change as an issue that relates to equity, fairness, ethics and human rights and not just an environmental

²³ Bafana. B., 'Climate Change is No 'Future Scenario' for Pacific Island Nations; Climate Change is 'Real' Available at <https://reliefweb.int/report/world/climate-change-no-future-scenario-pacific-island-nations-climate-change-real> (Accessed on 28/07/2023)

²⁴ Ibid

²⁵ Giles. M., 'The Principles of Climate Justice at CoP27.' Op Cit.

²⁶ Mary Robinson Foundation Climate Justice., 'Principles of Climate Justice.' Available at <https://www.mrfcj.org/principles-of-climate-justice/> (Accessed on 28/07/2023)

CHAPTER ONE: Introduction to Climate Change and Climate Justice

phenomena.²⁷ Climate Justice is a framework that focuses on the intersection between climate change and social inequalities.²⁸ This is achieved by linking the effects of climate change to the notions of justice particularly environmental and social justice by examining the concepts of equality and human rights within the lens of climate change.²⁹ It focuses on how climate change impacts people differently, unevenly and disproportionately and seeks to address the resultant injustices in fair and equitable ways.³⁰

Climate Justice encapsulates various facets of justice including distributive justice, procedural justice and justice as recognition.³¹ Distributive justice concerns itself with the disproportionate impact that climate change has on the people, communities and countries that are least responsible for climate change and its impacts.³² Climate Justice seeks to ensure the just distribution of the burdens and benefits of climate change among nations.³³ It further insists on redressing the imbalances caused by the effects of climate change by imposing what is sometimes referred to as a climate debt on those nations primarily responsible for causing climate change.³⁴ Procedural justice on the other hand is aimed at addressing distributive climate injustices by creating processes that are participatory, fair, inclusive and accessible.³⁵ Procedural justice requires that citizens be informed about and involved in decision-making on climate change matters.³⁶ Justice as recognition

²⁷ United Nations Environment Programme., 'Climate Justice.' Available at <https://leap.unep.org/knowledge/glossary/climate-justice> (Accessed on 28/07/2023).

²⁸ Ibid.

²⁹ Sultana. F., 'Critical Climate Justice' Op Cit.

³⁰ Ibid.

³¹ Monica. T & Bronwyn. L., 'Community Lawyering and Climate Justice: A New Frontier.' *Alternative Law Journal* (47) 3 pp 199-203.

³² Ibid.

³³ Giles. M., 'The Principles of Climate Justice at CoP27,' Op Cit.

³⁴ Ibid.

³⁵ Monica. T & Bronwyn. L., 'Community Lawyering and Climate Justice: A New Frontier,' Op Cit.

³⁶ Ibid.

CHAPTER ONE: Introduction to Climate Change and Climate Justice

on its part seeks to give a voice to people who have been traditionally marginalized in climate change matters as a result of structural inequality.³⁷ Climate Justice is thus a multidimensional idea that requires the various facets of justice to be recognized and upheld simultaneously.³⁸

The idea of Climate justice is therefore significant for the entire world since it stands seeks to achieve an agenda that links the struggle for a prosperous, safe future for all with a fight against inequalities and exclusion.³⁹ It envisages linking human rights with development and climate action, having a people centred approach to climate action, understanding that not everyone has contributed to climate change in the same way and combatting injustices resulting from climate change social, gender, economic, intergenerational and environmental injustices.⁴⁰ It seeks to achieve equal access to natural resources, fair and effective solutions in response to climate change and the assigning of responsibility for those who contribute most to the global threat of climate change.⁴¹ Climate Justice is thus guided by several principles including the protection and empowering of vulnerable individuals and communities, promoting public participation in decision making, fostering global collaboration in the response to climate change, achieving intergeneration equity in order to protect future generations from the effects of climate change and assigning of responsibility to

³⁷ Sultana. F., 'Critical Climate Justice' Op Cit.

³⁸ Ibid.

³⁹ Foundation for European Progressive Studies., 'United for Climate Justice.' Available at <https://feps-europe.eu/wpcontent/uploads/downloads/publications/short%20united%20for%20climate%20justice%20-%204.pdf> (Accessed on 28/07/2023).

⁴⁰ UNICEF., 'What is Climate Justice? and What can we do Achieve it?' Available at <https://www.unicef.org/globalinsight/what-climate-justice-and-what-can-we-do-achieve-it#:~:text=Utilizing%20a%20climate%20justice%20approach,vulnerability%20to%20the%20climate%20crisis.> (Accessed on 28/07/2023)

⁴¹ New Internationalist., 'Four Principles for Climate Justice.' Available at <https://newint.org/features/2009/01/01/principles-climate-justice> (Accessed on 28/07/2023)

nations that contribute most to global greenhouse gas emissions.⁴² Climate Justice is thus vital in ensuring effective climate change mitigation and adaptation towards Sustainable Development.

1.5. Pillars of Climate Justice

The effects of climate change exacerbate the pre-existing vulnerabilities of communities that are already having a hard time making ends meet. It has a disproportionately negative impact on the nations that are still developing.⁴³ Paying close attention to the environmental policy preferences of people living in nations with lower emissions and lower incomes is one strategy that may be used to advance climate justice.⁴⁴

The concept of climate justice draws attention to how climate change is an ethical problem as well as how the causes and impacts of climate change are related to environmental and social justice.⁴⁵ When developing policies about climate change, it is necessary to take into consideration not only who is directly impacted by climate-related issues but also who is primarily responsible for causing these issues. Only then can climate justice be achieved.⁴⁶

The effects of climate change, both directly and indirectly, may be seen in a wide variety of internationally secured human rights. States (as duty-bearers) have an affirmative responsibility to take effective actions to avoid and rectify these climatic consequences, and as a result, to mitigate climate change, and to guarantee that all human beings (as

⁴² Giles. M., 'The Principles of Climate Justice at CoP27.' Op Cit

⁴³ Sachan R, 'Role of Climate Justice in Strengthening Adaptive Capacities in Developing Countries' (2020), 823.

⁴⁴ Running K, 'Towards Climate Justice: How Do the Most Vulnerable Weigh Environment-Economy Trade-Offs?' (2015) 50 Social science research 217.

⁴⁵ Sultana F, 'Critical Climate Justice' (2022) 188 The Geographical Journal 118; 'Why Climate Change Is an Environmental Justice Issue' (*State of the Planet*, 22 September 2020) <<https://news.climate.columbia.edu/2020/09/22/climate-change-environmental-justice/>> accessed 18 July 2023.

⁴⁶ Running K, 'Towards Climate Justice: How Do the Most Vulnerable Weigh Environment-Economy Trade-Offs?' (2015) 50 Social science research 217.

CHAPTER ONE: Introduction to Climate Change and Climate Justice

rights-holders) have the required ability to adapt to the climate crisis. This affirmative requirement was established by the United Nations Framework Convention on climatic Change (UNFCCC) in 1992.⁴⁷

To achieve climate justice, climate action must be in line with the many human rights accords, commitments, standards, and principles that are already in place. Unfairly and in disproportionate amounts, the negative effects of climate change are borne by those who have made the smallest contribution to the problem. They have to be able to participate meaningfully in climate change mitigation efforts; they have to be the major beneficiaries of such efforts, and they have to have access to viable solutions.⁴⁸ Therefore, one strategy to better include justice in talks is to expand our knowledge of how individuals who have high climate vulnerability but low climate responsibility see environmental preservation as another policy goal. The reasoning behind such a strategy is predicated on the notion of increased democratic involvement, which is one of the fundamental goals of the new economic movement that promotes a socially and ecologically sustainable economy.⁴⁹

1.6. Addressing Climate Change for Peace and Sustainability

The Intergovernmental Panel on Climate Change (IPCC) recommends that global CO₂ emissions should reach net zero by the year 2050 after a gradual decline over the following ten years to a level that is about half of what they were in 2010. According to the Intergovernmental Panel on Climate Change (IPCC), in order to limit the rise in global temperature to 1.5 degrees Celsius, all aspects of civilization will need

⁴⁷ OHCHR U, 'Understanding Human Rights and Climate Change', *Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the parties to the United Nations Framework Convention on Climate Change* (2015).

⁴⁸ Ibid.

⁴⁹ Running K, 'Towards Climate Justice: How Do the Most Vulnerable Weigh Environment-Economy Trade-Offs?' (2015) 50 *Social science research* 217, 218.

CHAPTER ONE: Introduction to Climate Change and Climate Justice

to undergo transformations that are drastic, unprecedented, and urgently necessary.⁵⁰

The process of adapting to new conditions is one of the most important factors in lowering people's susceptibility to the effects of climate change. In ecological systems, adaptation refers to the process of autonomously adjusting to new conditions via ecological and evolutionary processes. When it comes to human systems, adaptation may be anticipatory or reactive, gradual or radical, and all of these things simultaneously. The latter modifies the underlying characteristics of a social-ecological system in preparation for the effects that climate change is going to have. The capacity for adaptation is constrained by both rigid and malleable boundaries.⁵¹

Understanding and assessing climate adaptation processes and measures to lower risks caused by human-induced climate change requires a recognition of the value of a variety of types of knowledge, including scientific knowledge, indigenous knowledge, and local knowledge. This is necessary in order to fulfil the requirement that the worth of these many forms of knowledge be acknowledged.⁵²

Goal 12.2 of the Sustainable Development Goals (SDG) specifies that all states shall achieve sustainable management and efficient use of natural

⁵⁰ McGregor D, Whitaker S and Sritharan M, 'Indigenous Environmental Justice and Sustainability' (2020) 43 *Current Opinion in Environmental Sustainability* 35, p.35.

⁵¹ IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3-33, doi:10.1017/9781009325844.001.

⁵² Pörtner, Hans-Otto, et al. "IPCC, 2022: Summary for policymakers." (2022): 3-33.

CHAPTER ONE: Introduction to Climate Change and Climate Justice

resources by the year 2030. This is intended to ensure sustainable consumption and production patterns. The aim is to stop the world from deteriorating, which may be accomplished by practising sustainable production and consumption, practising responsible management of the planet's natural resources, and taking prompt action to counteract Climate Change. This will allow the world to meet the needs of both the current generation and the generations to come in the future.⁵³

The Sustainable Development Goals (SDGs) offer the groundwork that is necessary to improve living conditions around the globe and to mitigate the potentially catastrophic effects of climate change brought on by human activity. The Sustainable Development Goal (SDG) 13 on "Climate Action" encourages the integration of initiatives for limiting the effects of climate change into frameworks for economic growth. The Sustainable Development Goals (SDGs) 14 and 15, which focus, respectively, on life in the ocean and on life on land, call for the implementation of practices that are less harmful to the environment while extracting the natural resources of the planet.⁵⁴

As a step towards fulfilling socio-economic rights of communities and other associated rights as envisioned under Sustainable Development Goals, there is a need for rapid adoption of scientific and nature-based ways to mitigate climate change and conserving biodiversity. This is due to the fact that nature-based approaches have been shown to be effective in the past. Once they are put in place, the finance mechanisms that were recommended at COP 27 should be used effectively as a means of establishing communities and ecosystems that are more

⁵³United Nations, Preamble, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1.

⁵⁴ United Nations, 'Sustainability' (United Nations) <<https://www.un.org/en/academic-impact/sustainability>> accessed 14 February 2023.

resilient. Efforts to achieve the Sustainable Development Goals will be given a significant boost as a result of this action.⁵⁵

Research has shown that oceans and seas are an essential component of any solution to the climate change problem. This is due to the fact that they store the carbon that is the primary cause of climate change and provide major benefits for climate adaptation. To protect the ocean, it is necessary to take action both on land and at sea. This involves decreasing the direct impacts that people have on the ocean, cleaning up polluted rivers, restoring polluted wetlands, and developing a circular economy in which potential pollutants are utilised for as long as is practically possible before being disposed of in an acceptable manner when they have reached the end of their useful lives.⁵⁶

The pressing need to find solutions to environmental issues has resulted in increased push for more stringent legislative measures. It has been argued persuasively that environmental goals cannot be achieved solely by environmental policies or in protected areas. Rather, transformative change requires a fundamental, system-wide reorganization across technological, economic, and social factors, including paradigms, goals, and values.⁵⁷ However, in order for environmental sustainability to be achieved, it is essential that individuals who are currently on the

⁵⁵ Sachs, J.; Kroll, C.; Lafortune, G.; Fuller, G.; Woelm, F. Sustainable Development Report 2022; Cambridge University Press, 2022; UNEP, UN Environment Assembly concludes with 14 resolutions to curb pollution, protect and restore nature worldwide. UN Environment. <http://www.unep.org/news-and-stories/press-release/un-environment-assembly-concludes-14-resolutions-curb-pollution> (accessed 2023-06-04); Sarkki, S.; Pihlajamäki, M.; Rasmus, S.; Eronen, J. T. "Rights for Life" Scenario to Reach Biodiversity Targets and Social Equity for Indigenous Peoples and Local Communities. *Biological Conservation* 2023, 280, 109958. <https://doi.org/10.1016/j.biocon.2023.109958>.

⁵⁶ 'Why Protecting the Ocean and Wetlands Can Help Fight the Climate Crisis' (UNEP, 11 November 2022) <<http://www.unep.org/news-and-stories/story/why-protecting-ocean-and-wetlands-can-help-fight-climate-crisis>> accessed 2 June 2023.

⁵⁷ Dalby, S. Climate Change and Environmental Conflicts. In *Routledge Handbook of Environmental Conflict and Peacebuilding*; Routledge, 2018.

periphery and in a precarious situation not be left behind by the necessary revolutionary changes.⁵⁸

Environmental problems such as Climate Change, the loss of biodiversity, water shortages, air and water pollution, and soil degradation, amongst others, are contributing factors in the rise of poverty and social inequality.⁵⁹ Environmental governance must explicitly involve a greater variety of environmental actors, organisations, and institutions and become more adaptive, responsive, and innovative in order to cope with pressures such as climate change, economic instability, and sociopolitical or ideological upheavals.⁶⁰ This is required in order for environmental governance to be able to deal with these stresses. There is a critical need for more collaboration between governmental and private-sector stakeholders in the decision-making and enforcement processes pertaining to the environment.

Climate change now necessitates not only protecting and reconstructing the system, but also changing the system itself, as well as transforming landscapes, ecosystems, cities, and trading arrangements, so that they are both less vulnerable to obvious hazards and flexible enough to reinvent themselves when unexpected crises occur. Governance is important when it comes to adjusting to changing times, whether in terms of alterations in the environment or changes in the global economy. In the context of the conversation on climate security, this is the most important issue that has to be reinforced in policy discussions. Instead of focusing on local environmental circumstances and

⁵⁸ Ibid.

⁵⁹ Environment UN, 'Environmental Rule of Law' (UNEP - UN Environment Programme, 5 October 2017) <<http://www.unep.org/explore-topics/environmental-rights-and-governance/what-we-do/promoting-environmental-rule-law-0>> accessed 2 June 2023.

⁶⁰ DeCaro, D. A., Chaffin, B. C., Schlager, E., Garmestani, A. S., & Ruhl, J. B., "Legal and Institutional Foundations of Adaptive Environmental Governance," *Ecology and Society: A Journal of Integrative Science for Resilience and Sustainability*, 22, no. 1 (2017): 1.

straightforward scarcity tales as a potential mechanism for conflict, this should be the primary area of attention.⁶¹

1.7. Climate Change in Africa

Africa is classified as a continent that is highly vulnerable to climate change due to several reasons including endemic poverty and high dependence on rain-fed agriculture, complex governance and institutional dimensions, limited access to capital including markets and technology, weak infrastructure, ecosystem degradation and poor management of natural resources, disasters both natural and man-made and conflicts.⁶² This vulnerability is worsened by strong dependence of African economies on climate sensitive natural resources⁶³. It has been observed that African countries are already experiencing effects of climate change such as drought, water scarcity, flooding among others⁶⁴. Climate change is having a devastating impact on the African continent creating food insecurity, stressing water resources, depleting human health, displacing populations and impeding socio-economic development⁶⁵. It has been observed that in Africa, approximately 50 million people are on the brink of falling below the poverty line for reasons connected to climate change, 100 million people are at risk of being displaced by climate change, and about 600 million people lack energy access⁶⁶.

⁶¹ Dalby, S. Climate Change and Environmental Conflicts. In Routledge Handbook of Environmental Conflict and Peacebuilding; Routledge, 2018.

⁶² Kimaro. Didas et al., 'Climate Change Mitigation and Adaptation in ECA/SADC/COMESA Region: Opportunities and Challenges.'

Available at https://www.researchgate.net/publication/346628199_Climate_Change_Mitigation_and_Adaptation_in_ECASADCCOMESA_region_Opportunities_and_Challenges (Accessed on 14/08/2023)

⁶³ Ibid

⁶⁴ Ibid

⁶⁵ Rao. V., & Yadav. P., 'Confronting Climate Change in Africa.' Available at <https://knowledge.insead.edu/responsibility/confronting-climate-change-africa> (Accessed on 14/08/2023)

⁶⁶ Ibid

CHAPTER ONE: Introduction to Climate Change and Climate Justice

It has been asserted that despite having contributed the least to global warming and having the lowest emissions, Africa faces exponential collateral damage from the effects of climate change posing systemic risks to its economies, infrastructure investments, water and food systems, public health, agriculture, and livelihoods, threatening to undo its modest development gains and slip into higher levels of extreme poverty⁶⁷. Increasing temperatures and sea levels, changing precipitation patterns and more extreme weather are threatening human health and safety, food and water security and socio-economic development in Africa⁶⁸. The United Nations Framework Convention on Climate Change observed that climate change is having a growing impact on the African continent, hitting the most vulnerable hardest, and contributing to food insecurity, population displacement and stress on water resources⁶⁹. Cases of devastating floods, invasion of desert locusts and severe droughts are vivid examples of the impacts of climate change on the continent⁷⁰.

The foregoing concerns demonstrate that the threat of climate change is a pertinent problem in Africa. While Africa has contributed negligibly to climate change, with just about two to three percent of global emissions, it stands out disproportionately as the most vulnerable region in the world⁷¹. This situation highlights the inequalities brought about by climate change. It has been observed that developed countries mainly the large industrialized economies of Europe and North America and some Asian countries such as China continuing to benefit

⁶⁷ African Development Bank Group., 'Climate Change in Africa.' Available at <https://www.afdb.org/en/cop25/climate-change-africa> (Accessed on 14/08/2023)

⁶⁸ United Nations Framework Convention on Climate Change., 'Climate Change is an Increasing Threat to Africa.' Available at <https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa> (Accessed on 14/08/2023)

⁶⁹ Ibid

⁷⁰ Ibid

⁷¹ United Nations Environment Programme., 'Responding to Climate Change.' Available at <https://www.unep.org/regions/africa/regional-initiatives/responding-climate-change> (Accessed on 14/08/2023)

CHAPTER ONE: Introduction to Climate Change and Climate Justice

more from the industries and technologies that cause climate change while developing nations in places such as Africa, Asia, the Caribbean Islands and the Pacific Islands which due to an unfortunate mixture of economic and geographic vulnerability, continue to shoulder the brunt of the burdens of climate change despite their relative innocence in causing it⁷². While climate change is global, the poor are disproportionately vulnerable to its effects⁷³. This is because they lack the resources to afford goods and services they need to buffer themselves and recover from the effects of climate change⁷⁴.

Climate change represents a major threat to Africa achieving the Sustainable Development Goals⁷⁵. Confronting climate change in Africa is thus an urgent need if the continent is to realize the Sustainable Development agenda. It has been observed that implementing the climate action commitments of African states popularly known as Nationally Determined Contributions (NDCs) is vital in fostering socio-economic development in the continent⁷⁶.

1.8. Conclusion

Africa is classified as one of the continents highly vulnerable to climate change due to several reasons: high poverty level, high dependence on rain-fed agriculture, poor management of natural resources, capacity/technology limitations, weak infrastructure, and less efficient governance/institutional setup.⁷⁷ Arguably, Kenya's challenges as far

⁷² Giles. M., 'The Principles of Climate Justice at CoP27.' Available at <https://earth.org/principlesofclimatejustice/#:~:text=That%20response%20should%20be%20based,the%20consequences%20of%20climate%20change> (Accessed on 14/08/2023)

⁷³ United Nations Environment Programme., 'Responding to Climate Change.' Op Cit

⁷⁴ Ibid

⁷⁵ African Development Bank Group., 'Climate Change in Africa.' Op Cit

⁷⁶ Ibid

⁷⁷ Kimaro, Didas N., Alfred N. Gichu, Hezron Mogaka, Brian E. Isabirye, and Kifle Woldearegay. "Climate Change Mitigation and Adaptation in ECA/SADC/COMESA region: Opportunities and

CHAPTER ONE: Introduction to Climate Change and Climate Justice

as combating climate change is concerned are not any different from the ones identified above.

Climate change impacts and the associated socio-economic losses on Kenya have been exacerbated by the country's high dependence on climate sensitive natural resources.⁷⁸

It is crucial to act swiftly since a disproportionate number of people are impacted by Climate Change, including women, youth, coastal populations, local communities, indigenous populations, fishermen, the underprivileged, and the elderly. Indigenous peoples, local communities, and those affected by Climate Change are also not included in international attempts to counteract it. This is true despite the fact that local economies that depend on natural resources and food sovereignty are also threatened by the consequences of Climate Change. Additionally, they have the potential to pose a threat to the wellbeing of communities all over the globe, especially those who are vulnerable and powerless, including children and the elderly.⁷⁹

This book is largely informed by topics around climate change mitigation, adaptation and climate justice as prerequisites for achieving sustainability for a better and safer world for current and future generations.

Challenges." <https://www.researchgate.net/publication/346628199_Climate_Change_Mitigation_and_Adaptation_in_ECASADCCOMESA_region_Opportunities_and_Challenges> accessed 4 June 2023.

⁷⁸GoK, I. N. D. C. "Kenya's Intended Nationally Determined Contribution." (2015).

⁷⁹ Muigua K., *Securing Our Destiny through Effective Management of the Environment*, Glenwood Publishers Limited (2020), ISBN: 978-9966-046-06-1.

CHAPTER TWO

Climate Change and Sustainability

2.1. Introduction

Environmental sustainability has been defined as a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs without diminishing biological diversity.¹ It has also been defined as the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.² This concept received global attention following the release of the Report of the World Commission on Environment and Development (Brundtland Report) which considered it within the context of Sustainable Development.³ The Report defined Sustainable Development as development which meets the needs of the present generations without compromising the ability of future generations to meet their own needs.⁴ Sustainable Development seeks to foster development that is socially, economically and environmentally sustainable.⁵

Environmental sustainability thus seeks to promote the various facets of development in a manner that does not harm future generations

¹ Morelli. J., 'Environmental Sustainability: A Definition for Environmental Professionals.' *Journal of Environmental Sustainability*, Volume 1, Issue 1 (2011)

² Sphera., 'What Is Environmental Sustainability?' Available at <https://sphera.com/glossary/what-is-environmental-sustainability/> (Accessed on 11/08/2023)

³ Report of the World Commission on Environment and Development., 'Our Common Future' 1987 (Brundtland Report)

⁴ Ibid

⁵ Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.' *International Sustainable Development Law.*, Vol 1.

CHAPTER TWO: *Climate Change and Sustainability*

through loss and damage of global ecosystems.⁶ It encapsulates the principle of intergenerational equity which provides that natural resources of the earth must be safeguarded for the benefit of the present and future generations through careful planning and management.⁷ The Rio Declaration on Environment and Development further stipulates that the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.⁸

Achieving environmental sustainability has become a pertinent concern in the wake of global environmental challenges.⁹ These problems include global warming, loss of biodiversity, pollution, deforestation, ocean acidification, food and water insecurity, soil degradation and depletion of natural resources through overfishing, unsustainable mining among others.¹⁰ These environmental problems have been worsened by the threat of climate change which is the most defining challenge of our time¹¹. The impacts of climate change such as warmer temperatures, intense droughts, water scarcity, severe wild fires, rising sea levels, flooding, melting polar ice, catastrophic storms and declining biodiversity are being witnessed across the world¹². These

⁶ Goodland. R., 'The Concept of Environmental Sustainability.' *Annual Review of Ecology and Systematics*, Volume 26 (1995), 1-24

⁷ United Nations., 'Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972' Principle 2

⁸ United Nations General Assembly., 'Report of the United Nations Conference On Environment and Development: Rio Declaration on Environment and Development.' A/CONF.151/26 (Vol. I), Principle 3.

⁹ Robinson. D., '15 Biggest Environmental Problems of 2023.' Available at <https://earth.org/the-biggest-environmental-problems-of-our-lifetime/> (Accessed on 11/08/2023).

¹⁰ Ibid.

¹¹ United Nations Department of Economic and Social Affairs., 'Forum on Climate Change and Science and Technology Innovation.' Available at <https://www.un.org/en/desa/forum-climate-change-and-science-and-technology-innovation> (Accessed on 11/08/2023).

¹² United Nations., 'What is Climate Change?' Available at <https://www.un.org/en/climatechange/what-is-climate-change> (Accessed on 11/08/2023).

CHAPTER TWO: Climate Change and Sustainability

environmental problems, including climate change affect environmental sustainability by affecting natural ecosystems as evidenced by loss of biodiversity and depletion of natural resources.¹³ It has been argued that environmental problems including climate change are caused by human activities such as burning of fossil fuels like coal, oil and gas, deforestation and unsustainable agriculture practices.¹⁴ Addressing these problems, towards fostering environmental sustainability, therefore requires a change in human behaviour and practices.¹⁵

2.2. Climate Change and Sustainable Development Goals: The Link

Climate change is considered to be one of the greatest challenges facing mankind in this century and beyond.¹⁶ The effects of climate change on poverty, mental health, food security, and migration further complicate the link between climate change and war.¹⁷ As a result, the goals of the Conference of Parties Twenty Sixth session (COP 26), held in Glasgow from 31st October to 13th November 2021 included to: secure global net zero by mid-century and keep 1.5 degrees within reach; adapt to protect communities and natural habitats; mobilise finance; and work together to deliver,¹⁸ where countries were expected to, *inter alia* accelerate action to tackle the climate crisis through collaboration between governments, businesses and civil society.¹⁹ Achieving these will naturally require

¹³ UNICEF., 'Climate Change and Environmental Sustainability.' Available at <https://www.unicef.org/india/what-we-do/climate-change> (Accessed on 11/08/2023).

¹⁴ United Nations., 'What is Climate Change?' Op Cit.

¹⁵ Ibid.

¹⁶ See Dervis, K., "Devastating for the World's Poor Climate Change Threatens the Development Gains Already Achieved," *UN Chronicle Online Edition* < <https://www.unclearn.org/wp-content/uploads/library/undp30.pdf>> accessed 6 September 2023.

¹⁷ 'Does Climate Change Cause Conflict?' (IGC, 2 June 2021) <<https://www.theigc.org/blog/does-climate-change-cause-conflict/>> accessed 20 September 2023.

¹⁸ 'COP26 Goals' (*UN Climate Change Conference (COP26) at the SEC – Glasgow 2021*) <<https://ukcop26.org/cop26-goals/>> accessed 5 April 2022.

¹⁹ Ibid.

CHAPTER TWO: Climate Change and Sustainability

some adjustments by countries' leadership and other stakeholders. Arguably, climate change comes with a lot of conflicts and/or disputes that need sustainable means of handling them.²⁰

Goal 12.2 of the Sustainable Development Goals (SDG) specifies that all states shall achieve sustainable management and efficient use of natural resources by the year 2030. This is intended to ensure sustainable consumption and production patterns. The aim is to stop the world from deteriorating, which may be accomplished by practising sustainable production and consumption, practising responsible management of the planet's natural resources, and taking prompt action to counteract Climate Change. This will allow the world to meet the needs of both the current generation and the generations to come in the future.²¹

The Sustainable Development Goals (SDGs) offer the groundwork that is necessary to improve living conditions around the globe and to mitigate the potentially catastrophic effects of climate change brought on by human activity. The Sustainable Development Goal (SDG) 13 on "Climate Action" encourages the integration of initiatives for limiting the effects of climate change into frameworks for economic growth. The Sustainable Development Goals (SDGs) 14 and 15, which focus, respectively, on life in the ocean and on life on land, call for the implementation of practices that are less harmful to the environment while extracting the natural resources of the planet.²²

²⁰ See Vally Koubi, 'Climate Change and Conflict' (2019) 22 Annual Review of Political Science 343 <<https://www.annualreviews.org/doi/10.1146/annurev-polisci-050317-070830>> accessed 11 April 2022.

²¹ United Nations, Preamble, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1.

²² United Nations, 'Sustainability' (United Nations) <<https://www.un.org/en/academic-impact/sustainability>> accessed 14 February 2023.

CHAPTER TWO: *Climate Change and Sustainability*

As a step towards fulfilling socio-economic rights of communities and other associated rights as envisioned under Sustainable Development Goals, there is a need for rapid adoption of nature-based ways to mitigating climate change and conserving biodiversity. This is a need due to the fact that nature-based approaches have been shown to be effective in the past. Once they are put into place, the finance mechanisms that were recommended at COP 27 should be used effectively as a means of establishing communities and ecosystems that are more resilient. Efforts to achieve the Sustainable Development Goals will be given a significant boost as a result of this action.²³

2.3. Promoting Environmental Justice as a tool for Climate Change Mitigation and Adaptation

Environmental Justice means the right to have access to natural resources; not to suffer disproportionately from environmental policies, laws and regulations; and the right to environmental information, participation and involvement in decision-making.²⁴ It has also been defined as the fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.²⁵ Environmental Justice is attained when every person enjoys the same degree of protection from environmental

²³ Sachs, J.; Kroll, C.; Lafortune, G.; Fuller, G.; Woelm, F. Sustainable Development Report 2022; Cambridge University Press, 2022; UNEP, UN Environment Assembly concludes with 14 resolutions to curb pollution, protect and restore nature worldwide. UN Environment. <http://www.unep.org/news-and-stories/press-release/un-environment-assembly-concludes-14-resolutions-curb-pollution> (accessed 2023-06-04); Sarkki, S.; Pihlajamäki, M.; Rasmus, S.; Eronen, J. T. "Rights for Life" Scenario to Reach Biodiversity Targets and Social Equity for Indigenous Peoples and Local Communities. *Biological Conservation* 2023, 280, 109958. <https://doi.org/10.1016/j.biocon.2023.109958>.

²⁴ Ako, R., 'Resource Exploitation and Environmental Justice: the Nigerian Experience' Available at <https://www.elgaronline.com/display/edcoll/9781848446793/9781848446793.00011.xml> (Accessed on 24/07/2023)

²⁵ United States Environmental Protection Agency; 'Environmental Justice.' Available at <https://www.epa.gov/environmentaljustice> (Accessed on 24/07/2023)

CHAPTER TWO: *Climate Change and Sustainability*

and health hazards and has access to the decision-making process to have a healthy environment.²⁶ Environmental Justice thus seeks to address distributive inequity, lack of recognition, disenfranchisement and exclusion in environmental matters.²⁷

Environmental Justice raises several concerns regarding equality, equity and fairness in environmental matters.²⁸ These include intra and intergenerational equity in the environmental context, including the realization that degradation of environmental conditions has been mostly led by industrialized countries, and its impacts more acutely experienced by developing countries which contributed the least to such degradation;²⁹ Distributive environmental justice which is the notion that environmental benefits and burdens should be distributed fairly and in a way that does not contribute toward further marginalization of vulnerable groups, from both intra and intergenerational perspectives, within and among nations; corrective justice for environmental harm, including compensation mechanisms, access to justice and effective remedy, and legal empowerment;³⁰ procedural fairness in environmental issues, requiring open, transparent and inclusive decision making, and access to information at national and international levels; the idea of justice for the environment, as something to be protected in its own right;³¹ and the consideration of sustainability as a condition for justice, an idea that presupposes that although justice is primarily a human-centric concept, it must be viewed in a context of ecological sustainability given the interdependence

²⁶ Ibid

²⁷ Schlosberg, D & Collins, L., 'From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice.' WIREs Clim Change 2014

²⁸ Ibid

²⁹ United Nations Development Programme., 'Environmental Justice: Securing Our Right to a Clean, Healthy and Sustainable Environment.' Available at <https://www.undp.org/publications/environmental-justice-securing-our-right-clean-healthy-and-sustainable-environment> (Accessed on 24/07/2023)

³⁰ Ibid.

³¹ Ibid.

CHAPTER TWO: *Climate Change and Sustainability*

between man and nature.³² Environmental Justice seeks to achieve the ideal of access, participation and procedural justice in environmental decision making.³³ Environmental Justice is a key pillar of Sustainable Development.³⁴ It highlights the plight of vulnerable people and communities who bear the most burden when it comes to environmental damage and seeks to give them a voice through access to environmental information and participation in environmental decision making in order to ensure sustainable and equitable development.³⁵

The United Nations 2030 Agenda for Sustainable Development and its Sustainable Development Goals recognize the environment as an essential pillar of sustainability and sets out several measures towards its protection and conservation.³⁶ It further envisages both anthropocentric and ecocentric³⁷ approaches towards Environmental Justice by seeking to achieve goals such as ensuring availability and sustainable management of water and sanitation for all; ensuring access to affordable, reliable, sustainable and modern energy for all; taking urgent action to combat climate change and its impacts; ensuring the conservation and sustainable use of the oceans, seas and marine resources; protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halting and reversing land degradation biodiversity

³² United Nations Development Programme., 'Environmental Justice: Securing Our Right to a Clean, Healthy and Sustainable Environment,' Op Cit.

³³ Schlosberg, D & Collins, L., 'From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice,' Op Cit.

³⁴ United States Environmental Protection Agency; 'Environmental Justice.' Op Cit.

³⁵ Muigua, K., Wamukoya, D., & Kariuki, F., 'Natural Resources and Environmental Justice in Kenya.' Glenwood Publishers Limited, 2015.

³⁶ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.'

Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 24/07/2023).

³⁷ Muigua, K., 'Nurturing Our Environment for Sustainable Development.' Glenwood Publishers Limited, 2016

CHAPTER TWO: Climate Change and Sustainability

loss and promoting access to justice.³⁸ The Sustainable Development Goals thus envisage attainment of human rights and environmental conservation which are key concerns in the Environmental Justice debate.³⁹

Further, the *Rio Declaration on Environment and Development*⁴⁰ succinctly captures the key elements of Environmental Justice. It stipulates as follows:

'Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided (emphasis added)⁴¹.'

The Declaration thus contains the critical components that are germane in promoting Environmental Justice which are access to information, public participation and access to justice in environmental matters⁴².

Environmental Justice has also been captured under the legal framework in Kenya. The Constitution of Kenya enshrines Sustainable

³⁸ Ibid

³⁹ Menton. M et al., 'Environmental Justice and the SDGs: From Synergies to Gaps and Contradictions.' *Sustainability Science*, No. 15 of 2020.

⁴⁰ United Nations General Assembly., 'Report of the United Nations Conference on Environment and Development: Rio Declaration on Environment and Development.' A/CONF. 151/26 (Vol.1).

⁴¹ Ibid, Principle 10.

⁴² Muigua. K., Wamukoya. D., & Kariuki. F., 'Natural Resources and Environmental Justice in Kenya.' Op Cit.

CHAPTER TWO: *Climate Change and Sustainability*

Development as among the national values and principles of governance.⁴³ Fostering Sustainable Development is one of the ways of achieving Environmental Justice.⁴⁴ The Constitution further sets out the right to a clean and healthy environment.⁴⁵ It has been argued that this right entails procedural elements such as access to information, public participation, and access to justice or effective remedies which are vital components in the Environmental Justice discourse.⁴⁶ Further, the Constitution sets out several obligations of the State in respect of the environment including ensuring sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits; the need encourage public participation in the management, protection and conservation of the environment; establishing systems of environmental impact assessment, environmental audit and monitoring of the environment and eliminating processes and activities that are likely to endanger the environment.⁴⁷

2.4. Conclusion

The global threat of climate change has led to concerted efforts through various legal instruments geared towards mitigating and adapting to its effects. *The United Nations Framework Convention on Climate Change* (UNFCCC) is geared towards combating climate change by achieving stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with

⁴³ Constitution of Kenya, 2010., Article 10 (2) (d), Government Printer, Nairobi.

⁴⁴ United Nations Development Programme., 'Environmental Justice: Securing Our Right to a Clean, Healthy and Sustainable Environment,' Op Cit.

⁴⁵ Constitution of Kenya, 2010., Article 42.

⁴⁶ Muigua. K., 'Recognising a Human Right to Safe, Healthy and Sustainable Environment.' Available at <http://kmco.co.ke/wp-content/uploads/2021/04/Recognising-a-Human-Right-to-Safe-Healthy-andSustainable-Environment-Kariuki-Muigua-1st-April-2021.pdf> (Accessed on 24/07/2023).

⁴⁷ Constitution of Kenya, 2010., Article 69.

CHAPTER TWO: Climate Change and Sustainability

the climate system⁴⁸. The *Paris Agreement* is aimed at strengthening the global response to the threat of climate change towards Sustainable Development⁴⁹. It seeks to achieve this goal through measures such as holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change and increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production⁵⁰. Further, the *United Nations 2030 Agenda for Sustainable Development*⁵¹ urges the global community to take urgent action to combat climate change and its impacts through measures such as strengthening the resilience and adaptive capacity to climate-related hazards and natural disasters in all countries; integrating climate change measures into national policies, strategies and planning; and improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.⁵²

Climate change impacts the attainment of the Sustainable Development agenda⁵³. It affects the availability of basic necessities like freshwater, food, and energy, while efforts to redress climate change, both through

⁴⁸ United Nations Framework Convention on Climate Change., Available at <https://unfccc.int/resource/docs/convkp/conveng.pdf> (Accessed on 28/07/2023)

⁴⁹ United Nations Framework Convention on Climate Change., 'Paris Agreement.' Available at https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf (Accessed on 28/07/2023)

⁵⁰ Ibid

⁵¹ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 28/07/2023).

⁵² Ibid, Sustainable Development goal 13.

⁵³ International Development Law Organization., 'Climate Justice: A Rule of Law Approach for Transformative Climate Action.' Op Cit.

CHAPTER TWO: Climate Change and Sustainability

adaptation and mitigation similarly inform and shape the global development agenda⁵⁴. It has also been observed that climate change results in food insecurity, water scarcity, depletion of natural resources, displacement of people, health hazards, social inequity and unemployment thus hindering the attainment of Sustainable Development⁵⁵.

There is thus a need to address climate change as a prerequisite for achieving sustainable development.

⁵⁴ United Nations Sustainable Development Goals., 'Climate Change.' Available at <https://sustainabledevelopment.un.org/topics/climatechange> (Accessed on 28/07/2023)

⁵⁵ Muigua.K., 'Nurturing Our Environment for Sustainable Development.' Glenwood Publishers Limited, 2016

CHAPTER THREE

Legal and Institutional Framework on Climate Justice in Kenya

3.1. Introduction

The concept of Climate Justice has emerged to deal with the justice concerns brought about by climate change. Climate Justice seeks to address the causes and impacts of climate change in a manner that recognizes and fosters the rights and concerns of vulnerable people, communities and countries.¹

This chapter seeks to critically discuss the legal and institutional framework necessary for promoting Climate Justice in Kenya. It is worth pointing out that responding to climate change requires involvement of all stakeholders.² The chapter conceptualizes Climate Justice and analyzes its enabling legal framework at the global, regional and national levels.

3.2. Conceptualizing Climate Justice

The concept of Climate Justice is a subset of Environmental Justice.³ Environmental Justice refers to the right to have access to natural resources; not to suffer disproportionately from environmental policies, laws and regulations; and the right to environmental information, participation and involvement in decision-making.⁴ It has also been

¹ Schlosberg. D & Collins. L., 'From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice.' *WIREs Clim Change* 2014.

² Monica. T & Bronwyn. L., 'Community Lawyering and Climate Justice: A New Frontier.' *Alternative Law Journal* (47) 3 pp 199-203.

³ Ibid.

⁴ Ako. R., 'Resource Exploitation and Environmental Justice: the Nigerian Experience' Available at

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

defined as the fair treatment and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.⁵ Environmental Justice is attained when every person enjoys the same degree of protection from environmental and health hazards and has access to the decision-making process to have a healthy environment.⁶ Environmental Justice thus seeks to address distributive inequity, lack of recognition, disenfranchisement and exclusion in environmental matters.⁷ It seeks to achieve the ideal of access, participation and procedural justice in environmental decision making.⁸ Environmental Justice is a key pillar of Sustainable Development.

Climate Justice flows from Environmental Justice and seeks to promote justice in climate related concerns. It entails understating climate change as an issue that relates to equity, fairness, ethics and human rights and not just an environmental phenomena.⁹ Climate Justice is a framework that focuses on the intersection between climate change and social inequalities. This is achieved by linking the effects of climate change to the notions of justice particularly environmental and social justice by examining the concepts of equality and human rights within the lens of climate change.¹⁰ It focuses on how climate change impacts people differently, unevenly and disproportionately and seeks to address the resultant injustices in fair and equitable ways.¹¹

<https://www.elgaronline.com/display/edcoll/9781848446793/9781848446793.00011.xml>
(Accessed on 13 September 2023)

⁵ United States Environmental Protection Agency; 'Environmental Justice.' Available at <https://www.epa.gov/environmentaljustice> (Accessed on 13 September 2023)

⁶ Ibid

⁷ Schlosberg. D & Collins. L., 'From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice.' Op Cit.

⁸ Ibid

⁹ United Nations Environment Programme., 'Climate Justice.' Available at <https://leap.unep.org/knowledge/glossary/climate-justice> (Accessed on 13 September 2023)

¹⁰ Ibid

¹¹ Sultana. F., 'Critical Climate Justice' Op Cit.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

Climate Justice encapsulates various facets of justice including distributive justice, procedural justice and justice as recognition.¹² Distributive justice concerns itself with the disproportionate impact that climate change has on the people, communities and countries that are least responsible for climate change and its impacts.¹³ It has been argued that communities that have contributed the least to climate change are the ones that are the most affected by its impacts.¹⁴ Procedural justice, on the other hand, is aimed at addressing distributive climate injustices by creating processes that are participatory, fair, inclusive and accessible.¹⁵ Procedural justice requires that citizens be informed about and involved in decision-making on climate change matters. Justice as recognition on its part seeks to give a voice to people who have been traditionally marginalized in climate change matters as a result of structural inequality.¹⁶

Climate Justice is thus a multidimensional idea that requires the various facets of justice to be recognized and upheld simultaneously.¹⁷

3.3. Legal Framework on Climate Justice

Various laws, treaties, conventions and policies have been adopted towards attaining climate justice at the international, regional and national level. This section offers an overview of the international, regional and domestic regulatory framework on climate justice.

¹² Monica. T & Bronwyn. L., 'Community Lawyering and Climate Justice: A New Frontier.' Op Cit.

¹³ Ibid.

¹⁴ Sultana. F., 'Critical Climate Justice' Op Cit.

¹⁵ Monica. T & Bronwyn. L., 'Community Lawyering and Climate Justice: A New Frontier' Op Cit.

¹⁶ Ibid.

¹⁷ Ibid.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

3.3.1. International Legal Framework

The *Rio Declaration on Environment and Development*¹⁸ encapsulates key principles towards attaining Environmental Justice and Climate Justice. The Declaration provides that human beings are at the centre of all concerns for Sustainable Development.¹⁹ This calls for the need for involvement of all human beings in all matters concerning Sustainable Development such as combating climate change. Towards this end, the Declaration calls of the co-operation of all states and all people in achieving Sustainable Development through measures such as environmental protection.²⁰ The Declaration further acknowledges that environmental issues are best handled with the participation of all concerned citizens at the relevant level²¹. It calls for access to information, participation in decision making and access to effective remedies in all environmental matters including those concerning climate change.²² The Rio Declaration thus captures and seeks to promote key elements of Climate Justice.

The *United Nations Framework Convention on Climate Change*²³ (UNFCCC) is an international legal instrument geared towards combating climate change by achieving stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The UNFCCC encapsulates several principles that are integral in confronting climate change.²⁴ These principles include protection of the climate system for the benefit

¹⁸ United Nations, Report of the United Nations Conference on Environment and Development., '*Rio Declaration on Environment and Development.*' A/CONF.151/26 (Vol. I).

¹⁹ Ibid, Principle 1.

²⁰ Ibid, principle 5.

²¹ Ibid, Principle 10.

²² Ibid.

²³ UN General Assembly, *United Nations Framework Convention on Climate Change: resolution / adopted by the General Assembly*, 20 January 1994, A/RES/48/189.

²⁴ Ibid

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

of present and future generations of humankind (the principle of intergenerational equity); the principle of common but differentiated responsibilities; giving full consideration to the specific needs and special circumstances of developing countries especially those that are particularly vulnerable to the adverse effects of climate change; the precautionary principle; the principle of Sustainable Development and the principle of international cooperation²⁵. The UNFCCC further enshrines various commitments by member states towards confronting climate change. These include promoting and cooperating in the development, application and diffusion, including transfer, of technologies, practices and processes aimed at combating climate change; cooperating in preparing for adaptation to the impacts of climate change; taking climate change considerations into account in social, economic and environmental policies; promoting and cooperating in scientific, technological, technical, socio-economic and other research on climate change and promoting and cooperating in education, training and public awareness related to climate change.²⁶

UNFCCC is geared towards combating climate change by achieving stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.²⁷ In order to achieve this goal, the UNFCCC calls for *cooperation* and *participation* by all countries which are key components of Climate Justice.²⁸ The Convention also calls upon State Parties to promote and facilitate public access to information on climate change and its effects and public participation in addressing climate change and its effects and the development of adequate responses.²⁹ The UNFCCC

²⁵ Ibid, Article 3

²⁶ Ibid, Article 4

²⁷ United Nations Framework Convention on Climate Change., Available at <https://unfccc.int/resource/docs/convkp/conveng.pdf> (Accessed on 13 September 2023).

²⁸ Ibid, Preamble.

²⁹ Ibid, Article 6 (a).

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

thus upholds the pillars of access to information and public participation which are key elements of procedural justice in the climate justice debate.

The *Paris Agreement*³⁰ is aimed at strengthening the global response to the threat of climate change towards Sustainable Development. The Agreement affirms the importance of public awareness, public participation, public access to information and cooperation at all levels in combating climate change.³¹ These are fundamental components of procedural justice. The Agreement further recognizes the specific needs and special needs of developing countries which are most vulnerable to the adverse effects of climate change.³² It thus calls for equity and the promotion of the principle of Common but Differentiated Responsibilities and capabilities in light of different national circumstances in combating climate change.³³ This is key towards promoting distributive justice in climate change matters.

The United Nations *2030 Agenda for Sustainable Development*³⁴ is a global commitment by member states of the United Nations to achieve Sustainable Development across the globe. It sets out 17 goals towards achieving the ideal of Sustainable Development.³⁵ Sustainable Goals 13 is geared towards climate action through measures such as strengthening the resilience and adaptive capacity to climate-related hazards and natural disasters in all countries; integrating climate

³⁰ United Nations Framework Convention on Climate Change., 'Paris Agreement.' Available at https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf (Accessed on 13 September 2023).

³¹ Ibid, Preamble.

³² Ibid.

³³ Ibid, Article 2 (2).

³⁴ United Nations., 'The 2030 Agenda for Sustainable Development.' Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 13 September 2023).

³⁵ Ibid.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

change measures into national policies, strategies and planning; and Improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.³⁶ The *2030 Agenda for Sustainable Development* calls for partnership by all states towards attaining Sustainable Development.³⁷ The 2030 Agenda for Sustainable Development thus sets the global blueprint for combating climate change and achieving Climate Justice.

3.3.2. Regional Legal Framework

While Africa contributes negligibly to global green-house gas emissions at an average of two to three percent, it stands out disproportionately as the most vulnerable region in the world.³⁸

The *African Leaders Nairobi Declaration On Climate Change and Call to Action* recognised that Africa is not historically responsible for global warming, but bears the brunt of its effects, impacting lives, livelihoods, and economies.³⁹ The African Heads of State and Government called upon the global community to act with urgency in reducing emissions, fulfilling its obligations, keeping past promises, and supporting the continent in addressing

³⁶ UNDP., 'Sustainable Development Goals: Goal 13.' Available at https://www.undp.org/sustainable-development-goals?gclid=CjwKCAjwhJukBhBPEiwAniIcNWyEJw2ovpllJMb43W5y2_2kwXeZbt25GeRmoepAzlh2yjARP3D5VhoCn-oQAvD_BwE (Accessed on 13 September 2023)

³⁷ Ibid, Goal 17

³⁸ United Nations Environment Programme., 'Responding to Climate Change.' Available at <https://www.unep.org/regions/africa/regional-initiatives/responding-climate-change> (Accessed on 13 September 2023)

³⁹ African Union, *African Leaders Nairobi Declaration on Climate Change and Call to Action*, A declaration made on 6th September 2023 by African leaders attending the Africa Climate Summit 2023, para. 8 < <https://au.int/en/decisions/african-leaders-nairobi-declaration-climate-change-and-call-action-preamble> > Accessed on 10 August 2023.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

climate change, specifically to: i) Accelerate all efforts to reduce emissions to align with goals set forth in the Paris Agreement; ii) Honor the commitment to provide \$100 billion in annual climate finance, as promised 14 years ago at the Copenhagen conference; and iii) Uphold commitments to a fair and accelerated process of phasing down coal, and abolishment of all fossil fuel subsidies.⁴⁰ They also called for climate-positive investments that catalyse a growth trajectory, anchored in the industries poised to transform our planet and enable African countries to achieve stable middle-income status by 2050.⁴¹

Further, they urged global leaders to join Africa in seizing this unprecedented opportunity to accelerate global decarbonization, while pursuing equality and shared prosperity.⁴²

They also called for the operationalization of the Loss & Damage fund as agreed at COP 27 and resolve for a measurable Global Goal on Adaptation (GGA) with indicators and targets to enable assessment of progress against negative impacts of climate change.⁴³

These leaders also made commitments that not only seeks to attract sustainable investments that will benefit the African people but also position Africa as a meaningful participant in the global climate change mitigation and adaptation debate. The objective of the Summit was to redefine the African continent's perception, emphasizing its significant reserves of clean energy resources and renewable energy sources, and positioning it as a contributor to addressing climate change rather than solely a recipient impacted by the actions of the world's largest

⁴⁰ African Union, *African Leaders Nairobi Declaration on Climate Change and Call to Action*, A declaration made on 6th September 2023 by African leaders attending the Africa Climate Summit 2023, para. 17.

⁴¹ *Ibid*, para. 18.

⁴² *Ibid*, para. 19.

⁴³ *Ibid*, para. 20.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

nations.⁴⁴ The statement was adopted with unanimous agreement. It further emphasizes the need for Africa's extensive mineral resources to undergo processing inside the continent. The Declaration recognises that the decarbonization of the global economy presents a chance to promote equality and shared prosperity.⁴⁵

This highlights the distributive justice concerns inherent in the climate justice debate. Climate Justice is thus a fundamental concern in Africa. Various attempts have previously been made towards achieving this goal in Africa.

The Africa Union *Agenda 2063*⁴⁶ seeks to achieve Sustainable Development and transform Africa into a prosperous and peaceful continent representing a dynamic force in the international arena by the year 2063. It seeks to promote *inter alia* environmental sustainability and climate resilience in Africa by the year 2063. It seeks to promote environmentally sustainable and climate resilient economies and communities through sustainable natural resource management; biodiversity conservation; promoting renewable energy and climate resilience and natural disasters preparedness and prevention. Attaining the vision of Agenda 2063 is key in promoting climate justice in Africa. The *African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032)* aligns with the objectives of the Africa Union's Agenda 2063, emphasizing the importance of climate-resilient

⁴⁴ 'African Climate Summit Adopts "Nairobi Declaration" Calling for Global Tax on Fossil Fuels' (*France 24*, 6 September 2023)

<<https://www.france24.com/en/africa/20230906-african-climate-summit-adopts-nairobi-declaration-calling-for-global-tax-on-fossil-fuels>> accessed 8 October 2023.

⁴⁵ 'African Climate Summit Adopts "Nairobi Declaration" Calling for Global Tax on Fossil Fuels' (*France 24*, 6 September 2023)

<<https://www.france24.com/en/africa/20230906-african-climate-summit-adopts-nairobi-declaration-calling-for-global-tax-on-fossil-fuels>> accessed 8 October 2023.

⁴⁶ African Union., 'Agenda 2063: The Africa We Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 13 September 2023)

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

communities and economies as essential elements of the continent's vision for a unified, prosperous, and peaceful Africa.⁴⁷ This vision is centred on the active participation of African citizens and their influential role in the global stage. The African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032) facilitates the achievement of this goal through the delineation of principles, priorities, and action areas aimed at fostering heightened climate collaboration and sustainable, resilient development in the long term.⁴⁸ Further, the *East African Community Climate Change Policy*⁴⁹ represents a regional attempt towards combating climate change and attaining climate justice at the East African level. The Policy aims at addressing the adverse impacts of climate change in the East African region.⁵⁰ The Policy sets out certain objectives that are crucial in achieving Climate Justice including promoting public awareness and socio-economic importance of climate change and promoting capacity building efforts through education, training, research, technology development and transfer.⁵¹ It calls for the collaboration of various stakeholders including the government, private sector, civil society and vulnerable communities and populations including the youth and women in achieving the ideal of Sustainable Development and Climate Justice in East Africa.⁵² The Policy is thus crucial in promoting climate justice in East Africa.

⁴⁷ United Nations. Economic Commission for Africa; African Union Commission (2022). African Union climate change and resilient development strategy and action plan (2022-2032). Addis Ababa: © UN. ECA. <https://hdl.handle.net/10855/47738>.

⁴⁸ Ibid.

⁴⁹ East African Community., 'EAC Climate Change Policy' Available at http://repository.eac.int/bitstream/handle/11671/538/EAC%20Climate%20Change%20Policy_April%20202011.pdf?sequence=1&isAllowed=y (Accessed on 7).

⁵⁰ Ibid.

⁵¹ Ibid, Article 2.2.

⁵² Ibid, Article 2.4.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

The *African Leaders Nairobi Declaration On Climate Change and Call to Action*⁵³ is a result of the inaugural Africa Climate Summit (ACS) in Nairobi, Kenya, held from 4th to 6th September 2023. The African Heads of State and Government committed to develop and implement policies, regulations and incentives aimed at attracting local, regional and global investment in green growth and inclusive economies.⁵⁴

3.3.3. National Legal Framework

Various attempts have been made towards domesticating the concept of climate justice in Kenya. The *Constitution of Kenya*, 2010 sets out national values and principles of governance that bind all persons in matters such as application and interpretation of the Constitution; enactment, application and interpretation of laws and implementation of public policy decisions.⁵⁵ These values and principles include Sustainable Development and public participation which are key pillars of climate justice.⁵⁶ The Constitution further enshrines the right of every person to a Clean and Healthy Environment which includes the right to have the environment protected for the benefit of the present and future generations.⁵⁷ Promoting the right to a Clean and Healthy Environment is critical in attaining Climate Justice in Kenya. The Constitution also sets out certain obligations in respect of the environment. This includes the role of the state to encourage public participation in the management, protection and conservation of the environment.⁵⁸ Promoting this role in climate change matters is an important step in attaining Climate Justice in Kenya.

⁵³ African Union, *African Leaders Nairobi Declaration on Climate Change and Call to Action*, A declaration made on 6th September 2023 by African leaders attending the Africa Climate Summit 2023, para. 8 < <https://au.int/en/decisions/african-leaders-nairobi-declaration-climate-change-and-call-action-preamble> > Accessed on 10 August 2023.

⁵⁴ *Ibid.*, para. 21,

⁵⁵ Constitution of Kenya, 2010., Article 10 (1), Government Printer, Nairobi.

⁵⁶ *Ibid.*, Article 10 (2).

⁵⁷ *Ibid.*, Article 42.

⁵⁸ *Ibid.*, Article 69 (1) (d).

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

The *Climate Change Act*⁵⁹ is an Act of Parliament that provides a regulatory framework for enhanced response to climate change and sets out mechanisms and measures to achieve low carbon climate development. Among the objects and purpose of the Act is to facilitate capacity development for public participation in climate change responses through awareness creation, consultation, representation and access to information.⁶⁰ The Act further seeks to mainstream the principle of Sustainable Development into the planning for and decision making on climate change response.⁶¹ Promoting the vision of the Climate Change Act is integral in attaining Climate Justice in Kenya.

The *National Climate Change Policy* was developed to facilitate a coordinated, coherent and effective response to the local, national and global challenges and opportunities presented by climate change.⁶² It further seeks to enhance adaptive capacity and resilience to climate change, and promote low carbon development for the Sustainable Development of Kenya.⁶³ The Policy sets out several measures towards achieving its aim which include facilitating widespread public awareness, participation, ownership and oversight of Kenya's climate change response efforts and action plans.⁶⁴ The Policy further enshrines several principles that are crucial in the Climate Justice debate including *Sustainable Development; Equity and Social Inclusion and special needs and circumstances* of vulnerable people and communities.⁶⁵

⁵⁹ Climate Change Act., No. 11 of 2016, Government Printer, Nairobi.

⁶⁰ Ibid, S 3 (2) (h).

⁶¹ Ibid, S 3 (2) (k).

⁶² Sessional Paper No. 5 of 2016., 'National Climate Change Framework Policy.' Available at <http://aiap.or.ke/wp-content/uploads/2018/10/Climate-Change-Framework-PolicyMay2017.pdf> (Accessed on 13 September 2023)

⁶³ Ibid.

⁶⁴ Ibid, S 3.2 (v).

⁶⁵ Ibid, S 3.3.

CHAPTER THREE: *Legal and Institutional Framework on Climate Justice in Kenya*

3.4. Fostering Climate Justice: Prospects and Challenges

Various attempts have been made towards fostering Climate Justice at the global, regional and national levels. The *Rio Declaration on Environment and Development*⁶⁶ encapsulates fundamental principles of Climate Justice. It enshrines the principles of access to information, participation in decision making and access to effective remedies in all environmental matters including those concerning climate change⁶⁷. The Declaration is important in fostering Climate Justice at the global level. *The United Nations Framework Convention on Climate Change (UNFCCC)*⁶⁸ calls for *cooperation* and *participation* by all countries in combating climate change. The Convention also calls upon state parties to promote and facilitate *public access to information* on climate change and its effects and *public participation* in addressing climate change and its effects and the development of adequate responses.⁶⁹ The UNFCCC thus upholds the principles of *access to information* and *public participation* which are key elements of procedural justice in the climate justice debate. The *Paris Agreement*⁷⁰ also affirms the importance of public awareness, public participation, public access to information and cooperation at all levels in combating climate change⁷¹. In addition, the Paris Agreement recognizes the specific and special needs of developing countries which are most vulnerable to the adverse effects of climate change.⁷² It thus calls for equity and the promotion of the principle of Common but Differentiated Responsibilities and capabilities in light of different national circumstances in combating

⁶⁶ Report of the United Nations Conference on Environment and Development., 'Rio Declaration on Environment and Development.' A/CONF.151/26 (Vol. I),

⁶⁷ Ibid, Principle 10.

⁶⁸ 'United Nations Framework Convention on Climate Change.' Op Cit.

⁶⁹ Ibid, Article 6 (a).

⁷⁰ 'Paris Agreement', Op Cit.

⁷¹ Ibid, Preamble.

⁷² Ibid.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

climate change.⁷³ This is key towards promoting distributive justice in climate change matters.

At the regional level, the *Africa Union Agenda 2063*⁷⁴ to promote environmentally sustainable and climate resilient economies and communities through sustainable natural resource management; biodiversity conservation; promoting renewable energy and climate resilience and natural disasters preparedness and prevention.⁷⁵ Agenda 2063 is vital in fostering Climate Justice in Africa. In Kenya, the *Climate Change Act*⁷⁶ seeks to facilitate capacity development for public participation in climate change responses through awareness creation, consultation, representation and access to information.⁷⁷ The Act further seeks to mainstream the principle of Sustainable Development into the planning for and decision making on climate change response.⁷⁸ The Climate Change Act is integral in attaining Climate Justice in Kenya.

In addition to the above mentioned legal instruments, there have been various actions and decisions adopted by the global community and individual countries towards fostering Climate Justice. The United Nations Climate Change Conferences which serve as the formal meeting of the UNFCCC parties (Conference of the Parties, that is, COP) have been vital in assessing global progress in responding to climate change.⁷⁹ At the COP 27 (Sharm El-Sheikh Climate Change Conference

⁷³ Ibid, Article 2 (2).

⁷⁴ African Union., 'Agenda 2063: The Africa We Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 28/07/2023).

⁷⁵ Ibid.

⁷⁶ Climate Change Act, No. 11 of 2016, Laws of Kenya.

⁷⁷ Ibid, S 3 (2) (h).

⁷⁸ Ibid, S 3 (2) (k).

⁷⁹ United Nations Framework Convention on Climate Change., 'Conference of the Parties (COP).' Available at <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop> (Accessed on 28/07/2023).

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

- 6 November-20 November 2022) held in Egypt, the UNFCCC agreed on several issues that are vital in enhancing Climate Justice.⁸⁰ These include establishing a dedicated fund to cater for loss and damage for vulnerable countries hit hard by floods, drought and other climate disasters; holding businesses and institutions accountable for actions which contribute to climate change; mobilizing more financial support for developing countries and implementation of climate change mitigation and adaptation measures across the world.⁸¹ Implementing the outcome of COP 27 will foster Climate Justice.

There has been an increase in climate change funding where developed countries, multilateral development banks and multilateral climate funds have provided funding to developing and underdeveloped countries to aid in their climate change mitigation and adaptation measures⁸². It has been asserted that financial resources and sound investments are needed to address climate change, to both reduce emissions, promote adaptation to the impacts that are already occurring, and to build resilience.⁸³ The World Bank which is the largest multilateral funder of climate investments in developing countries notes that climate finance is crucial in fostering Climate Justice through investments in programs that reduce or avoid greenhouse gas emissions such as clean technology, renewable energy and sustainable forestry.⁸⁴ Climate finance is thus essential in fostering Climate Justice by

⁸⁰ United Nations Framework Convention on Climate Change., 'Sharm El-Sheikh Climate Change Conference - November 2022.' Available at <https://unfccc.int/cop27> (Accessed on 28/07/2023).

⁸¹ Ibid.

⁸² Hong, H., 'Climate Finance.' *Review of Financial Studies*, Volume 33, No. 3, 2020.

⁸³ United Nations., 'Financing Climate Action.' Available at <https://www.un.org/en/climatechange/raising-ambition/climate-finance> (Accessed on 28/07/2023)

⁸⁴ The World Bank., '3 Things You Need to Know About Climate Finance.' Available at <https://www.worldbank.org/en/topic/climatechange/brief/3-things-you-need-to-know-about-climate-finance> (Accessed on 28/07/2023).

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

enhancing the capacity of vulnerable countries and communities to respond to the effects of climate change.

Finally, Climate Justice has also been promoted through climate change litigation. Climate change litigation entails filing of lawsuits pertaining the causes and consequences of climate change.⁸⁵ Through climate change litigation, courts and tribunals are able to adjudicate upon pertinent issues in climate change such mitigation and adaptation measures as well as climate change-related loss and damage.⁸⁶ It has been used as a tool to enforce the principles of Climate Justice across the world such as public participation, access to information, access to justice and access to remedies.⁸⁷ Climate change litigation has consequently become a tool to enforce or enhance climate commitments by countries across the globe.⁸⁸ It can be used to foster Climate Justice by promoting its principles and holding countries accountable in respect of laws and policies on climate change.⁸⁹

From the foregoing discussion, it is evident that there has been progress towards fostering Climate Justice across the world. However, despite these efforts, climate injustices are still prevalent. Geographical injustices are evident from the demonstrable fact that many of the countries least responsible for the current climate crisis are,

⁸⁵ Setzer. J., 'Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance.' Available at https://www.researchgate.net/profile/JoanaSetzer/publication/331499727_Climate_change_litigation_A_review_of_research_on_courts_and_litigants_in_climate_governance/links/5e89690d92851c2f527f820d/Climate-change-litigation-A-review-ofresearch-on-courts-and-litigants-in-climate-governance.pdf (Accessed on 28/07/2023).

⁸⁶ Ibid.

⁸⁷ Setzer.J & Higham. C., 'Global Trends in Climate Change Litigation: 2022 Snapshot' Available at <https://www.cccep.ac.uk/wp-content/uploads/2022/06/Global-trends-in-climate-change-litigation2022-snapshot.pdf> (Accessed on 28/07/2023).

⁸⁸ Ibid.

⁸⁹ Setzer. J., 'Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance,' Op Cit.

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

nevertheless, those feeling its effects most acutely.⁹⁰ The studies have highlighted the example of countries of Pakistan, countries in the Horn of Africa, countries in the Caribbean and Pacific Islands among others.⁹¹ Further, it has been pointed out that gender inequalities are evident in the climate change discourse with women often bearing the brunt of climate disasters since they depend more heavily on natural resources like water and firewood, meaning that if these items become scarce, they may need to travel further for them.⁹² Further, gender inequalities within communities may leave women more vulnerable to the immediate aftermath of natural disasters occasioned by the effects of climate change, or excluded from the decision-making table when disaster risk reduction solutions and other climate change responses are designed and implemented.⁹³ Climate change has also resulted in other injustices such as economic inequalities, intergenerational injustices with future generations predicted to bear the most burden due to the effects of climate change, discrimination, environmental racism and displacement of people resulting in climate refugees.⁹⁴ There is need to address these problems in order to realize Climate Justice.

An effective legal and institutional framework must respond to these challenges, if climate justice and sustainability are to be realised. It has been asserted that courts through litigation can play a fundamental role in safeguarding environmental rights in Kenya and fostering Environmental Justice.⁹⁵ The Constitution of Kenya also recognizes the

⁹⁰ Concern Worldwide., '10 Climate Injustices and How to Fight Them.' Available at <https://www.concern.net/news/climate-injustices> (Accessed on 28/07/2023).

⁹¹ Bafana. B., 'Climate Change is No 'Future Scenario' for Pacific Island Nations; Climate Change is 'Real' Op Cit.

⁹² Pearse. R., 'Gender and Climate Change,' *WIREs Climate Change*, 2016.

⁹³ Ibid.

⁹⁴ Concern Worldwide., '10 Climate Injustices and How to Fight Them.' Op Cit.

⁹⁵ Muigua. K., 'The Role of Courts in Safeguarding Environmental Rights in Kenya: A Critical Appraisal.' Available at <http://kmco.co.ke/wp-content/uploads/2019/01/The-Role-of-Courts-in-Safeguarding-Environmental-Rights-in-Kenya-A-Critical-Appraisal-Kariuki-Muigua-17th-January-2019-1.pdf> (Accessed on 24/07/2023).

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

role of litigation in enforcement of environmental rights. It allows a person alleging the denial, infringement or violation or of the right to a clean and healthy environment to apply to a court for redress in addition to any other legal remedies that are available.⁹⁶ The *Environmental Management and Co-ordination Act (EMCA)*⁹⁷ further upholds the role of litigation in fostering Environmental Justice. The Act stipulates that if a person alleges that the right to a clean and healthy environment has been, is being or is likely to be denied, violated, infringed or threatened, that person may on his behalf or on behalf of a group or class of persons, members of an association or in the public interest may apply to the Environment and Land Court for redress.⁹⁸ The Act empowers the Environment and Land Court to make certain orders towards realizing Environmental Justice including an order to prevent, stop or discontinue any act or omission deleterious to the environment; an order to compel the persons responsible for the environmental degradation to restore the degraded environment as far as practicable to its immediate condition prior to the damage and an order of compensation.⁹⁹ While exercising its jurisdiction to foster Environmental Justice, the Act also mandates the Environment and Land Court to be guided by the principles of Sustainable Development including the principle of public participation in the development of policies, plans and processes for the management of the environment; the principles of intergenerational and intragenerational equity; the polluter-pays principle; and the pre-cautionary principle.¹⁰⁰ EMCA further establishes the National Environment Tribunal which is a key body in promoting Environmental Justice in Kenya.¹⁰¹ The Tribunal is

⁹⁶ Constitution of Kenya, Article 70.

⁹⁷ Environmental Management and Co-ordination Act, No. 8 of 1999, Government Printer, Nairobi.

⁹⁸ Ibid, S 3 (3).

⁹⁹ Ibid

¹⁰⁰ Ibid, S 3 (5)

¹⁰¹ Ibid, S 125

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

vested with jurisdiction to hear and determine appeals concerning certain matters including the grant or refusal of grant of a licence or permit under EMCA; imposition of any condition, limitation or restriction on a licence; revocation, suspension or variation of a licence and appeals from the decisions of the Director-General, the Authority or Committees of the Authority or its agents.¹⁰² EMCA empowers the National Environment Tribunal to make certain orders towards realizing Environmental Justice including confirming, setting aside or varying the order or decision in question and orders to enhance the principles of Sustainable Development.¹⁰³

In addition, the *Environment and Land Court Act* establishes the Environment and Land Court to hear and determine disputes relating to environmental planning and protection, climate issues, land use planning, title, tenure, boundaries, rates, rents, valuations, mining, minerals and other natural resources among other matters¹⁰⁴. While exercising its jurisdiction, the Act mandates the Environment and Land Court to be guided by several tenets that are key in realizing Environmental Justice including the principles of Sustainable Development such as the principle of public participation; the polluter-pays principle and the pre-cautionary principle.¹⁰⁵

Litigation and efficient legal and institutional frameworks are thus key in realizing climate justice in Kenya. Through litigation, the jurisdiction of courts and tribunals such as the Environment and Land Court and the National Environment Tribunal can be used to enhance climate justice in Kenya.

¹⁰² Ibid, S 129 (1) & (2)

¹⁰³ Ibid, S 129 (3)

¹⁰⁴ Environment and Land Court Act, No. 19 of 2011, S 13 (2) (a)

¹⁰⁵ Ibid, S 18 (a)

CHAPTER THREE: Legal and Institutional Framework on Climate Justice in Kenya

3.5. Conclusion

The anticipated consequences of a warming climate system are likely to have an impact on the accessibility of fundamental resources such as freshwater, food security, and energy for a significant portion of the population.¹⁰⁶ Concurrently, initiatives aimed at addressing climate change, encompassing both adaptation and mitigation strategies, will play a crucial role in shaping and influencing the global development agenda.¹⁰⁷ There exists a robust correlation between climate change and sustainable development. Impoverished and developing nations, particularly those classified as least developed, would have the greatest negative impacts and possess the least capacity to manage the expected disruptions to their social, economic, and ecological systems.¹⁰⁸

The practice of taking legal action over climate change has been on the rise in national courts all around the world, with the majority of cases being claimed as breaches of human rights.¹⁰⁹ Climate change mitigation is one of the key environmental goals of the United Nations' 2030 Agenda for Sustainable Development Goals (SDGs)¹¹⁰, as captured in Sustainable Development Goal 13, which aims to help countries attain resilience and adaptability.¹¹¹

Adequate and efficient legal and institutional legal frameworks are necessary if climate litigation is to not only grow but also have effective and meaningful results towards promoting realisation of climate justice in Kenya and Africa as a continent.

¹⁰⁶ 'Climate Change.: Sustainable Development Knowledge Platform' <<https://sustainabledevelopment.un.org/topics/climatechange>> accessed 11 October 2023.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ 'The Rising Tide of Climate Litigation' <<https://www.ibanet.org/The-rising-tide-of-climate-litigation>> accessed 11 October 2023

¹¹⁰ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, 21 October 2015, A/RES/70/1.

¹¹¹ Ibid, SDG 13.

CHAPTER FOUR

Entrenching Gender in Climate Change Mitigation and Adaptation

4.1. Introduction

The United Nations 2030 Agenda for Sustainable Development envisages a world of universal respect for human rights and human dignity, the rule of law, justice, equality, and non-discrimination, among others.¹ This is a world in which consumption and production patterns and use of all natural resources – from air to land, from rivers, lakes, and aquifers to oceans and seas – are sustainable, on the one hand, and one in which democracy, good governance and the rule of law, as well as an enabling environment at the national and international levels, are essential for sustainable development, including sustained and inclusive economic growth, social development, environmental protection and the eradication of poverty and hunger, on the other hand. This calls for the concerted efforts of all players if all this is to be achieved. The Sustainable Development Goals (SDGs) is a set of 17 Sustainable Development Goals and 169 targets that seek to build on the Millennium Development Goals to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls, and are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.²

¹ United Nations, Preamble, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1.

² Ibid, Preamble.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

In Kenya, the *Climate Change Act*³ seeks to enhance the national response to climate change and achieve low carbon climate development for the Sustainable Development of Kenya.⁴ It identifies several ways of achieving this goal such as mainstreaming climate change responses into development planning, decision making and implementation; build national resilience and enhancing adaptive capacity to the impacts of climate change; formulating programmes and plans to enhance the resilience and adaptive capacity of human and ecological systems to the impacts of climate change; mainstreaming intergenerational and gender equity in all aspects of climate change responses; promoting low carbon technologies, improving efficiency and reducing emissions intensity by facilitating approaches and uptake of technologies that support low carbon, and climate resilient development and facilitating capacity development for public participation in climate change responses through awareness creation, consultation, representation and access to information.⁵

4.2. Gender and Climate Justice

The United Nations' 2030 Agenda for Sustainable Development envisions a global society characterized by widespread adherence to principles such as the protection of human rights and human dignity, the promotion of the rule of law, the establishment of justice, the pursuit of equality, and the prevention of discrimination, among other objectives.⁶ In this global context, the aim is to establish a state where the utilisation of natural resources, encompassing air, land, water bodies such as rivers, lakes, aquifers, oceans, and seas, is conducted in

³ Climate Change Act., No. 11 of 2016, Government Printer, Nairobi

⁴ Ibid, S 3 (1)

⁵ Ibid, S 3 (2)

⁶ 'UNSDG | Human Rights-Based Approach' <<https://unsdg.un.org/2030-agenda/universal-values/human-rights-based-approach>, <https://unsdg.un.org/2030-agenda/universal-values/human-rights-based-approach>> accessed 7 October 2023.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

a sustainable manner.⁷ Simultaneously, the promotion of democracy, effective governance, adherence to legal frameworks, and the creation of conducive conditions at both national and international levels are deemed indispensable for achieving sustainable development. This includes fostering continuous and inclusive economic growth, advancing social development, safeguarding the environment, and eliminating poverty and hunger. The achievement of this goal necessitates the collaborative endeavours of all stakeholders involved.⁸ Through the creation of a dedicated agenda item addressing gender and climate change and inclusion of overarching text in the Paris Agreement, UNFCCC parties have recognized that women and men are equally involved in UNFCCC processes and in developing and implementing climate policies that are gender-responsive.⁹ It is often difficult for women to contribute fully to climate-related planning, policy-making, and implementation due to their unequal participation in decision-making processes and labour markets.¹⁰

4.3. Gendered Impacts of Climate Change

The term gender refers to the set of social norms, practices and institutions that regulate the relations between women and men in a society.¹¹ It has also been defined as a social construct that ascribes

⁷ Schyns, J.F., Hoekstra, A.Y., Booij, M.J., Hogeboom, R.J. and Mekonnen, M.M., 'Limits to the World's Green Water Resources for Food, Feed, Fiber, Timber, and Bioenergy' (2019) 116 Proceedings of the National Academy of Sciences 4893.

⁸ United Nations Development Programme. "Governance for sustainable development: integrating governance in the post-2015 development framework." (2014) < <https://www.undp.org/sites/g/files/zskgke326/files/publications/Discussion-Paper-Governance-for-Sustainable-Development.pdf> > accessed 3 October 2023.

⁹ 'Introduction to Gender and Climate Change | UNFCCC' <<https://unfccc.int/gender>> accessed 3 October 2023.

¹⁰ Ibid.

¹¹ United Nations, "The Role of Men and Boys in Achieving Gender Equality," Women 2000 and Beyond, December 2008, p.4. Available at <http://www.unwomen.org/~media/headquarters/media/publications/un/en/w2000menandboysweb.pdf> (Accessed on 11/08/2023)

CHAPTER FOUR: *Entrenching Gender in Climate Change Mitigation and Adaptation*

different qualities and rights to women and men regardless of individual competence or desires.¹² Further, the term gender is also used to refer to the socially-constructed expectations about the characteristics, aptitudes and behaviours associated with being a woman or a man, and while gender defines what is feminine and masculine, it shapes the social roles that men and women play and the power relations between them, which can have a profound effect on the use and management of natural resources.¹³

Gender equality entails giving men and women equal treatment when it comes to rights, responsibilities and opportunities.¹⁴ It enshrines equal outcomes for women, men and gender-diverse people.¹⁵ Gender equity on the other hand is about fairness.¹⁶ In order to ensure everyone has equal opportunities, gender equity considers privilege, bias and other parameters that can limit how people access opportunities.¹⁷ Gender equity is the process to achieve gender equality.¹⁸ It recognizes that due to historical and social disadvantages some people especially women are not in the same position as men and thus treating them 'equally' may not be fair hence the need to address these inequalities.¹⁹

¹² G. J. Latham, "A study on gender equality as a prerequisite for sustainable development," Report to the Environment Advisory Council, Sweden 2007:2, p. 17. Available at http://www.uft.oekologie.unibremen.de/hartmutkoehler_fuer_studierende/MEC/09-MECreading/gender%202007%20EAC%20rapport_engelska.pdf (Accessed on 11/08/2023)

¹³ 'What Is Gender and Biodiversity?' Available at

<https://www.cbd.int/gender/biodiversity/> (Accessed on 11/08/2023)

¹⁴ Crabtree. E., 'Why we Need Gender Equity, Not Just Equality.' Available at <https://iqeq.com/insights/why-we-need-gender-equity-not-just-equality/#:~:text=Gender%20equality%20is%20giving%20all,limit%20how%20people%20access%20opportunities.> (Accessed on 11/08/2023).

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ DCED., 'Gender Equality vs Equity.' Available at <https://www.enterprise-development.org/weegateway/gender-equality-vs-equity/> (Accessed on 11/08/2023)

¹⁸ Ibid.

¹⁹ Ibid.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

It has been observed that men and women relate to the environment in different ways, and environmental changes have different impacts on their lives.²⁰ Women play a critical role in sustaining communities and managing natural resources, but their contributions are often undervalued and neglected.²¹ For example, women play a central part in the provision, management and safeguarding of freshwater as a natural resource, and they are often responsible for sanitation and maintaining a hygienic home.²² Women are also more likely than men to live in poverty, and they are more vulnerable to the impacts of climate change and other environmental hazards, especially in developing countries.²³

Natural disasters such as erosion and other forms of soil degradation, pollution of freshwaters, shore-line erosion, flooding, loss of wetlands, drought and desertification impact directly on women in their roles as providers of food, water and fuel.²⁴ It has also been observed that climate change can also impact on women's productive roles since its impacts such as rising sea levels, flooding in low-lying delta areas and increased salt-water intrusion can jeopardize sustainable livelihood strategies.²⁵ Further, food security and family well-being are threatened when the resource base on which women rely to carry out their critical roles and obtain supplementary incomes is undermined.²⁶ Agriculture

²⁰ United Nations Environment Programme., 'About Gender.' Available at <https://www.unep.org/explore-topics/gender/about-gender> (Accessed on 11/08/2023).

²¹ Ibid.

²² SIDA., 'Gender and the Environment.' Available at <https://cdn.sida.se/publications/files/-gender-and-the-environment.pdf> (Accessed on 11/08/2023).

²³ United Nations Environment Programme., 'About Gender.' Op Cit.

²⁴ Hannan. C., 'Mainstreaming Gender Perspectives in Environmental Management and Mitigation of Natural Disasters.' Available at https://web.archive.org/web/20180721174301id_/http://www.un.org/womenwatch/osagi/pdf/presnat%20disaster.PDF (Accessed on 12/08/2023)

²⁵ Ibid

²⁶ Ibid

CHAPTER FOUR: *Entrenching Gender in Climate Change Mitigation and Adaptation*

is the most important employment sector for women in low and middle income countries and therefore, during periods of drought and erratic rainfall, women, as agricultural workers and primary procurers, work harder to secure income and resources for their families.²⁷ This puts added pressure on girls, who often have to leave school to help their mothers manage the increased burden.²⁸ Women also bear a disproportional burden of deteriorating water quality and availability in rural and urban areas due to environmental problems such as pollution and drought and have to travel long distances in search of water to sustain households.²⁹ Based on the foregoing, it has been argued that women were more worried about climate change than men and that more women than men felt they could do something to curb climate change and were prepared to take action to that effect³⁰. Actualizing gender equity and giving women a voice in environmental decision making can therefore foster environmental sustainability.

In addition, in the context of corporate governance, it has been observed that women play a more significant role, compared to men, in establishing positive values in terms of social welfare but also toward reducing carbon emissions.³¹ Thus, enhancing board gender diversity is vital in enabling firms to 'go green'.³² Gender board diversity is positively related to a firm's 'environmental consciousness and foster

²⁷ UN Women., 'Explainer: How Gender Inequality and Climate Change are Interconnected.' Available at https://www.unwomen.org/en/news-stories/explainer/2022/02/explainer-how-gender-inequality-and-climate-change-are-interconnected?gclid=CjwKCAjw29ymBhAKEiwAHJbJ8p-iWBVsiOQq0h8-HiXaObwP7T1nztSxRGPldFcxcRs-flzzRIQIgRoCVrIQAvD_BwE (Accessed on 12/08/2023)

²⁸ Ibid

²⁹ SIDA., 'Gender and the Environment.' Op Cit

³⁰ Kassinis. G et al., 'Gender and Environmental Sustainability: A Longitudinal Analysis.' *Corporate Social Responsibility and Environmental Management* (2016)

³¹ De Silva. DG., & Pownall. RA., 'Going Green: Does it Depend on Education, Gender or Income?' *Applied Economics*, Volume 46, No. 5. (2014) pp573-586.

³² Ibid.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

environmental sustainability initiatives through Corporate Social Responsibility (CSR) activities.³³ To this extent, it has been argued that women have a lower proclivity for unethical business behavior and are more socially oriented than men, which could mean that more gender diverse boards are less likely to engage in unethical behavior and be more effective in CSR-related decision-making.³⁴ Actualizing gender equity in board decision making can thus enhance environmental sustainability.

Based on the foregoing, it has been asserted that Gender equity and environmental sustainability are gaining political momentum as global challenges that require urgent coordinated action.³⁵ Women and men around the world are affected differently by climate change, deforestation, land degradation, desertification, unsustainable infrastructure, growing water scarcity and inadequate sanitation, making the goals of gender equality and environmental sustainability mutually reinforcing.³⁶ Integrating a gender lens to environmental data collection and policy making can thus foster environmental sustainability.³⁷

4.4. Actualizing Gender Equity for Environmental Sustainability: Prospects and Problems

There have been some attempts towards fostering gender equity for environmental sustainability. The Third United Nations Women's Conference held in Nairobi Kenya in 1985 was among the first international forums that made explicit the linkages between

³³ Kassinis. G et al., 'Gender and Environmental Sustainability: A Longitudinal Analysis.' Op Cit

³⁴ Ibid.

³⁵ The Organization for Economic Cooperation and Development., 'Gender and the Environment.' Available at <https://www.oecd.org/env/gender-and-the-environment-3d32ca39-en.htm> (Accessed on 12/08/2023).

³⁶ Ibid.

³⁷ Ibid.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

Sustainable Development and women's involvement and empowerment as well as gender equality and equity.³⁸ The conference identified the environment as an area of concern for women and called for a gender perspective on Sustainable Development, planning and implementation.³⁹ The *Rio Declaration* also envisages the participation of all people in environmental management.⁴⁰ Principle 10 of the Rio Declaration states as follows:

*'Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.'*⁴¹

Principle 10 of the Rio Declaration thus encapsulates several tenets that are vital in actualizing gender equity for environmental sustainability including participation of all citizens, access to information and access to justice.⁴² Upholding these principles can enhance gender equity for environmental sustainability.

³⁸ United Nations., 'Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace.' A/CONF.116/128/Rev.1

³⁹ Ibid.

⁴⁰ United Nations General Assembly., 'Report of the United Nations Conference On Environment and Development: Rio Declaration on Environment and Development.' Op Cit

⁴¹ Ibid.

⁴² Ibid.

CHAPTER FOUR: *Entrenching Gender in Climate Change Mitigation and Adaptation*

In Africa, the *African Charter on Human and People's Rights*⁴³ stipulates that all people shall have the right to a general satisfactory environment favourable to their development.⁴⁴ It also calls upon Africa states to ensure the elimination of every discrimination against women.⁴⁵ The *African Charter on Human and People's Rights* therefore envisages the ideas of environmental sustainability and gender equity. Further, the *Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa*⁴⁶ states that women shall have the right to live in a healthy and sustainable environment.⁴⁷ It implores states to ensure greater participation of women in the planning, management and preservation of the environment and the sustainable use of natural resources at all levels.⁴⁸ The Protocol thus envisages the role of gender equity in environmental sustainability.

In Kenya, the Constitution enshrines equity and equality as being among the national values and principles of governance.⁴⁹ It further captures the right of every person to a clean and healthy environment.⁵⁰ The Constitution also obliges the state to encourage public participation in the management, protection and conservation of the environment.⁵¹ It also states that every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure

⁴³ African Charter on Human and People's Rights., Available at https://au.int/sites/default/files/treaties/36390-treaty-0011_-_african_charter_on_human_and_peoples_rights_e.pdf (Accessed on 12/08/2023).

⁴⁴ Ibid, Article 24.

⁴⁵ Ibid, Article 18 (3).

⁴⁶ Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa., Available at <https://www.ohchr.org/sites/default/files/Documents/Issues/Women/WG/ProtocolontheRightsofWomen.pdf> (Accessed on 12/08/2023).

⁴⁷ Ibid, Article 18 (1).

⁴⁸ Ibid, Article 18 (2) (a).

⁴⁹ Constitution of Kenya, 2010, Article 10 (2) (b).

⁵⁰ Article 42.

⁵¹ Ibid, Article 69 (1) (d).

CHAPTER FOUR: *Entrenching Gender in Climate Change Mitigation and Adaptation*

ecologically sustainable development and use of natural resources.⁵² Actualizing these Constitutional provisions will foster gender equity for environmental sustainability in Kenya.

In addition, the *National Policy on Gender and Development*⁵³ seeks to create a just, fair and transformed society free from gender-based discrimination in all spheres of life practices.⁵⁴ The policy is further aimed at integrating gender equality and women's empowerment into sectoral policies, planning and programmes including the environment and natural resources management.⁵⁵ The policy acknowledges that access to and control over environmental resources is gender biased.⁵⁶ It seeks to promote gender equity for environmental sustainability through measures such as having women well represented in decision-making processes over the environment and natural resources; taking into account women's input into climate change adaptation and mitigation strategies; reducing gender disparities in access to natural resources; providing affordable clean water to reduce health risks related to poor quality of water and providing gender-disaggregated data on the impacts of environmental and natural resources' degradation and climate change.⁵⁷ Realizing the vision of this policy is vital in actualizing gender equity for environmental sustainability in Kenya.

From the foregoing, it can be deduced that there have been attempts towards fostering gender equity for environmental sustainability.

⁵² Ibid, Article 69 (2).

⁵³ Republic of Kenya., 'Sessional Paper No. 02 of 2019 on National Policy on Gender and Development.' Available at <http://psyg.go.ke/wp-content/uploads/2019/12/NATIONAL-POLICY-ON-GENDER-AND-DEVELOPMENT.pdf> (Accessed on 12/08/2023).

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

However, it has also been observed that there are still gender disparities which hinder effective realization of gender equity for sustainable development.⁵⁸ It has been observed that men are the main actors in the management of renewable and non-renewable natural resources such as forests, wildlife, minerals and natural gas.⁵⁹ This has significant implications on the Gross Domestic Product and the livelihoods of Kenyans dependent on the environment and natural resources.⁶⁰ Further, gender disparities are also witnessed through cases of unequal and insecure rights over land with women being disproportionately disadvantaged.⁶¹ In Kenya, it has been stated that there are gender inequalities in land ownership and representation.⁶² The Constitution of Kenya acknowledges this problem and enshrines the elimination of gender discrimination in law, customs and practices related to land and property in land as one of the principles of land policy in Kenya.⁶³ Access to and secure tenure over land is closely linked to natural resource access and management, such as water and forest resources, with benefits for sustainable ecosystems.⁶⁴

In addition, it has been pointed out that looking at gender aspects of the use of natural resources such as water, forests and land and experiences of environmental degradation through climate change, pollution,

⁵⁸ Kassinis. G et al., 'Gender and Environmental Sustainability: A Longitudinal Analysis.' Op Cit.

⁵⁹ Republic of Kenya., 'Sessional Paper No. 02 of 2019 on National Policy on Gender and Development.' Op Cit.

⁶⁰ Ibid.

⁶¹ IUCN., 'Gender and the Environment: What are the Barriers to Gender Equality in Sustainable Ecosystem Management?' Available at <https://www.iucn.org/news/gender/202001/gender-and-environment-what-are-barriers-gender-equality-sustainable-ecosystem-management> (Accessed on 12/08/2023).

⁶² Kariuki. J., & Birner. R., 'Exploring Gender Equity in Ecological Restoration: The Case of a Market Based Program in Kenya.' Available at <https://er.uwpress.org/content/wper/39/1-2/77.full.pdf> (Accessed on 12/08/2023).

⁶³ Constitution of Kenya., Article 60 (1) (f)

⁶⁴ IUCN., 'Gender and the Environment: What are the Barriers to Gender Equality in Sustainable Ecosystem Management?' Op Cit.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

chemicals, loss of biodiversity illustrates gender inequalities.⁶⁵ Women are severely affected by challenges such as the lack of access to modern energy services, lack of access to safe and clean water and inadequate land rights due to their important role in sustaining households.⁶⁶ Furthermore, women have been severely impacted by the effects of climate change as witnessed by inadequate access to natural resources such as water, food insecurity due to drought which hinders farming activities and gender based violence.⁶⁷ It has also been noted that inadequate representation by women in environmental governance in areas such as energy, forestry and land has resulted in mismanagement of these sectors contributing to the threat of climate change and adverse effects on women.⁶⁸ It is necessary to solve these problems in order to actualize gender equity and climate justice for environmental sustainability.

4.5. Way Forward

There is need to acknowledge the important role that gender plays in climate justice as a way of actualizing gender equity in order to enhance environmental sustainability. It has been stated that gender equality and women's empowerment are matters of fundamental human rights and prerequisites to meeting sustainable development goals around the world.⁶⁹ This fact is acknowledged by the *United Nation's 2030 Agenda for Sustainable Development*⁷⁰ which asserts that realizing gender equality

⁶⁵ SIDA., 'Gender and the Environment,' Op Cit.

⁶⁶ Ibid.

⁶⁷ United Nations Framework Convention on Climate Change., 'New Report: Why Climate Change Impacts Women Differently than Men.' Available at https://unfccc.int/news/new-report-why-climate-change-impacts-women-differently-than-men?gclid=CjwKCAjw29ymBhAKEiwAHJbJ8ssIfst99WBehD0DHNpgsbjqaHye6wOiIPq9xBR4ZYRvsL8yf_KNgxoCskUQA_vD_BwE (Accessed on 12/08/2023).

⁶⁸ SIDA., 'Gender and the Environment.' Op Cit.

⁶⁹ IUCN., 'Gender and the Environment: What are the Barriers to Gender Equality in Sustainable Ecosystem Management?' Op Cit.

⁷⁰ United Nations, 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

and empowerment of women will make a crucial contribution towards progress across all the Sustainable Development Goals and targets.⁷¹ Sustainable Development Goal 5 seeks to ensure effective and full participation of women and equal opportunities at all levels of decision making in political, economic and public life including access to ownership and control over land and natural resources.⁷² Realizing this goal is vital in actualizing gender equity for environmental sustainability and climate justice.

Further, there is need to foster participation of women in environmental decision making including formulation of laws and policies on the environment and implementation of environmental projects.⁷³ Public participation is a fundamental principle that can enhance sound management of the environment and natural resources towards environmental sustainability and climate justice.⁷⁴ The importance of public participation has been enunciated under the Rio Declaration on Environment and Development.⁷⁵ Public participation has also been captured as among the national values and principles of governance in Kenya.⁷⁶ The Constitution also obliges the state to encourage public participation in the management, protection and conservation of the environment.⁷⁷ Public participation can foster the voice of women in environmental decision making and contribute towards the realization

<https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 12/08/2023).

⁷¹ Ibid.

⁷² Ibid.

⁷³ United Nations Framework Convention on Climate Change., 'New Report: Why Climate Change Impacts Women Differently than Men,' Op Cit.

⁷⁴ Muigua. K., 'Towards Meaningful Public Participation in Natural Resource Management in Kenya.' Available at <http://kmco.co.ke/wp-content/uploads/2018/08/TOWARDS-MEANINGFUL-PUBLIC-PARTICIPATION-IN-NATURAL-RESOURCE-MANAGEMENT-IN-KENYA.pdf> (Accessed on 12/09/2023).

⁷⁵ Rio Declaration on Environment and Development, Principe 10.

⁷⁶ Constitution of Kenya, 2010., Article 10 (2) (a).

⁷⁷ Ibid, Article 69 (1) (d).

CHAPTER FOUR: *Entrenching Gender in Climate Change Mitigation and Adaptation*

of environmental sustainability through sound and effective decisions that incorporate the decision of all concerned citizens including women.⁷⁸ Women have always been the custodians of the environment and incorporating their views in environmental decision making will enhance the quality of such decisions thus fostering Sustainable Development.⁷⁹ It is imperative to empower women and enhance access to information which are important tenets in fostering effective public participation.⁸⁰

Kenya's *National Policy on Gender and Development*⁸¹ also envisages several ways through which gender equity can be realized for environmental sustainability. These include developing and reviewing environment, and other natural resources (including forests, water, mining, petroleum and energy) management laws, policies and programmes to ensure gender and equity compliance; ensuring availability of water for multiple use to women taking into account the gender division of labour that defines women's domestic and productive activities in the household; ensuring that women participate in and benefit equitably from investments in various natural resources development initiatives; Building capacities of development agencies in gender mainstreaming into environment and climate change laws, policies and programmes and ensure that women participate in and contribute to and benefit from climate resilient programmes and projects and supporting interventions aimed at equitable participation

⁷⁸ Shobeiri. S., & Meiboudi. H., 'Women's Participation in Environmental Management and Development Promotion Culture.' Available at https://www.researchgate.net/publication/311533595_Women's_participation_in_environmental_management_and_development_Promotion_Culture#:~:text=Women%20are%20the%20main%20cause,environmental%20management%20are%20so%20obvious. (Accessed on 12/08/2023).

⁷⁹ Ibid.

⁸⁰ Muigua. K., 'Towards Meaningful Public Participation in Natural Resource Management in Kenya,' Op Cit.

⁸¹ Republic of Kenya., 'Sessional Paper No. 02 of 2019 on National Policy on Gender and Development.' Op Cit.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

of women in the sustainable utilization of natural resources for economic benefits including opportunities for carbon trading.⁸² Realizing the vision of this policy is essential in actualizing gender equity for environmental sustainability in Kenya. It is indeed possible to achieve gender equality and equity if the National Policy on Gender and Development can be implemented and supported by good will from all groups of persons and all levels of government.⁸³

It is also imperative embrace the role of women in in environment and natural resource decision making and leadership.⁸⁴ This can be achieved by appointing women in leadership positions in ministries, state departments, environmental management bodies and other positions in environment related sectors.⁸⁵ Economic empowerment of women is also vital in actualizing gender equity and environmental sustainability.⁸⁶ It can enhance the ability of women to access resources such as land, energy and water a factor that can enhance effective management of these resources towards environmental sustainability.⁸⁷ Though the foregoing among other measures, gender equity can be actualized for environmental sustainability towards Sustainable Development. It has been argued that if countries are to achieve the Sustainable Development goals as well as their national development plans such as the Vision 2030 development blueprint in Kenya, then

⁸² Ibid, Part 4.9.

⁸³ Muigua. K., 'Actualising the National Policy on Gender and Development in Kenya.' Available at <http://kmco.co.ke/wp-content/uploads/2020/10/Actualising-the-National-Policy-on-Gender-and-Development-in-Kenya-Kariuki-Muigua-Ph.D-October-2020.pdf> (Accessed on 12/08/2023).

⁸⁴ IUCN., 'Gender and the Environment: What are the Barriers to Gender Equality in Sustainable Ecosystem Management?' Op Cit.

⁸⁵ Ibid.

⁸⁶ Organization for Security and Co-operation in Europe., 'Gender and the Environment.' Available at <https://www.osce.org/files/ff/documents/4/ff/36360.pdf> (Accessed on 12/08/2023).

⁸⁷ Ibid.

CHAPTER FOUR: Entrenching Gender in Climate Change Mitigation and Adaptation

gender equality and equity must be addressed as a matter of priority since development requires concerted efforts of both men and women.⁸⁸

4.6. Conclusion

Achieving environmental sustainability has become a pertinent concern in the wake of global environmental challenges especially the threat of climate change.⁸⁹ Achieving climate justice for both men and women is part of the steps towards attaining sustainability. Despite efforts being made towards fostering gender equity, it has been observed that gender disparities are evident in the sphere of environmental governance and management, a situation that hinders environmental sustainability and realization of Sustainable Development.⁹⁰ There is a need for active participation of both men and women in the management of natural resources and environmental governance in order to foster environmental sustainability.⁹¹ This can be achieved through public participation and access to information; embracing the role of women in in environment and natural resource decision making and leadership; economic empowerment of women and implementing national policies and programmes on gender such as Kenya's National Policy on Gender and Development.⁹² Actualizing gender equity for environmental sustainability and climate change mitigation and adaptation is thus feasible.

⁸⁸ Muigua. K., 'Actualising the National Policy on Gender and Development in Kenya.' Op Cit.

⁸⁹ Robinson. D., '15 Biggest Environmental Problems of 2023.' Op Cit.

⁹⁰ Geneva Environment Network., 'Gender and the Environment.' Op Cit.

⁹¹ Muigua. K., 'Gender Perspectives in Biodiversity Conservation.' Op Cit.

⁹² Muigua. K., 'Actualising the National Policy on Gender and Development in Kenya.' Op Cit.

CHAPTER FIVE

Climate Justice and Environmental Conflicts

5.1. Introduction

Over the years, there has been an appreciation of the impact that climate may have in economic results, as well as rising public concern about climate change.¹ The term "climate" refers to observations of climatic factors such as temperature, rainfall, and water availability, as well as climate indices that serve as proxy measures for these variables.² While climatic circumstances do not generate conflict on their own, they can modify the environment under which particular social interactions take place, potentially altering the risk of conflict.³ The environmental principle of polluter pays, which holds that polluters should be held accountable for destroying the environment, justifies the concept of resolving climate change disputes through restorative dispute management approaches.⁴

Changes in rainfall patterns, droughts, changes in the flora, and a general lack of resources have all contributed to a number of violent wars. Conflicts involving pastoralists and these other bloody conflicts are clearly related. However, not every violent conflict is caused by climate change; often, the political, social, and economic backdrop play

¹ Marshall Burke, Solomon M Hsiang and Edward Miguel, 'Climate and Conflict' (2015) 7 Annual Review of Economics 577, 578 <<https://www.annualreviews.org/doi/10.1146/annurev-economics-080614-115430>> accessed 27 March 2022.

² Marshall Burke, Solomon M Hsiang and Edward Miguel, 'Climate and Conflict' (2015) 7 Annual Review of Economics 577, 578 <<https://www.annualreviews.org/doi/10.1146/annurev-economics-080614-115430>> accessed 27 March 2022.

³ Ibid, 579.

⁴ K. Segerson, *Environment*, in *Encyclopedia of Energy, Natural Resource, and Environmental Economics* Volume 3, 2013.

CHAPTER FIVE: *Climate Justice and Environmental Conflicts*

a significant role.⁵ Since a major portion of the local population relies on rain-fed agriculture and pastoralism, the negative consequences of climate change on people's livelihoods may be severe. Additionally, when environmental changes are paired with other socioeconomic pressures like political marginalisation, communities may be more inclined to turn to violence to resolve conflicts or get access to resources.⁶

This chapter critically discusses the place of Climate Change in the rise and trends in environmental conflicts.

5.2. Effects of Climate Change on Livelihoods

Climate change has become a worldwide concern throughout time as a result of the harm it does to the environment and human lives. Climate Change is a significant issue that has an impact on many facets of the environment and human existence.⁷ The objective of Sustainable Development and the eradication of poverty are intertwined with the battle against climate change.⁸

⁵ Mobjörk, Malin. "Exploring the climate-conflict link: The case of East Africa." Stockholm International Peace Research Institute, SIPRI yearbook 2017: Armaments, disarmament and international security (2017): 287-299, at pp. 292-93.

⁶ Ibid, p. 293; see also Scheffran, J.; Brzoska, M.; Kominek, J.; Link, P. M.; Schilling, J. Disentangling the Climate-Conflict Nexus: Empirical and Theoretical Assessment of Vulnerabilities and Pathways. *Rev. Eur. Stud.* 2012, 4, 1.

⁷ Muigua, K., *Nurturing Our Environment for Sustainable Development*, Glenwood Publishers, Nairobi – 2016; Muigua, K., Kariuki, F., Wamukoya, D., *Natural Resources and Environmental Justice in Kenya*, Glenwood Publishers, Nairobi – 2015.

⁸ United Nations, *Support Sustainable Development and Climate Action*. United Nations. <https://www.un.org/en/our-work/support-sustainable-development-and-climate-action> (accessed 2023-06-04); Poverty-Environment Action for Sustainable Development Goals. UNEP - UN Environment Programme. <http://www.unep.org/regions/asia-and-pacific/regional-initiatives/poverty-environment-action-sustainable-development> (accessed 2023-06-04); 170 actions to combat climate change - act now! <https://sites.ungeneva.org/170actions/climate/> (accessed 2023-06-04); Carbon emissions anywhere threaten development everywhere | UNCTAD. <https://unctad.org/news/carbon-emissions-anywhere-threaten-development-everywhere> (accessed 2023-06-04).

CHAPTER FIVE: *Climate Justice and Environmental Conflicts*

One of the most important aspects of human growth is working towards a state of overall enhanced and maintained well-being for all people. The way in which Climate Change and its related stresses support or destabilize livelihood systems is a significant factor in human development. This is especially true for the livelihood systems of individuals who are economically disadvantaged and highly vulnerable.⁹

Due to factors like poverty, location, and social discrimination, vulnerable groups are exposed to serious environmental risks; however, they lack the resources necessary to deal with and combat the negative effects of climate change, which exacerbates social injustices and structural injustices.¹⁰

It is possible to draw a connection between the changing environment and many forms of discrimination, including those on the levels of class, ethnicity, and the global community. This discrimination is not just a sort of emotional response; rather, it is a strategy that assures the replication of inequality in its background and facilitates the reproduction of inequality within the group.¹¹

Women are more likely to be responsible for duties such as the production of food, the preparation of food, and the transportation of water, all of which may be directly influenced by climate-related occurrences such as droughts. As a result, women are more likely to be negatively impacted by Climate Change than males.¹²

⁹ UNDP, Climate Change. "Human Development: towards Building a Climate Resilient Nation." *Zimbabwe Human Development Report* (2017).

¹⁰ AA, D. S. with. "Human-induced climate change causes global environmental injustice." Daily Sabah. <https://www.dailysabah.com/turkiye/human-induced-climate-change-causes-global-environmental-injustice/news> (accessed 2023-06-03).

¹¹ AA, D. S. with. "Human-induced climate change causes global environmental injustice." Daily Sabah. <https://www.dailysabah.com/turkiye/human-induced-climate-change-causes-global-environmental-injustice/news> (accessed 2023-06-03).

¹² Ibid.

CHAPTER FIVE: Climate Justice and Environmental Conflicts

There is a growing consensus that climate change constitutes a "threat multiplier" because of its involvement in aggravating the root causes of conflicts in its conventional forms. The most glaring example is the manner in which alterations in climate change affect competition for ever-decreasing supplies of resources. According to studies conducted on the so-called "heat-aggression relationship," there is a 10–20 percentage point increase in the likelihood of armed conflict connected with each 0.5-degree Celsius rise in the temperature of the surrounding environment.¹³

According to the findings of a research that was published in 2021, there are normally more occurrences of violence in regions that are next to communities of herders that travel periodically. Second, the research indicates that the likelihood of a dispute occurring on farmlands that are in close proximity to a herding community is increased by a factor of 35% whenever a usual and unfavourable decrease in rainfall is observed by the herding community. The researchers come to the conclusion that there is no influence on conflict when a group that does not herd animals has the same decrease in rainfall.¹⁴

5.3. Climate Change as a Catalyst for Environmental Conflicts

One of the most significant challenges that the world is now confronted with is climate change, which is caused by human activity. Vulnerable members of society, such as the elderly, children, and women, as well as immigrants, and nations with shaky economies, are particularly at risk from the effects of Climate Change.¹⁵

¹³ How is climate change driving conflict in Africa? - World | ReliefWeb. <https://reliefweb.int/report/world/how-climate-change-driving-conflict-africa> (accessed 2023-06-04).

¹⁴ Does climate change cause conflict? International Growth Centre. <https://www.theigc.org/blogs/does-climate-change-cause-conflict> (accessed 2023-06-04).

¹⁵ AA, D. S. with. "Human-induced climate change causes global environmental injustice." Daily Sabah. <https://www.dailysabah.com/turkiye/human-induced-climate-change-causes-global-environmental-injustice/news> (accessed 2023-06-03).

CHAPTER FIVE: *Climate Justice and Environmental Conflicts*

Even though it is generally agreed that there is only an indirect correlation between climate change and conflicts, some analysts in both industrialized and developing nations have made this connection anyhow.¹⁶ The connection between Climate change and conflict is made more complex by the consequences of Climate Change on issues such as poverty, mental health, food security, and migration.¹⁷ As a consequence of this, the objectives of the twenty-sixth session of the Conference of the Parties (COP 26), which took place in Glasgow from the 31st of October to the 13th of November 2021, were as follows: achieve global net zero by the middle of the century and keep warming below 1.5 degrees Celsius within reach; adapt to protect communities and natural habitats; mobilise finance; and work together to deliver,¹⁸ where countries were expected to, among other things, accelerate action to combat the climate crisis through collaboration between governments.¹⁹ In order to accomplish these goals, it is going to be necessary for the leadership of each country, as well as many other stakeholders, to make certain modifications. It is arguable that Climate Change brings with it a great number of conflicts and/or disputes that call for environmentally responsible strategies of resolving them.²⁰

There is no one single criterion that can be agreed upon for what constitutes a disagreement on Climate Change.²¹ Some writers have

¹⁶ 'Does Climate Change Cause Conflict?' (IGC, 2 June 2021) <<https://www.theigc.org/blog/does-climate-change-cause-conflict/>> accessed 3 June 2023; see also Gleditsch, N. P. *Whither the Weather? Climate Change and Conflict*. *Journal of Peace Research*, 2012, 49, 3-9.

¹⁷ *Ibid.*

¹⁸ 'COP26 Goals' (UN Climate Change Conference (COP26) at the SEC - Glasgow 2021) <<https://ukcop26.org/cop26-goals/>> accessed 3 June 2023.

¹⁹ *Ibid.*

²⁰ See Vally Koubi, 'Climate Change and Conflict' (2019) 22 *Annual Review of Political Science* 343 <<https://www.annualreviews.org/doi/10.1146/annurev-polisci-050317-070830>> accessed 3 June 2023.

²¹ C. Mark Baker, Cara Dowling, Dylan McKimmie, Tamlyn Mills, Kevin O'Gorman, Holly Stebbing, Martin Valasek, "What are climate change and sustainability disputes? Key arbitration examples (Part 1 contractual disputes)", in James Rogers,

CHAPTER FIVE: *Climate Justice and Environmental Conflicts*

made the observation that Climate Change is a "threat multiplier," meaning that it may raise human security concerns such as a lack of food and water while also contributing to (violent) conflict in nations that are particularly sensitive to the effects of climate change.²² This is due to the fact that the negative implications of Climate Change, such as a lack of water, failed crops, food poverty, economic shocks, migration, and displacement, may heighten the likelihood of conflict and violence.²³ Environmental conflicts and disputes can be broken down into two categories: first, conflicts over access to environmental resources as a source of livelihood and as a foundation for economic activity; and second, conflicts over what are known as the "side effects" of economic activity, such as the loss of biodiversity and pollution. Both of these categories can be broken down further into subcategories.²⁴

The public's level of worry over Climate Change has steadily increased over the course of the years, along with a growing awareness of the potential influence that climate may have on the outcomes of economic activity.²⁵ The word "climate" refers to measurements of climatic parameters such as temperature, rainfall, and water availability, in addition to climate indices that serve as proxy measures for these

London; Cara Dowling, Vancouver (eds), *International arbitration report*, Norton Rose Fulbright – Issue 16 – June 2021, p. 40. < <https://www.nortonrosefulbright.com/media/files/nrf/nrfweb/publications/international-arbitration-report-issue-16.pdf?revision=40c8a703-6e1d-413c-8c7e-ac1201697383&revision=40c8a703-6e1d-413c-8c7e-ac1201697383> > accessed 3 June 2023.

²² Froese, Rebecca, and Janpeter Schilling, "The Nexus of Climate Change, Land Use, and Conflicts." (2019).

²³ 'Tackling the Intersecting Challenges of Climate Change, Fragility and Conflict' <<https://blogs.worldbank.org/dev4peace/tackling-intersecting-challenges-climate-change-fragility-and-conflict>> accessed 3 June 2023.

²⁴ Arild Vatn, *Environmental Governance: Institutions, Policies and Actions* (Paperback edition, Edward Elgar Publishing 2016) 2.

²⁵ Marshall Burke, Solomon M Hsiang and Edward Miguel, 'Climate and Conflict' (2015) 7 Annual Review of Economics 577, 578 <<https://www.annualreviews.org/doi/10.1146/annurev-economics-080614-115430>> accessed 3 June 2023.

CHAPTER FIVE: Climate Justice and Environmental Conflicts

variables.²⁶ These climatic factors include temperature, precipitation, and water availability. Even if the weather does not directly cause conflict, it may change the conditions under which certain social interactions take place, which in turn might affect the likelihood that they will result in a violent exchange.²⁷

Recent years have seen the emergence of the concept "Climate Security" as a catch-all phrase for a wide variety of problems that seem to be linked to global environmental change. These problems include conflicts, vulnerabilities, and other types of insecurity.²⁸

The manner in which Climate Security is framed is important because it directs the formulation, scope, and speed of climate solutions, in addition to determining who should benefit. After 2007, the concept of 'Climate Security' began to acquire traction within the context of four pre-existing frames: national (or state) security, international security, human security, and ecological security.²⁹ In the field of peace and conflict studies, these frames are considered to be standard, with the first three being referred to as "vertical security frames" and the last frame being referred to as a "horizontal security frame." Whose safety is in jeopardy serves as the primary topic of interest in each of these frames.³⁰

It has been noticed that three consequences of Climate Change (natural catastrophes, rising sea levels, and growing scarcity of resources) are

²⁶ Marshall Burke, Solomon M Hsiang and Edward Miguel, 'Climate and Conflict' (2015) 7 Annual Review of Economics 577, 578

<<https://www.annualreviews.org/doi/10.1146/annurev-economics-080614-115430>>

accessed 3 June 2023.

²⁷ Ibid, 579.

²⁸ Dalby, S. Climate Change and Environmental Conflicts. In Routledge handbook of environmental conflict and peacebuilding; Routledge, 2018; pp 42-53.

²⁹ Lamain, C. Conflicting Securities: Contributions to a Critical Research Agenda on Climate Security. Globalizations 2022, 19 (8), 1257-1272.

³⁰ Ibid.

CHAPTER FIVE: Climate Justice and Environmental Conflicts

widely anticipated to lead to loss of livelihood, economic decline, and increased insecurity either directly or via forced migration. This is despite the fact that there is no conclusive evidence to support these assumptions. These variables, in turn, may contribute to political and economic instability, social disintegration, migration, and incorrect responses from governments. This is because these issues interact with weak governance, societal inequities, and a terrible neighbourhood. In the long run, this leads to a rise in both the incentive for inciting violence and the chances for mobilisation.³¹

Several statistical studies of conflict in Africa have revealed that communal and social violence are more likely to occur during or immediately after rainy times. However, some of the studies have also showed that there is some increased risk after very dry periods. As a result, there are conflicting opinions on the scarcity scenario.³²

The consequences of Climate Change are not primary predictors of conflict as politics and a history of conflict are. Instead, politics and a history of conflict are primary predictors of conflict. However, they are seen as "threat multipliers" because of their ability to exacerbate preexisting patterns of conflict, such as those that occur between nomadic herders and farmers. Shocks to the environment, such as variations in precipitation and temperature, may make it more probable that conflicts and acts of violence will occur, as well as make them more severe when they do.³³

In addition, it has been observed that the implications of Climate Change on poverty, mental health, food security, and migration

³¹ Theisen, O. M.; Gleditsch, N. P.; Buhaug, H. Is Climate Change a Driver of Armed Conflict? *Climatic change* 2013, 117, 613–625.

³² *Ibid*, p. 620.

³³ *Does climate change cause conflict?* International Growth Centre. <https://www.theigc.org/blogs/does-climate-change-cause-conflict> (accessed 2023-06-04).

CHAPTER FIVE: Climate Justice and Environmental Conflicts

complicate the link between climate change and conflict. This has been highlighted both empirically and conceptually. Even though there is some evidence starting to surface, much more investigation is required in these areas. The function of climate adaptation in mitigating the negative consequences of Climate Change on conflict is another significant topic that should be investigated in the future. For instance, social protection and agricultural technology show a great deal of promise in terms of assisting nations in adapting to the effects of Climate Change and, possibly, in lessening conflicts that are caused by climate change.³⁴

5.4. Addressing Climate Change for Peace and Sustainability

The Intergovernmental Panel on Climate Change (IPCC) recommends that global CO₂ emissions should reach net zero by the year 2050 after a gradual decline over the following ten years to a level that is about half of what they were in 2010. According to the Intergovernmental Panel on Climate Change (IPCC), in order to limit the rise in global temperature to 1.5 degrees Celsius, all aspects of civilization will need to undergo transformations that are drastic, unprecedented, and urgently necessary.³⁵

The process of adapting to new conditions is one of the most important factors in lowering people's susceptibility to the effects of climate change. In ecological systems, adaptation refers to the process of autonomously adjusting to new conditions via ecological and evolutionary processes. When it comes to human systems, adaptation may be anticipatory or reactive, gradual or radical, and all of these things simultaneously. The latter modifies the underlying characteristics of a social-ecological system in preparation for the effects

³⁴ Ibid.

³⁵ McGregor D, Whitaker S and Sritharan M, 'Indigenous Environmental Justice and Sustainability' (2020) 43 Current Opinion in Environmental Sustainability 35, p.35.

CHAPTER FIVE: Climate Justice and Environmental Conflicts

that climate change is going to have. The capacity for adaptation is constrained by both rigid and malleable boundaries.³⁶

Understanding and assessing climate adaptation processes and measures to lower risks caused by human-induced climate change requires a recognition of the value of a variety of types of knowledge, including scientific knowledge, indigenous knowledge, and local knowledge. This is necessary in order to fulfil the requirement that the worth of these many forms of knowledge be acknowledged.³⁷

Research has shown that oceans and seas are an essential component of any solution to the climate change problem. This is due to the fact that they store the carbon that is the primary cause of climate change and provide major benefits for climate adaptation. To protect the oceans, it is necessary to take action both on land and at sea. This involves decreasing the direct impacts that people have on the ocean, cleaning up polluted rivers, restoring polluted wetlands, and developing a circular economy in which potential pollutants are utilised for as long as is practically possible before being disposed of in an acceptable manner when they have reached the end of their useful life.³⁸

The pressing need to find solutions to environmental issues has resulted in increased push for more stringent legislative measures. It has been

³⁶ IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33, doi:10.1017/9781009325844.001.

³⁷ Pörtner, Hans-Otto, et al. "IPCC, 2022: Summary for policymakers." (2022): 3-33.

³⁸ 'Why Protecting the Ocean and Wetlands Can Help Fight the Climate Crisis' (UNEP, 11 November 2022) <<http://www.unep.org/news-and-stories/story/why-protecting-ocean-and-wetlands-can-help-fight-climate-crisis>> accessed 2 June 2023.

CHAPTER FIVE: Climate Justice and Environmental Conflicts

argued persuasively that environmental goals cannot be achieved solely by environmental policies or in protected areas. Rather, transformative change requires a fundamental, system-wide reorganization across technological, economic, and social factors, including paradigms, goals, and values.³⁹ However, in order for environmental sustainability to be achieved, it is essential that individuals who are currently on the periphery and in a precarious situation not be left behind by the necessary revolutionary changes.⁴⁰

Environmental problems such as Climate Change, the loss of biodiversity, water shortages, air and water pollution, and soil degradation, amongst others, are contributing factors in the rise of poverty and social inequality.⁴¹ Environmental governance must explicitly involve a greater variety of environmental actors, organisations, and institutions and become more adaptive, responsive, and innovative in order to cope with pressures such as climate change, economic instability, and sociopolitical or ideological upheavals.⁴² This is required in order for environmental governance to be able to deal with these stresses. There is a critical need for more collaboration between governmental and private-sector stakeholders in the decision-making and enforcement processes pertaining to the environment.

Climate change now necessitates not only protecting and reconstructing the system, but also changing the system itself, as well as transforming landscapes, ecosystems, cities, and trading arrangements, so that they

³⁹ Dalby, S. *Climate Change and Environmental Conflicts*. In *Routledge Handbook of Environmental Conflict and Peacebuilding*; Routledge, 2018.

⁴⁰ *Ibid.*

⁴¹ Environment UN, 'Environmental Rule of Law' (UNEP - UN Environment Programme, 5 October 2017) <<http://www.unep.org/explore-topics/environmental-rights-and-governance/what-we-do/promoting-environmental-rule-law-0>> accessed 2 June 2023.

⁴² DeCaro, D. A., Chaffin, B. C., Schlager, E., Garmestani, A. S., & Ruhl, J. B., "Legal and Institutional Foundations of Adaptive Environmental Governance," *Ecology and Society: A Journal of Integrative Science for Resilience and Sustainability*, 22, no. 1 (2017): 1.

CHAPTER FIVE: Climate Justice and Environmental Conflicts

are both less vulnerable to obvious hazards and flexible enough to reinvent themselves when unexpected crises occur. Governance is important when it comes to adjusting to changing times, whether in terms of alterations in the environment or changes in the global economy. In the context of the conversation on climate security, this is the most important issue that has to be reinforced in policy discussions. Instead of focusing on local environmental circumstances and straightforward scarcity tales as a potential mechanism for conflict, this should be the primary area of attention.⁴³

5.5. Conclusion

Africa is classified as one of the continents that are highly vulnerable to climate change due to several reasons: high poverty level, high dependence on rain-fed agriculture, poor management of natural resources, capacity/technology limitations, weak infrastructure, and less efficient governance/institutional setup.⁴⁴ Arguably, Kenya's challenges as far as combating climate change is concerned are not any different from the ones identified above.

Climate change impacts and the associated socio-economic losses on Kenya have been exacerbated by the country's high dependence on climate sensitive natural resources.⁴⁵

It is crucial to act swiftly since a disproportionate number of people are impacted by Climate Change, including women, youth, coastal

⁴³ Dalby, S. *Climate Change and Environmental Conflicts*. In *Routledge Handbook of Environmental Conflict and Peacebuilding*; Routledge, 2018.

⁴⁴ Kimaro, Didas N., Alfred N. Gichu, Hezron Mogaka, Brian E. Isabirye, and Kifle Woldearegay. "Climate Change Mitigation and Adaptation in ECA/SADC/COMESA region: Opportunities and Challenges." <https://www.researchgate.net/publication/346628199_Climate_Change_Mitigation_and_Adaptation_in_ECASADCCOMESA_region_Opportunities_and_Challenges> accessed 4 June 2023.

⁴⁵ GoK, I. N. D. C. "Kenya's Intended Nationally Determined Contribution." (2015).

CHAPTER FIVE: Climate Justice and Environmental Conflicts

populations, local communities, indigenous populations, fishermen, the underprivileged, and the elderly. Indigenous peoples, local communities, and those affected by Climate Change are also not included in international attempts to counteract it. This is true despite the fact that local economies that depend on natural resources and food sovereignty are also threatened by the consequences of Climate Change. Additionally, they have the potential to pose a threat to the wellbeing of communities all over the globe, especially those who are vulnerable and powerless, including children and the elderly.⁴⁶

⁴⁶ Muigua, *Securing Our Destiny through Effective Management of the Environment*, Glenwood Publishers Limited (2020), ISBN: 978-9966-046-06-1.

CHAPTER SIX

Tapping into Africa's Blue Economy: Challenges and Promises

6.1. Introduction

Blue Economy has been defined as a 'sustainable ocean-based economic model that is largely dependent on coastal and marine ecosystems and resources, but one that employs environmentally-sound and innovative infrastructure, technologies and practices, including institutional and financing arrangements, for meeting the goals of: (a) sustainable and inclusive development; (b) protecting the coasts and oceans, and reducing environmental risks and ecological scarcities; (c) addressing water, energy and food security; (d) protecting the health, livelihoods and welfare of the people in the coastal zone; and (e) fostering an ecosystem-based climate change mitigation and adaptation measures¹. It has also been described as the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem². The concept of the Blue Economy integrates into a new approach the economic exploitation of the resources of oceans, lakes, rivers and other bodies of water and the conservation of aquatic ecosystems³. It represents a basis for rational and sustainable use and conservation of natural resources (both renewable and non-renewable) and their natural habitats⁴.

¹ UNDP., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Available at <https://www.undp.org/sites/g/files/zskgke326/files/migration/ke/Policy-Brief--2018---6---Blue-Economy-for-Inclusive-and-Sustainable-Growth.pdf> (Accessed on 17/07/2023)

² The World Bank., 'What is the Blue Economy?' Available at <https://www.worldbank.org/en/news/infographic/2017/06/06/blue-economy> (Accessed on 17/07/2023)

³ Africa Union., 'Africa Blue Economy Strategy.' Available at https://www.auiabar.org/sites/default/files/2020-10/sd_20200313_africa_blue_economy_strategy_en.pdf (Accessed on 17/07/2023_

⁴ Ibid

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

The concept of Blue Economy emphasizes protecting and sustainably developing oceans, and implementing policies that ensure better stewardship of marine ecosystems, wildlife and other resources⁵. It aims to harmonize economic growth with environmental preservation through sustainable practices⁶. This concept recognizes that the oceans, which cover 71% of the Earth's surface, possess untapped potential for various sectors⁷. Blue Economy therefore encompasses diverse but related issues surrounding the exploitation of ocean resources including smart shipping, ports, transportation and global connectivity; employment, job creation and poverty eradication; cities, tourism, resilient coasts and infrastructure; sustainable energy, mineral resources and innovative industries; managing and sustaining marine life, conservation and sustainable economic activities; ending hunger, securing food supplies and promoting good health and sustainable fisheries; climate action, agriculture waste management and pollution-free oceans; maritime security, safety and regulatory enforcement and people, culture, communities and societies⁸.

Blue Economy is vital in the Sustainable Development agenda. The Blue Economy can be considered a component to the larger green economy, which focuses on an efficient and equitable use of resources and emphasizes Sustainable Development without degrading the environment⁹. A healthy ocean is key for a sustainable future both for

⁵ Bove. T., 'What are the Promises of a Blue Economy?' Available at <https://earth.org/blue-economy/#> (Accessed on 17/07/2023)

⁶ Purcell. N., 'What is the Blue Economy?' Available at <https://bluerobotics.com/what-is-the-blue-economy/#:~:text=The%20blue%20economy%20encourages%20the,reduce%20fuel%20consumption%20and%20emissions.> (Accessed on 17/07/2023)

⁷ Ibid

⁸ Kenya Maritime Authority., 'Report on the Global Sustainable Blue Economy Conference 26th-28th November 2018 Nairobi, Kenya.' Available at <http://kenyaforimo.kma.go.ke/wp-content/uploads/2019/11/SBEC-FINAL-REPORT-8-DECEMBER-2018-rev-2-1-2-PDF2-3-compressed.pdf> (Accessed on 17/07/2023)

⁹ Bove. T., 'What are the Promises of a Blue Economy?' Op Cit

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

people and the planet¹⁰. The world's oceans – their temperature, chemistry, currents and life – drive global systems that make the Earth habitable for humankind¹¹. A Blue Economy prioritizes all three pillars of sustainability: environmental, economic, and social¹². In addition to providing goods and services measurable in monetary terms, coral reefs, mangroves, seagrass meadows and wetlands deliver critical ecosystem services such as coastal protection and carbon sequestration¹³. The importance of Blue Economy in the Sustainable Development discourse is recognized under the United Nations 2030 Agenda for Sustainable Development whose goals include to conserve and sustainably use the oceans, seas and marine resources for Sustainable Development¹⁴. Enhancing conservation and the sustainable use of ocean-based resources is thus integral in fostering the Blue Economy and Sustainable Development.

It has been observed that Africa has an opportunity to unleash the potential to develop a resilient Blue Economy¹⁵. With its great potential,

¹⁰ United Nations Environment Programme., 'Enabling Sustainable, Resilient and Inclusive Blue Economies.' Available at <https://www.unep.org/explore-topics/oceans-seas/what-we-do/enabling-sustainable-resilient-and-inclusive-blue-economies> (Accessed on 17/07/2023)

¹¹ United Nations Development Programme., 'Goal 14: Life Below Water.' Available at https://www.undp.org/sustainable-development-goals/below-water?gclid=Cj0KCQjwzdOIBhCNARIsAPMwjbyodp8PZIkguJb9OPW9JC-jZ2fPWPOOvlgrRnGolWtE86-55pcSV5saAqJCEALw_wcB (Accessed on 17/07/2023)

¹² United Nations., 'Sustainable Blue Economy Vital for Small Countries and Coastal Populations.' Available at <https://news.un.org/en/story/2022/06/1121562> (Accessed on 17/07/2023)

¹³ Ibid

¹⁴ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 17/07/2023)

¹⁵ The World Bank., 'Blue Economy for Resilient Africa Program.' Available at <https://www.worldbank.org/en/events/2022/11/16/blue-economy-for-resilient-africa-program> (Accessed on 17/07/2023)

CHAPTER SIX: *Tapping into Africa's Blue Economy: Challenges and Promises*

the blue economy holds a lot of promise for Africa¹⁶. As a continent surrounded by some of the world's most important marine biodiversity, strategic maritime trade routes, abundant aquatic resources and blue carbon assets, it has become critically urgent for African countries to embrace blue economy development through impactful policies which support the African continent in meeting global and continental targets¹⁷. The chapter critically discusses the concept of blue economy in Africa. It explores the problems and promises of Blue Economy in Africa. The chapter further recommends the way forward towards fostering Africa's Blue Economy for Sustainable Development.

6.2. The Blue Economy in Africa

The Blue Economy is vital in Africa. Africa's Blue Economy is made of vast lakes and rivers and an extensive ocean resource base¹⁸. A total of 38 out of the African Union's 55 member states are coastal or island states, while 64% of the African continent is covered by a network of freshwater resources such as rivers, lakes, aquifers, basins, watersheds among others¹⁹. Further, it is estimated that maritime zones under Africa's jurisdiction total about 13 million square kilometers, including territorial seas and Exclusive Economic Zones (EEZ) and approximately 6.5 million square kilometers for the continental shelf (for which countries have jurisdiction over only the seabed)²⁰. In addition, the

¹⁶ Muigua. K., 'Securing Our Destiny through Effective Management of the Environment.' Glenwood Publishers Limited, 2020

¹⁷ African Union., 'Shaping a Sustainable Blue Economy for Africa UN Oceans Conference Side Event.' Available at <https://au.int/en/newsevents/20220630/shaping-sustainable-blue-economy-africa-un-oceans-conference-side-event> (Accessed on 17/07/2023)

¹⁸ Africa Renewal., 'Africa's Blue Economy: A Policy Handbook.' Available at <https://www.un.org/africarenewal/documents/africas-blue-economy-policy-handbook> (Accessed on 18/07/2023)

¹⁹ African Union., 'Shaping a Sustainable Blue Economy for Africa UN Oceans Conference Side Event.' Op Cit

²⁰ United Nations Economic Commission for Africa., 'Africa's Blue Economy: A Policy Handbook.' Available at

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

lacustrine (or lake) zones of Africa cover approximately 240,000 square kilometers²¹. These aquatic resources represent tremendous potential for blue food, nutrition and food security, ecosystem services, employment and wealth creation and innovation²². It has been argued that all African countries, including landlocked states, can be thought of as political agents in the Blue Economy and their economic futures are strongly associated with issues described as 'marine²³.' Therefore, the benefits of sound Blue Economy practices such secure coastal states spill over to landlocked states in Africa due to lower transportation and improved access to maritime countries' economies²⁴.

The continent therefore has a huge Blue Economy potential that can enhance Sustainable Development of African states. Indeed, the African Union estimates that the Blue Economy currently generates nearly US\$300 billion for the continent, creating nearly 49 million jobs in the process²⁵. These and other crucial benefits most notably food security, livelihoods, and biodiversity are entirely dependent on the ocean's health²⁶. Further, it has been observed that international trade is important to many African economies, with more than 90 percent of Africa's imports and exports conducted by sea²⁷. Further, it estimated that freshwater and ocean fish make a vital contribution to the food and nutritional security of over 200 million Africans and provide income for

<https://wedocs.unep.org/bitstream/handle/20.500.11822/30130/AfricasBlueEconomy.pdf?sequence=1&isAllowed=y> (Accessed on 18/07/2023)

²¹ Ibid

²² African Union., 'Shaping a Sustainable Blue Economy for Africa UN Oceans Conference Side Event.' Op Cit

²³ Childs. J & Hicks. C., 'Securing the Blue: Political Ecologies of the Blue Economy in Africa.' *Journal of Political Ecology*, 2019

²⁴ Ibid

²⁵ The World Bank., 'Blue Economy for Resilient Africa Program.' Op Cit

²⁶ Ibid

²⁷ United Nations Economic Commission for Africa., 'Africa's Blue Economy: A Policy Handbook.' Op Cit

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

over 10 million²⁸. The Blue Economy is thus at the core of Sustainable Development of African countries at the environmental, economic and social levels.

The importance of the Blue Economy in Africa is recognized under the Africa's Union *Agenda 2063* which seeks to achieve a prosperous Africa based on inclusive growth and Sustainable Development through measures such as exploiting the vast potential of Africa's blue/ocean economy²⁹. Agenda 2063 recognizes the potential of the Blue Economy to trigger Sustainable Development in Africa through marine resources, fishing, tourism, energy, port operations, mining and marine transport³⁰. It calls for the sustainable utilization and management of the Blue Economy in Africa in order to realize its potential³¹.

In addition, the *Africa Blue Economy Strategy* seeks to achieve an inclusive and sustainable Blue Economy that significantly contributes to Africa's transformation and growth³². It aims to guide the development of an inclusive and sustainable Blue Economy that becomes a significant contributor to continental transformation and growth, through advancing knowledge on marine and aquatic biotechnology, environmental sustainability, the growth of an Africa-wide shipping industry, the development of sea, river and lake transport, the management of fishing activities on these aquatic spaces, and the exploitation and beneficiation of deep sea mineral and other

²⁸ Ibid

²⁹ Africa Union., 'Agenda 2063: The Africa we Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 18/07/2023)

³⁰ Ibid

³¹ Ibid

³² Africa Union., 'Africa Blue Economy Strategy.' Available at https://www.auiabar.org/sites/default/files/2020-10/sd_20200313_africa_blue_economy_strategy_en.pdf (Accessed on 18/07/2023)

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

resources³³. The strategy outlines the key drivers of change that are shaping Africa Blue Economy development; strategic and technical challenges to Blue Economy development and identifies priority areas of intervention for sustainable blue economy development in Africa³⁴. The Africa Blue Economy Strategy is thus vital in attaining Sustainable Development in Africa.

Finally, the *Africa' Blue Economy Policy Handbook* developed by the United Nations Economic Commission for Africa provides guidelines on mainstreaming the Blue Economy into continental, subregional, and national policies, plans, laws, regulations, and practices for the development of African sustainable Blue Economy strategies³⁵. It advocates for an integrated, holistic and participatory approach that includes sustainable use and management of the Blue Economy resources for societal progress in a diverse Africa³⁶. The Policy Handbook further acknowledges that there is an emerging opportunity to develop an African Blue Economy narrative that better reflects the kinds of development goals, partnerships, and forms of social reciprocity that African societies need as they move further into the 21st century³⁷. The Policy Handbook can thus enhance innovation in formulation of policies, laws, regulations and practices towards enhancing Sustainable Development of the Blue Economy in Africa. Africa thus has a great Blue Economy potential. However, several concerns hinder development of a resilient Blue Economy in Africa.

³³ Ibid

³⁴ Ibid

³⁵ United Nations Economic Commission for Africa., 'Africa's Blue Economy: A Policy Handbook.' Op Cit

³⁶ Ibid

³⁷ Ibid

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

6.3. The Blue Economy in Africa: Challenges and Promises

It has been noted that the potential benefits of developing the Blue Economy in Africa and across the globe are enormous³⁸. Blue economies offer the possibilities of improved efficiency in our land and ocean management, better treatment and governance of marine ecosystems, a more equitable model of global health standards, lower emissions and resilience against climate change³⁹. The Blue Economy in Africa provides numerous advantages such as habitat for fish and marine life; carbon sequestration; shoreline protection; waste recycling and storing; ocean processes that influence climate and biodiversity and new emerging activities such as desalination; marine biotechnologies, ocean energy and seabed mining⁴⁰. The Blue Economy is thus at the core of Sustainable Development in Africa.

However, despite this promise, several concerns hinder full realization of the benefits of the Blue Economy in Africa. It has been indicated that unsustainable infrastructure development, inadequate management of natural habitats and resources, and pollution are among the problems threatening the productivity of the Blue Economy in Africa⁴¹. In addition, climate change-related events such as sea-level rise, land subsidence, storm surge, and coastal flooding are exacerbating the vulnerability of the Blue Economy in Africa⁴².

The African Union also identifies the concerns facing the Blue Economy in Africa to include the increasing menace of illegal fishing in the Exclusive Economic Zones (EEZ) that has resulted in massive loss

³⁸ Bove. T., 'What are the Promises of a Blue Economy?' Op Cit

³⁹ Ibid

⁴⁰ UNDP., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Op Cit

⁴¹ Childs. J & Hicks. C., 'Securing the Blue: Political Ecologies of the Blue Economy in Africa.' Op Cit

⁴² Ibid

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

estimated at \$10 billion USD annually; sea piracy and illegal drug trafficking which pose a real threat not only to the safety of vessels and their crew but also to the economies of affected countries particularly in the Gulf of Guinea and South West Indian Ocean; pollution through dumping of toxic wastes as well as indiscriminate discarding of single use plastics and environmental and climate change and climate variability which impacts on Africa's aquatic systems and food production overall⁴³.

Further, the United Nations Development Programme has identified challenges which hinder realization of the full benefits of the Blue Economy in Africa. These challenges include illegal and unregulated fishing, piracy and armed robbery, maritime terrorism, illicit trade in crude oil, arms, drug and human trafficking and smuggling of contraband goods; degradation of marine ecosystems through discharge of oil, the dumping of toxic waste, illegal sand harvesting and the destruction of coral reefs and coastal forests⁴⁴.

The challenges facing the Blue Economy in Africa were considered at the Sustainable Blue Economy Conference held in Nairobi Kenya in November 2018. These concerns include low participation of African countries in the maritime and shipping industry; climate change, marine pollution, unsustainable extraction of marine resources and destruction of coastal habitats; lack of proper education and training framework that promotes maritime education and skills for a sector that requires highly skilled labour force; negative effects of human activities and environmental degradation on marine ecosystems which shrink the potential of the blue economy resources; inadequate capacity (human skills and technology) to tap into the energy and mineral resources

⁴³ Africa Union., 'Africa Blue Economy Strategy.' Op Cit

⁴⁴ UNDP., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Op Cit

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

within the blue economy sustainably; Unsustainable fishing practices driven by inadequate fisheries management mechanisms; rapidly decreasing fish habitats, including coral reefs and mangroves; loss of aquatic habitats, bio-diversity and shrinking water levels due to pollution and climate change; inadequate inclusion of local communities and peoples in blue economy and a wide range of maritime security threats including piracy, Illegal, Unregulated and Unreported (IUU) fishing, smuggling of people, arms trafficking, narcotics and other illicit goods, terrorism, cybercrimes, proliferation of Weapons of Mass Destruction (WMDs), threats to freedom of navigation, environmental risks, and natural disasters⁴⁵.

In addition, there have been incidences of maritime boundary disputes between African countries. A key example was the maritime boundary dispute between Kenya and Somalia over 100,000 sq km of maritime space that is believed to contain significant oil and gas deposits as well as rich fisheries⁴⁶. The dispute eventually ended up being determined by the International Court of Justice⁴⁷. Such disputes can potentially ruin relationships between African countries and affect the sustainable utilization of the Blue Economy in Africa.

For Africa, the Blue Economy offers greater opportunity beyond the economy and the environment⁴⁸. It presents African countries with a unique opportunity to achieve their national development objectives, to improve regional integration, and to exert influence in the global setting⁴⁹. However, from the foregoing discussion, it is evident that

⁴⁵ Kenya Maritime Authority., 'Report on the Global Sustainable Blue Economy Conference 26th-28th November 2018 Nairobi, Kenya.' Op Cit

⁴⁶ International Court of Justice., 'Maritime Delimitation in the Indian Ocean (Somalia v. Kenya).' Available at <https://www.icj-cij.org/case/161> (Accessed on 18/07/2023)

⁴⁷ Ibid

⁴⁸ Nagy. H & Nene. S., 'Blue Gold: Advancing Blue Economy Governance in Africa.' *Sustainability*, No. 13 of 2021

⁴⁹ Ibid

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

there are several concerns affecting the effective utilization of the Blue Economy in Africa. There is need to address the foregoing concerns in order to foster the Blue Economy in Africa.

6.4. Way Forward

The Sustainable Blue Economy Conference identified a number of key political targets that are pertinent in fostering Africa's Blue Economy. These include promoting action-oriented global strategies that places people and the Blue Economy resources at the centre of Sustainable Development; promoting collaboration for sustainable partnerships and projects in the various sectors of the Blue Economy; mobilizing finance from public and private sources; promoting access to technologies and innovations; sharing best practices on sustainable management of the Blue Economy; capacity building; promoting gender equality and the role and participation of women and youth in the Blue Economy; strengthening science and research to generate and disseminate evidence-based knowledge and information as well to inform policy and decision making; strengthening governance mechanisms; and promoting synergies within and between different levels of governments⁵⁰. These recommendations are vital in fostering the Blue Economy in Africa and can be incorporated into national policy, legal and institutional frameworks towards enhancing the capacity of African countries to harness the Blue Economy for the realization of Sustainable Development.

In addition, several interventions are necessary in various sectors of the Blue Economy in order to foster its realization in Africa. In fisheries and aquaculture, there is need to optimize conservation and sustainable

⁵⁰ United Nations Economic Commission for Africa., 'The Nairobi Statement of Intent on Advancing the Global Sustainable Blue Economy.' Available at <https://archive.uneca.org/sites/default/files/uploaded-documents/SROs/EA/HIGH-LEVEL-SUSTAINABLE-BLUE-ECONOMY-CONFERENCE-2018/nairobi-statement-of-intent-advancing-global-sustainable-blue-economy.pdf> (Accessed on 19/07/2023)

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

fisheries and aquaculture resources use while minimizing conflicts in order to achieve full wealth-generating potential for fisheries and aquaculture sector⁵¹. This will enhance the sustainability of the fisheries and aquaculture sector while enabling African countries reap from the benefits of the Blue Economy in this sector. Further, in the energy sector there is need to unlock the sustainable blue energy potential through measures such as creating conducive regulatory environment for the development and application of sustainable blue energy⁵². This will trigger investments and realization of the energy potential of the Blue Economy thus enabling African countries meet their energy targets among other goals⁵³. African countries can also tap into the potential of the Blue Economy in order to meet the growing demand of mineral resources and oil and gas for economic prosperity⁵⁴.

There is also need for African countries to tap into the potential of the Blue Economy in the transport sector. It has been pointed out that there has been low participation of African countries in the maritime and shipping industry⁵⁵. However, African countries can tap into the potential of the Blue Economy in this sector through measures such as modernization of African ports and carrying cargoes of African countries at reasonable rates⁵⁶. In addition, there is need develop integrated strategies for sustainable tourism and infrastructures in order to realize the full potential of the Blue Economy in Africa⁵⁷.

⁵¹ Africa Union., 'Africa Blue Economy Strategy.' Op Cit

⁵² Ibid

⁵³ Nagy. H & Nene. S., 'Blue Gold: Advancing Blue Economy Governance in Africa.' Op Cit

⁵⁴ Ibid

⁵⁵ Kenya Maritime Authority., 'Report on the Global Sustainable Blue Economy Conference 26th-28th November 2018 Nairobi, Kenya.' Op Cit

⁵⁶ Mohanty. S & Dash. P., 'Economic Opportunities in Blue Economy in Africa.' Available at https://link.springer.com/chapter/10.1007/978-981-15-5550-3_6 (Accessed on 19/07/2023)

⁵⁷ Ibid

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

In addition, one of the priority areas in fostering Africa's Blue Economy is curbing pollution of Blue Economy resources such as oceans and lakes⁵⁸. Efforts towards curbing pollution should include addressing the effects of agriculture residue chemicals and soil erosion from highlands which end up polluting water bodies⁵⁹. In addition, it is necessary to enhance resilience of the Blue Economy through climate change mitigation and adaptation by promoting the integration of blue carbon and ecosystem services into climate change policies and Coastal and Aquatic policies⁶⁰. African Countries should consider embracing nature based solution for the enhancement of Coastal and Aquatic Ecosystem contribution to Biodiversity and climate change achievements⁶¹.

Finally, it is paramount for African countries to promote good governance in the Blue Economy sector and establish regional and sub-regional cooperation in the Blue Economy⁶². This will be vital in ensure security and safety in the African maritime area and addressing concerns such as piracy and drug trafficking⁶³. It also important for African countries to foster good relationships in order to prevent disputes concerning the Blue Economy such as the maritime boundary delimitation dispute between Kenya and Somalia⁶⁴. This will enable African countries to realize the full benefits of the Blue Economy.

⁵⁸ Muigua. K., 'Securing Our Destiny through Effective Management of the Environment.' Op Cit

⁵⁹ Ibid

⁶⁰ Techera..E., 'Supporting Blue Economy Agenda: Fisheries, Food Security and Climate Change in the Indian Ocean.' *Journal of the Indian Ocean Region*, Volume 14, No. 1, 2018

⁶¹ Ibid

⁶² Roy. A., 'Blue Economy in the Indian Ocean: Governance Perspectives for Sustainable Development in the Region.' Available at https://www.orfonline.org/wp-content/uploads/2019/01/ORF_Occasional_Paper_181_Blue_Economy.pdf (Accessed on 19/07/2023)

⁶³ Ibid

⁶⁴ Olorundami. F., 'The Kenya/Somalia Maritime Boundary Delimitation Dispute.' Available at

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

6.5. Conclusion

The concept of the Blue Economy is very pertinent in Africa and across the globe. Africa has an opportunity to unleash the potential to develop a resilient blue economy⁶⁵. With its great potential, the blue economy holds a lot of promise for Africa⁶⁶. The Blue Economy holds the promise of enhancing economic, social and environmental development in Africa⁶⁷. However, several problems hinder Africa from realizing the full promise of the Blue Economy. These concerns include illegal and unregulated fishing, piracy and armed robbery, maritime terrorism, illicit trade in crude oil, arms, drug and human trafficking and smuggling of contraband goods; degradation of marine ecosystems through discharge of oil, the dumping of toxic waste, illegal sand harvesting and the destruction of coral reefs and coastal forests⁶⁸. There is need to address these challenges through measures such as promoting good governance in the Blue Economy sector; establishing regional and sub- regional cooperation; pollution control; enhancing the climate resilience of the Blue Economy sector; and tapping into the benefits of the various sectors of the blue economy such as energy, mining, transport, tourism and fishing by establishing sustainable practices⁶⁹. Through this, the economic, social and environmental benefits of the Blue Economy will be realized towards achieving the visions of the African Union Agenda 2063 and the United Nations Sustainable Development Goals and in particular Goal 14 that seeks to conserve and sustainably use the oceans, seas and marine resources for

<http://ndl.ethernet.edu.et/bitstream/123456789/61052/1/Zeray%20Yihdego.pdf#page=173>
(Accessed on 19/07/2023)

⁶⁵ The World Bank., 'Blue Economy for Resilient Africa Program.' Op Ci

⁶⁶ Muigua. K., 'Securing Our Destiny through Effective Management of the Environment.' Op Cit

⁶⁷ United Nations., 'Sustainable Blue Economy Vital for Small Countries and Coastal Populations.' Op Cit

⁶⁸ UNDP., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Op Cit

⁶⁹ Africa Union., 'Africa Blue Economy Strategy.' Op Cit

CHAPTER SIX: Tapping into Africa's Blue Economy: Challenges and Promises

Sustainable Development⁷⁰. Fostering Africa's Blue Economy is an achievable dream.

⁷⁰ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

CHAPTER SEVEN

Embracing Green Economy for Climate Change Mitigation

7.1. Introduction

During the Africa Climate Summit, held in Nairobi, Kenya, from 4th to 6th September 2023, African Heads of State and Government committed to strengthen continental collaboration, which they considered as essential to enabling and advancing green growth, including but not limited to regional and continental grid interconnectivity, and further accelerating the operationalization of the Africa Continental Free Trade Area (AfCFTA) Agreement.¹ They also committed to advance green industrialization across the Continent by prioritizing energy-intense industries to trigger a virtuous cycle of renewable energy deployment and economic activity, with a special emphasis on adding value to Africa's natural endowments.²

The concept of 'greening' economies has become a pertinent concern in global politics in the wake of challenges facing the planet including the threat of climate change.³ Effects of climate change such as rising temperatures, drought, crop failure, desertification, depletion of natural resources, water scarcity and rising sea levels have had significant impacts on human development, economic development and environmental sustainability⁴. Consequently, climate change mitigation

¹ African Union, *African Leaders Nairobi Declaration on Climate Change and Call to Action*, A declaration made on 6th September 2023 by African leaders attending the Africa Climate Summit 2023, para. 25 < <https://au.int/en/decisions/african-leaders-nairobi-declaration-climate-change-and-call-action-preamble>> Accessed on 10 August 2023.

² Ibid, para. 26.

³ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' *Journal of Political Ecology*, 2019

⁴ Muigua. K., 'Nurturing Our Environment for Sustainable Development.' Glenwood Publishers Limited, 2016

and adaptation are vital in fostering Sustainable Development.⁵ Proponents of green growth view it as an opportunity to strike a balance between human development, environmental conservation and economic development⁶. Greening growth can thus support the realization of Sustainable Development by taking into account environmental protection, economic development and social concerns which are key considerations in the Sustainable Development agenda.⁷ The term 'green economy' has been defined as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.⁸ It has also been defined as policy focus that emphasizes environmentally sustainable economic progress to foster low-carbon, socially inclusive development⁹. Green Growth is one of the strategies to achieve sustainable development that focuses on greening conventional economic systems and developing a green economy, where economic prosperity can go hand-in-hand with ecological sustainability.¹⁰ Various approaches have been taken towards greening economies. In the global North, the main components in the green economy transition have been technological and market-based solutions to existing industrial sectors

⁵ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 03/07/2022)

⁶ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' Op Cit

⁷ Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.' *International Sustainable Development Law.*, Vol 1.

⁸ United Nations Economic Commission for Europe., 'Greening the Economy: Mainstreaming the Environment into Economic Development.' Available at <https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=796&menu=1515> (Accessed on 03/07/2023)

⁹ United Nations Economic and Social Commission for Asia and the Pacific., 'Green Growth Uptake in Asia-Pacific Region.' Available at https://unece.org/fileadmin/DAM/env/cep/CEP-20/ppp/Item10_b_ESCAP_GreenGrowthUptake_e_sm.pdf (Accessed on 03/07/2023)

¹⁰ Ibid

as well as fiscal instruments in environmental governance.¹¹ Further, in the global South, green economy implementation majorly focuses on environmental protection along with modernization and shifts in access to and control over forestry, freshwater, fisheries, energy and agriculture among other natural resources.¹²

The chapter critically examines actualization of Africa's green dream. It explores the progress made towards greening economies in Africa. The chapter further discusses opportunities and challenges facing the attainment of green growth in Africa. It also suggests recommendations towards actualizing Africa's green dream for Sustainable Development.

7.2. The Concept of Green Energy

Growing human populations and rising levels of consumption have elevated energy demands, placing increasing burdens on the environment, particularly on the global climate¹³. Conventional energy sources such as fossil fuels cause significant environmental impacts such as climate change¹⁴. This has necessitated the transition to green energy sources.

Green energy which is also referred to as clean, sustainable or renewable energy is energy that is derived from natural resources, such as sunlight, wind or water¹⁵. It has also been described as energy that comes from renewable sources of energy¹⁶. Such sources include solar

¹¹ Bailey, I & Caprotti. F. 'The Green Economy: Functional Domains and Theoretical Directions of Enquiry.' *Environment and Planning*, No. 46 of 2014.

¹² Ibid

¹³ Gibson. L et al., 'How Green is 'Green' Energy?' *Trends in Ecology & Evolution*, 2306

¹⁴ Ibid

¹⁵ TWI Global., 'What is Green Energy? (Definition, Types and Examples).' Available at <https://www.twi-global.com/technical-knowledge/faqs/what-is-green-energy> (Accessed on 26/06/2023)

¹⁶ Inspire Clean Energy., 'What is Green Energy? Types, Definitions and Examples.' <https://www.inspirecleanenergy.com/blog/clean-energy-101/what-is-green-energy> (Accessed on 26/06/2023)

power, wind power, hydropower, geothermal energy, biomass and biofuels¹⁷. Renewable energy has been defined as energy derived from natural sources that are replenished at a higher rate than they are consumed¹⁸. The Energy Act of Kenya defines renewable energy as non-fossil energy generated from natural non-depleting resources including but not limited to solar energy, wind energy, biomass energy, biological waste energy, hydro energy, geothermal energy and ocean and tidal energy¹⁹.

Green energy sources such as renewable energy are environmentally friendly and can aid in fostering Sustainable Development and promoting climate change mitigation and adaptation²⁰. Generating green energy from renewable energy sources creates far lower emissions than traditional sources such as burning fossil fuels²¹. Green energy has the potential of replacing the negative effects of fossil fuels with more environmentally-friendly alternatives²². Since, it is derived from natural resources, green energy is also often renewable and clean, meaning that it emits no or few greenhouse gases and is often readily available.²³ Transitioning from fossil fuels, which currently account for the lion's share of emissions, to green energy sources such renewable energy is key to addressing the climate crisis.²⁴ Green energy sources such as renewable energy can also enhance security of energy supply and promote energy justice by fostering the attainment of the right of access to clean and affordable energy.²⁵

¹⁷ Ibid

¹⁸ United Nations., 'What is Renewable Energy?' Available at <https://www.un.org/en/climatechange/what-is-renewable-energy> (Accessed on 26/06/2023)

¹⁹ Energy Act, No. 1 of 2019, Laws of Kenya., S 2.

²⁰ Mohtasham. J., 'Review Article: Renewable Energies' *Energy Procedia*, 74 (2015) 1289 – 1297

²¹ Ibid

²² TWI Global., 'What is Green Energy? (Definition, Types and Examples).' Op Cit

²³ Ibid

²⁴ United Nations., 'What is Renewable Energy?' Op Cit

²⁵ Nizic. M.K., 'The Advantages and Disadvantages of Renewable Energy in the Tourist Destination.' Available at

Despite the viability of green energy sources such as renewable energy, these sources are yet to be widely embraced due to several challenges including inadequate funding and investment in green energy, lack of political goodwill and ignorance among consumers.²⁶ There is need to adopt green energy in order to achieve energy justice, promote socio-economic development and foster Sustainable Development through climate change mitigation and adaptation.²⁷

7.3. Green Growth in Africa: Opportunities and Challenges

The concept of 'green economies' has received widespread attention since the Rio+20 conference.²⁸ The outcome of the Conference affirmed the role of green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving Sustainable Development.²⁹ It calls upon states to embrace green economies as a tool of eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the Earth's ecosystems³⁰. The outcome of the Rio+20 Conference further recognizes the importance of green economy in enhancing our ability to manage natural resources sustainably and with lower negative environmental impacts, increasing resource efficiency and reduction of waste.³¹

https://www.researchgate.net/publication/320584990_The_Advantages_and_Disadvantages_of_Renewable_Energy_in_the_Tourist_Destination (Accessed on 26/06/2023)

²⁶ Muigua. K., 'Nurturing Our Environment for Sustainable Development.' Glenwood Publishers Limited, 2016

²⁷ Ibid

²⁸ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' Op Cit

²⁹ United Nations., 'The Future We Want: Outcome document of the United Nations Conference on Sustainable Development held in Rio de Janeiro, Brazil, from 20-22 June 2012.' Available at

<https://sustainabledevelopment.un.org/content/documents/733FutureWeWant.pdf>

(Accessed on 03/07/2023)

³⁰ Ibid

³¹ Ibid

CHAPTER SEVEN: Embracing Green Economy for Climate Change Mitigation

Since the outcome of the Rio+ 20 Conference, the concept of green economy has been embraced at the global, regional and national levels. The universal call for green growth is stipulated under the United Nations 2030 Agenda for Sustainable Development which envisions development which balances social, economic and environmental sustainability³². The Sustainable Development Goals seek to promote green economies through measures such as ensuring access to affordable and clean energy; promoting sustainable industrialization, innovation and infrastructure; promoting the growth of sustainable cities and communities and combating climate change.³³ Achieving the Sustainable Development agenda is essential in fostering green economies in Africa.

At the regional level, the *Africa Union's Agenda 2063* sets out the aspirations of prosperous Africa based on inclusive growth and Sustainable Development.³⁴ It seeks to achieve this goal through measures such as promoting sustainable and inclusive economic growth; ensuring sustainable management of natural resources in Africa; fostering sustainable consumption and production patterns; fostering climate resilience and natural disasters preparedness and prevention and embracing renewable energy in Africa³⁵. Realizing the aspirations of Agenda 2063 is paramount in actualizing Africa's green dream. In addition, the *Agreement Establishing the African Continental*

³² United Nations Development Programme., 'Sustainable Development Goals.' Available at https://www.google.com/search?q=undp&oq=UNDP&gs_lcrp=EgZjaHJvbWUqDwgAEAA YQxjAhixAxiKBTIPCAAQABhDGOMCGLEDGIoFMhIIARAUgEMyXwEYsQMY0QM YigUyCQgCEAAyQxiKBTIJCAMQABhDGloFMgYIBBBFGDwyBggFEEUYPDIGCAYQ RRg8MgYIBxBFGDzSAQgyNzM2ajFqN6gCALACAA&sourceid=chrome&ie=UTF-8 (Accessed on 03/07/2023)

³³ Ibid

³⁴ Africa Union., 'Agenda 2063: The Africa we Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 03/07/2023)

³⁵ Ibid

CHAPTER SEVEN: *Embracing Green Economy for Climate Change Mitigation*

*Free Trade Area (AfCFTA)*³⁶ seeks to promote and attain sustainable and inclusive socio-economic development in the region. It recognizes the need to promote sustainable development in accordance with the Sustainable Development Goals as vital in achieving the economic integration of the African continent.³⁷ There is need to promote the vision of the AfCFTA in order actualize Africa's green dream.

In Kenya, the Constitution embraces Sustainable Development as one of the national values and principles of governance.³⁸ It further encompasses several provisions that are vital in attaining green growth in Kenya including the recognition of the right to a clean and healthy environment.³⁹ The Constitution also stipulates certain obligations in respect of the environment which include ensuring sustainable exploitation, utilisation, management and conservation of the environment and natural resources; achieving and maintaining a tree cover of at least ten per cent of the land area of Kenya; establishing systems of environmental impact assessment, environmental audit and monitoring of the environment and eliminating processes and activities that are likely to endanger the environment.⁴⁰ Implementing these among other provisions of the Constitution will enhance green growth in Kenya.

Green growth has been embraced in Africa through measures such as promoting the use of clean and renewable sources of energy. There have been increased investments in renewable sources of energy such as solar, wind, hydro, geothermal and green hydrogen.⁴¹ Clean and

³⁶ African Union., 'Agreement Establishing the African Continental Free Trade Area.' Available at https://au.int/sites/default/files/treaties/36437-treaty-consolidated_text_on_cfta_-_en.pdf (Accessed on 03/07/2023)

³⁷ Ibid

³⁸ Constitution of Kenya, 2010., Article 10 (2) (d), Government Printer, Nairobi.

³⁹ Ibid, Article 42

⁴⁰ Ibid, Article 69

⁴¹ Hafner. M et al., 'Prospects for Renewable Energy in Africa.' *Energy in Africa*, 2018, pp 47-75

CHAPTER SEVEN: Embracing Green Economy for Climate Change Mitigation

renewable sources of energy are essential in climate change mitigation and adaptation and actualizing the green dream.⁴² Agenda 2063 recognizes the importance of renewable sources of energy in ensuring environmental sustainability and climate resilient economies and communities towards attaining Sustainable Development in Africa.⁴³ Africa has vast resource potential in wind, solar, hydro, and geothermal energy and falling costs are increasingly bringing renewables within reach.⁴⁴ It has been pointed out that renewable sources of energy can help address many of Africa's social, economic, health and environmental challenges and foster the realization of a climate-safe future in which sustainable development prerogatives are met.⁴⁵ There is need for increased investments in renewable sources of energy in Africa in order to actualize the green dream.

In addition, green revolution is also being witnessed in the agricultural sector in Africa. Technologies such as genetic engineering have been adopted to transfer the nitrogen-fixing capabilities of legumes such as peas and beans into cereal crops.⁴⁶ This has facilitated the attainment of higher yields, without the use of expensive fertilizers.⁴⁷ This approach also aids in the reduction in the use of chemical nitrogen fertilizers, which contribute substantially to both carbon emissions and environmental pollution⁴⁸. Some African countries have also adopted regenerative agricultural practices such as crop rotation, agroforestry,

⁴² Crane. D., 'My Clean-Energy Green Dream.' Available at <https://www.greenbiz.com/article/myclean-energy-green-dream> (Accessed on 03/07/2023)

⁴³ Africa Union., 'Agenda 2063: The Africa we Want.' Op Cit

⁴⁴ International Renewable Energy Agency., 'Renewable Energy Market Analysis: Africa and its Regions.' Available at <https://www.irena.org/publications/2022/Jan/Renewable-Energy-Market-Analysis-Africa> (Accessed on 03/07/2023)

⁴⁵ Ibid

⁴⁶ Conrow. J., 'Borlaug's Dream is Being Realized.' Available at <https://allianceforscience.org/blog/2017/04/borlaugs-dream-is-being-realized/> (Accessed on 03/07/2023)

⁴⁷ Ibid

⁴⁸ Ibid

CHAPTER SEVEN: Embracing Green Economy for Climate Change Mitigation

use of drought- and heat-resistant crops, integrated pest control systems, water harvesting and irrigation.⁴⁹ This has helped in fostering high-yielding, resilient, and adaptive practices that constitute an African approach to climate-smart agriculture.⁵⁰ Greening of the agricultural sector is vital in actualizing Africa's green dream.

Further, there has been progress towards actualizing Africa's green dream through the adoption of sustainable waste management practices. Countries such as Rwanda and Kenya have banned the use of plastic bags due to their negative environmental impacts.⁵¹ This has promoted improved waste management and environmental conservation in these countries.⁵² In addition there has been growth of sustainability startups aimed at promoting efficient waste management through measures such as treatment, recycling of waste and conversion of waste into useful products such as compost and biofuel briquettes.⁵³ Progress has also been made towards fostering green growth in the African tourism sector through eco-resorts or family villages in countries such as Rwanda.⁵⁴ Africa is a continent that is rich in cultural and ecological heritage and recreational development has been identified as one of the measures of promoting green growth in the tourism sector.⁵⁵ This has enhanced sustainability and social growth

⁴⁹ Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Available at <https://climatechampions.unfccc.int/call-to-action-for-climate-resilient-sustainable-food-systems-in-africa/> (Accessed on 03/07/2023)

⁵⁰ Ibid

⁵¹ Behuria. P., 'Ban the (plastic) Bag? Explaining Variation in the Implementation of Plastic Bag Bans in Rwanda, Kenya and Uganda.' *EPC: Politics and Space*, 2021, P 1-18

⁵² Ibid

⁵³ Forbes., 'Meet The African Green Entrepreneurs Showing the West How It's Done.' Available at <https://www.forbes.com/sites/davidrvetter/2021/12/14/meet-the-african-green-entrepreneurs-showing-the-west-how-its-done/?sh=6d46b5bf51cb> (Accessed on 03/07/2023)

⁵⁴ MTD., 'Green Dream Rwanda.' Available at <https://www.mtds.nl/en/news/newsarchive/q/nid/337/title/green-dream-rwanda> (Accessed on 03/07/2023)

⁵⁵ Ibid

CHAPTER SEVEN: Embracing Green Economy for Climate Change Mitigation

through a combination of agriculture, the commitment of local businesses and educating and recruitment of local staff in such projects.⁵⁶

Despite the progress made towards actualizing Africa's green dream, several concerns have hindered the attainment of this ideal. It has been pointed out that the transition towards renewable energy has not been fully embraced due to factors such as insufficient investments with only 2% of global investments in renewable energy in the last two decades being made in Africa, with significant regional disparities.⁵⁷ This has significantly affected access to clean cooking fuels and technologies in most parts of Africa.⁵⁸ Further, it has been asserted that African countries especially those in the North African region which have untapped renewable energy sources including hydrogen have struggled to meet their own renewable energy targets, often as a result of unattractive investment conditions, insufficiently developed legal frameworks for renewable energy development and uneven and inconsistent implementation of regulations.⁵⁹ It is necessary to address these challenges in order to actualize Africa's green dream in the energy sector.

In addition, it has been observed that agricultural practices that supported African communities in the past such as slash-and-burn

⁵⁶ Ibid

⁵⁷ International Renewable Energy Agency., 'Renewable Energy Market Analysis: Africa and its Regions.' Op Cit

⁵⁸ Ibid

⁵⁹ EN: Former., 'North Africa's Hydrogen Potential.' Available at https://www.enformer.com/en/north-africashydrogenpotential/?etcc_med=SEA&etcc_par=Google&etcc_cmp=Energy&etcc_grp=135634609600&etcc_bky=hydrogen%20africa&etcc_mty=p&etcc_plc=&etcc_ctv=580888668376&etcc_bde=c&etcc_var=CjwKCAjw44mlBhAQEiwAqP3eViMmP67xkwkqMI4FIRbBPvWOgaNcBckR9BJMhu0bOUf1s-OG4JKuwhoCga4QAvD_BwE&gad=1&gclid=CjwKCAjw44mlBhAQEiwAqP3eViMmP67xkwkqMI4FIRbBPvWOgaNcBckR9BJMhu0bOUf1s-OG4JKuwhoCga4QAvD_BwE (Accessed on 03/07/2023)

CHAPTER SEVEN: *Embracing Green Economy for Climate Change Mitigation*

cultivation and crop rotation are now driving the sector's decline⁶⁰. These practices combined with long-term ecological impacts of chemical-heavy farming systems contribute to land degradation and crop failure⁶¹. The situation is worsened by changing weather patterns as result of the threat of climate change and unstable sociopolitical dynamics hindering the attainment of food security⁶². There is need to address concerns in the agricultural sector in order to actualize Africa's green dream.

It also been asserted that despite the abundance of water resources in Africa including lakes, rivers, swamps and underground aquifers, there has been degradation and underutilization of these water resources⁶³. Concerns such as pollution, poor agricultural practices and the effects of climate change have affected the quality and quantity of water resources in Africa⁶⁴. This has hindered actualizing Africa's green dream in other areas including agriculture and food production, energy, manufacturing and processing, tourism and health due to the centrality of water in Africa's pursuit of the Sustainable Development Goals⁶⁵. It is imperative that concerns in the water sector be addressed in order to foster Sustainable Development and actualize Africa's green dream.

As a result of the foregoing concerns, it has been observed that Africa continues to lag behind other regions of the world in achieving the

⁶⁰ African Wildlife Foundation., 'Sustainable Agriculture.' Available at <https://www.awf.org/community/sustainable-agriculture> (Accessed on 03/07/2023)

⁶¹ Ibid

⁶² Ibid

⁶³ Mugagga. F, & Nabaasa. B., 'The Centrality of Water Resources to the Realization of Sustainable Development Goals (SDG). A Review of Potentials and Constraints on the African Continent.' *International Soil and Water Conservation Research*, Volume 4, No. 3, 2016

⁶⁴ Ibid.

⁶⁵ Ibid.

Sustainable Development agenda⁶⁶. The continent has huge potential to achieve green growth and the transition into green economies. There is need to deal with the above concerns in order to actualize Africa's green dream.

7.4. The Journey towards Green Energy: Prospects and Challenges

There have been several attempt towards recognizing the right of access to clean and affordable energy as a fundamental human right at the global, regional and national levels. The *Energy Charter Treaty* is a multilateral framework for energy cooperation that is designed to promote energy security through the operation of more open and competitive energy markets, while respecting the principles of Sustainable Development and sovereignty over energy resources⁶⁷. Among the target of the Treaty is the promotion of energy efficiency and minimising the environmental impact of energy production and use⁶⁸. The Treaty is one of the best available instruments for improving international energy security by promoting international energy investments and fair access to markets⁶⁹. It also urges its member states to formulate clear policies for improving energy efficiency and reducing the energy cycle's negative environmental impacts⁷⁰. However, membership of the Energy Charter Treaty is mostly drawn from

⁶⁶ Begashaw. B., 'Africa and the Sustainable Development Goals: A long Way to go.' Available at <https://www.brookings.edu/articles/africa-and-the-sustainable-development-goals-a-long-way-to-go/> (Accessed on 03/07/2023)

⁶⁷ The Energy Charter Treaty., Available at <https://www.energycharter.org/fileadmin/DocumentsMedia/Legal/ECTC-en.pdf> (Accessed on 26/06/2023)

⁶⁸ Ibid

⁶⁹ Konoplyanik. A & Walde. T., 'Energy Charter Treaty and its Role in International Energy.' Available at http://konoplyanik.ru/ru/publications/articles/417_Energy_Charter_Treaty_and_its_Role_in_International_Energy.pdf (Accessed on 26/06/2023)

⁷⁰ Ibid.

CHAPTER SEVEN: *Embracing Green Economy for Climate Change Mitigation*

European nations⁷¹. The Treaty may thus not address energy concerns in most African countries.

The United Nations *2030 Agenda on Sustainable Development* also seeks to foster the adoption of green energy⁷². Sustainable Development goal 7 is aimed at ensuring universal access to affordable, reliable and modern energy services⁷³. It further recognizes that investing in green energy including renewable sources of energy such as solar, wind and thermal power; improving energy productivity, and ensuring energy for all are vital in the attainment of the Sustainable Development agenda⁷⁴. Adopting green energy is thus vital in fostering Sustainable Development.

At the regional level, the *Treaty Establishing the East African Community*⁷⁵ recognizes the role of energy in the East African integration agenda. It urges member states to adopt policies and mechanisms to promote the efficient exploitation, development, joint research and utilisation of various energy resources available within the region⁷⁶. Further, the Treaty calls upon member states to promote the exploitation and utilisation of new and renewable sources of energy within the East African Community⁷⁷. The Treaty also implores member states to take

⁷¹ Energy Charter., 'Members and Observers to the Energy Charter Conference.' Available at <https://www.energycharter.org/who-we-are/members-observers/> (Accessed on 26/06/2023)

⁷² United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

⁷³ United Nations Development Programme., 'Goal 7: Affordable and Clean Energy.' Op Cit

⁷⁴ Ibid

⁷⁵ Treaty Establishing the East African Community., Available at <https://investmentpolicy.unctad.org/international-investment-agreements/treaty-files/2487/download> (Accessed on 26/06/2023).

⁷⁶ Ibid, Article 101 (1).

⁷⁷ Ibid, Article 101 (2) (a).

measures towards supplying affordable energy to their citizens while taking cognizance of the protection of the environment⁷⁸.

In Kenya, it has been pointed that access to energy is a Constitutional right⁷⁹. Although the Constitution does not expressly provide for the right to access to energy, it recognizes energy as part of the natural resources in Kenya⁸⁰. To this extent, the Constitution provides that natural resources means the physical non-human factors and components, whether *renewable or non-renewable*, including inter alia rocks, minerals, fossil fuels and other sources of energy⁸¹. The Constitution also enshrines the principle of Sustainable Development in Kenya⁸². Enhancing universal access to affordable, reliable and modern energy services including green energy sources such as renewable energy is an essential part of the Sustainable Development agenda⁸³. The Constitution of Kenya thus envisages adoption of green energy.

Further, the *Energy Act*⁸⁴ embraces the concept of green energy by recognizing renewable sources of energy. The Act mandates the government to facilitate the provision of affordable energy services to all persons in Kenya⁸⁵. It also requires the government to promote the development and use of renewable energy technologies, including but not limited to biomass, biodiesel, bioethanol, charcoal, fuelwood, solar, wind, tidal waves, hydropower, biogas and municipal waste⁸⁶. Towards this end, the Act requires the government to undertake several measures including formulating a national strategy for coordinating

⁷⁸ Ibid, Article 101 (2) (f).

⁷⁹ Muigua. K., 'Access to Energy as a Constitutional Right in Kenya' Op Cit.

⁸⁰ Constitution of Kenya, 2010., Article 260, Government Printer, Nairobi

⁸¹ Ibid

⁸² Ibid, Article 10 (2) (d)

⁸³ United Nations Development Programme., 'Goal 7: Affordable and Clean Energy.' Op Cit

⁸⁴ Energy Act, No.1 of 2019, Government Printer, Nairobi

⁸⁵ Ibid, Article 7 (1)

⁸⁶ Ibid, S 75 (1)

CHAPTER SEVEN: Embracing Green Economy for Climate Change Mitigation

research in renewable energy; promoting international co-operation on programs focusing on renewable energy sources and harnessing opportunities offered under clean development mechanism and other mechanisms including, but not limited to, carbon credit trading to promote the development and exploitation of renewable energy sources⁸⁷. Actualizing the vision of the Energy Act is paramount in enhancing the right of access to clean and affordable energy in Kenya and adopting green energy.

In addition, the *National Energy Policy* recognizes energy as a critical component in Kenya⁸⁸. The policy seeks to achieve which several objectives including improving access to affordable, competitive and reliable energy services, promoting energy efficiency and conservation and promoting diversification of energy supply sources in Kenya to ensure security of supply among others⁸⁹. It contains several proposals towards the use, development and conservation of energy sources in the country such as coal resources, renewable energy and electricity⁹⁰. The Policy also contains energy efficiency and conservation measures aimed at reducing energy consumption without sacrificing productivity or increasing costs⁹¹. Effective implementation of the Policy is integral in promoting green energy in Kenya and enhancing the right of access to clean and affordable energy.

The concept of green energy is thus well captured at the global, regional and national levels. The International Energy Agency notes that the rate of adoption of green energy sources such as renewable energy is expected to rise with the world set to add as much renewable power in

⁸⁷ Ibid, S 75 (2)

⁸⁸ Ministry of Energy., 'National Energy Policy.' Available at https://repository.kippira.or.ke/bitstream/handle/123456789/1947/BL4PdOqKtxFT_National%20Energy%20Policy%20October%20%202018.pdf?sequence=1&isAllowed=y (Accessed on 26/06/2023)

⁸⁹ Ibid

⁹⁰ Ibid, S 1.2

⁹¹ Ibid, S 5.0

the next 5 years as it did in the past 20 years⁹². It further observes that renewables have grown rapidly in recent years, driven by policy support and sharp cost reductions for solar photovoltaics and wind power in particular⁹³. In addition, it has been asserted that the electricity sector remains the brightest spot for renewables with the strong growth of solar photovoltaics and wind in recent years, building on the already significant contribution of hydropower in the transition towards green energy⁹⁴. In Africa, the African Energy Forum is geared towards driving Africa's green energy transition⁹⁵. It notes that Africa's vast renewable resources give it a distinct advantage in the move towards a green hydrogen future⁹⁶. Among the key themes of its 2023 agenda is to increasing pace and scale of Africa's renewable energy projects towards adoption of green energy⁹⁷. Further in Kenya, the Rural Electrification and Renewable Energy Corporation is mandated to develop, promote and manage in collaboration with other agencies, the use of renewable energy and technologies⁹⁸. The Corporation has undertaken projects towards implementing this mandate including installation of solar power plants, electrification of public facilities and schools and transformer maximization projects to enhance electricity access and connectivity in areas with large populations⁹⁹. Thus, there are immense opportunities for adoption of green energy at the global, regional and national levels.

⁹² International Energy Agency., 'Renewables.' Available at <https://www.iea.org/fuels-and-technologies/renewables> (Accessed on 27/06/2023)

⁹³ Ibid

⁹⁴ Ibid

⁹⁵ Africa Energy Forum., 'Held on 20-23 June 2023 in Nairobi, Kenya', Available at <https://www.africa-energy-forum.com/> (Accessed on 27/06/2023)

⁹⁶ Ibid

⁹⁷ Ibid

⁹⁸ Energy Act, No. 1 of 2019, S 44 (1) (j)

⁹⁹ Rural Electrification and Renewable Energy Corporation., Available at <https://www.rerec.co.ke/our-work.php> (Accessed on 27/06/2023)

However, despite the viability of green energy sources including renewable energy, several concerns have hindered their effective adoption. These include inadequate funding, lack of political goodwill and ignorance among consumers¹⁰⁰. Further, the threat of climate change can hinder adoption of green energy sources such as hydroelectricity due to the depletion of forests and water catchment areas which act as a source for water used in their generation¹⁰¹. There is need to address these concerns in order to foster the adoption of green energy and fast track the transition to a less carbon-intensive and more sustainable energy system.

7.5. Way Forward

The economic, societal and environmental benefits of green energy sources such as renewable energy are numerous. It is available in abundance, cheaper and a healthier option for people and the planet.¹⁰² There is thus need to promote sustainability in the energy sector through the adoption and investing in the abundant renewable energy available all over the planet.¹⁰³ This will be essential in enhancing access to clean and affordable energy which is a fundamental human right and a critical component of the Sustainable Development agenda.¹⁰⁴ It has been pointed that in Kenya while notable progress has been made towards enhancing access to electricity through measures such as the rural electrification program, progress remains slow in promoting clean cooking facilities with bio-energy sources such as charcoal and wood fuel still being the most common source of energy in Kenya especially

¹⁰⁰ Muigua. K., 'Nurturing Our Environment for Sustainable Development.' Op Cit

¹⁰¹ Muigua. K., Wamukoya. D & Kariuki. F., 'Natural Resources and Environmental Justice in Kenya.' Op Cit

¹⁰² United Nations., 'Climate Action.' Available at <https://www.un.org/en/climatechange/how-communities-are-embracing-renewable-energy> (Accessed on 27/06/2023)

¹⁰³ Ibid

¹⁰⁴ Ibid

among the rural population.¹⁰⁵ However, the environmental concerns raised by these sources of energy such as climate change calls for the adoption of green sources of energy.¹⁰⁶ Measures can be put in place to enhance access to clean energy sources for purposes of cooking such as reducing the cost of Liquefied Petroleum Gas (LPG) to promote its affordability.¹⁰⁷ Further, costs related to electricity such as connection charges and billing costs should be made affordable for the benefit of all Kenyans especially those in rural areas.¹⁰⁸ This will ensure adoption of green energy while also fostering the right of access to clean and affordable energy.

In addition, there is need for government support through funding and putting in place relevant programs and policy measures in order to ensure adequate investment and adoption of green energy.¹⁰⁹ In Kenya, there is need to realize the vision of the Energy Act in order to adopt green energy sources such as renewable energy.¹¹⁰ Further, the Rural Electrification and Renewable Energy Corporation needs to effectively discharge its mandate in order to promote the adoption of green energy sources in Kenya.¹¹¹ There is also need for governments to put in place appropriate measures such as tax incentives and appropriate laws and

¹⁰⁵ Muchiri. L., 'Gender and Equity in Bioenergy Access and Delivery in Kenya' Practical Action East Africa, 2008, available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiy2P29z6PnAhUEiFwKHQlyCLOQFjAAegQIBRAB&url=http%3A%2F%2Fwww.cas.ed.ac.uk%2F_d ata%2Fassets%2Fword_doc%2F0007%2F24793%2FGender_and_Equity_in_Bio_energy_A ccess_and_Deliv ery_in_Kenya_final.doc&usg=AOvVaw2AKp1mvTSC9tafkIKJ-36 (Accessed on 27/06/2023)

¹⁰⁶ Ibid

¹⁰⁷ Muigua. K., 'Towards Energy Justice in Kenya.' Op Cit

¹⁰⁸ Ibid

¹⁰⁹ Muigua. K., 'Access to Energy as a Constitutional Right in Kenya' Op Cit

¹¹⁰ Centurion., 'Renewable Energy Growth in Kenya.' Available at <https://centurionlg.com/2022/02/01/renewable-energy-growth-in-kenya/> (Accessed on 27/06/2023)

¹¹¹ Ibid

policies in order to encourage investments in green energy sources by entities such as multinational corporations.¹¹² This will ensure green financing and investment in renewable energy projects and provide practical solutions for filling the green financing gap which is a key concern in adopting green energy especially in developing countries.¹¹³ It is also necessary promote public participation in the journey towards adopting green energy in order to guarantee energy justice. Sustainability in the energy sector also calls for the identification of the energy needs of consumers in a country and ensuring that the needs are met in a manner that is efficient.¹¹⁴ Thus in fostering investments in the energy sector, players such as the government and the private sector are required to ensure that they adopt measures towards promoting acceptability of green energy projects to local communities and that further, such projects are socially sustainable.¹¹⁵ Community consultation through meaningful public participation is important to ensure that there is public acceptance and cooperation in green energy projects.¹¹⁶ Public participation is an essential component of environmental governance including investments in green energy as envisaged under the Rio Declaration which acknowledges that environmental issues are best handled with the participation of all concerned citizens, at the relevant level.¹¹⁷ Public participation has also been enshrined as one of the national values and principles under the Constitution of Kenya¹¹⁸. Public participation can thus promote energy justice in the quest towards adopting green energy.

¹¹² Taghizadeh-Hesary. F & Yoshino. N., 'Sustainable Solutions for Green Financing and Investment in Renewable Energy Projects.' Available at <https://www.mdpi.com/1996-1073/13/4/788> (Accessed on 27/06/2023)

¹¹³ Ibid

¹¹⁴ Muigua. K., Wamukoya. D & Kariuki. F., 'Natural Resources and Environmental Justice in Kenya.' Op Cit

¹¹⁵ Ibid

¹¹⁶ Muigua. K., 'Access to Energy as a Constitutional Right in Kenya' Op Cit

¹¹⁷ United Nations General Assembly., 'Report of the United Nations Conference on Environment and Development: Rio Declaration on Environment and Development' 1992' A/CONF.151/26 (Vol. I)

¹¹⁸ Constitution of Kenya, 2010., Article 10 (2) (a)

Finally, there is need to promote sound environmental management in order to enhance adoption of green energy. Conservation of the environment ensures that certain renewable sources of energy such as water used for the generation of hydroelectricity is not exhausted due to the depletion of forests and other water catchment areas¹¹⁹. It is also imperative to combat climate change through appropriate mitigation and adaptation measures in order to ensure continued availability of green energy sources such as biomass and hydropower¹²⁰. Through these among other measures, adoption of green energy for a bright tomorrow will be realized.

In order to actualize Africa's green dream, it is necessary to upscale investments in green energy sources as renewable energy¹²¹. The continent has vast potential for renewable sources for energy which remains untapped¹²². Challenges such as unattractive investment conditions, insufficiently developed legal frameworks for renewable energy development and uneven and inconsistent implementation of regulations have hindered attainment of the green dream in the energy sector in Africa¹²³. African countries must address these concerns by creating attractive investment environments, developing efficient legal frameworks on renewable energy and implementing effective regulations in order to enhance the uptake of renewable sources of energy.¹²⁴ Further, there is need for adoption of market liberalization policies in the energy sector such as supporting public-private investment, improved private sector access to electricity generation and issuing of green bonds in order to promote renewable sources of energy

¹¹⁹ Muigua. K., Wamukoya. D & Kariuki. F., 'Natural Resources and Environmental Justice in Kenya.' Op Cit

¹²⁰ Owusu. P. & Asumadu-Sarkodie. S., 'A Review of Renewable Energy Sources, Sustainability Issues and Climate Change Mitigation.' *Cogent Engineering* (2016).

¹²¹ Hafner. M et al., 'Prospects for Renewable Energy in Africa.' Op Cit

¹²² Ibid

¹²³ EN: Former., 'North Africa's Hydrogen Potential.' Op Cit

¹²⁴ Ibid

in Africa¹²⁵. This will fast track realization of Africa's green dream in the energy sector.

Further, there is need to adopt green agricultural practices such as regenerative agriculture. Regenerative agricultural practices can aid in fostering climate resilient and sustainable green economies in Africa by avoiding the key problems of highly industrialized agriculture production that damage soil health, including vast tracts of mono-cultivated land, chemical runoffs, overexploitation of water resources, and high chemical and hormonal residue levels in food¹²⁶. This will promote the attainment of food security in Africa while also contributing towards climate change mitigation and adaptation in the quest towards Sustainable Development¹²⁷. African countries should thus adopt regenerative agricultural practices such as effective soil systems including no tilling and low tilling, crop rotation, use of drought and heat resistant crops, agroforestry, water harvesting, irrigation and green pest control measures¹²⁸. This will enhance actualization of the green dream in the agricultural sector in Africa.

In addition, it is vital to promote sustainable utilization and management of water resources in Africa. Water plays a fundamental role in the attainment of Sustainable Development. To this extent, it has been observed that there is a clear nexus between properly managed water resources, economic development and social wellbeing which are key pillars of the sustainable development agenda¹²⁹. The importance of

¹²⁵ Ibid

¹²⁶ Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Op Cit

¹²⁷ Davis. L.R et al., 'Farmer Led Regenerative Agriculture for Africa.' Available at <https://discovery.ucl.ac.uk/id/eprint/10106717/1/LunnRockliffe%2C%20Davies%20et%20al.%202020%20RA%20report.pdf> (Accessed on 03/07/2023)

¹²⁸ Ibid

¹²⁹ Koudstaal.R et al., 'Water and Sustainable Development' available at <https://www.ircwash.org/sites/default/files/210-92WA-11000.pdf> (Accessed on 03/07/2023)

CHAPTER SEVEN: Embracing Green Economy for Climate Change Mitigation

water is recognized under the 2030 Agenda for Sustainable Development which seeks to ensure the availability and sustainable management of water and sanitation for all¹³⁰. However, challenges have been witnessed in the water sector in Africa such as degradation and underutilization of these water resources¹³¹. It has been observed that sustainable management of water resources and access to safe water and sanitation are essential for unlocking economic growth and productivity, and providing significant leverage for existing investments in health and education¹³². There is need to improve the management of water and water resources in Africa through measures such pollution control, effective waste management, use of water smart landscaping and irrigation and sustainable utilization of water through reusing among other measures¹³³. This will promote the attainment of sustainable development goal 6 geared towards enhancing access to clean water and sanitation for all while also actualizing Africa's green dream in the water sector.

Further, Africa should adopt green value chains for minerals. It has been observed that Africa is endowed with a variety of minerals that are central to decarbonization such as the Democratic Republic of the Congo (DRC) which produces over 70% of the world's cobalt, DRC and Zambia which supply 10% of global copper and Mozambique and South Africa which hold significant reserves of graphite, platinum

¹³⁰ United Nations, Department of Economic and Social Affairs, Sustainable Development goal 6- clean water and sanitation, available at <https://sdgs.un.org/goals/goal6> (Accessed on 03/07/2023)

¹³¹ Mugagga, F, & Nabaasa, B., 'The Centrality of Water Resources to the Realization of Sustainable Development Goals (SDG). A Review of Potentials and Constraints on the African Continent.' Op Cit

¹³² United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' available at <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-6> (Accessed on 03/07/2023)

¹³³ Mugagga, F, & Nabaasa, B., 'The Centrality of Water Resources to the Realization of Sustainable Development Goals (SDG). A Review of Potentials and Constraints on the African Continent.' Op Cit

metals, lithium among other countries¹³⁴. It has been observed that the opportunities presented by the global green mineral boom and domestic achievements such as the African Continental Free-Trade Area can help facilitate development of regional value chains for green economy products in the mining sector¹³⁵. There is need to tap into these opportunities in order foster green value chains towards actualizing Africa's green dream.

Finally, Africa must fast track the attainment of the Sustainable Development goals and the Sustainable Development agenda. It has been argued that Africa continues to lag behind other regions of the world in achieving the Sustainable Development agenda¹³⁶. The continent has made slow progress in attaining goals such as ending extreme poverty, promoting access to clean water and sanitation, promoting quality education and achieving gender equality¹³⁷. There is need to enhance the attainment of Sustainable Development Goals in Africa through measures such as increased funding, improved public and private partnerships, strengthening domestic legislations, embracing technology and support from the international community¹³⁸. This will accelerate attainment of Sustainable Development in Africa whilst actualizing Africa's green dream.

¹³⁴ Economic Commission for Africa., 'African Countries Urged to Prioritize Green Value Chains for Minerals.' Available at <https://www.un.org/africarenewal/magazine/february-2023/african-countries-urged-prioritize-green-value-chains-minerals> (Accessed on 03/07/2023)

¹³⁵ Ibid

¹³⁶ Begashaw. B., 'Africa and the Sustainable Development Goals: A long Way to go.' Op Cit

¹³⁷ UNDP., 'New Africa SDGs Report shows Slow Progress, Calls for Greater Action to Meet Targets.' Available at <https://www.undp.org/africa/press-releases/new-africa-sdgs-report-shows-slow-progress-calls-greater-action-meet-targets> (Accessed on 03/07/2023)

¹³⁸ Ibid

7.6. Conclusion

The concept of 'green economy' is vital in fostering Sustainable Development at the global, regional and national levels¹³⁹. Green growth has been embraced in Africa through measures such as adoption of renewable sources of energy, regenerative agricultural practices and sustainable waste management¹⁴⁰. However, despite this progress, several concerns hinder effective attainment of green growth in Africa. These include insufficient investments in renewable energy, underutilization and degradation of water resources, poor agricultural practices in some areas and failure to accelerate attainment of the Sustainable Development Goals¹⁴¹. There is need to address these challenges by upscaling investments in green energy sources such as renewable energy, adopting green agricultural practices such as regenerative agriculture, promoting sustainable utilization and management of water resources, adopting green value chains for minerals and fast tracking attainment of the Sustainable Development Goals¹⁴². This will enhance green growth and attainment of Sustainable Development in Africa. Actualizing Africa's Green Dream is an idea worth implementing.

¹³⁹ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' Op Cit

¹⁴⁰ Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Op Cit

¹⁴¹ Begashaw. B., 'Africa and the Sustainable Development Goals: A long Way to go.' Op Cit

¹⁴² UNDP., 'New Africa SDGs Report shows Slow Progress, Calls for Greater Action to Meet Targets.' Op Cit

CHAPTER EIGHT

Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

8.1. Introduction

A company's level of social responsibility may be measured by how well it strikes a balance between its economic success and its commitment to protecting the environment.¹ The concept of Corporate Social Responsibility (CSR) pertains to the equilibrium between a company's financial performance and its commitment to environmental preservation. This subject has garnered growing interest among academic researchers, particularly in the context of the Paris Climate Agreement of 2015.² Corporate social responsibility (CSR) refers to a discretionary conduct that goes beyond legal obligations. It is often used by firms as a strategic approach to address the diverse demands of many stakeholder groups, including institutional, public, and other stakeholders, in response to external pressures.³

In light of the need for sustainable development, Corporate Environmental Responsibility has emerged as a vital ethical asset for organisations seeking to enhance company values and secure resources.⁴

The incorporation of environmental performance into corporate social responsibility (CSR) is a crucial aspect that is gaining significance in

¹ Zhang D, 'Are Firms Motivated to Greenwash by Financial Constraints? Evidence from Global Firms' Data' (2022) 33 *Journal of International Financial Management & Accounting* 459.

² Ibid.

³ Xia, F., Chen, J., Yang, X., Li, X. and Zhang, B., 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 *Corporate Social Responsibility and Environmental Management* 1770.

⁴ Ibid.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

tandem with the global push for sustainable economic development.⁵ Organizations that demonstrate strong environmental performance have the potential to cultivate a favourable reputation among investors and therefore lower their costs of financing. Conversely, organizations that exhibit poor environmental performance are likely to face detrimental consequences, such as damage to their reputation.⁶ The fundamental process at play is that investors anticipate that polluting entities would incur substantial costs and liabilities associated with pollution, thereby diminishing their future competitiveness.⁷ Numerous nations, mostly in the Global North, have implemented mandatory due diligence (MDD) laws, which compel business entities to ascertain, forestall, alleviate, and redress the detrimental effects on human rights and the environment resulting from their activities, including problems associated with climate change.⁸

This chapter discusses the concept of sustainability audit as a means of increasing the percentage of businesses that comply with environmental regulations in Kenya. This is an activity that would be carried out as a follow-up to the environmental impact assessment and as a component of the process of environmental auditing, both of which are specifically envisaged under the provisions of the Constitution of Kenya, 2010, as well as the Environmental Management and Co-Ordination Act, 1999⁹ (EMCA). In most cases, there is little evidence that most entities stick to ensuring that their activities are environmentally sustainable after the EIA process and NEMA's occasional audits for the most critical industries with higher chances of serious pollution of the

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Rajavuori, M., Savaresi, A. and van Asselt, H., "Mandatory Due Diligence Laws and Climate Change Litigation: Bridging the Corporate Climate Accountability Gap?" *Regulation & Governance* (2023).

⁹ Environmental Management and Co-ordination Act, No. 8 of 1999, Laws of Kenya, Revised Edition 2019 [1999].

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

environment. The author explores the topic of environmental compliance by corporations, discusses the challenges that are associated with it, and argues that a sustainability audit is one of the approaches that may be used to address these difficulties. The framework known as Environmental, Social, and Governance (ESG) will serve as the foundation for the discussion.

In addition, a legitimate worry arises over the phenomenon known as "greenwashing," wherein corporations may strategically disclose environmental performance data in a manner that deceives both the general public and potential investors.¹⁰

This chapter also critically discusses the concept of greenwashing as a strategy used by the corporate world to create the impression that they are compliant with Environmental, Social and Governance (ESG) while hiding the true level of compliance, through marketing, and makes recommendations on how to address the same.¹¹

8.2. Environmental Impact Assessment, Audit and Monitoring Framework in Kenya

The Environmental Management Coordination Act¹² (EMCA) includes provisions for environmental impact assessments (EIA) as a regulatory instrument for the purpose of protecting the environment from the effects of anthropocentric activities. Indeed, EMCA includes a variety of requirements that pertain to the execution of Environmental Impact Assessments (EIA), Strategic Environmental Assessments (SEA),

¹⁰ Xia, F., Chen, J., Yang, X., Li, X. and Zhang, B., 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 Corporate Social Responsibility and Environmental Management 1770.

¹¹ Yu EP, Van Luu B and Chen CH, 'Greenwashing in Environmental, Social and Governance Disclosures' (2020) 52 Research in International Business and Finance 101192.

¹² Environmental Management Coordination Act, No. 8 of 1999, Laws of Kenya.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

Environmental Audits (EA), and management activities for air, water, wastes, and noise. Additional obligations in relation to environmental issues include the protection of wildlife, the administration of forests and water resources, and the guaranteeing of the health and safety of workers.

EIA is provided for in EMCA Section 58, which states that "notwithstanding any approval, permit or licence granted under this Act or any other law in force in Kenya, any person, being a proponent of a project, should before financing, commencing, proceeding with, carrying out, executing or conducting or causing to be financed, commenced, proceeded with, carried out, executed or conducted by another person any undertaking specified in the Second Schedule to this Act, submit a preliminary environmental impact assessment report.¹³ EMCA defines "Environmental Impact Assessment" (EIA) as a systematic examination that is carried out to establish whether or not a programme, activity, or project will have any adverse impacts on the surrounding environment.¹⁴

The contents of the reports from environmental impact assessment are provided for the *Environmental (Impact Assessment and Audit) Regulations, 2003*¹⁵. On the other hand, it is important to point out that the CBD COP 6 Decision VI/7 acknowledges that the essential components of an environmental impact assessment would inevitably comprise the following steps notwithstanding the fact that law and practice in different countries might differ significantly from one another. Initial assessment to evaluate whether proposed projects or developments needs to be followed up with a complete or partial impact study; The first step in conducting an impact assessment is called

¹³ S. 58(1), EMCA.

¹⁴ S. 2, EMCA.

¹⁵ Environmental (Impact Assessment and Audit) Regulations, 2003, Legal Notice No. 101 of 2003, Laws of Kenya.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

scoping, and its purpose is to determine which possible implications are important to evaluate and then to develop terms of reference for the evaluation. Impact assessment is the process of attempting to forecast and identify the possible environmental repercussions of a proposed project or development while taking into consideration the inter-related consequences of the project proposal as well as the socio-economic implications; Identifying potential mitigation methods (which may include refraining from moving through with the development, searching for alternative designs or locations that circumvent the effects, building safeguards into the design of the project, or offering financial compensation for unintended consequences); Choosing whether or not to approve the project; monitoring and analysing the development activities, projected effects, and proposed mitigation measures to ensure that unanticipated consequences or failed mitigation measures are detected and handled in a timely manner; deciding whether or not to approve the project.¹⁶

In order to fulfil the responsibilities that are owed to the environment, Kenya's Constitution and the EMCA both mandate that environmental audits and monitoring be carried out at regular intervals.¹⁷ EMCA provides the definition of environmental audit as the methodical, recorded, periodic, and objective examination of how effectively environmental organisation, management, and equipment are doing in conserving or protecting the environment.¹⁸ Environmental audits and monitoring serve as follow-up instruments to establish the degree to which activities currently being carried out adhere to the environmental

¹⁶ Unit B, 'COP Decision' <<https://www.cbd.int/decision/cop/?id=7181>> accessed 9 November 2022.

¹⁷ Constitution of Kenya, 2010, Article 69 (1) (f), Government Printer, Nairobi.

¹⁸ EMCA, s. 2.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

impact assessment study report concerns that are relevant to the specific project in question.¹⁹

The purpose of this procedure is to ensure that the assessment report is not deviated from in any way, since this might have negative repercussions for the surrounding environment. In accordance with EMCA, the National Environment Management Authority (NEMA) is required to perform environmental audits on all activities that are likely to have a significant effect on the environment. Additionally, NEMA is required to monitor all environmental phenomena in consultation with lead agencies with the intention of performing an assessment of any potential changes in the environment and their potential impacts.²⁰

As per EMCA, “environmental audit” means the systematic, documented, periodic and objective evaluation of how well environmental organisation, management and equipment are performing in conserving or preserving the environment while “environmental monitoring” means the continuous or periodic determination of actual and potential effects of any activity or phenomenon on the environment whether short-term or long term.²¹ The Authority or its designated agents is responsible for carrying out environmental audit of all activities that are likely to have significant effect on the environment.²² The owner of the premises or the operator of a project for which an environmental impact assessment study report has been made is required to keep accurate records and make annual reports to the Authority describing how far the project conforms in

¹⁹ National Environment Management Authority (NEMA) - Environmental Audit (EA). https://www.nema.go.ke/index.php?option=com_content&view=article&id=155&Itemid=274 (accessed 2023-06-16).

²⁰ EMCA, s. 68 & 69.

²¹ EMCA, s.2.

²² Ibid, s. 68(1).

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

operation with the statements made in the environmental impact assessment study report submitted under section 58(2).²³

While the Act is silent on sustainability audit, it provides that one of the general principles towards guaranteeing the right to clean and healthy environment is that every person should cooperate with state organs to protect and conserve the environment and to ensure the ecological sustainable development and use of natural resources.²⁴ Such audits and monitoring can be expanded to include sustainability audit of companies as a way of enhancing sustainability of their operations.

8.3. Environmental, Social and Governance (ESG)

The Environmental, Social, and Governance (ESG) framework is a tool utilised by stakeholders to gain insight into an organization's management of risks and opportunities associated with ESG criteria. These criteria encompass environmental, social, and governance factors. The ESG framework adopts a comprehensive perspective that recognises the broad scope of sustainability, encompassing not only ecological concerns but also social and governance considerations.²⁵

The international framework for corporate environmental compliance is comprised of a variety of treaties, standards, and principles. These were created with the intention of making it easier to enforce environmental laws and regulations and ensure that businesses complied with them. Although such conventions, principles, and norms in most cases bind states, they are directly relevant to corporations due to the fact that a state is able to regulate the actions of a company within

²³ Ibid, s. 68(3).

²⁴ Ibid, s. 3(2A).

²⁵ ESG (*Environmental, Social, & Governance*). Corporate Finance Institute. <https://corporatefinanceinstitute.com/resources/esg/esg-environmental-social-governance/> (accessed 2023-06-11).

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

its jurisdiction in order to ensure that such activities are in line with its responsibilities under international law.²⁶

Collective action may most effectively be accomplished via the establishment of global environmental agreements. They "are rarely the end product, but rather create the framework and the process that guide responses to the environmental problem in question," according to some authors.²⁷ Agreements not only facilitate contacts between nations but also encourage reciprocity and demand that governments put in place the regulations essential to addressing environmental issues. In the end, the purpose of all of these roles, outputs, and substantive measurements is to work towards enhancing the health of the environment.²⁸

As environmental problems, such as climate change, become more widespread, it is no longer acceptable to let companies' actions and inactions go unchecked. As a means of preventing environmental harm caused by businesses on a national and international scale, the principle of environmental liability has just come into existence. In addition, concepts of corporate governance such as corporate social responsibility demand that businesses take into account the repercussions that their economic activities will have on society when making decisions.²⁹ There

²⁶ Escobar-Pemberthy, N.; Ivanova, M. Implementation of Multilateral Environmental Agreements: Rationale and Design of the Environmental Conventions Index. *Sustainability* 2020, 12 (17), 7098; Andresen, S.; Boasson, E. L.; Hønneland, G. *International Environmental Agreements: An Introduction*; Routledge, 2012; Brown Weiss, E. *The Evolution of International Environmental Law*. 2011; *Framework Principles on Human Rights and the Environment* (2018). OHCHR. <https://www.ohchr.org/en/special-procedures/sr-environment/framework-principles-human-rights-and-environment-2018> (accessed 2023-06-11).

²⁷ Escobar-Pemberthy, N.; Ivanova, M. Implementation of Multilateral Environmental Agreements: Rationale and Design of the Environmental Conventions Index. *Sustainability* 2020, 12 (17), 7098. <https://doi.org/10.3390/su12177098>.

²⁸ Ibid.

²⁹ Buckley, P 'Can Corporations Contribute directly to society or only through regulated behaviour' *Journal of the British Academy*, 6 (sl), p. 323-374.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

is a school of thought that contends the idea of environmental governance is an essential component of what is known as corporate social and environmental responsibility.³⁰

While discharging their responsibility to promote the success of a company, directors are required under the Companies Act to take into consideration the effects that the firm's activities will have on the local community as well as the natural environment.³¹ In addition, the Act requires that directors, while they are compiling their reports, include information regarding issues pertaining to the environment and take into account the effect that the operations of the firm have on the surrounding environment.³²

The Climate Change Act of 2016 establishes a legal framework for a more robust response to climate change, as well as policies and processes designed to realise low-carbon climatic development.³³ The Act applies to all aspects of the economy and mandates the implementation of measures aimed at incorporating responses to climate change into the process of development planning, as well as the provision of incentives and obligations for the contribution of the private sector towards the achievement of low carbon climate development and the promotion of low carbon technologies.³⁴ Additionally, it places climate change responsibilities on commercial businesses, which may also be compelled to submit reports on the status of the fulfilment of such commitments.³⁵ NEMA has been given the authority under the Act to monitor, investigate, and report on whether

³⁰ MSV. Prasad, 'Corporate Environmental Governance: A Perception of Indian Stakeholder', available at https://ecoinsee.org/conference/conf_papers/conf_paper_18.pdf, (accessed on 28/11/2019).

³¹ Companies Act, No. 17 of 2015, s. 143 (1) (d), Government Printer, Nairobi.

³² *Ibid*, s. 655 (4) (b).

³³ Climate Change Act, No. 11 of 2016, Government Printer, Nairobi.

³⁴ *Ibid*, s. 3.

³⁵ *Ibid*, s. 16.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

or not both private and public entities are complying with their responsibilities as outlined in the Act.³⁶ When carrying out their operations, corporations have a responsibility to keep in mind the provisions of the Climate Change Act of 2016, since this legislation is crucial to the corporate environmental compliance process.

It is, therefore, important for the stakeholders in environmental and corporate management and governance to work together towards ensuring that the activities of these companies promote or at least do not adversely contribute to environmental degradation and climate change.

8.4. Sustainability Audit: Scope and Indicators

In 2015, the member states of the United Nations unanimously agreed to adopt the 2030 Agenda for Sustainable Development. This agenda includes 169 objectives and 17 goals related to sustainable development. The United Nations General Assembly announced in resolution 70/1 that the Sustainable Development Goals and Targets would be monitored and evaluated using a set of global indicators that would concentrate on quantifiable results.³⁷ Therefore, the reporting done by companies is a significant data source for the framework used to track progress towards the Sustainable Development Goals. Reporting, which serves as a primary source of information on company performance, has the potential to enrich and enhance the monitoring mechanisms for the Sustainable Development Goals. It does this by providing stakeholders, such as governments and providers of capital, with the means to evaluate the economic, environmental, and social impact that companies have on sustainable development.³⁸

³⁶ Ibid, s. 17.

³⁷ United Nations Conference on Trade and Development. *Guidance on Core Indicators for Sustainability and SDG Impact Reporting*; 2022, p. 1.

³⁸ Ibid, p.1.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

Risk assessment based on sustainability from the perspectives of all stakeholders, including financial, social, environmental, and technical ones, and risk management are the main areas of attention for sustainability accounting and auditing.³⁹ The technocratic paradigm, which places an emphasis on hard data and its potential to give comprehensive control over persons, institutions, and systems, predominates in contemporary sustainability auditing.⁴⁰

The use of indicators may enhance the quality of decisions and trigger more effective actions by simplifying, clarifying, and making aggregate information more available to decision-makers. This can lead to improvements in both choice quality and action effectiveness. In this particular setting, the SI have been used as instruments with the purpose of assisting in gaining an understanding of the idea of sustainability. This awareness has been achieved via the utilisation of a methodological approach that is tied to the new paradigms of Sustainable Development.⁴¹ Indicators of Sustainability (SI) are metrics that aim to quantify the degree of sustainability and gather information for improved decision-making about policies, programmes, initiatives, and activities linked to sustainability. The SI looks to be a vital instrument for assessing development objectives as a sustainable proposition now that its significance has been shown with regard to public policy.⁴²

Indicators of sustainability are an important tool for businesses to have. Concerns over the environment have been more prevalent throughout

³⁹ Fagerström, A.; Hartwig, G. *Accounting and Auditing of Sustainability: A Model Inter Title*; 2016.

⁴⁰ Reid, J.; Rout, M. Developing Sustainability Indicators–The Need for Radical Transparency. *Ecological Indicators* 2020, 110, 105941.

⁴¹ Batalhao, A., de Fatima Martins, M., van Bellen, H.M., Ferreira Caldana, A.C. and Teixeira, D., 'Sustainability Indicators: Relevance, Public Policy Support and Challenges' (2019) 9 *Journal of Management and Sustainability* 173, p.174.

⁴² *Ibid*, 173.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

the years. These companies have a lot to offer, particularly in the area of minimising the negative externalities they cause. This must be accomplished via their plans and tactics, but it is very necessary that there be a technique that is adequate for judging how effective these measures have been.⁴³ These are the techniques that may be used to evaluate how well a company's strategy has been implemented. These actions are tied to certain goals and are outlined in a strategy for the corporate sustainability of the organisation. For instance, cutting down on waste or one's carbon impact throughout the manufacturing process. Implementation of these standards is used to determine whether or not progress is being achieved in the desired direction.⁴⁴ The use of these indicators is done mostly for the purpose of determining whether or not the organisation is successful in achieving its goals. In the event that there is a deviation, appropriate remedial actions may be taken. Therefore, sustainability indicators are used to assess not only the profitability of the organisation but also how well it carries out its aims.⁴⁵

The process of developing indicators is always a two-way affair. Indicators are not only sought by policy goals, but they also serve to concretize and shape those goals in many ways. As a result, the process of producing indicators cannot be limited to a strictly technical or scientific scope; rather, it need to be characterized by open communication and a focus on policy.⁴⁶ Indicators that are acceptable for this function need to be straightforward and unambiguous about their purpose: a) the number of indicators should be kept to a minimum, and the process of calculating them should be made public; b) the

⁴³ APLANET. *Sustainability indicators: definition, types of KPIs and their use in the sustainability plan*. APLANET. <https://aplanet.org/resources/sustainability-indicators/> (accessed 2023-06-28).

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Valentin A and Spangenberg JH, 'A Guide to Community Sustainability Indicators' (2000) 20 *Environmental impact assessment review* 381, p.381.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

indicators should be directionally clear, which means that they should point out items and trends that are obviously relevant in terms of their importance for sustainability, and they should be sensitive, which means that they should be able to signal either progress or the absence of progress.⁴⁷

While there may be challenges in development of these indicators, stakeholders from different sectors can work together to develop a set of indicators that are both relevant to the country and easy to follow up on.⁴⁸ Thus, such challenges should not be used as a hindrance to not promoting development of the SI for promoting sustainability audit in the country.

It has been pointed out, and properly so, that sustainability consists of environmental, economic, and social aspects (occasionally institutions are mentioned as the fourth dimension), each of which contains a lot of components that make it up. Therefore, indications of sustainability may be as varied as the components of the system, and they can also differ with respect to worldviews, objectives, and scales of time and space. There are a lot of indicators, but most of them only reflect some elements of human-environmental systems. Some of them are more integrative than others, but none of them are sufficient to measure all of the characteristics of sustainability by itself.⁴⁹ In addition, It is becoming more widely acknowledged that the most significant value of the terms "sustainability" and "sustainable development" rests in their focus on uniting the various aspects, the most prevalent classifications of which are environmental, economic, and social. In light of this, efforts to

⁴⁷ Ibid, pp. 381-82.

⁴⁸ See Batalhao, A., de Fatima Martins, M., van Bellen, H.M., Ferreira Caldana, A.C. and Teixeira, D., 'Sustainability Indicators: Relevance, Public Policy Support and Challenges' (2019) 9 *Journal of Management and Sustainability* 173.

⁴⁹ Wu J and Wu T, "Sustainability indicators and indices: an overview." *Handbook of sustainability management* (2012): 65-86.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

promote sustainability need to centre on the holistic, integrated totality of human and environmental systems. Sustainability indicators must be more than environmental indicators; they must be about time and/or thresholds.⁵⁰ Development indicators should be more than growth indicators; they should be about efficiency, sufficiency, equity, and quality of life. Development indicators should be more than growth indicators; they should be about efficiency, sufficiency, equity, and quality of life. When it comes to our attempts to make sustainable development a reality, indicators and indices are very necessary for developing a scientific knowledge and formulating effective policies.⁵¹ These measurements will need to continue to increase in complexity and sophistication as time goes on in order for them to keep up with the demands placed on them by the ever-worsening state of environmental and socioeconomic issues. The process of discovering suitable and efficient indicators of sustainability is one that involves evolution as well as learning new things.⁵²

8.5. Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

It has been suggested that conceptualizing sustainable development as a decision-making strategy enables for it to truly be "used," therefore going beyond the rhetoric and converting sustainability and its "action-guiding" capacity into a notion that can "action-generate." At a minimum, the three issues listed below need to be taken into consideration if one wishes to get an understanding of the connections that exist between sustainability and decision-making, and as a result, the actualization of sustainable development as a method for making decisions: The term "sustainability" should be understood with

⁵⁰ Ibid, 84.

⁵¹ Ibid, 84; see also Farrell, A. and Hart, M., What does sustainability really mean? The search for useful indicators. *Environment: science and policy for sustainable development*, 40(9), pp.4-31.

⁵² Ibid, 84.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

consideration given to its organising principles, which should then be applied to a particular socio-environmental setting; information-structuring (the inherent multi-dimensional complexity of sustainability should be organized into operational information units, such as indicators, and correctly presented in order to feed the decision-making process); and Impact (the knowledge on sustainability ought to have a significant impact both on the process of making decisions and on the process of actually implementing sustainable development).⁵³

In Kenya, reporting on the economic, environmental, and social elements of a company's activity, in addition to the company's engagement with various stakeholders, is not a regular practice. There is a need for the country to entrench reporting especially on sustainability in its corporate and environmental laws, if sustainability goals are to be achieved in the country. This should be enforced in line with the provisions of section 655 of the Companies Act⁵⁴ which requires that unless the company is subject to the small companies regime, the directors shall include in their report a business review that complies with subsection (3), so far as relevant to the company.⁵⁵ The purpose of the business review is to inform members of the company and assist them to assess how the directors have performed their duty under section 144.⁵⁶ In the case of a quoted company, the directors are required to specify in the business review (to the extent necessary for an understanding of the development, performance or position of the company) – (a) the main trends and factors likely to affect the future development, performance and position of the business of the company; (b) information about – (i) environmental matters (including the impact

⁵³ Waas, T.; Hugé, J.; Block, T.; Wright, T.; Benitez-Capistros, F.; Verbruggen, A. Sustainability Assessment and Indicators: Tools in a Decision-Making Strategy for Sustainable Development. *Sustainability* 2014, 6 (9), 5512–5534. <https://doi.org/10.3390/su6095512>.

⁵⁴ Companies Act. No. 17 Of 2015, Laws of Kenya. Revised Edition 2021 [2015].

⁵⁵ *Ibid*, s.655(1).

⁵⁶ *Ibid*, s.655(2).

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

of the business of the company on the environment); (ii) the employees of the company; and (iii) social and community issues, including information on any policies of the company in relation to those matters and the effectiveness of those policies; and (c) information about persons with whom the company has contractual or other arrangements that are essential to the business of the company.⁵⁷ There is a need for stricter enforcement of these provisions coupled with sustainability audit to ensure that both quoted and unquoted companies' activities promote the Government's efforts towards achieving sustainability in the country. The Brundtland Commission's definition of sustainability is a complex and multifaceted concept, making it an aspirational goal for public policy. It gives equal weight to environmental, economic, social, and institutional considerations as it does to other factors.⁵⁸ The Office of the Registrar of companies should work closely the NEMA in order to enhance the effectiveness of non-financial reporting through promoting sustainability audit to ensure transmission of verifiable data on economic, social, environmental and governance data, as a way of promoting sustainable development based on true data.

8.6. Greenwashing: A hindrance to Achieving Sustainability?

8.6.1. Greenwashing: Meaning and Drivers

One of the conceptualizations of greenwashing pertains to the phenomenon whereby firms exhibit an appearance of transparency and disseminate substantial volumes of environmental, social, and governance (ESG) data, but demonstrate inadequate results in many dimensions of their ESG endeavours.⁵⁹

⁵⁷ Ibid, s.655(4).

⁵⁸ Valentin A and Spangenberg JH, 'A Guide to Community Sustainability Indicators' (2000) 20 Environmental impact assessment review 381, p. 381.

⁵⁹ Zhang D, 'Are Firms Motivated to Greenwash by Financial Constraints? Evidence from Global Firms' Data' (2022) 33 Journal of International Financial Management & Accounting 459.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

The assessment of a firm's engagement in greenwashing involves evaluating its standing in relation to other firms by comparing the disparity between its ESG disclosure and performance ratings.⁶⁰ The primary motivation for organizations' decision to participate in greenwashing of their environmental performance is the anticipation of future investment and financing need. It has been observed that companies with elevated levels of debt are more inclined to partake in greenwashing practices.⁶¹

The phenomenon of greenwashing often arises from the strategic use of legal resources, such as green subsidies, by enterprises. The presence of legitimacy status ensures that corporations are open to external resources, which may lead enterprises with substandard environmental performance to use selective disclosure tactics.⁶² However, it is important to note that firms engage in greenwashing practices with the intention of conveying favourable messages. Companies may engage in the deceptive transmission of information by concealing unfavourable environmental data in order to preserve their reputation and project an environmentally responsible image, sometimes in response to pressure from investors.⁶³ Furthermore, the environmental decisions made by firms may be influenced by the interests and risk preferences of corporate leaders, who hold managerial and decision-making positions inside these organisations.⁶⁴

There is ongoing discourse on the potential influence of cultural variables on the propensity for greenwashing. The development of the current notion of corporate social responsibility (CSR) and the majority

⁶⁰ Ibid.

⁶¹ Xia F and others, 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 Corporate Social Responsibility and Environmental Management 1770.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

of studies on greenwashing have been focused on western cultures. However, there is an increasing interest in the social and environmental practices of corporations in transitional economies, leading to a fast expansion of relevant literature.⁶⁵

8.6.2. Combating Greenwashing for Sustainability

In recent years, there has been a growing focus on climate change and pollution emissions due to their significant impact on both human well-being and the economic and financial sectors.⁶⁶

The involvement of firms in greenwashing practices has the potential to negatively impact several stakeholders, such as investors, the general public, and competing enterprises. Greenwashing practices may result in a situation of information asymmetry, thereby causing detrimental effects on the financial interests of investors. The disclosure of previously concealed adverse environmental data by corporate executives has the potential to result in a significant decline in the value of a company's shares.⁶⁷ Furthermore, engaging in greenwashing practices does not contribute to the enhancement of business environmental performance. It is plausible for corporations to conceal instances of pollution and even breaches of environmental legislation by engaging in symbolic compliance.⁶⁸

⁶⁵ Xia F and others, 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 *Corporate Social Responsibility and Environmental Management* 1770.

⁶⁶ Zhang D, 'Are Firms Motivated to Greenwash by Financial Constraints? Evidence from Global Firms' Data' (2022) 33 *Journal of International Financial Management & Accounting* 459.

⁶⁷ Xia F and others, 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 *Corporate Social Responsibility and Environmental Management* 1770.

⁶⁸ *Ibid.*

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

The absence of consequences for greenwashing corporations also ultimately hampers equitable competition within markets, particularly for companies who prioritize environmental management and proactively publish essential environmental information.⁶⁹ Consequently, the presence of greenwashing practices may have an impact on stakeholders' perceptions of the firm, the decision-making processes of managers, the work performance of staff, and the purchase choices of customers.⁷⁰

It is the cultural aspect that has informed the current chapter, with a focus on developing nations like Kenya. For instance, the Kenya Flower Council, a voluntary membership organisation run by a board, with its main office located in Nairobi, oversees the adherence of its members to a set of guidelines encompassing various aspects of horticultural practices, sustainability, social responsibility, hygiene, health and safety, capacity development, environmental preservation, and conservation. The adherence to the code of practice serves as the fundamental support for all actions undertaken.⁷¹ The code of practice has been evaluated by the Floricultural Sustainability Initiative to assess its compliance with recognised social and environmental sustainability criteria, making it one of the three global standards that have undergone independent benchmarking.⁷²

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ 'Council Strives to Ensure Flower Farmers Meet Defined Standards - Kenyan Woman' (4 February 2018) <<https://kw.awcfs.org/article/council-strives-to-ensure-flower-farmers-meet-defined-standards/>> accessed 23 August 2023; see also 'EU Trade Deal: Kenya Opens Its Market to European Goods - DW - 06/20/2023' (*dw.com*) <<https://www.dw.com/en/eu-trade-deal-kenya-opens-its-market-to-european-goods/a-65978273>> accessed 23 August 2023.

⁷² Ibid; see also Buxton A and Vorley B, 'The Ethical Agent: Fresh Flowers in Kenya' [2012] International Institute for Environment and Development/Sustainable Food Lab.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

This does not mean that human rights violations and greenwashing have not been reported in Kenya and perhaps other African countries.⁷³ Western countries have been increasingly calling on African companies and other international corporations with presence in developing countries and others to adhere to ESG requirements. For instance, on the 1st of June 2023, after a prolonged period of rigorous discussions, the European Parliament endorsed its formal stance on the Corporate Sustainability Due Diligence Directive (CSDDD).⁷⁴ The implementation of the Corporate Sustainability Due Diligence Directive (CSDDD) proposed by the European Commission would require corporations to create due diligence protocols in order to mitigate the negative consequences of their activities on human rights and the environment. This would include addressing such effects across their global value chains. The objective is to promote the development of enduring and accountable corporate conduct, as well as to include sustainability factors into the operational and governance practices of firms.⁷⁵

The CSDDD is a component of the European Green Deal which encompasses a series of policy measures implemented by the European Commission. Its primary objective is to align the climate, energy, transport, and taxation policies of the European Union in order to achieve a minimum reduction of 55% in net greenhouse gas emissions

⁷³ Arif-Fear L, 'The Dark Side of the Flower Sector: The Growing Exploitation of Women in Kenya' (*Anti-Slavery International*, 3 November 2022) <<https://www.antislavery.org/flower-sector-exploitation-of-women-in-kenya/>> accessed 23 August 2023.

⁷⁴ Russell G, 'One Step Closer to Mandatory Human Rights and Environmental Due Diligence in the EU' (*Anti-Slavery International*, 20 June 2023) <<https://www.antislavery.org/one-step-closer-to-mandatory-human-rights-and-environmental-due-diligence-in-the-eu/>> accessed 23 August 2023.

⁷⁵ Union (EBU) EB, *Sustainability Rulebook: The Corporate Sustainability Due Diligence Directive (CSDDD)* (2023) <<https://www.ebu.ch/case-studies/open/legal-policy/the-future-of-eu-sustainability-regulation-ii-the-corporate-sustainability-due-diligence-directive-csddd>> accessed 23 August 2023.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

by 2030, relative to the levels recorded in 1990. Furthermore, the European Green Deal aims to attain climate-neutral by 2050.⁷⁶

Similarly, the proposal for a rule on deforestation-free supply chains was presented by the EU Commission in November 2021.⁷⁷ Cocoa was chosen, with beef, palm oil, soy, and coffee, as one of the five global commodities that needed more control. According to the survey, cocoa is alone accountable for 7.5% of deforestation worldwide that is attributed to the European Union.⁷⁸

It has been noted that Although governments require corporate environmental information disclosure, weak enforcement and low penalties can make it easy for companies to greenwash.⁷⁹ It is suggested that African countries could borrow a leaf from the proposed European CSDDD Rules' mode of enforcement which is:⁸⁰

- a. **Administrative supervision and sanctions:** Member States would designate an authority to supervise and impose administrative sanctions, including fines and compliance orders. At the European level, the Commission will set up a European Network of Supervisory Authorities that will bring together representatives of the national

⁷⁶ Ibid.

⁷⁷ Ghana <Anand Chandrasekhar> with reporting by Delali Adogla-Bessa in, 'West Africa Braces for Tough Sustainable Cocoa Rules in Europe' (*SWI swissinfo.ch*, 2 August 2022) <<https://www.swissinfo.ch/eng/business/west-africa-braces-for-tough-sustainable-cocoa-rules-in-europe/47713236>> accessed 23 August 2023.

⁷⁸ Ibid; see also Ilgar O, 'SAP BrandVoice: The Sustainability Problems Percolating In The Coffee Supply Chain' (*Forbes*) <<https://www.forbes.com/sites/sap/2022/09/29/the-sustainability-problems-percolating-in-the-coffee-supply-chain/>> accessed 23 August 2023.

⁷⁹ Xia F and others, 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 *Corporate Social Responsibility and Environmental Management* 1770.

⁸⁰ Union (EBU) EB, *Sustainability Rulebook: The Corporate Sustainability Due Diligence Directive (CSDDD)* (2023) <<https://www.ebu.ch/case-studies/open/legal-policy/the-future-of-eu-sustainability-regulation-ii-the-corporate-sustainability-due-diligence-directive-csddd>> accessed 23 August 2023.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

authorities to ensure a coordinated approach. Natural and legal persons would be entitled to submit “substantiated concerns” to any supervisory authority alleging that a company is failing to comply.⁸¹

- b. Civil liability:** Member States will ensure that victims have access to compensation for damages resulting from the companies’ failure to comply with their due diligence obligations.⁸²
- c. Financial incentives:** Implementation of the emission reduction plans will be embedded in the financial incentives of directors of EU companies by linking their variable remuneration to their contribution to fulfilling these plans.⁸³

While these proposals may require additional legislation/regulations, they are not entirely unachievable with the current framework, especially in Kenya. Companies are subject to oversight from the public and social organisations in order to ensure their adherence to Corporate Social Responsibility (CSR) practices. Public and social organisations closely monitor the environmental practices of enterprises and often express dissatisfaction or impose penalties on companies that demonstrate environmental irresponsibility.⁸⁴ The presence of social oversight heightens the likelihood of greenwashing being exposed, resulting in a subsequent erosion of public confidence.⁸⁵ Hence, the

⁸¹ Ibid; see also ‘Corporate Sustainability Due Diligence’ (23 February 2022) <https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en> accessed 23 August 2023.

⁸² Ibid; ‘Corporate Sustainability Due Diligence’ (23 February 2022) <https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en> accessed 23 August 2023.

⁸³ Ibid; see also ‘Corporate Sustainability Due Diligence’ (23 February 2022) <https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en> accessed 23 August 2023.

⁸⁴ Xia F and others, ‘Financial Constraints and Corporate Greenwashing Strategies in China’ (2023) 30 Corporate Social Responsibility and Environmental Management 1770.

⁸⁵ ‘Corporate Sustainability Greenwash and the Risk to Social and Governance Standards’ <<https://www.ibanet.org/corporate-sustainability-greenwash-risk-to-social-and-governance-standards>> accessed 23 August 2023; Laufer WS, ‘Social Accountability and Corporate Greenwashing’ (2003) 43 Journal of business ethics 253;

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

oversight from the general public has the potential to impede the practice of greenwashing by corporations.⁸⁶ Moreover, in a geographical area characterized by elevated environmental requirements and a greater emphasis on corporate environmental disclosure, the influence of societal scrutiny will assume a more important role.⁸⁷

Directors, in fulfilment of their duty to enhance the flourishing of a company, are mandated by the Companies Act of 2015 in Kenya to duly consider the potential impacts of the company's operations on both the surrounding community and the ecological environment.⁸⁸ Furthermore, the legislation mandates that directors include environmental considerations into their reports and assess the impact of the firm's activities on the surrounding ecosystem.⁸⁹

Efforts must be collectively undertaken to ensure the implementation of effective reporting mechanisms, particularly in the realm of corporate and environmental legislation, in order to successfully attain sustainability objectives within the nation and effectively curb the practice of greenwashing. This can get support from the provisions of section 655 of the Companies Act⁹⁰ which requires that unless the company is subject to the small companies regime, the directors shall include in their report a business review that complies with subsection (3), so far as relevant to the company.⁹¹ The purpose of the business review is to inform members of the company and assist them to assess

⁸⁶ Xia F and others, 'Financial Constraints and Corporate Greenwashing Strategies in China' (2023) 30 Corporate Social Responsibility and Environmental Management 1770.

⁸⁷ Ibid.

⁸⁸ Companies Act, No. 17 of 2015, s. 143 (1) (d), Government Printer, Nairobi.

⁸⁹ Ibid, s. 655 (4) (b).

⁹⁰ Companies Act. No. 17 Of 2015, Laws of Kenya. Revised Edition 2021 [2015]

⁹¹ Ibid, s.655(1).

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

how the directors have performed their duty under section 144.⁹² In the case of a quoted company, the directors are required to specify in the business review (to the extent necessary for an understanding of the development, performance or position of the company) – (a) the main trends and factors likely to affect the future development, performance and position of the business of the company; (b) information about – (i) environmental matters (including the impact of the business of the company on the environment); (ii) the employees of the company; and (iii) social and community issues, including information on any policies of the company in relation to those matters and the effectiveness of those policies; and (c) information about persons with whom the company has contractual or other arrangements that are essential to the business of the company.⁹³

In addition to the foregoing, the Environmental Management and Co-Ordination Act, 1999⁹⁴ (EMCA) envisages environmental reporting and even spells out enforcement tools and offences to enhance compliance.⁹⁵ EMCA stipulates various environmental offences which including offences related to *inspection*, offences related to *Environmental Impact Assessment*, offences related to records and *standards and offences related to hazardous wastes* (emphasis added).⁹⁶ The Act also prescribes penalties for these offences.⁹⁷ Offences under EMCA relate to among other things, failing to submit to inspection⁹⁸, offences relating to Environmental Impact Assessment⁹⁹; offences relating to records¹⁰⁰; offences relating to

⁹² Ibid, s.655(2).

⁹³ Ibid, s.655(4).

⁹⁴ Environmental Management and Co-ordination Act, No. 8 of 1999, Laws of Kenya, Revised Edition 2019 [1999].

⁹⁵ See SEC. 38 (C); Sec. 57; Part XIII, EMCA

⁹⁶ EMCA, s. 137-146.

⁹⁷ Ibid.

⁹⁸ Sec. 137, EMCA.

⁹⁹ Sec. 138, EMCA.

¹⁰⁰ Sec. 139, EMCA.

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

standards¹⁰¹; offences relating to hazardous waste¹⁰²; offences relating to pollution¹⁰³; and offences relating to restoration orders¹⁰⁴.

To meet the obligations towards the environment, it is mandated by both Kenya's Constitution and the Environmental Management and Coordination Act (EMCA) that periodic environmental audits and monitoring activities be conducted.¹⁰⁵ According to EMCA, an environmental audit is a systematic, documented, regular, and unbiased evaluation of the effectiveness of an organization's environmental practices, management strategies, and equipment in the preservation and safeguarding of the environment.¹⁰⁶ Environmental audits and monitoring are used as subsequent measures to examine the extent to which ongoing operations align with the environmental impact assessment study report, addressing the pertinent problems associated with the particular project at hand.¹⁰⁷

This is a testimony that Kenya is not entirely devoid of the requisite legislation to curb greenwashing by the corporations operating in the country. All that is required is streamlining the operational efficiency of co-operation between enforcement agencies and the goodwill of the political class. The political goodwill is important as the monitoring and enforcement task will not come without financial implications. While some of the enforcement costs may be recovered from the polluters, some of the costs may not.¹⁰⁸ Even as the companies market themselves

¹⁰¹ Sec. 140, EMCA.

¹⁰² Sec. 141, EMCA.

¹⁰³ Sec. 142, EMCA.

¹⁰⁴ Sec. 143, EMCA.

¹⁰⁵ Constitution of Kenya, 2010, Article 69 (1) (f), Government Printer, Nairobi.

¹⁰⁶ EMCA, s. 2.

¹⁰⁷ *National Environment Management Authority (NEMA) - Environmental Audit (EA)*. https://www.nema.go.ke/index.php?option=com_content&view=article&id=155&Itemid=274 (accessed 2023-06-16).

¹⁰⁸ See Chapter Seven, Farmer A, *Handbook of Environmental Protection and Enforcement: Principles and Practice* (Earthscan 2012).

CHAPTER EIGHT: Embracing Sustainability Audit for Enhanced Corporate Environmental Compliance in Kenya

as 'green' they must not be taken at their word; regulators must verify the information being fed to the public either through media or own audit reports.

8.7. Conclusion

There is a pressing need for the development of well-thought-out sustainability assessment systems that involve governments, industries, and non-governmental organisations. These systems need to be able to provide certainty and assurance to either consumers or the general public regarding the sustainability of particular industry practices and activities. This would go a long way towards generating increased understanding of environmental and social concerns while encouraging the development of sustainable practices across organisations and businesses. It would also go a long way towards assessing and communicating sustainability attributes. This should be done in a way that is open, honest, and critical as we go forward with the creation of the sustainability assessment systems.¹⁰⁹ Embracing Sustainability Audit for enhanced corporate environmental compliance is the way to go as we seek to attain true Sustainable Development.

There is an urgent need for enhanced implementation of the provisions on sustainability audit, accompanied by the implementation of sustainability audits. This is necessary to ensure that all corporations and businesses, whose operations have the potential to impact the environment, are included and held accountable for any detrimental consequences on both human beings and the environment. These efforts are aimed at attaining sustainability in Kenya and Africa as a whole. Greenwashing is clearly a hindrance to achieving true sustainability. We should curb or avoid it altogether.

¹⁰⁹ Reid, J.; Rout, M. Developing Sustainability Indicators–The Need for Radical Transparency. *Ecological Indicators* 2020, 110, 105941.

CHAPTER NINE

Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

9.1. Introduction

The concept of Sustainable Development seeks to balance social, environmental and economic targets¹. It aims to ensure that human welfare is taken care of while also seeking to make certain that environmental resources are utilized in a manner that promotes protection and conservation for the sake of future generations². Sustainable Development is also viewed as development that meets the needs of the present without compromising the ability of future generations to meet their own needs³. This idea has been adopted as the global blueprint for development as envisaged by the United Nations in its 2030 Agenda for Sustainable Development⁴. The 2030 Agenda for Sustainable Development stipulates 17 Sustainable Development Goals (SDGs) which sets out a universal call to action to end poverty protect the planet and ensure that all people enjoy peace and prosperity by 2030⁵. The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all⁶. They address the global challenges facing the world including those related to poverty,

¹ Holden. E., Linnerud. K., & Banister. D., 'The Imperatives of Sustainable Development.' (2017) 25 Sustainable Development, 213

² Muigua. K., 'Achieving Sustainable Development, Peace and Environmental Security.' Glenwood Publishers Limited, 2015

³ World Commission on Environment and Development., 'Our Common Future.' Oxford, (Oxford University Press, 1987)

⁴ United Nations General Assembly., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1

⁵ Ibid

⁶ United Nations., 'Sustainable Development Goals.' Available at <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> (Accessed on 07/08/2023)

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

inequality, climate change, environmental degradation, peace and justice⁷.

Sustainable Development is a vital concept with global implications. Realizing Sustainable Development is essential in improving the quality of life for people and the planet by attaining economic prosperity, social equity and environmental protection⁸. It has been asserted that achieving the Sustainable Development Goals is essential in improving lives and transforming the world for the better⁹.

However, it has been observed that there has been slow progress in achieving most of the targets stipulated by the Sustainable Development Goals such as ending poverty, achieving food security, promoting good health and well-being, combating climate change and fostering peace¹⁰. Despite the ambitious plan set forward by the Sustainable Development Goals, many countries including Kenya are still facing social injustices such as gender inequalities and economic disparities between the rich and the poor resulting in many people facing challenges in accessing quality and adequate food, health services, quality education, clean water and sanitation and affordable and clean energy¹¹. Further, environmental problems are still widespread as evidenced by pollution of water sources, poor solid waste management and industrial pollution, actions which result in climate change concerns¹². These factors necessitate a re-evaluation of

⁷ Ibid

⁸ Muigua. K., 'Nurturing Our Environment for Sustainable Development.' Glenwood Publishers Limited, 2016

⁹ United Nations General Assembly., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

¹⁰ United Nations., 'Sustainable Development Progress Chart 2022.' Available at <https://unstats.un.org/sdgs/report/2022/Progress-Chart-2022.pdf> (Accessed on 07/08/2023)

¹¹ Muigua. K., 'Achieving Sustainable Development, Peace and Environmental Security.' Op Cit

¹² Ibid

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

the policies, plans and programs designed towards realizing the Sustainable Development agenda.

This chapter discusses the role of science, technology and innovation in fostering Sustainable Development. It has been argued that science, technology and innovation are vital tools in promoting Sustainable Development¹³. The United Nations Development Programme further acknowledges that creativity, knowhow, technology and financial resources from all of society is necessary to achieve the SDGs in every context¹⁴. The chapter critically examines ways through which science, technology and innovation can promote Sustainable Development. It argues a case for embracing science, technology and innovation in addressing climate change in order to accelerate the attainment of Sustainable Development across the globe.

9.2. Role of Science, Technology and Innovation in Achieving Sustainable Development

In the context of Sustainable Development, science has been described as the process of understanding how humans interact with the natural environment¹⁵. Environmental science studies the mechanisms and processes underlying our interactions with the natural environment, the implications for the environment of the complexity and uncertainty

¹³ Sustainability., 'The Impact of Science and Technology on Sustainable Future.' Available at <https://blog.se.com/sustainability/2023/03/15/the-impact-of-science-and-technology-on-sustainable-future/#:~:text=Science%20and%20technology%20for%20a%20sustainable%20future%20are%20likely%20to,health%20needs%20worldwide%20while%20protecting> (Accessed on 07/08/2023)

¹⁴ UNDP., 'The SDGs in Action.' Available at <https://www.undp.org/sustainable-development-goals> (Accessed on 07/08/2023)

¹⁵ Voulvoulis. N., 'The Contrasting Roles of Science and Technology in Environmental Challenges.' *Critical Reviews in Environmental Science and Technology*, Available at https://www.researchgate.net/publication/331388362_The_contrasting_roles_of_science_and_technology_in_environmental_challenges (Accessed on 07/08/2023)

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

brought on by economic, technological and social change¹⁶. Environmental technology on the other hand can be understood as the process of applying the understanding obtained from environmental science to address environmental challenges¹⁷. It allows the application of scientific knowledge towards taking the actions necessary to prevent, prepare for, or mitigate environmental risks¹⁸. Technology entails both soft technology which refers to information, training, research and capacity building and hard technology comprising of equipment and machinery¹⁹. Innovation in the field of Sustainable Development and refers to the process of developing and adopting new processes, products and technologies that are environment- friendly and aimed at addressing societal concerns such as food security, health, climate change and energy by promoting effective remedies to these challenges²⁰. Innovation is a key driver of sustainability²¹. It has been asserted that science, technology and innovation can provide effective solutions to most, if not all, environmental problems facing the world²². Science, technology and innovation plays a critical role in achieving the sustainable development goals. It can enhance productivity and induce a dynamic transformation of the economy, increasing growth rates and the number of decent jobs while reducing fossil-based energy consumption²³. In addition, through science, technology and

¹⁶ Walls. A et al., 'Convergence between Science and Environmental Education.' *Science*, Volume 344, No. 6184

¹⁷ Voulvoulis. N., 'The Contrasting Roles of Science and Technology in Environmental Challenges.' *Op Cit*

¹⁸ *Ibid*

¹⁹ Srinivas. H., 'Introduction: Technology and Environment' available at <http://www.gdrc.org/techtran/introduction.html> (Accessed on 07/08/2023)

²⁰ Silvestre. B., & Tirca. D., 'Innovations for Sustainable Development: Moving towards a Sustainable Future.' *Journal of Cleaner Production*, 2018

²¹ *Ibid*

²² Huesemann. M.H., 'Can Pollution Problems Be Effectively Solved by Environmental Science and Technology? An Analysis of Critical Limitations, Ecological Economics, Volume 37, Issue 2, May 2001, pp, 271-287

²³ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Available at

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

innovation, it is possible to develop essential drugs and improve health and medical care, achieve food security through sustainable agricultural methods and raising agricultural productivity, improve the safety of housework, and increase the safety of reproduction²⁴. It has also been asserted that eco-friendly technology is poised to have a significant impact on the environment, as well as the economy, in the near future²⁵. Such technology can aid in reducing emissions, the amount of waste produced and the amount of money spend²⁶.

Achieving the Sustainable Development Goals requires action on a number of fronts, including harnessing and maximizing the potential of science and technological innovation²⁷. Examples of such technologies include carbon capture and storage systems, more efficient irrigation methods, essential medicines, household water purification devices, and manufacturing processes that minimize waste and pollution²⁸. It has been argued that advancing a nation's capacity in science, technology and innovation and their effective application in social, economic and environmental dimensions of development are essential factors for expanding peoples' capabilities and achieving Sustainable Development²⁹.

<https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/CDP-excerpt-2013-3.pdf> (Accessed on 07/08/2023)

²⁴ Ibid

²⁵ Nichols. M., 'How Can Technology Save the Environment?' Available at <https://born2invest.com/articles/technology-save-environment/> (Accessed on 07/08/2023)

²⁶ Ibid

²⁷ Harvard Kennedy School., 'Technology Innovation for Sustainable Development (2011-present).' Available at <https://www.hks.harvard.edu/centers/mrcbg/programs/sustsci/activities/program-initiatives/innovation> (Accessed on 07/08/2023)

²⁸ Ibid

²⁹ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

The role of science, technology and innovation in realizing Sustainable Development is increasingly being acknowledged³⁰. Most countries are now using science and technology to identify the answers to achieving a sustainable future and solving the environmental problems that they are facing³¹. The United Nations 2030 Agenda for Sustainable Development recognizes the role of science, technology and innovation in achieving the Sustainable Development Goals including achieving food security; promoting good health and well-being; fostering access to affordable and clean energy; building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation and combating climate change³². It advocates for enhanced international cooperation on and access to science, technology and innovation including knowledge sharing, capacity building, development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries in order to enhance Sustainable Development³³.

The *Rio Declaration on Environment and Development*³⁴ further acknowledges the role of science, technology and innovation in the Sustainable Development agenda. It encourages states to cooperate towards strengthening endogenous capacity-building for Sustainable Development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies,

³⁰ Nasscom Community., 'Role Of Science and Technology in Building a Sustainable Future.' Available at <https://wire19.com/role-of-science-and-technology-in-building-a-sustainable-future/> (Accessed on 07/08/2023)

³¹ Ibid

³² United Nations General Assembly., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

³³ Ibid

³⁴ United Nations General Assembly., 'Report of the United Nations Conference on Environment and Development: Rio Declaration on Environment and Development.' A/CONF.151/26 (Vol. I)

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

including new and innovative technologies³⁵. The *Paris Agreement*³⁶ also recognizes the role of science, technology and innovation in climate change mitigation and adaptation. It calls for the use of scientific knowledge in planning, policies and implementation in relation to climate change adaptation and mitigation actions; technology development and transfer and accelerating, encouraging and enabling innovation in order to improve global resilience to climate change and foster Sustainable Development³⁷.

The role of science, technology and innovation in Sustainable Development is also captured in Kenya. The *Constitution of Kenya* requires the state to recognise the role of science and indigenous technologies in the development of the nation³⁸. In addition, the *Environmental Management and Co-ordination Act* encourages the use of suitable technologies to minimize pollution and adoption of innovative conservation practices in order to realize sound management of the environment³⁹. The *Climate Change Act* also envisages the role of scientific knowledge about climate change, technology transfer and technological innovations relevant to climate change including promoting low carbon technologies and uptake of technologies that support low carbon and climate resilient development in fostering effective climate change mitigation and adaptation in Kenya towards Sustainable Development⁴⁰.

³⁵ Ibid, Principle 9

³⁶ United Nations Framework Convention on Climate Change., 'Paris Agreement.' Available at https://unfccc.int/sites/default/files/english_paris_agreement.pdf (Accessed on 07/08/2023)

³⁷ Ibid

³⁸ Constitution of Kenya, 2010, Article 11 (2) (b)., Government Printer, Nairobi

³⁹ Environmental Management and Co-ordination Act., No. 8 of 1999, Government Printer, Nairobi

⁴⁰ Climate Change Act., No. 11 of 2016, Government Printer, Nairobi.

Science, technology and innovation are thus vital in fostering Sustainable Development.

9.3. Realizing Sustainable Development through Science, Technology and Innovation: Promises and Problems

Science, technology and innovation has aided the realization of Sustainable Development in various fields. Agricultural research, innovation and technology has enhanced food production and improved the resilience of the agricultural sector to the effects of climate change⁴¹. Advancements in precision agriculture, farm automation, genetics, water management technology including water efficient irrigation technologies and post-harvest management and storage of food have enabled smarter, safer and more productive farming⁴². It has been asserted that technology and innovation provide the agricultural sector with an opportunity to increase productivity while promoting better management of natural resources⁴³. This is vital in ensuring long-term viability of the agricultural sector and reducing the negative environmental impacts of production, such as pollutants and waste⁴⁴. Sustainable agriculture production systems also take into account how to adapt to climate change and mitigate greenhouse gas emissions⁴⁵. Science, technology and innovation have thus enhanced realization of food security which is an essential component of the Sustainable Development agenda⁴⁶.

⁴¹ Muigua. K., 'Nurturing our Environment for Sustainable Development.' Op Cit

⁴² Mass Challenge., 'Agriculture Innovation: 10 Tech Trends to Watch in 2023.' Available at <https://masschallenge.org/articles/agriculture-innovation/> (Accessed on 08/2023)

⁴³ Organisation for Economic Co-operation and Development., 'Innovation for a more Sustainable and Prosperous Agriculture.' Available at <https://www.oecd.org/agriculture/topics/agricultural-productivity-and-innovation/> (Accessed on 08/08/2023)

⁴⁴ Ibid

⁴⁵ Ibid

⁴⁶ UNDP., 'Goal 2: Zero Hunger.' Available at <https://www.undp.org/sustainable-development-goals/zero-hunger?gclid=CjwKCAjw44mlBhAQEiwAqP3eVopUd->

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

Further, science, technology and innovation have enabled development essential drugs and vaccines thus improving health and medical care⁴⁷. It has been argued that science, technology and innovation are the keys to achieving Sustainable Development in developing countries by improving their health systems and mitigating negative environmental impacts that jeopardize people's health⁴⁸. According to the World Health Organization, science, technology and innovation accelerate progress in primary health care, addressing poverty-related diseases, and disease outbreak early warning and response⁴⁹. Research, development, innovation, data and digital health can help deliver effective primary health care thus aiding in the fight against diseases⁵⁰. Science, technology and innovation enhance access to treatments, vaccines, and health-related technologies⁵¹. The importance of science, technology and innovation in the health sector has been recently witnessed through life saving treatments and development of vaccines in the ongoing global fight against the COVID-19 pandemic⁵². Science, technology and innovation are therefore integral in ensuring good

R_KxFJ8xEotjff6tFCHYfOZ0EISOZ5qBngYBSlgPCoPXLypPxoCpGkQAvD_BwE
(Accessed on 08/08/2023)

⁴⁷ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

⁴⁸ United Nations., 'World Health Day 2022: Science, Technology and Innovation help improve Health in the Least Developed Countries.' Available at <https://www.un.org/technologybank/news/world-health-day-2022-science-technology-and-innovation-help-improve-health-least-developed> (Accessed on 08/08/2023)

⁴⁹ World Health Organization., 'Stronger Collaboration, Better Health: Global Action Plan for Healthy Lives and Well-being for All.' Available at <https://www.who.int/initiatives/sdg3-global-action-plan> (Accessed on 08/08/2023)

⁵⁰ United Nations Economic and Social Council., 'Using Science, Technology and Innovation to Close the Gap on Sustainable Development Goal 3, Good Health and Well-Being.' E/CN.16/2021/2

⁵¹ Ibid

⁵² UNCTAD., 'Science, Technology and Innovation efforts to address COVID-19.' Available at <https://unctad.org/topic/commission-on-science-and-technology-for-development/covid-19> (Accessed on 08/08/2023)

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

health and well-being for all and addressing future health emergencies and infectious disease outbreaks⁵³.

In addition, science, technology and innovation are key drivers in the realization of Sustainable Development Goal 7 that seeks to ensure universal access to affordable and clean energy⁵⁴. Science, technology and innovation enable access to clean and more efficient sources of energy including solar, wind and thermal power⁵⁵. This role is recognized under the United Nations 2030 Agenda for Sustainable Development which seeks to enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy; energy efficiency and advanced and cleaner fossil-fuel technology, and investment in energy infrastructure and clean energy technology⁵⁶. Investing in Science, technology and innovation is thus integral in promoting clean, affordable and sustainable sources of energy including renewable energy⁵⁷.

Science, technology and innovation have also enhanced global efforts in the fight against climate change⁵⁸. It has been observed that the reality

⁵³ United Nations Economic and Social Council., 'Using Science, Technology and Innovation to Close the Gap on Sustainable Development Goal 3, Good Health and Well-Being.' Op Cit

⁵⁴ UNDP., 'Goal 7: Affordable and Clean Energy.' Available at https://www.undp.org/sustainable-development-goals/affordable-and-clean-energy?gclid=CjwKCAjw44mlBhAQEiwAqP3eVvpUd-R_KxFJ8xEotjf6tFCHYfOZ0EISOZ5qBngYBSIgPCoPXLypPxoCpGkQAvD_BwE (Accessed on 08/08/2023)

⁵⁵ Ibid

⁵⁶ United Nations General Assembly., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

⁵⁷ Muigua. K., 'Delivering Clean and Affordable Energy for All.' Available at <http://kmco.co.ke/wp-content/uploads/2021/05/Delivering-Clean-and-Affordable-Energy-for-All-Kariuki-Muigua-Ph.D-24th-April-2021-1.pdf> (Accessed on 08/08/2023)

⁵⁸ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

of global climate change has heightened the critical importance of science and technological innovation to achieve Sustainable Development goals⁵⁹. An effective and sustainable response to climate change demands the best, most up-to-date scientific assessments of the issue, made in a holistic and multi-disciplinary way⁶⁰. Cleaner technologies, including cleaner energy technologies such as renewable energy, have an important role to play in addressing climate change⁶¹. Further, innovations such as electric cars are helping to curb climate change since such vehicles do not directly emit greenhouse gases unlike conventional internal combustion engine vehicles⁶². Advancements in technology are also accelerating carbon sequestration by capturing, removing and storing carbon dioxide from the earth's atmosphere practices such as carbon capture and storage thus aiding in curbing climate change⁶³.

Science, technology and innovation have also fostered sustainable waste management practices helping to curb pollution thus preventing its impacts on human health and the environment and contributing to the attainment of Sustainable Development⁶⁴. Smart waste technologies have promoted efficient industrial and solid waste management systems through the development of tools and processes that tackle the

⁵⁹ United Nations Department of Economic and Social Affairs., 'Forum on Climate Change and Science and Technology Innovation.' Available at <https://www.un.org/en/desa/forum-climate-change-and-science-and-technology-innovation> (Accessed on 08/08/2023)

⁶⁰ Ibid

⁶¹ Ibid

⁶² Hausfather. Z., 'Factcheck: How Electric Vehicles Help to Tackle Climate Change.' Available at <https://www.carbonbrief.org/factcheck-how-electric-vehicles-help-to-tackle-climate-change/> (Accessed on 08/08/2023)

⁶³ nationalgrid., 'What is Carbon Sequestration?' Available at <https://www.nationalgrid.com/stories/energy-explained/what-carbon-sequestration> (Accessed on 08/08/2023)

⁶⁴ Bordt. M., Rosa. J.M., & Boivin. J., 'Science, Technology and Innovation for Sustainable Development.' Available at <https://www.oecd.org/science/inno/37450421.pdf> (Accessed on 08/08/2023)

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

main challenges of waste management, such as cleaning, collecting, transporting, recovery, recycling and final disposal⁶⁵. Sustainable waste management is vital in realizing Sustainable Development by curbing the effect of industrial and solid waste on food, water, human health and the climate⁶⁶.

From the foregoing, it is evident that science, technology and innovation are crucial in fostering Sustainable Development. However, these phenomena have been described as a double-edged sword capable of both doing and undoing environmental damage⁶⁷. Most environmental challenges such as global warming and climate change can be attributed to technological innovations since they are majorly caused by industrial pollution and fuel emissions from motor vehicles⁶⁸. It has also been observed that while technologies can be successful in solving specific environmental challenges such as pollution, they cause unavoidable negative environmental impacts elsewhere or in the future⁶⁹. In addition, it has been asserted that it is intrinsically impossible to design industrial processes and innovations that have no negative environmental impacts⁷⁰. For example, it has been argued that the manufacture of electric vehicles, an innovation heralded for being

⁶⁵ Guerra. P., 'Technological Innovation in Solid Waste Management: The Digital Revolution is Transforming the Way We See and Handle our Waste.' Available at <https://blogs.iadb.org/agua/en/technological-innovation-in-solid-waste-management-the-digital-revolution-is-transforming-the-way-we-see-and-handle-our-waste/> (Accessed on 08/08/2023)

⁶⁶ Elsheekh. K. M., 'Achieving Sustainable Development Goals from the Perspective of Solid Waste Management Plans.' *Journal of Engineering and Applied Sciences*, Volume 68, No. 9 (2021)

⁶⁷ Muigua. K., 'Utilising Science and Technology for Environmental Management in Kenya.' Available at <http://kmco.co.ke/wp-content/uploads/2020/04/Utilising-Science-and-Technology-for-Environmental-Management-in-Kenya.pdf> (Accessed on 08/08/2023)

⁶⁸ Ibid

⁶⁹ Huesemann. M., 'Can Pollution Problems be Effectively Solved by Environmental Science and Technology? An analysis of Critical Limitations.' *Ecological Economic*, Volume 37, Issue 2 (2001)

⁷⁰ Ibid

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

environment- friendly, results in environmental concerns that have climate change implications⁷¹. The manufacture of batteries used in electric cars comes from mining activities that have environmental cost due to the toxic fumes released during the mining process and the water-intensive nature of the activity⁷².

Further, the role of science, technology and innovation in Sustainable Development is yet to be fully embraced especially in developing countries due to factors such as inadequate funding and investment and poor government policy⁷³. As a result, these countries are lagging behind in achieving Sustainable Development goals such as food security; good health and well- being; clean water and sanitation; affordable and clean energy and climate action⁷⁴. Challenges and barriers to technology transfer have also hindered effective application of science, technology and innovation in promoting Sustainable Development especially in developing countries⁷⁵. These challenges include inadequate incentives, cost of new technologies, capacity challenges including inadequate infrastructure and governance

⁷¹ Lakshmi. R. B., 'The Environmental Impact of Battery Production for Electric Vehicles.' Available at <https://earth.org/environmental-impact-of-battery-production/> (Accessed on 08/08/2023)

⁷² Ibid

⁷³ United Nations., 'Science, Technology and Innovation for Sustainable Development in the Global Partnership for Development Beyond 2015.' Available at https://www.un.org/en/development/desa/policy/untaskteam_undf/thinkpieces/28_thinkpiece_science.pdf (Accessed on 08/08/2023)

⁷⁴ UNDP., 'New Africa SDGs Report Shows Slow Progress, Calls for Greater Action to Meet Targets.' Available at [https://www.undp.org/africa/press-releases/new-africa-sdgs-report-shows-slow-progress-calls-greater-action-meet-targets#:~:text=The%202022%20Africa%20SDGs%20report,\(Partnerships%20for%20the%20Goals\).&text=Africa%20has%20made%20slow%20progress,of%20quality%20education%20for%20all.](https://www.undp.org/africa/press-releases/new-africa-sdgs-report-shows-slow-progress-calls-greater-action-meet-targets#:~:text=The%202022%20Africa%20SDGs%20report,(Partnerships%20for%20the%20Goals).&text=Africa%20has%20made%20slow%20progress,of%20quality%20education%20for%20all.) (Accessed on 08/08/2023)

⁷⁵ Johnson. D., & Kristina. M. L., 'Challenges to Technology Transfer: A Literature Review of the Constraints on Environmental Technology Dissemination.' *Colorado College Working Paper No. 2009-07*

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

conditions⁷⁶. It is necessary to address these challenges in order to fully embrace science, technology and innovation for Sustainable Development.

9.4. Way Forward

There is need to fully embrace science, technology and innovation in order to actualize the Sustainable Development agenda. One way through which this can be achieved is investing in science, technology and innovation which are essential factors for economic development and social progress and fostering Sustainable Development by building greener and more inclusive societies⁷⁷. It has been asserted that there is need for governments to put in place action-orientated science, technology and innovation programmes that are aligned to development strategies to meet the ambitions of the Sustainable Development Goals⁷⁸. This can be achieved through investments in clean energy sources including renewable energy, sustainable agricultural practices to enhance productivity and health care⁷⁹. There is also need for developed countries and international financial institutions such as the World Bank to enhance funding and investment in developing countries in sectors such as infrastructure, energy, education, agriculture and health care in order to help them achieve the Sustainable Development Goals⁸⁰.

⁷⁶ Ibid

⁷⁷ UNESCO., 'Investing in Science, Technology and Innovation.' Available at <https://en.unesco.org/themes/investing-science-technology-and-innovation> (Accessed on 08/08/2023)

⁷⁸ United Nations Economic and Social Commission for Asia and the Pacific., 'Science, Technology and Innovation for Sustainable Development.' E/ESCAP/72/32

⁷⁹ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

⁸⁰ United Nations., 'What is Financing for Sustainable Development?' Available at <https://financing.desa.un.org/about/what-financing-sustainable-development> (Accessed on 08/08/2023)

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

In addition, it is imperative to integrate science, technology and innovation considerations into public policy goals and decisions in order to realize Sustainable Development⁸¹. Through such integration, science, technology and innovation will be pursued with the broader development agenda towards achieving Sustainable Development⁸². In Kenya, the Vision 2030 development blueprint acknowledges the role of science, technology and development in raising productivity and efficiency levels across the economic, social and political pillars⁸³. It calls for increased scientific research, development and adoption of technology and innovation in order to accelerate economic development in Kenya⁸⁴. Embracing science, technology and innovation in public policy goals and development agenda is vital in realizing Sustainable Development⁸⁵.

It is also pertinent to promote regional and international collaboration in order to fully embrace science, technology and innovation for Sustainable Development. Regions such as Asia and the Pacific have been lauded for collaboration through the establishment of science parks, tech clusters and innovation hubs that have fostered a dynamic, vibrant and collaborative ecosystem for science, technology and innovation⁸⁶. Other regions including Africa can follow this example in order to embrace science, technology and innovation. Further, it has been pointed out that collaboration through technology transfer is vital in fostering Sustainable Development especially in developing

⁸¹ United Nations., 'Science, Technology and Innovation for Sustainable Development in the Global Partnership for Development Beyond 2015.' Op Cit

⁸² Ibid

⁸³ Government of Kenya., 'Sessional paper On Kenya Vision 2030.' Available at <https://vision2030.go.ke/wp-content/uploads/2018/05/Sessional-paper-No.-10-of-2012-On-Kenya-Vision-2030.pdf> (Accessed on 08/08/2023)

⁸⁴ Ibid

⁸⁵ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

⁸⁶ United Nations Economic and Social Commission for Asia and the Pacific., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

countries⁸⁷. Technology transfer enables distribution of technologies and innovations from their place of origin to other places⁸⁸. It can thus enable the transfer of technologies thus are essential in areas such as health care, agriculture, energy and climate change mitigation and adaptation towards meeting the Sustainable Development needs of developing countries⁸⁹. It is thus vital for countries to embrace collaboration through technology transfer and remove barriers affecting effective transfer of technology in order to realize Sustainable Development⁹⁰.

Lastly, it is imperative for countries to enhance their overall science, technology, technical capacity and technical capabilities⁹¹. This can be achieved through advanced education and training, improved infrastructure, equipment, and through strengthening linkages with actors in the productive sectors⁹². These among other measures are vital in enabling countries to fully embrace science, technology and innovation for Sustainable Development.

9.5. Conclusion

Science, technology and innovation are crucial factors in achieving Sustainable Development⁹³. These components have improved agriculture thus promoting food security; promoted the development

⁸⁷ Corsi. A et al., 'Technology transfer for Sustainable Development: Social Impacts Depicted and Some Other Answers to a Few Questions.' *Journal of Cleaner Production*, Volume 245, No. 1 (2020)

⁸⁸ Gonsel. A., 'Research on Effectiveness of Technology Transfer from a Knowledge Based Perspective.' *Social and Behavioral Sciences*, Volume 207, No. 20 (2015)

⁸⁹ Corsi. A et al., 'Technology transfer for Sustainable Development: Social Impacts Depicted and Some Other Answers to a Few Questions.' Op Cit

⁹⁰ Ibid

⁹¹ United Nations Economic and Social Commission for Asia and the Pacific., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

⁹² Government of Kenya., 'Sessional paper On Kenya Vision 2030.'

⁹³ United Nations Committee for Development Policy., 'Science, Technology and Innovation for Sustainable Development.' Op Cit

CHAPTER NINE: Applying Science, Technology and Innovation for Climate Change Mitigation and Resilience

essential drugs and vaccines thus improving health and medical care; enhanced access to affordable and clean energy including renewable sources of energy; fostered sustainable waste management practices and enhanced the global response to the threat of climate change⁹⁴. However, concerns such as inadequate funding and investments, poor government policies, challenges in technology transfer and capacity inadequacies have hindered the ability of countries especially in the developing world from fully adopting science, technology and innovation for Sustainable Development⁹⁵. Addressing these problems calls for increased funding and investments; integrating science, technology and innovation considerations into public policy goals and decisions; promote regional and international collaboration through measures such as technology transfer and enhancing the science, technology, technical capacity and technical capabilities of countries through measures as education, training and infrastructure development⁹⁶. This will enable effective utilization of science, technology and innovation as tools for fostering Sustainable Development. Embracing science, technology and innovation for Sustainable Development is a quest worth pursuing.

⁹⁴ Ibid

⁹⁵ United Nations., 'Science, Technology and Innovation for Sustainable Development in the Global Partnership for Development Beyond 2015.' Op Cit.

⁹⁶ United Nations Economic and Social Commission for Asia and the Pacific., 'Science, Technology and Innovation for Sustainable Development.' Op Cit.

CHAPTER TEN

Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation

10.1. Introduction

The increase in climate litigation cases can be attributed to the adverse effects of climate change on livelihoods and the implementation of legal frameworks by global environmental organisations and individual countries in response to these effects. In several nations, individuals, non-governmental organisations, and organized groups have initiated legal proceedings against their respective governments, alleging either a failure to act or specific issues that include factual or legal considerations related to the causes or consequences of climate change.¹ Climate change is defined in section 2 of the Climate Change Act 2016² to mean, “a change in the climate system which is caused by significant changes in the concentration of greenhouse gases as a consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period.” There is however no universally accepted definition of a climate change-related dispute.³ In the past, many nations located in the Global South have not considered climate change to be one of their most significant challenges.

¹ Higham C, ‘Global Trends in Climate Change Litigation: 2023 Snapshot - Joana Setzer and Catherine Higham’ <<https://policycommons.net/artifacts/4775807/global-trends-in-climate-change-litigation/5612069/>> accessed 7 October 2023.

² Climate Change Act, No. 11 of 2016, Laws of Kenya, Government Printer Nairobi

³ C. Mark Baker, Cara Dowling, Dylan McKimmie, Tamlyn Mills, Kevin O’Gorman, Holly Stebbing, Martin Valasek, “What are climate change and sustainability disputes? Key arbitration examples (Part 1 contractual disputes)”, in James Rogers, London; Cara Dowling, Vancouver (eds), *International arbitration report*, Norton Rose Fulbright - Issue 16 - June 2021, p. 40. < <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/publications/international-arbitration-report-issue-16.pdf?revision=40c8a703-6e1d-413c-8c7e-ac1201697383&revision=40c8a703-6e1d-413c-8c7e-ac1201697383>> accessed 7 August 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

Instead, they have prioritized more pressing issues, such as the need for immediate economic development, the reduction of poverty, and energy security, as well as more immediate environmental challenges, such as the presence of hazardous waste and the availability of safe drinking water.⁴ Some authors have however observed that climate change is a "threat multiplier," which can increase human security issues such as food and water scarcity while also leading to (violent) conflict in climate-vulnerable countries.⁵ This is as a result of the fact that climate change's negative repercussions, such as water scarcity, crop failure, food insecurity, economic shocks, migration, and displacement, can exacerbate the risk of conflict and violence⁶. Environmental conflicts and disputes can be divided into two categories: first, access to environmental resources as a source of livelihood and as a foundation for economic activity, and second, conflicts over what are known as "side effects" of economic activity, such as biodiversity loss and pollution.⁷

The practice of taking legal action over climate change has been on the rise in national courts all around the world, with the majority of cases being claimed as breaches of human rights.⁸ Climate change mitigation is one of the key environmental goals of the United Nations' 2030 Agenda for Sustainable Development Goals (SDGs)⁹, as captured in

⁴ Setzer J and Benjamin L, 'Climate Litigation in the Global South: Constraints and Innovations' (2019) 9 *Transnational Environmental Law*.

⁵ Froese, Rebecca, and Janpeter Schilling, "The Nexus of Climate Change, Land Use, and Conflicts." (2019).

⁶ 'Tackling the Intersecting Challenges of Climate Change, Fragility and Conflict' <<https://blogs.worldbank.org/dev4peace/tackling-intersecting-challenges-climate-change-fragility-and-conflict>> accessed 30 March 2022.

⁷ Arild Vatn, *Environmental Governance: Institutions, Policies and Actions* (Paperback edition, Edward Elgar Publishing 2016) 2.

⁹ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, 21 October 2015, A/RES/70/1.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

Sustainable Development Goal 13, which aims to help countries attain resilience and adaptability.¹⁰

Although climate change litigation may refer to a wide variety of various procedures, in general, it is understood to refer to claims that specifically raise a question of fact or law related to the causes or implications of climate change. This definition holds true even though climate change litigation can refer to a wide variety of different actions.¹¹ The 2020 Global Climate Litigation Report on Status Review defines “climate change litigation” to include cases that raise material issues of law or fact relating to climate change mitigation, adaptation, or the science of climate change.¹²

It has been noted that activist organisations have been utilising litigation to promote ambition in climate action.¹³ These groups are adopting a longer term perspective that looks beyond the immediate victories and losses of specific lawsuits. In particular, environmental advocacy organisations are resorting to the judicial system in an effort to hasten the adoption of more stringent levels of mitigation ambition, new policies, as well as more efficient execution and compliance with current ones.¹⁴ This kind of lawsuit is helping to supplement the execution of

¹⁰ Ibid, SDG 13.

¹¹ ‘Climate Change Litigation in Africa: Current Status and Future Developments | White & Case LLP’ (9 November 2021) <<https://www.whitecase.com/insight-our-thinking/climate-change-litigation-africa-current-status-and-future-developments>> accessed 7 August 2023.

¹² Burger M and Tigre MA, ‘Global Climate Litigation Report: 2023 Status Review’, p. 6.

¹³ ‘Climate Change Litigation in Africa: Current Status and Future Developments | White & Case LLP’ (9 November 2021) <<https://www.whitecase.com/insight-our-thinking/climate-change-litigation-africa-current-status-and-future-developments>> accessed 7 August 2023.

¹⁴ Higham C, Setzer J and Bradeen E, ‘Challenging Government Responses to Climate Change through Framework Litigation’ (2022) <<https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/09/Challenging->

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

the Paris Agreement at the national level, which is one of the ways in which it is contributing in novel ways to the governance of the global climate at the international level.¹⁵

The climate lawsuits that have been brought up to this point often fall into one or more of the following six categories: (1) climate rights; (2) domestic enforcement; (3) keeping fossil fuels in the ground; (4) corporate accountability and responsibility; (5) failure to adapt and the implications of adaptation; and (6) climate disclosures and greenwashing.¹⁶

There has been a recent surge in the number of people who are taking their governments to court over their failure to take measures to prevent climate change. A significant number of these cases are being brought (at least in part) on the basis of human rights legislation.¹⁷ However, it has been claimed that utilising human rights as a foundation for a lawsuit against a government in relation to climate change is not a foolproof strategy.¹⁸ It is not that straightforward to trace damage due to climate change to the actions or omissions of individual governments and identify these consequences as human rights breaches. In addition, there are concerns of admissibility and justiciability that need to be taken into consideration.¹⁹ It is worth pointing out that any challenges

government-responses-to-climate-change-through-framework-litigation-final.pdf>
accessed 8 August 2023.

¹⁵ 'Climate Change Litigation on the African Continent' (*Regional Programme Energy Security and Climate Change in Sub-Saharan Africa*, 21 June 2021) <<https://www.kas.de/en/web/climate-energy-africa/single-title/-/content/climate-change-litigation-on-the-african-continent>> accessed 5 August 2023.

¹⁶ Burger M and Tigre MA, 'Global Climate Litigation Report: 2023 Status Review', p. 13.

¹⁷ Dewaele J, 'The Use of Human Rights Law in Climate Change Litigation : Inquiring Human Rights Obligations of States in the Context of Climate Change; and the Use of Human Rights Law in Urgenda and Other Climate Cases' (Global Campus of Human Rights 2019) <<http://doi.org/20.500.11825/1295>> accessed 8 August 2023.

¹⁸ Ibid.

¹⁹ Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

or crisis attributable to climate change could give rise to climate litigation due to the global scale of the problem of excessive greenhouse gas emissions and the various localized actions made by different parties that contribute towards resolving the issue.²⁰ As a consequence of this, academics have contended with questions such as the following in an effort to give the concept of climate litigation in the literature some form:²¹

- a) whether to include only cases that expressly raise issues of climate change policy or science, or whether to extend study to cases motivated by concerns over climate change issues (e.g., a challenge to a coal plant proposal on the grounds of its broader environmental or amenity impacts), or with consequences for addressing climate change (e.g., cases concerned with the costs of and compensation for extreme weather events like hurricanes), even if the litigation itself is not explicitly framed in terms of climate change;
- b) whether to focus on judgments issued by courts or to include other types of quasi-judicial decision-making processes and actions that lead to outcomes other than judgments, such as a settlement decision; and
- c) whether to include only cases with a pro-regulatory focus or also those brought by industry challenging climate regulatory measures.²²

²⁰ 'Climate Litigation More than Doubles in Five Years, Now a Key Tool in Delivering Climate Justice' (*UN Environment*, 27 July 2023) <<http://www.unep.org/news-and-stories/press-release/climate-litigation-more-doubles-five-years-now-key-tool-delivering>> accessed 15 August 2023.

²¹ Peel J and Osofsky HM, 'Climate Change Litigation' (2020) 16 *Annual Review of Law and Social Science* 21.

²² Peel J and Osofsky HM, 'Climate Change Litigation' (2020) 16 *Annual Review of Law and Social Science* 21.

CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation

These factors thus make it relevant to discuss the concept of climate change litigation and how these challenges can be overcome, especially in the context of Kenya. This study posits that while the current trend may not have yet gained significant traction in Kenya, it is anticipated that this will change in due course. This shift is expected to occur as a growing number of individuals become cognizant of their environmental rights and develop higher expectations from the government and other stakeholders in terms of their response to the impacts of climate change on their livelihoods. In the pursuit of achieving sustainable development, the author argues that the promotion of climate litigation in Kenya might serve as a substantial element in effectively tackling this global predicament.

10.2. The Role of Law and Courts in Climate Change Mitigation

The implementation of mitigation measures incurs significant expenses, but the costs associated with adaptation may be much greater and challenging to accurately assess.²³ Consequently, in the immediate term, governments often prioritize the adverse effects of mitigation policies on their constituents. Furthermore, it is crucial to note that while the implementation of mitigation measures may incur significant expenses for a specific State, the positive outcomes of these efforts extend beyond its borders and contribute to the overall well-being of the entire planet.²⁴ Hence, the phenomenon of free riding is feasible and appears to be incentivized: if nations had the opportunity to reap the advantages of mitigation actions carried out by other nations, it is unlikely that they would willingly burden their own population with associated costs.²⁵

²³ United Nations Framework Convention on Climate Change (UNFCCC), "Assessing the costs and benefits of adaptation options: an overview of approaches." *The Nairobi work Programme on impacts, vulnerability and adaptation to climate change* (2011): 52.

²⁴ Mukhopadhyay, B., "Entwining Climate Change Adaptation and Mitigation with Development." *International Journal of Research in Engineering, Science and Management* 3, no. 1 (2020): 150-155.

²⁵ Roy N, 'Climate Change's Free Rider Problem: Why We Must Relinquish Freedom to Become Free' (2021) 45 *William & Mary Environmental Law and Policy Review* 821.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

What is the rationale for their decision to implement mitigation measures when there is a lack of concurrent pursuit of similar efforts by others? This phenomenon elucidates the reasons behind the adoption of insufficient mitigation measures or the failure to meet mitigation objectives by certain States. It also sheds light on the inclination of States to avoid making substantial commitments at the international level. Within this particular framework, several scholars have posited that the judiciary plays a crucial role in guaranteeing the ambitiousness and successful implementation of climate treaties.²⁶

Climate litigation has the potential to effectively delineate the responsibilities of States in accordance with international legal frameworks, so enabling courts to serve as catalysts for regulatory transformation. Similar observations have been made about the UNFCCC or the Kyoto Protocol, highlighting the excessively ambiguous character of the responsibilities. These requirements are intentionally formulated in a manner that renders it exceedingly difficult to assert that any specific article may be used as a basis for legal action. Consequently, the objective at hand is to evaluate the presence of any mitigation responsibility, specifically pertaining to the reduction of greenhouse gas (GHG) emissions or the augmentation of sinks and reservoirs. Furthermore, it is essential to ascertain the implications and outcomes stemming from this assessment.²⁷

Given the considerable uncertainty surrounding this particular topic, it is worth noting that courts have the capacity to assume a pivotal role in

²⁶ Rocha A, 'Suing States: The Role of Courts in Promoting States' Responsibility for Climate Change' in Maria da Glória Garcia and António Cortês (eds), *Blue Planet Law: The Ecology of our Economic and Technological World* (Springer International Publishing 2023) <https://doi.org/10.1007/978-3-031-24888-7_8> accessed 5 October 2023.

²⁷ Rocha A, 'Suing States: The Role of Courts in Promoting States' Responsibility for Climate Change' in Maria da Glória Garcia and António Cortês (eds), *Blue Planet Law: The Ecology of our Economic and Technological World* (Springer International Publishing 2023) <https://doi.org/10.1007/978-3-031-24888-7_8> accessed 5 October 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

clarifying the scope of States' obligations to mitigate climate change under the legal framework of the United Nations Framework Convention on Climate Change (UNFCCC). Given the current situation, to whom should the allocation of compensation be directed?²⁸

Kenya's Climate Change Act 2016²⁹ seeks to provide a regulatory framework for enhanced response to climate change; to provide for mechanisms and measures to achieve low carbon climate development, and for connected purposes. The Act defines "climate change" to mean a change in the climate system which is caused by significant changes in the concentration of greenhouse gases as a consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period.³⁰ Notably, the Act seeks to promote mainstreaming of climate change mitigation measures, which may be considered the use of law as a tool for promoting social change.³¹ This is in line with SDG 13 which requires countries to take urgent action to combat climate change and its impacts, acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.³²

The Climate Change Act 2016 also empowers the courts to uphold rights relating to climate change and spells out the role of the court as follows: "A person may, under Article 70 of the Constitution, apply to the Environment and Land Court, alleging that a person has acted in a manner that has or is likely to adversely affect efforts towards mitigation and adaptation to the effects of climate change".³³ In such

²⁸

²⁹ Climate Change Act, No. 11 of 2016, Laws of Kenya.

³⁰ Sec. 2, Climate Change Act, 2016.

³¹ See sections, 13, 18 & 19, Climate Change Act, 2016.

³² United Nations, Preamble, Transforming our world: the 2030 Agenda for Sustainable Development, SDG 13.

³³ Section 23(1), Climate Change Act, 2016.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

applications, the court may make an order or give directions to: prevent, stop, or discontinue an act or omission that is harmful to the environment; compel a public officer to take measures to prevent or discontinue an act or omission that is harmful to the environment; or provide compensation to a victim of a violation relating to climate change duties.³⁴ It is also worth mentioning that SDG 16 encourages countries to ‘promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels’.

Lawyers are seen as agents of social engineering in society as well as justice, equity, and equality, and this chapter argues that they have a huge role to play, not only in ensuring that their professional roles are in line with the sustainability agenda but also advising and defending their clients on the same. This chapter also revisits the role of lawyers both as active players in fighting climate change and also as agents of securing climate justice for those most affected by the adverse effects of climate change in society. The author argues that as agents of social engineering and the rule of law, lawyers must take up the challenge of climate change and ensure that the environmental law principle of polluter pays, among others, is entrenched in mitigation responses to ensure that climate justice is achieved for all. There are a variety of ways in which climate change affects each subfield of the legal profession, and lawyers need to be aware of how this rapidly escalating climate catastrophe and the transition to net-zero energy are affecting their particular area of practice, as well as the business of law and the provision of legal services.³⁵

³⁴ Section 23(2), Climate Change Act, 2016.

³⁵ ‘Lawyers in a Warming World | Peter A. Allard School of Law’ <<https://allard.ubc.ca/about-us/news-and-announcements/2023/lawyers-warming-world>> accessed 17 July 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

The provisions of *Climate Change Act 2016* acknowledge the role of courts in upholding rights relating to climate change and spell out the role of the court in the following words: “a person may, pursuant to Article 70 of the Constitution, apply to the Environment and Land Court, alleging that a person has acted in a manner that has or is likely to adversely affect efforts towards mitigation and adaptation to the effects of climate change”.³⁶ In such applications, the court may make an order or give directions to: prevent, stop or discontinue an act or omission that is harmful to the environment; compel a public officer to take measures to prevent or discontinue an act or omission that is harmful to the environment; or provide compensation to a victim of a violation relating to climate change duties.³⁷

Notably, Kenya’s Environment and Land Court Act, 2011³⁸ provides for the jurisdiction of the Environment and Land Court as including power to hear and determine disputes relating to climate issues.³⁹ Considering that this is still a relatively new concept in Kenya and that the law in Kenya envisages only ‘climate related issues’ litigation by both the Environment and Land Court and the Magistrate’s courts, as seen in the next section of this chapter, the discussion herein will not be restricted to any special category of these cases in particular but all cases that relate to effects of climate change.

10.3. Challenges and Limitations of Climate Change Litigation

It must be noted that while climate [change] litigation refers to a diverse body of legal proceedings, involving many different types of challenges, a specific subset of climate litigation consists of cases in which litigants challenge the ambition or implementation of a national or subnational

³⁶ Section 23(1), *Climate Change Act, 2016*.

³⁷ Section 23(2), *Climate Change Act, 2016*. Government Printer, Nairobi

³⁸ Environment and Land Court Act, No. 19 of 2011, *Laws of Kenya Government Printer, Nairobi*

³⁹ *ibid*, section 13(2)(a).

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

government's overall policy response to climate change.⁴⁰ The term 'government framework litigation' has been used to describe this group of cases.⁴¹ The Government and its various agencies must thus be aware of these types of cases. For example, it has been documented that as of the 31st of July in 2022, at least 80 instances of framework litigation have been brought against governments from throughout the globe.⁴² Only one year, 2021, saw the filing of little under half of these lawsuits.⁴³ Cases have been brought before the national courts of 24 countries, as well as the General Court of the European Union, the European Court of Human Rights, the Inter-American Commission on Human Rights, the United Nations Committee on the Rights of the Child, the United Nations Human Rights Committee, and other UN Special Procedures.⁴⁴ The Hague District Court's decision in *Urgenda Foundation v State of the Netherlands* (2015) found that the Dutch government's emission reduction targets to be inadequate to safeguard Dutch citizens from the impacts of climate change, a ruling that has since been upheld by the Dutch Court of Appeal and then on December 20, 2019, by the Dutch Supreme Court [*State of the Netherlands v Urgenda* (2019)].⁴⁵

It has rightly been pointed out that in Global South countries where environmental law already exists, policymakers are confronted with a

⁴⁰ Higham C, Setzer J and Bradeen E, 'Challenging Government Responses to Climate Change through Framework Litigation' (2022) <<https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/09/Challenging-government-responses-to-climate-change-through-framework-litigation-final.pdf>> accessed 8 August 2023.

⁴¹ Ibid.

⁴² 'Governments Face Tide of Framework Litigation Cases | The Actuary' <<https://www.theactuary.com/2022/09/21/governments-face-tide-framework-litigation-cases>> accessed 15 August 2023.

⁴³ Ibid.

⁴⁴ Higham C, Setzer J and Bradeen E, 'Challenging Government Responses to Climate Change through Framework Litigation' (2022).

⁴⁵ Peel J and Osofsky HM, 'Climate Change Litigation' (2020) 16 Annual Review of Law and Social Science 21.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

variety of obstacles that make enforcement difficult.⁴⁶ These obstacles include weak and fragmented institutions, poor legal foundations, and a lack of political will.⁴⁷ A number of Global South nations do not have the necessary resources, infrastructure, technology, or monitoring facilities to enable effective enforcement. In addition, environmental regulation could be out of date or might not take into account the constraints of the current technological, economic, or human resource landscape.⁴⁸ In addition, the creation of entirely novel agencies is often necessary for environmental regulation.⁴⁹ When they do exist, these organisations often have inadequate resources and fragmented institutional frameworks, which may cause administrators to work in isolation.⁵⁰

Some of the most significant difficulties that climate litigation may experience include determining whether or not the court has the jurisdiction to settle the dispute; locating the origin of an enforceable climate-related right or obligation; formulating a remedy that will lessen the plaintiffs' injuries; and, most importantly, marshalling the science of climate attribution.⁵¹

⁴⁶ Hub ISK, 'Environmental Laws Impeded by Lack of Enforcement, First-Ever Global Assessment Finds | News | SDG Knowledge Hub | IISD' <<https://sdg.iisd.org:443/news/environmental-laws-impeded-by-lack-of-enforcement-first-ever-global-assessment-finds/>> accessed 15 August 2023.

⁴⁷ Setzer J and Benjamin L, 'Climate Litigation in the Global South: Constraints and Innovations' (2019) 9 *Transnational Environmental Law*.

⁴⁸ Minneti J, 'Environmental Governance and the Global South' [2018] *William & Mary Environmental Law and Policy Review*, Forthcoming.

⁴⁹ *Ibid.*

⁵⁰ Setzer J and Benjamin L, 'Climate Litigation in the Global South: Constraints and Innovations' (2019) 9 *Transnational Environmental Law*.

⁵¹ Burger M and Tigre MA, 'Global Climate Litigation Report: 2023 Status Review', p. 4; Banda ML and Fulton CS, 'Litigating Climate Change in National Courts: Recent Trends and Developments in Global Climate Law' (2017) 47 *Environmental Law Reporter*.

CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation

It is commendable that courts and tribunals in Kenya have not shied away from their role in promoting climate change mitigation. For instance, in the case of *Save Lamu & 5 others v National Environmental Management Authority (NEMA) & another* [2019] eKLR⁵², where the grounds of the appeal included, ‘contribution to climate change and making the Project inconsistent with Kenya’s low carbon development commitments’, the National Environment Tribunal observed as follows:

16. The purpose of the Environment Impact Assessment (EIA) process is to assist a country in attaining sustainable development when commissioning projects. The United Nations has set Sustainable Development Goals (SDGs), which are an urgent call for action by all countries recognizing that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

38. Climate Change issues are pertinent in projects of this nature and due consideration and compliance with all laws relating to the same. The omission to consider the provisions of the Climate Change Act 2016 was significant even though its eventual effect would be unknown.

139. In applying the precautionary principle where there is lack of clarity on the consequences of certain aspects of the project it behooves the Tribunal to reject it. On climate change issues this is of greater importance and made the provisions on climate change within the report incomplete and inadequate.

Notably, this approach is similar to one that was adopted in *EarthLife Africa Johannesburg v. Minister of Environmental Affairs & Others*, where

⁵² *Save Lamu & 5 others v National Environmental Management Authority (NEMA) & another* [2019] eKLR, Tribunal Appeal Net 196 of 2016.

CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation

the South African High Court determined that global climate change was a relevant consideration in the environmental review of plans for a new coal-fired plant.⁵³

Similarly, section 20 of the Climate Change Act 2016 provides that, “the [National Environment Management] Authority shall integrate climate risk and vulnerability assessment into all forms of assessment, and for that purpose liaise with relevant lead agencies for their technical advice.” Thus, as highlighted in the *Lamu case*, it is expected that the National Environment Management Authority and the other lead agencies should consider climate change issues while reviewing applications for issuance of various development licenses as legal requirement.

In addition, Section 9 of the Magistrate’s Act 2015⁵⁴ reads as follows:-

9. A magistrate's court shall –

(a) in the exercise of the jurisdiction conferred upon it by section 26 of the Environment and Land Court Act and subject to the pecuniary limits under section 7(1), hear and determine claims relating to –

(i) environmental planning and protection, climate issues, land use planning, title, tenure, boundaries, rates, rents, valuations, mining, minerals and other natural resources;

While it is to be acknowledged that the judicial officers appointed to head environment and land courts are appointed on the basis of having

⁵³ Setzer J and Benjamin L, ‘Climate Litigation in the Global South: Constraints and Innovations’ (2019) 9 *Transnational Environmental Law* <https://www.researchgate.net/publication/338346001_Climate_Litigation_in_the_Global_South_Constraints_and_Innovations> accessed 8 August 2023.

⁵⁴ Magistrates Courts Act, Act No. 26 of 2015, Laws of Kenya, Government Printer, Nairobi

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

relevant knowledge in the area, it must also be acknowledged that they may not always be well versed with all matters that come before them due to the evolving nature of the emerging matters in the area.⁵⁵ When adjudicating issues over legal liability for climate change, courts depend on several types of evidence, including scientific and historical data, among others. The necessity of measuring the extent to which various players contribute to climate change-related damages has established the foundation for legal actions targeting both governmental and private entities. The ability of courts and litigants to effectively acquire, utilise, and assess pertinent scientific material, as well as to locate and involve scientists possessing relevant competence as expert witnesses or in advisory capacities, is often limited. Scientists, meanwhile, may lack comprehension on the specific types of knowledge required to provide insights for climate litigation, as well as the methods to discern and evaluate potential avenues for contribution.⁵⁶ Thus, there is need for not only engaging experts in the area but also continuous building of capacity of the judicial officers in the technical matters relating climate change as well as collaboration between the different actors.

It has been observed that government framework cases may concern the design and overall ambition of a government's response to climate change (58 'ambition cases'), or they may concern the adequacy of the implementation of a policy response (9 'implementation cases'). Some cases concern both (13 'ambition and implementation cases').⁵⁷ There is

⁵⁵ May JR and Daly E, 'Global Judicial Handbook on Environmental Constitutionalism' (2019); Shelton D and Kiss AC, *Judicial Handbook on Environmental Law* (UNEP/Earthprint 2005); 'Tilting Scales of Justice in Favour of Climate in Kenya' <<https://www.unodc.org/easternafrika/Stories/tilting-scales-of-justice-in-favour-of-climate-in-kenya.html>> accessed 15 August 2023.

⁵⁶ Wentz, J., Merner, D., Franta, B., Lehmen, A. and Frumhoff, P.C., "Research priorities for climate litigation." *Earth's Future* 11, no. 1 (2023): e2022EF002928.

⁵⁷ Higham C, Setzer J and Bradeen E, 'Challenging Government Responses to Climate Change through Framework Litigation' (2022) <<https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/09/Challenging->

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

thus a need for continuous review of the existing legal and policy measures put in place by both the national and county governments to enhance their effectiveness. The implementing bodies should also continue building capacity. All levels of government should prepare for the possibility of being required by law to take action against climate change and work on establishing internal decision-making procedures that are congruent with the goal of mitigating the negative effects of climate change.⁵⁸

Strategic litigation concerning climate change in the Global South might gain advantage from (i) access to justice in combination with the presence of progressive climate and/or environmental rights laws, and (ii) judicial opportunism.⁵⁹ When these factors are brought together, they have the potential to assist actors in the Global South in overcoming countervailing dynamics of significant capacity constraints in implementing environmental legislation and managing fragmented and under-resourced institutional structures.⁶⁰ As a result, they have the ability to contribute to progressive outcomes.⁶¹ In countries that have taken progressive procedural as well as regulatory approaches to environmental protection and justice, this, it has been suggested, may lead to decisions that maintain or advance climate change protection, especially around climate change adaptation.⁶²

government-responses-to-climate-change-through-framework-litigation-final.pdf>
accessed 8 August 2023.

⁵⁸ Ibid.

⁵⁹ 'Enhancing Access to Justice to Tackle Climate Change and Pollution and Protect Biodiversity | UNECE' <<https://unece.org/climate-change/news/enhancing-access-justice-tackle-climate-change-and-pollution-and-protect>> accessed 15 August 2023; Wright RG, 'The Proper Role of Judicial Opportunism in Constitutional Rights Scrutiny' (2023) 26 *Richmond Public Interest Law Review* 49; Carnwath, Lord, CVO, 'Judges and the Common Laws of the Environment—At Home and Abroad' (2014) 26 *Journal of Environmental Law* 177.

⁶⁰ Ibid.

⁶¹ Setzer J and Benjamin L, 'Climate Litigation in the Global South: Constraints and Innovations' (2019) 9 *Transnational Environmental Law*.

⁶² Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

Access to justice is contingent upon the fulfilment of certain preconditions, one of which is the physical presence of a court.⁶³ In order for litigants to be given the right of access to courts, whether individually, collectively, or as a third party or *amicus curiae*, the criteria pertaining to standing, which differ from jurisdiction to jurisdiction, must be followed.⁶⁴ Luckily for Kenyans, the 2010 Constitution of Kenya is very progressive and the courts have been implementing the same as captured in the case of *Martin Osano Rabera & another v Municipal Council of Nakuru & 2 others* [2018] eKLR⁶⁵, where the Court stated as follows:

48. I have considered the petition, the evidence both in support and opposition to it and the submissions. That a clean and healthy environment is a fundamental prerequisite for life is not a matter that needs belabouring. It is for this reason that the drafters of the Constitution of Kenya, 2010 saw it fit to provide for the right to a clean and healthy environment at **Article 42** within the Bill of Rights. Needless to state, Kenyans voted overwhelmingly in favour of the draft, thus giving their seal of approval to its provisions. **Article 42** states as follows:

Every person has the right to a clean and healthy environment, which includes the right –

(a) to have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69; and

(b) to have obligations relating to the environment fulfilled under Article 70.

⁶³ Rashid NM, 'Access to Justice' (*United Nations and the Rule of Law*) <<https://www.un.org/ruleoflaw/thematic-areas/access-to-justice-and-rule-of-law-institutions/access-to-justice/>> accessed 15 August 2023.

⁶⁴ Setzer J and Benjamin L, 'Climate Litigation in the Global South: Constraints and Innovations' (2019) 9 *Transnational Environmental Law*.

⁶⁵ *Martin Osano Rabera & another v Municipal Council of Nakuru & 2 others* [2018] eKLR, Petition No. 53 of 2012.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

49. A duty to have the environment protected for the benefit of present and future generations is imposed on both the State and every person under Article 69 which among others requires the state to ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits; to establish systems of environmental impact assessment, environmental audit and monitoring of the environment and to eliminate processes and activities that are likely to endanger the environment. Under the same article, every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources. In short, the obligation to ensure a clean and healthy environment imposed on everybody - from the state to all persons be they natural, juridical, association or other group of persons whether incorporated or not.

50. So as to further safeguard environmental rights and to facilitate access to court for purposes of enforcing the right secured by Article 42, Article 70 of the constitution provides that if a person alleges that a right to a clean and healthy environment recognised and protected under Article 42 has been, is being or is likely to be, denied, violated, infringed or threatened, the person may apply to court for redress in addition to any other legal remedies that are available in respect to the same matter and that he does not have to demonstrate that any person has incurred loss or suffered injury.

51. Provisions similar to those at **Article 42** are found at **Section 3** of the **Environmental Management and Co-ordination Act, 1999** (EMCA). Under **Section 3 (3)** of EMCA, if a person alleges that the right to a clean and healthy environment has been, is being or is likely to be denied, violated, infringed or threatened, in relation to him, then without prejudice to any other action with respect to the same matter which is lawfully available, that person may on his behalf or on behalf of a group or class of persons, members of an association or in the public interest may apply to this court and this court may make such orders, among others, to prevent, stop or discontinue any act or omission deleterious to the environment; to compel the persons responsible for the environmental degradation to restore the degraded environment as far

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

as practicable to its immediate condition prior to the damage; and to provide compensation for any victim of pollution and the cost of beneficial uses lost as a result of an act of pollution and other connected losses.

52. I have outlined all these provisions to underscore the importance placed by the constitution and statute law on protection of the right to a clean and healthy environment and conservation of the environment generally.

The human rights approach to solving human problems is at the core of the 2030 Agenda for Sustainable Development.⁶⁶ In order for the world to continue to serve the requirements of the present and future generations, everyone has a responsibility to prevent it from degrading, especially via sustainable production and consumption, the management of its natural resources, and urgent action on climate change.⁶⁷ Sustainable development must take into account the relationship between human rights and environmental protection. Sustainable Development is contingent upon upholding peoples' rights to a secure environment where they can thrive.⁶⁸

According to the Swedish International Development Cooperation Agency, the following are key questions to ask when applying the Human Rights-Based Approach:⁶⁹

⁶⁶ 'OHCHR and the 2030 Agenda for Sustainable Development' (OHCHR) <<https://www.ohchr.org/en/sdgs>> accessed 15 August 2023.

⁶⁷ United Nations, 'Support Sustainable Development and Climate Action' (United Nations) <<https://www.un.org/en/our-work/support-sustainable-development-and-climate-action>> accessed 15 August 2023.

⁶⁸ Choondassery Y, 'Rights-Based Approach: The Hub of Sustainable Development' (2017) 8 Discourse and Communication for Sustainable Education.

⁶⁹ Cybercom, 'Human Rights Based Approach' (Sida) <<https://www.sida.se/en/for-partners/methods-materials/human-rights-based-approach>> accessed 15 August 2023.

CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation

- a) Participation: Do all relevant stakeholders engage actively, in a way which allows rights holders to contribute meaningfully and influence outcomes?
- b) Link to human rights obligations: How are relevant human rights standards and recommendations from international and regional human rights mechanisms identified and used in formulating objectives and to advance processes and outcomes?
- c) Accountability: Who are the duty bearers at different levels, and do they have sufficient capacity and interest to be accountable to rights holders?
- d) Are there mechanisms for participation and complaints in place for rights holders, civil society and other stakeholders to hold the duty bearers to account?
- e) Non-discrimination and equality: Are rights holders and the root causes of the non-realisation of their human rights identified and taken into account, particularly those most subject to discrimination and marginalisation?
- f) Empowerment and capacity development: How does the intervention contribute to the empowerment of rights holders to claim their rights, as well as capacity development of duty bearers to uphold their responsibilities, and of other relevant stakeholders to contribute to positive outcomes? and,
- g) finally, transparency: What measures are put in place to ensure that all stakeholders are able to access relevant information and knowledge regarding the intervention?⁷⁰

Respecting human rights and providing equal opportunity for everyone in society is a key component of sustainability.⁷¹ With an emphasis on

⁷⁰ Ibid.

⁷¹ Kaltenborn M, Markus K and Kuhn H, *Sustainable Development Goals and Human Rights* (2020); Yimbessalu J and Zakus D, 'The Sustainable Development Goals as Human Rights' (2019); Bexell M, Hickmann T and Schapper A, 'Strengthening the Sustainable Development Goals through Integration with Human Rights' (2023) 23 *International Environmental Agreements: Politics, Law and Economics* 133.

reducing poverty, it necessitates an equal distribution of resources.⁷² There is a focus on local communities, including preserving and enhancing their life support systems, acknowledging and respecting other cultures, and averting all forms of exploitation.⁷³ Hence, social outcomes comprise social capital, trust, increased equity, and raised living standards.⁷⁴

10.4. Potential Future Developments in Climate Change Litigation

The 2020 Global Climate Litigation Report on Status Review identified 5 key issues that may present challenges to future growth and development of climate litigation:

First, there has been a surge in the number of consumer and investor fraud cases that are being filed against businesses, saying that the businesses either neglected to disclose information concerning climate risk or misrepresented the information that they did disclose. Second, it seems that in recent years there has been an increase in the number of pre- and post-disaster claims that are based on the defendant's inability to adequately prepare for or manage the repercussions of severe weather occurrences. Third, the execution of court orders will present additional obstacles as more cases are brought forward and as some of those cases get an outcome. Fourth, as cases that attempt to assign blame for private actors' contributions to climate change and cases that argue for stronger government action to mitigate both progress and spread, courts and litigants will increasingly be called on to confront the law and science of climate attribution. This is because of the rising number of lawsuits that seek to assign responsibility. Last

⁷² Ibid; 'Human Rights Principles' (*United Nations Population Fund*) <<https://www.unfpa.org/resources/human-rights-principles>> accessed 15 August 2023.

⁷³ Popova O, 'Inclusive Development: A New Concept or an Update of the Sustainable Development Concept?' [2020] *Economy and Forecasting* 128.

⁷⁴ de Man A, 'The Sustainable Development Goals and the Rights-Based Approach to Development: Compatible or Missing the Point?' (2019) 19 *African Human Rights Law Journal* 445, p. 3; Banik D, 'Legal Empowerment as a Conceptual and Operational Tool in Poverty Eradication' (2009) 1 *Hague Journal on the Rule of Law* 117.

CHAPTER TEN: *Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation*

but not least, parties to legal disputes are increasingly taking their cases to international adjudicatory organisations. These entities may lack the capacity to implement their decisions, but their statements have the potential to modify and enrich judicial knowledge.⁷⁵

Members of the legal profession must get behind the movement to protect our planet from the catastrophic effects of accelerating climate change.⁷⁶ Accelerating the reduction of carbon emissions from all sources is the primary tactic that will be used in the campaign.⁷⁷ The campaign must be conducted on all three levels: locally, nationally, and worldwide. The battle lines extend across several realms, including the political, economic, and cultural spheres, and lawyers have a lot to offer in each of these areas.⁷⁸

10.4.1. Lawyers as Agents of Social Engineering/Change

The continued existence of a free and democratic society depends upon recognition of the concept that justice is based upon the rule of law grounded in respect for the dignity of the individual and his capacity through reason for enlightened self-

⁷⁵ Burger M and Tigre MA, 'Global Climate Litigation Report: 2023 Status Review', p. 4.

⁷⁶ 'The Role Lawyers Can Play in Addressing the Climate Crisis' (WTW) <<https://www.wtwco.com/en-gb/insights/2022/02/the-role-lawyers-can-play-in-addressing-the-climate-crisis>> accessed 18 July 2023; 'The Profession's Role in Addressing the Climate Crisis' <<http://www.nationalmagazine.ca/en-ca/articles/law/in-depth/2023/the-profession-s-role-in-addressing-the-climate-crisis>> accessed 18 July 2023.

⁷⁷ <https://www.facebook.com/unep>, 'The Six-Sector Solution to the Climate Crisis' (UN Environment, 7 December 2020) <<https://www.unep.org/interactive/six-sector-solution-climate-change/>> accessed 18 July 2023; 'Measures to Reduce Greenhouse Gas Emissions | Climate Change | Government.NL' <<https://www.government.nl/topics/climate-change/national-measures>> accessed 18 July 2023; 'Net Zero Coalition | United Nations' <<https://www.un.org/en/climatechange/net-zero-coalition>> accessed 18 July 2023; 'Climate Change Mitigation: Reducing Emissions' <<https://www.eea.europa.eu/en/topics/in-depth/climate-change-mitigation-reducing-emissions>> accessed 18 July 2023.

⁷⁸ Journal ABA, '7 Ways Lawyers Can Join the Fight to Curb Climate Change' (ABA Journal) <<https://www.abajournal.com/voice/article/7-ways-lawyers-can-join-the-fight-to-curb-climate-change>> accessed 18 July 2023.

**CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation**

*government. Law so grounded makes justice possible, for only through such law does the dignity of the individual attain respect and protection. Without it, individual rights become subject to unrestrained power, respect for the law is destroyed, and rational self-government is impossible. Lawyers, as guardians of the law, play a vital role in the preservation of society(Emphasis added).*⁷⁹

Arguably, environmental goals cannot be realized just through environmental legislation or in protected areas; revolutionary change needs a fundamental, system-wide reorganization spanning technical, economic, and social elements, including perspectives, goals, and values.⁸⁰

As already pointed out, lawyers have been considered agents of social engineering and change. The term "social change" is used to refer to a shift or a change that happens as a variation of the accepted way of life as a result of changes in geographical circumstances, material culture, demographic composition, ideology, and ideas or discoveries in society.⁸¹ Social change may also be seen as a variation of the acceptable way of life. The societal changes that take place will inevitably have repercussions for the other social institutions and will usher in a new era of living in a society that is transitioning from a more traditional to a more contemporary one.⁸²

⁷⁹ ABA Model Code of Professional Responsibility, Preamble and Preliminary Statement (1981) in Thomas D. Morgan & Ronald D. Rotunda, 1998 Selected Standards On Professional Responsibility (1998) (as quoted in Loewy KL, 'Lawyering for Social Change' (2000) 27 Fordham Urban Law Journal 1869).

⁸⁰ Sarkki, S., Pihlajamäki, M., Rasmus, S. and Eronen, J.T., "'Rights for Life" Scenario to Reach Biodiversity Targets and Social Equity for Indigenous Peoples and Local Communities' (2023) 280 Biological Conservation 109958.

⁸¹ Matnuh H, "Law as a tool of social engineering." In *1st International Conference on Social Sciences Education-" Multicultural Transformation in Education, Social Sciences and Wetland Environment"*(ICSSE 2017), pp. 118-120. Atlantis Press, 2017. <<https://www.atlantis-press.com/proceedings/icsse-17/25889472>> accessed 10 July 2023, p. 118; see also Utama AS, 'Law and Social Dynamics of Society' (2021) 3 International Journal of Law and Public Policy (IJLAPP) 107, p.108.

⁸² Ibid, p. 118.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

Changes in social values, social norms, behavioural patterns, social organization, changes in the structure of social institutions, changes in society, changes in power and authority, and changes in social interaction have all been linked to social engineering.⁸³

The overarching goal of environmental law is to remedy environmental issues, particularly those that are the result of human activity.⁸⁴ More specifically, environmental law seeks to combat pollution, resource depletion, and environmental degradation to build a world that is aesthetically pleasing, hospitable, and conducive to human well-being.⁸⁵ It is necessary to take into consideration other factors that will determine the creation of a good environment to combat the increasingly severe environmental damage. These factors include education, legal awareness, technology, and adequate funding to finance projects that prevent pollution and environmental damage, as well as efforts to improve quality.⁸⁶ All members of the community, not

⁸³ Matnuh H, "Law as a tool of social engineering." In *1st International Conference on Social Sciences Education- " Multicultural Transformation in Education, Social Sciences and Wetland Environment"* (ICSSE 2017), p. 118.

⁸⁴ 'Environmental Rule of Law' (UNEP - UN Environment Programme, 5 October 2017) <<http://www.unep.org/explore-topics/environmental-rights-and-governance/what-we-do/promoting-environmental-rule-law-0>> accessed 18 July 2023; 'Framework Principles on Human Rights and the Environment (2018)' (OHCHR) <<https://www.ohchr.org/en/special-procedures/sr-environment/framework-principles-human-rights-and-environment-2018>> accessed 18 July 2023; 'International Environmental Law' <https://www.americanbar.org/groups/public_education/publications/insights-on-law-and-society/volume-19/insights-vol--19---issue-1/international-environmental-law/> accessed 18 July 2023; Schachter O, 'The Emergence of International Environmental Law' (1991) 44 *Journal of International Affairs* 457

⁸⁵ Maruf A, 'Legal Aspects of Environment in Indonesia: An Efforts to Prevent Environmental Damage and Pollution' (2021) 1 *Journal of Human Rights, Culture and Legal System*.

⁸⁶ Kaminker C and Stewart F, 'The Role of Institutional Investors in Financing Clean Energy'; US EPA O, 'What Is Environmental Education?' (13 December 2012) <<https://www.epa.gov/education/what-environmental-education>> accessed 18 July 2023; 'DSD :: Resources - Publications - Core Publications' <https://www.un.org/esa/dsd/agenda21/res_agenda21_36.shtml> accessed 18 July 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

only the government, are responsible for contributing to successful environmental law enforcement efforts.⁸⁷

The American Bar Association (ABA) passed a resolution in respect of climate change in 2020, which was followed by the International Bar Association (IBA), the ABA's worldwide equivalent, passing a "Statement on the Climate Crisis." The statement from the International Bar Association "urges lawyers, acting in accordance with their professional conduct rules and the rule of law, to consider... taking a climate-conscious approach to problems encountered in daily legal practices." This includes operating "on a *pro bono*, volunteer, or reduced fee basis, for those negatively affected by the climate crisis," as well as "advising clients of the potential risks, liability, and reputational damage arising from activity that negatively contributes to the climate crisis."⁸⁸

In addition to this, the IBA statement "urges lawyers, as influential figures and thought leaders within society, to live responsibly in the face of the climate crisis" by reducing "their environmental footprint" in "every- day actions" and by "supporting positive changes in the workplace, including the adoption of more sustainable practices, such as greater reliance on electronic file storage facilities and digital technologies, more energy efficient offices, and more climate-friendly practices."⁸⁹

It has also been pointed out, and properly so, that eventually, large reductions in greenhouse gas emissions and systematic adaptation to

⁸⁷ Ibid, p. 20.

⁸⁸ Dernbach JC, Russell IS and Bogoshian M, 'Advocating for the Future', *The Environmental Forum*, March/April (2021).

⁸⁹ Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

climate change are not likely to occur without new and changed laws.⁹⁰ This is because new and modified laws are required for dramatic reductions in greenhouse gas emissions to occur. To campaign for, write, assist in implementing, and guide clients on the various laws that are necessary at the federal, state, and municipal levels, lawyers are required.⁹¹ Legal reforms are also required in private law and governance, such as certification, auditing, labeling, and reporting programmes. Supply chain contracts are another area of private law that has to be modified.⁹² Legal counsel is sought out by clients in the business world and others for assistance with ensuring legal compliance, mitigating risk, and making other choices that substantially impact the carbon load in the atmosphere.⁹³ In addition to this, members of the bar have influential roles in the communities in which they live. Leadership is required from many different kinds of lawyers, including those who work in private practice and corporate practice, as well as those who work in non-profit organizations, academia, and the government.⁹⁴

The principles of professional responsibility that have been around for a long time imply that lawyers have a responsibility to communicate to their clients the dangers and possibilities that are associated with climate change.⁹⁵ After concluding that climate change-related hazards and possibilities do exist, lawyers have a responsibility to educate their

⁹⁰ Dernbach JC, Russell IS and Bogoshian M, 'Advocating for the Future', *The Environmental Forum*, March/April (2021).

⁹¹ Ibid.

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Vaughan S, 'Existential Ethics: Thinking Hard About Lawyer Responsibility for Clients' Environmental Harms' [2023] *Current Legal Problems* cuad005; 'Basic Principles on the Role of Lawyers' (OHCHR) <<https://www.ohchr.org/en/instruments-mechanisms/instruments/basic-principles-role-lawyers>> accessed 18 July 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

clients about these risks and opportunities.⁹⁶ To provide clients with appropriate counsel that will help them resolve a legal problem or conflict, it is necessary to examine not only the legal problems at hand but also the financial, emotional and psychological, relational and social, environmental, and ethical ramifications that various courses of action will have.⁹⁷ Clients can have a better understanding of the outcomes, costs, and risks connected with the various courses of action that are available to them and thus make a more informed decision.⁹⁸ Daily, lawyers provide clients with counsel of this comprehensive nature in a variety of practice areas of the law. This standard procedure would, of course, benefit from the addition of climate change's repercussions as a factor in decision-making.⁹⁹

**10.4.2. Promoting Rule of Law and Adoption of Human Rights
Approaches to Climate Justice**

Better governance begins with strict respect for the rule of law, as well as the norms and guardrails that serve to keep the gears of government, business, and our legal system turning smoothly.¹⁰⁰ These standards include a dedication to the common good, mutual respect, a willingness to critically examine the viewpoints of others, respect for facts and science, civil dialogue, and respect for the scientific method.¹⁰¹ In both public and private conversations, attorneys need to aim toward better

⁹⁶ Dernbach JC, Russell IS and Bogoshian M, 'Advocating for the Future', *The Environmental Forum*, March/April (2021).

⁹⁷ Preston BJ, 'Climate Conscious Lawyering' (2021) 95 *Australian Law Journal* 51.

⁹⁸ *Ibid.*

⁹⁹ *Ibid.*

¹⁰⁰ Unit DS, 'What Is the Rule of Law' (*United Nations and the Rule of Law*) <<https://www.un.org/ruleoflaw/what-is-the-rule-of-law/>> accessed 19 July 2023; 'Rule of Law | UN Global Compact' <<https://unglobalcompact.org/what-is-gc/our-work/governance/rule-law>> accessed 19 July 2023; Pomeranz EF and Stedman RC, 'Measuring Good Governance: Piloting an Instrument for Evaluating Good Governance Principles' (2020) 22 *Journal of Environmental Policy & Planning* 428.

¹⁰¹ Dernbach JC, Russell IS and Bogoshian M, 'Advocating for the Future', *The Environmental Forum*, March/April (2021).

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

modeling of values like these, emphasizing plainly and explicitly how important it is to adhere to the rule of law and make decisions based on facts. They need to keep the dialogue respectful, find those who reject or undermine core standards, and even challenge them.¹⁰²

Applying a rights-based approach to policy and development, as called for by the Declaration on the Right to Development and agreed to in the UN Common Understanding on a Human Rights-Based Approach to Development Cooperation, is one way that human rights may be included in activities that are relevant to climate change. This can be done by recognizing that human rights are intertwined with climate change.¹⁰³

A rights-based approach analyzes duties, inequalities, and vulnerabilities, and it works to rectify discriminatory practices and unequal distributions of power. It does this through establishing plans, strategies, and programmes within the context of a framework of rights and duties that have been established by international law.¹⁰⁴

The following are some of the most important aspects of a strategy that is focused on human rights: (a) In the process of formulating policies and programmes, the primary goal should be to fulfill human rights; (b) The rights-holders and their entitlements must be identified, as well as the corresponding duty-bearers and their obligations, to find ways for strengthening the capacities of rights-holders to make their claims and of duty-bearers to meet their obligations; and (c) Principles and

¹⁰² Ibid.

¹⁰³ OHCHR U, 'Understanding Human Rights and Climate Change', *Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the parties to the United Nations Framework Convention on Climate Change* (2015).

¹⁰⁴ OHCHR U, 'Understanding Human Rights and Climate Change', *Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the parties to the United Nations Framework Convention on Climate Change* (2015).

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

standards derived from international human rights law, particularly the Universal Declaration of Human Rights, must be adhered to.¹⁰⁵

Any strategy that seeks to adapt to or mitigate the effects of climate change, such as the promotion of alternative energy sources, forest conservation or tree-planting projects, resettlement schemes, and others, should incorporate an approach that is centred on human rights.¹⁰⁶ Participation from affected individuals and communities, without regard to any form of bias, is required during the planning and execution of these projects. They are entitled to due process and should be able to seek recourse if their rights are violated.¹⁰⁷

10.4.3. Adopting the Concept of Sustainable Development as a Way of Practice

The Sustainable Development Goals (SDGs) provide the foundation that is essential to improve living standards throughout the world and to avoid the potentially catastrophic impacts of climate change brought on by human activities.¹⁰⁸ SDG 13 on "Climate Action" urges the

¹⁰⁵ OHCHR U, 'Understanding Human Rights and Climate Change', *Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the parties to the United Nations Framework Convention on Climate Change* (2015).

¹⁰⁶ Olawuyi D, 'The Human Rights Based Approach to Climate Change Mitigation: Legal Framework for Addressing Human Rights Questions in Mitigation Projects' (PhD Thesis, University of Oxford 2013); Mahadew R, 'A Human-Rights-Based Approach to Climate Change' [2021] *Revue juridique de l'Océan Indien* 155.

¹⁰⁷ OHCHR U, 'Understanding Human Rights and Climate Change', *Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the parties to the United Nations Framework Convention on Climate Change* (2015).

¹⁰⁸ 'THE 17 GOALS | Sustainable Development' <<https://sdgs.un.org/goals>> accessed 20 July 2023; Economic UN D of and Affairs S, *The Sustainable Development Goals: Report 2022* (UN 2022); 'Climate Change - United Nations Sustainable Development' <<https://www.un.org/sustainabledevelopment/climate-change/>> accessed 20 July 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

incorporation of actions for reducing the consequences of climate change into frameworks for economic development.¹⁰⁹

Adopting the concept of Sustainable Development would assist lawyers in thinking more comprehensively and plainly about the many legal options available to choose the most appropriate course of action.¹¹⁰ Sustainable Development is a lens or framework that may be used to handle practically any problem, including climate change. Lawyers can utilize this to their advantage. The lens offers a comprehension of the many risks and advantages, both individual and accumulated, that is inherent in a course of action that a client suggests.¹¹¹ This technique delves deeper to assist customers to avoid expenses and realize gains, as opposed to approaches that confine the study to surface-level economic issues and obvious legal hazards.¹¹² Among these advantages are the opportunity to enhance people's quality of life and to fight the environmental problem.¹¹³

10.4.4. Need for Continuous Professional Development and Retraining in Climate Change Matters

To facilitate the transactions, resource development initiatives, and renewable energy projects that are essential in the transition to net zero, lawyers will play a major role as drafters of the necessary legal documents.¹¹⁴ They will be the ones to preserve human rights, engage with Indigenous rights-holders, and represent people seeking

¹⁰⁹ United Nations, Preamble, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1.

¹¹⁰ Dernbach JC, Russell IS and Bogoshian M, 'Advocating for the Future', *The Environmental Forum*, March/April (2021).

¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ Ibid.

¹¹⁴ 'Lawyers in a Warming World | Peter A. Allard School of Law' <<https://allard.ubc.ca/about-us/news-and-announcements/2023/lawyers-warming-world>> accessed 17 July 2023.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

responsibility for greenwashing or fighting against such accusations.¹¹⁵ They will also be the ones to engage with Indigenous rights-holders.¹¹⁶ It will be more important for lawyers to have a solid understanding of greenhouse gas (GHG) emissions and climate mitigation, and this will need ongoing education and retraining for them to be able to assist their clients in comprehending the evolving legal and regulatory requirements and learning how to adapt.¹¹⁷

If lawyers do not evaluate and tell their clients about the dangers and opportunities associated with climate change, there is a possibility that they may break the duty that they owe to their clients in certain circumstances.¹¹⁸

10.4.5. Role of Law Society of Kenya in Shaping a Climate Change-Conscious Lawyer

There has been an effort to lessen the effect that international arbitrations have on the environment called the Campaign for Greener Arbitrations.¹¹⁹ To radically reduce the carbon footprint of the

¹¹⁵ 'Lawyers in a Warming World | Peter A. Allard School of Law' <<https://allard.ubc.ca/about-us/news-and-announcements/2023/lawyers-warming-world>> accessed 17 July 2023.

¹¹⁶ 'How Indigenous Peoples in Africa Are Impacted by Climate Change - IWGIA - International Work Group for Indigenous Affairs' <<https://www.iwgia.org/en/news/4959-how-indigenous-peoples-in-africa-are-impacted-by-climate-change.html>> accessed 20 July 2023

¹¹⁷ 'Lawyers in a Warming World | Peter A. Allard School of Law' <<https://allard.ubc.ca/about-us/news-and-announcements/2023/lawyers-warming-world>> accessed 17 July 2023.

¹¹⁸ Ibid.

¹¹⁹ alison.eyre@hsf.com, 'Inside Arbitration: Towards Greener Arbitrations Achieving Greater Environmental Sustainability in the Way We Conduct Arbitrations: An Update' (Herbert Smith Freehills | Global law firm, 25 February 2021) <<https://www.herbertsmithfreehills.com/latest-thinking/inside-arbitration-towards-greener-arbitrations-achieving-greater-environmental-0>> accessed 20 July 2023; 'The Green Pledge: No Talk, More Action' (Kluwer Arbitration Blog, 20 March 2020) <<https://arbitrationblog.kluwerarbitration.com/2020/03/20/the-green-pledge-no-talk-more-action/>> accessed 20 July 2023; 'HKIAC Signs Green Pledge & Supports Green

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

arbitration community, international arbitrator Lucy Greenwood established the campaign in 2019.¹²⁰ A Steering Committee was formed by the Campaign for Greener Arbitrations in 2020 and is made up of individuals with an interest in the development of international arbitration, including practitioners, institutions, and legal service providers.¹²¹ The creation of a Framework and a set of Protocols to encourage better environmental behaviour through several action items was one of the Steering Committee's main goals. The Protocols provide useful advice for putting the Guiding Principles' principles into practice.¹²²

According to the Campaign's research, practitioners can significantly reduce these carbon emissions by concentrating on just three areas: (i) adopting clean forms of energy, (ii); reducing long-haul travel, and (iii) reducing waste. For instance, by completely ceasing to use hard copy filings, practitioners could significantly reduce these carbon emissions. Everyone in the arbitration community has a stake in lowering the carbon footprint of our sector.¹²³

The "Green Protocols" is a series of guidelines created by the Campaign for Greener Arbitrations to nudge other stakeholders towards adopting more environmentally friendly behaviours and cutting back on carbon

Protocols' <<https://www.hkiac.org/news/hkiac-signs-green-pledge-supports-green-protocols>> accessed 20 July 2023; 'Putting the Campaign for Greener Arbitration Protocols into Practice' (Pinsent Masons, 20 July 2023) <<https://www.pinsentmasons.com/out-law/analysis/putting-the-campaign-for-greener-arbitration-protocols-into-practice>> accessed 20 July 2023.

¹²⁰ 'Campaign for Greener Arbitrations' (Campaign for Greener Arbitrations, 19 March 2023) <<https://www.greenerarbitrations.com>> accessed 17 July 2023.

¹²¹ 'Green Protocols' (Campaign for Greener Arbitrations) <<https://www.greenerarbitrations.com/green-protocols>> accessed 17 July 2023.

¹²² Ibid.

¹²³ Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

emissions.¹²⁴ This Framework offers recommendations for implementing the Green Protocols, which are the Green Protocol for Arbitral Proceedings, the Green Protocol for Law Firms, Chambers, and Legal Service Providers Working in Arbitration, the Green Protocol for Arbitrators, the Green Protocol for Arbitration Conferences, the Green Protocol for Arbitral Hearing Venues, and the Green Protocol for Arbitral Institutions.¹²⁵

The Green Protocols provide practical ways to implement the Campaign for Greener Arbitrations' Guiding Principles, which asks the arbitration community to commit to: Creating a workspace with a reduced environmental footprint, by looking for opportunities to reduce energy consumption and waste; Corresponding electronically, unless hard copy correspondence is expressly needed in the circumstances, while also being mindful that email has a carbon footprint; Encouraging the use of video-conferencing facilities as an alternative to travel (including for the purposes of conducting fact finding or interviews with witnesses); Avoiding printing, requesting the use of electronic rather than hard copies of documents and promoting the use of electronic bundles at hearings; Using, where possible, suppliers and service providers who are committed to reducing their environmental footprint (including for the purposes of arranging an arbitration hearing); Considering and/or suggesting, where appropriate, that witnesses or experts give evidence through video-conferencing facilities, rather than attend hearings in person; Avoiding unnecessary travel and using video-conferencing facilities as an

¹²⁴ Ibid; 'The Campaign for Greener Arbitrations: Encouraging Sustainable Practices in International Arbitration | Jus Mundi Blog' (11 August 2021) <<https://blog.jusmundi.com/the-campaign-for-greener-arbitrations-encouraging-sustainable-practices-in-international-arbitration/>> accessed 20 July 2023.

¹²⁵ Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

alternative; and Considering and questioning the need to fly at all times and offsetting carbon emissions for any arbitration-related travel.¹²⁶

Notably, this Framework and the Green Protocols are not binding and are not intended to displace applicable rules or derogate from the arbitration agreement, unless and to the extent the Parties so agree (either in the arbitration agreement or subsequently) or the Tribunal so orders. This Framework and the Green Protocols do not establish liability or a liability standard for legal or regulatory purposes.¹²⁷

Similarly, the Law Society of Kenya could borrow a leaf from these efforts and work with other stakeholders to develop similar guidelines for law firms and law practitioners to encourage them to reduce their carbon footprint. This would go a long way in not only cultivating positive behavioral change among the lawyers but also the clients who get to interact with these lawyers.

10.5. Conclusion

The 2020 Global Climate Litigation Report on Status Review rightly points out that:

In conclusion, the number of lawsuits concerning climate change is growing, the number of legal theories is expanding, and it has become abundantly clear that climate cases can contribute significantly to meaningfully compel governmental actors and corporate actors to pursue more ambitious climate change mitigation and adaptation goals. Climate litigation will continue to have an important role to play as the international community moves deeper into the third decade of this millennium. This is a crucial decade in which nations must change their course to drastically reduce emissions of greenhouse gases, enact

¹²⁶ Ibid.

¹²⁷ Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

reforms to achieve the United Nations Sustainable Development Goals, and also respond to and recover from the COVID-19 pandemic.¹²⁸

The escalating severity of the climate problem and the perceived insufficiency of solutions from both public and commercial sectors have led to a growing trend of individuals seeking legal recourse through the court system for climate-related remedies.¹²⁹ There are those who want to establish governmental responsibilities in regulating greenhouse gas (GHG) emissions, in accordance with constitutional, statutory, or human rights legislation pertaining to the safeguarding of public health and welfare. Some approaches focus on altering corporate behaviour or seeking financial reparations from firms that carry substantial accountability for climate change.¹³⁰ The potential for litigation in this context has been enhanced due to the emergence of fresh evidence regarding the detrimental consequences of climate change, the role of governmental and corporate entities in greenhouse gas emissions, and the deliberate actions of individuals acting in bad faith to undermine climate science and impede efforts to address climate change.¹³¹ The provided evidence can be utilised to demonstrate the following assertions: (a) the plaintiff incurred harm as a result of climate change, (b) the defendant had a role in causing such harm through its actions that contributed to climate change, and (c) the defendant possessed knowledge or had reasonable grounds to anticipate that its contribution to climate change would result in harm. This material serves the purpose of establishing both causation and liability in legal proceedings pertaining to claims about the legal accountability for climate change related injuries associated with a particular activity or context.¹³²

¹²⁸ Burger M and Tigre MA, 'Global Climate Litigation Report: 2023 Status Review', p. 5.

¹²⁹ Wentz, J., Merner, D., Franta, B., Lehmen, A. and Frumhoff, P.C., "Research priorities for climate litigation." *Earth's Future* 11, no. 1 (2023): e2022EF002928.

¹³⁰ *Ibid.*

¹³¹ *Ibid.*

¹³² *Ibid.*

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

The concept of a rights-based approach to climate litigation is arguably consistent with the 2030 Agenda for Sustainable Development.¹³³ It is worth pointing out that the interconnectedness among these rights was also captured in 2022, when the United Nations General Assembly (UNGA) adopted a resolution declaring a clean, healthy & sustainable environment as a human right.¹³⁴ They acknowledged that the right to a clean, healthy and sustainable environment is related to other rights and existing international law.¹³⁵ It was also affirmed that the promotion of the human right to a clean, healthy and sustainable environment requires the full implementation of the multilateral environmental agreements under the principles of international environmental law.¹³⁶

Due to the "triple planetary catastrophe" of human-caused climate change, widespread biodiversity loss, and unchecked pollution currently threatening to cross the planetary boundaries necessary to live securely on Earth as well as air pollution, polluted water, pollution from plastics, and chemical pollutants, all of which can jeopardise the right to life, dignity, and health, the U.N. responded to the calls to establish a right to a clean, healthy, and sustainable environment.¹³⁷

¹³³ Mahadew, R., "A Human-Rights-Based Approach to Climate Change." *Revue juridique de l'Océan Indien* 31 (2021): 155-168.

¹³⁴ United Nations General Assembly, *The Human Right to a Clean, Healthy and Sustainable Environment: resolution* / adopted by the General Assembly, UN. General Assembly (76th sess.: 2021-2022); 'In Historic Move, UN Declares Healthy Environment a Human Right' (UNEP, 28 July 2022) <<http://www.unep.org/news-and-stories/story/historic-move-un-declares-healthy-environment-human-right>> accessed 15 August 2023; 'UN General Assembly Declares Access to Clean and Healthy Environment a Universal Human Right | UN News' (28 July 2022) <<https://news.un.org/en/story/2022/07/1123482>> accessed 15 August 2023.

¹³⁵ United Nations General Assembly, *The Human Right to a Clean, Healthy and Sustainable Environment: resolution* / adopted by the General Assembly, UN. General Assembly (76th sess.: 2021-2022), para. 2.

¹³⁶ *Ibid*, para. 3.

¹³⁷ 'The UN Just Declared a New Human Right' (*World Economic Forum*, 9 August 2022) <<https://www.weforum.org/agenda/2022/08/the-un-just-declared-a-universal-human-right->

CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts in Climate Change Mitigation

As a result, more work has to be done in the implementation, monitoring, and assessment of the Sustainable Development Goals to guarantee that the full range of benefits offered by a rights-based approach is realized, especially as far as climate justice is concerned.¹³⁸ Even as the debate on what climate justice entails and the best approaches to the same continue, Kenyans must continually be encouraged to utilise the human-rights approaches and the courts and tribunals must remain proactive in addressing matters relating to climate change, as a prerequisite for realisation of Sustainable Development agenda.

Promoting Climate litigation in Kenya for sustainability is thus a venture that is worth pursuing.

The debate in this chapter also looks at legal professionals from several perspectives, including those of professionals, citizens, family members, and members of various communities.¹³⁹ Lawyers have a responsibility to their clients and society as a whole, and one of those duties requires them to strive for improved governance. It is difficult to address climate disruption and sustainable development unless we have effective governance at the national, regional, and international levels as well as in the business sector. These are all necessary components.¹⁴⁰

In both their personal and professional lives, lawyers need to give careful consideration to the possibility of taking part in and lending

to-a-healthy-sustainable-environment-here-s-where-resolutions-like-this-can-lead/>
accessed 15 August 2023.

¹³⁸ de Man A, 'The Sustainable Development Goals and the Rights-Based Approach to Development: Compatible or Missing the Point?' (2019) 19 African Human Rights Law Journal 445.

¹³⁹ Dernbach JC, Russell IS and Bogoshian M, 'Advocating for the Future', *The Environmental Forum*, March/April (2021).

¹⁴⁰ Ibid.

*CHAPTER TEN: Climate Change Litigation: The Role of Law, Lawyers and Courts
in Climate Change Mitigation*

their support to legal initiatives that aim to decrease emissions of greenhouse gases and increase resilience to the effects of climate change.¹⁴¹ Lawyers must ‘walk the talk’ if they are to have any meaningful influence in the societies that they live in.¹⁴² Since the maintenance of a consistent climate is essential to the functioning of our society, legal professionals cannot ignore climate change. It has been observed that the scientific evidence is unequivocal and the fight now centres on our beliefs, practices, and systems of thought, where the level of success that humanity achieves in reducing greenhouse gas emissions in the present will determine the kind of legacy that is passed down to the next generations.¹⁴³

¹⁴¹ Dernbach JC, Russell IS and Bogoshian M, ‘Advocating for the Future’, *The Environmental Forum*, March/April (2021).

¹⁴² Moliterno JE, ‘The Lawyer as Catalyst of Social Change’ [2009] *Fordham Law Review*.

¹⁴³ ‘Lawyers in a Warming World | Peter A. Allard School of Law’ <<https://allard.ubc.ca/about-us/news-and-announcements/2023/lawyers-warming-world>> accessed 17 July 2023.

CHAPTER ELEVEN

Climate Financing: Which Way for Africa?

11.1. Introduction

Responding to the threat of climate change has become both a national priority and a global responsibility.¹ It has been asserted that the world is responding to climate change through two fundamental approaches being mitigation and adaptation². Climate change mitigation involves reducing greenhouse gas emissions and stopping the problem of climate change from growing.³ Adaptation on the other hand involves learning how to live with the existing threat of climate change and protecting humanity from the future effects of climate change.⁴ The United Nations Environment Programme further observes that addressing the threat of climate change can be pursued through several avenues including adaptation and building resilience to climate change; mitigation and moving towards low carbon societies; reduction of emissions from deforestation and forest degradation; and finance for new models for the green economy.⁵

It has been observed that finance plays a vital role in the climate agenda by enhancing the mitigation and adaptation capabilities of countries especially in the developing world⁶. This chapter explores the concept

¹ United Nations Development Programme., 'Islamic Finance's Answer to SDGs and Climate Change.' Available at <https://www.undp.org/blog/islamic-finances-answer-sdgs-and-climate-change> (Accessed on 09/08/2023)

² World Visions., 'How is the World Responding to Climate Change?' Available at https://www.worldvision.com.au/docs/default-source/school-resources/how-is-the-world-responding-to-climate-change.pdf?sfvrsn=32021b89_0 (Accessed on 08/09/2023)

³ Ibid.

⁴ Ibid.

⁵ United Nations Environment Programme., 'Responding to Climate Change.' Available at <https://www.unep.org/regions/europe/regional-initiatives/responding-climate-change#:~:text=The%20UN%20Environment%20Programme%20supports,new%20models%20for%20the%20green> (Accessed on 09/08/2023).

⁶ Steckel. J. C., 'From Climate Finance Toward Sustainable Development Finance.' *WIREs Climate Change*, 2017.

of climate finance and its role in climate change mitigation and adaptation. It defines climate finance and discusses some of the national, regional and global efforts towards embracing this idea. The chapter critically examines the efficacy of climate finance as a tool of climate change mitigation and adaptation. It further examines the problems inherent in the idea of climate finance. The chapter concludes by proposing reforms towards unlocking climate finance at the national, regional and global levels in order to foster development.

11.2. Climate Finance: An Overview

Climate finance has been defined as local and global financing of public and private investment that seeks to support mitigation of and adaptation to climate change.⁷ It has also been described as finance for activities aimed at mitigating or adapting to the impacts of climate change.⁸ The United Nations Framework Convention on Climate Change defines climate finance as local, national or transnational financing drawn from public, private and alternative sources of financing that seeks to support mitigation and adaptation actions that will address climate change.⁹ From the foregoing definitions, climate finance represents the flow of funds to all activities, programmes or projects intended to help address climate change through both mitigation and adaptation across the world. The landscape of climate finance can be considered from several dimensions among them being the source of finance which could be public, private or hybrid; the type of finance or instrument used to provide it which could be development aid, equity or debt; where finance flows from and to such as domestic flows and international flows; the sector and purpose of the activity or

⁷ Hong. H., Karolyi. G. A., & Scheinkman. J.A., 'Climate Finance.' *Review of Financial Studies*, Volume 33, Issue 3 (2020).

⁸ The London School of Economics and Political Science., 'What is Climate Finance?' Available at <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-climate-finance-and-where-will-it-come-from/> (Accessed on 09/08/2023).

⁹ United Nations Framework Convention on Climate Change., 'What is Climate Finance?' Available at <https://unfccc.int/topics/introduction-to-climate-finance> (Accessed on 09/08/2023)

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

asset that receives finance including whether actions are directly or indirectly related to mitigation, adaptation or compensation for damages and whether finance is incremental.¹⁰

Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts.¹¹ It has been correctly observed that climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions.¹² Climate finance is equally important for adaptation, since significant financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate.¹³ Climate finance is thus crucial in combating climate change since the adaptation and mitigation processes crucial in enhancing national, regional and global response to climate change require funding.¹⁴

Climate finance is very essential for developing countries. It has been asserted that efforts to address climate change can cost billions of dollars, often making them out of reach for developing countries, which have contributed far fewer greenhouse gas emissions than developed

¹⁰ The London School of Economics and Political Science., 'What is Climate Finance?' Op Cit.

¹¹ UNFCCC Standing Committee on Finance., '2014 Biennial Assessment and Overview of Climate Finance Flows Report.' Available at https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/2014_biennial_assessment_and_overview_of_climate_finance_flows_report_web.pdf (Accessed on 09/08/2023)

¹² United Nations Framework Convention on Climate Change., 'What is Climate Finance?' Op Cit

¹³ Ibid

¹⁴ Climate Finance., 'Climate Finance Essential for Mitigating and Adapting to Climate Change.' Available at <https://www.iberdrola.com/sustainability/what-is-climate-finance> (Accessed on 09/08/2023)

CHAPTER ELEVEN: Climate Financing: Which Way for Africa?

countries.¹⁵ Climate change has had uneven and unequal burdens across the globe with nations and communities that contribute the least to climate change suffering the most from its consequences.¹⁶ However, many developing countries and small island nations lack the financial resources to prepare for and cope with the impacts of climate change including deeper droughts, more intense storms, greater heat extremes, bigger wildfires, and rising sea levels and to transition to clean energy.¹⁷ Consequently, such countries have had to bear heavy burden due to the adverse effects of climate change as evidenced by cases of severe droughts, extreme floods resulting in deaths and damage of infrastructure, displacement of people among others.¹⁸ As a result, climate finance is seen as a vital tool in enhancing the capacity of developing countries to respond to climate change.¹⁹ It has been stated that huge financial resources are needed to support countries in promoting climate change mitigation and adaptation and financing has a critical role to play in this quest.²⁰

Climate finance is vital in fostering Climate Justice since it recognizes the inequalities between countries with developing countries being the

¹⁵ Hill. A., & Babin. M 'Why Climate Finance is Critical for Accelerating Global Action.' Available at <https://www.cfr.org/in-brief/why-climate-finance-critical-accelerating-global-action> (Accessed on 09/08/2023)

¹⁶ Sultana. F., 'Critical Climate Justice' Available at <https://www.farhanasultana.com/wpcontent/uploads/Sultana-Critical-climate-justice.pdf> (Accessed on 10 August 2023)

¹⁷ Hill. A., & Babin. M 'Why Climate Finance is Critical for Accelerating Global Action.' Op Cit

¹⁸ Muigua. K., 'Fostering Climate Justice for Sustainable Development.' Available at <http://kmco.co.ke/wp-content/uploads/2023/07/Fostering-Climate-Justice-for-Sustainable-Development.pdf> (Accessed on 09/08/2023)

¹⁹ Hill. A., & Babin. M 'Why Climate Finance is Critical for Accelerating Global Action.' Op Cit

²⁰ Climate Finance Leadership Initiative., 'Financing Sustainable Infrastructure in Emerging Markets.' Available at https://www.bloomberg.com/cfli/mobilizing-investment/?utm_medium=cpc_search&utm_campaign=NB_ENG_DSAXX_DSAXXXXXX XXXXX_EVG_XXXX_XXX_Y0469_EN_EN_X_BLOM_GO_SE_XXX_XXXXXXXXXX X&gclid=Cj0KCQjwz8emBhDrARIsANNJjS4wepzVumLzWNAJWjkAvoejDfVwY4SO1nlqXklkvscSrv0stXd-4H8aAiAhEALw_wcB&gclidsrc=aw.ds (Accessed on 09/08/2023).

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

most vulnerable to the effects of climate change and thus requiring financial resources to aid their mitigation and adaptation programmes.²¹ The concept of Climate Justice recognizes the inequalities brought about by climate change with developing nations in places such as Africa, Asia, the Caribbean Islands and the Pacific Islands which due to an unfortunate mixture of economic and geographic vulnerability, continue to shoulder the brunt of the burdens of climate change despite their relative innocence in causing it.²² Climate Justice focuses on how climate change impacts people differently, unevenly and disproportionately and seeks to address the resultant injustices in fair and equitable ways.²³ Climate finance fosters Climate Justice by ensuring that vulnerable countries and communities have access to financial resources required to address the injustices brought by climate change and foster mitigation and adaptation measures.²⁴

The role of climate finance in climate change mitigation and adaptation is recognized in various legal instruments. The *United Nations Framework Convention on Climate Change*²⁵ enshrines the role of financing in enhancing the global response to the threat of climate change. It requires developing countries take all practicable steps to promote, facilitate and *finance*, (emphasis added) as appropriate, the transfer of, or access to, environmentally sound technologies and knowhow to other parties, particularly developing country parties, to enable them to

²¹ Colenbrander. S et al., 'Using Climate Finance to Advance Climate Justice: The Politics and Practice of Channeling Resources to the Local Level.' *Climate Policy*, 2017.

²² Giles. M., 'The Principles of Climate Justice at CoP27.' Available at <https://earth.org/principlesofclimatejustice/#:~:text=That%20response%20should%20be%20based,the%20consequences%20of%20climate%20change> (Accessed on 10 August 2023).

²³ Sultana. F., 'Critical Climate Justice' Op Cit.

²⁴ Colenbrander. S et al., 'Using Climate Finance to Advance Climate Justice: The Politics and Practice of Channeling Resources to the Local Level.' Op Cit.

²⁵ United Nations Framework Convention on Climate Change., Available at https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf (Accessed on 09/08/2023)

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

implement the provisions of the Convention²⁶. Further, the *Paris Agreement*²⁷ encourages developed countries to continue to take the lead in mobilizing *climate finance* from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country-driven strategies, and taking into account the needs and priorities of developing country parties.²⁸ Further, the Agreement provides that such mobilization of climate finance should represent a progression beyond previous efforts²⁹. The Paris Agreement thus calls for capacity building to enhance the ability of developing countries including those vulnerable to the adverse effects of climate change, such as small island developing states to take effective climate change action through measures such as access to climate finance³⁰. These instruments thus acknowledge the fundamental role of climate finance in fostering climate change mitigation and adaptation especially in developing countries.

At the regional level, the *East African Community Climate Change Policy*³¹ recognizes the importance of financial resources in implementing climate change mitigation and adaptation measures. It acknowledges challenges facing climate financing in East Africa and seeks to mobilize sustainable funding from development partners, including multilateral agencies, bilateral partners and intergovernmental agencies and the private sector in order to enhance climate change mitigation and adaptation in the region.³² It also stipulates the importance of capacity

²⁶ Ibid, Article 4 (5)

²⁷ Paris Agreement., Available at https://unfccc.int/sites/default/files/english_paris_agreement.pdf (Accessed on 09/08/2023)

²⁸ Ibid, Article 9 (3)

²⁹ Ibid

³⁰ Ibid, Article 11 (1)

³¹ East African Community Climate Change Policy., Available at <https://www.eac.int/environment/climate-change/eac-climate-change-policy-framework> (Accessed on 10 August 2023)

³² Ibid.

building in climate finance in order to enhance the climate resilience of the East African region.³³

In Kenya, the *Climate Change Act*³⁴ also envisages the role of climate finance in enhancing climate change resilience and low carbon development for the Sustainable Development of Kenya.³⁵ The Act defines climate finance as monies available for or mobilized by government or non-government entities to finance climate change mitigation and adaptation actions and interventions³⁶. It mandates the Climate Change Directorate to optimize the country's opportunities to mobilize *climate finance*.³⁷ The Act also establishes the Climate Change Fund whose purposes include to *finance* climate change actions and enhance achievement of low carbon climate resilient development.³⁸ The Climate Change Act envisages use of the Climate Change Fund to *finance*, through grants and loans the implantation of climate change adaptation and mitigation actions.³⁹ The idea of climate finance is thus well captured in Kenya.

From the foregoing, it is evident that climate finance is a pertinent idea in fostering global response to climate change through mitigation and adaptation actions. The concept of climate change faces several promises and pitfalls.

11.3. Unlocking Climate Finance: Promises and Pitfalls

The landscape of climate finance presents numerous opportunities. The United Nations Framework Convention on Climate Change (UNFCCC) has established the Green Climate Fund which is mandated to support

³³ Ibid.

³⁴ Climate Change Act, No. 11 of 2016, Laws of Kenya.

³⁵ Ibid, S 3.

³⁶ Ibid, S 2.

³⁷ Ibid, S 9 (8) (d) (iii).

³⁸ Ibid, S 25 (5) (c).

³⁹ Ibid, S 25 (8) (c).

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

countries particularly those that are vulnerable to the impacts of climate change, including least developed countries, small island developing states, and African nations.⁴⁰ The Green Climate Fund is the world's largest climate fund and plays a fundamental role in helping developing countries raise and realize their Nationally Determined Contributions (NDC) ambitions towards low-emissions and climate-resilient pathways as envisaged under the Paris Agreement.⁴¹ Since 2015, the Green Climate Fund has approved over \$12 billion for projects across more than 125 developing countries to accelerate clean energy transitions, build resilience in the most vulnerable countries, and catalyze private investment⁴². These projects are expected to reduce 2.5 billion tons of emissions and increase the resilience of over 900 million people.⁴³ The Green Climate Fund therefore plays a key role in unlocking climate finance.

Furthermore, at the 2022 United Nations Climate Change Conference/Conference of the Parties of the UNFCCC (COP27), a breakthrough agreement was reached to provide loss and damage funding for vulnerable countries hit hard by floods, droughts and other climate disasters.⁴⁴ This decision has been lauded as historic since it recognizes the need for finance to respond to loss and damage associated with the severe consequences of climate change.⁴⁵ The decision recognizes the urgent and immediate need for new, additional,

⁴⁰ United Nations Framework Convention on Climate Change., 'Report of the Conference of the Parties on its Sixteenth Session, held in Cancun from 29 November to 10 December 2010.' FCCC/CP/2010/7/Add.1.

⁴¹ Green Climate Fund., 'About GCF.' Available at <https://www.greenclimate.fund/about> (Accessed on 10 August 2023).

⁴² Ibid.

⁴³ Ibid.

⁴⁴ UNFCCC., 'Five Key Takeaways from COP27.' Available at https://unfccc.int/process-and-meetings/conferences/sharm-el-sheikh-climate-change-conference-november-2022/five-key-takeaways-from-cop27?gclid=EAlaIqobChMI-5_C16jRgAMVDzAGAB1Ikw6NEAAYASAAEgL_QfD_BwE (Accessed on 10 August 2023).

⁴⁵ Ibid.

CHAPTER ELEVEN: Climate Financing: Which Way for Africa?

predictable and adequate financial resources to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change.⁴⁶ The decision supports the UNFCCC commitment to jointly mobilise \$100 billion in climate finance per year to support developing countries.⁴⁷ Actualizing the decision of COP 27 and meeting UNFCCC's commitment on climate funding is vital in unlocking climate finance for development.

In addition, developed countries have embraced climate finance by promising to provide financial assistance to developing countries to support their climate change mitigation and adaptation activities as envisaged under the Paris Agreement.⁴⁸ The United States of America (USA) pledged to enhance climate support for developing countries to more than \$11 billion a year by 2024.⁴⁹ In addition, the USA recently provided \$1 billion to the Green Climate Fund (GCF) to support climate change mitigation and adaptation measures in developing countries.⁵⁰ Further, the United Kingdom has committed to spend £11.6 billion on International Climate Finance from financial years 2021/2022 to

⁴⁶ UNFCCC., 'Decision -/CP.27 -/CMA.4: Funding Arrangements for Responding to Loss and Damage Associated with the Adverse Effects of Climate Change, Including a Focus on Addressing Loss and Damage.' Available at https://unfccc.int/sites/default/files/resource/cma4_auv_8f.pdf (Accessed on 10 August 2023).

⁴⁷ United Nations Framework Convention on Climate Change., 'Introduction to Climate Finance.' Available at https://unfccc.int/topics/introduction-to-climate-finance?gclid=EAIaIQobChMI18L91LDRgAMValpoCR2_kQzJEAAYAiAAEgI4cfD_BwE (Accessed on 10 August 2023).

⁴⁸ Paris Agreement, Article 9 (3)

⁴⁹ The White House., 'FACT SHEET: President Biden to Catalyze Global Climate action through the Major Economies Forum on Energy and Climate.' Available at <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/20/fact-sheet-president-biden-to-catalyze-global-climate-action-through-the-major-economies-forum-on-energy-and-climate/> (Accessed on 10 August 2023).

⁵⁰ Ibid.

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

2025/2026.⁵¹ The UK notes that this funding is crucial in climate action through investments in priority areas including clean energy, adaptation and resilience and sustainable cities, infrastructure and transport.⁵² Developing countries therefore play an important role in unlocking climate finance for development.

International and regional financial institutions have also been key catalysts in unlocking climate finance. The World Bank acknowledges that financing transformative climate action is vital for development and to support the poorest people who are most affected by climate change.⁵³ The World Bank delivered a record USD 31.7 Billion in fiscal year 2022 to help countries address climate change representing a 19% increase from the USD 26.6 Billion reached in the fiscal year 2021.⁵⁴ The World Bank continues to be the largest multilateral financier of climate action in developing countries.⁵⁵ In Africa, the African Development Bank is committed to action on climate change and green growth, and to ensuring that development across the continent drives growth that is not only economically empowering but also decarbonized, climate-friendly, environmentally sustainable, and socially inclusive.⁵⁶ In its Climate Action Plan, the African Development Bank recognizes the importance of leveraging climate finance and mobilizing resources for climate action and green growth.⁵⁷ The Bank's climate finance

⁵¹ Government of the United Kingdom., 'UK International Climate Finance Strategy.' Available at <https://www.gov.uk/government/publications/uk-international-climate-finance-strategy> (Accessed on 10 August 2023).

⁵² Ibid.

⁵³ The World Bank., '10 Things You Should Know About the World Bank Group's Climate Finance.' Available at <https://www.worldbank.org/en/news/factsheet/2022/09/30/10-things-you-should-know-about-the-world-bank-group-s-climate-finance> (Accessed on 10 August 2023).

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ African Development Bank Group., 'Climate Change.' Available at <https://www.afdb.org/en/topics-and-sectors/sectors/climate-change> (Accessed on 10 August 2023).

⁵⁷ African Development Bank., 'African Development Bank Climate Change and Green Growth Strategic Framework: Action Plan 2021-2025.' Available at

CHAPTER ELEVEN: Climate Financing: Which Way for Africa?

investments increased from \$2.1 billion in 2020 to \$2.4 billion in 2021 and \$3.6 billion in 2022.⁵⁸ International and regional financial institutions therefore play a critical role in promoting access to climate finance.

Countries have also furthered their own efforts to unlock climate finance. The Government of Kenya estimates that USD 62 Billion is required to implement the country's National Determined Contributions (NDCs) between 2020-2030.⁵⁹ Kenya has made progress in realizing climate finance through public climate finance, bilateral and multilateral external funding and private climate finance involving both foreign investors and Kenyan investors⁶⁰. The country has also established budget programmes for biodiversity protection as part of its mitigation and adaption measures.⁶¹ Kenya has also adopted a green bond programme to promote financial sector innovation by developing a domestic green bond market.⁶² The programme is vital in enhancing the climate resilience of the country by fostering green investments.⁶³ In addition, Kenya has pioneered climate finance for pastoralist and vulnerable communities to reduce their vulnerability to climate

<https://www.afdb.org/en/documents/climate-change-and-green-growth-strategic-framework-operationalising-africas-voice-action-plan-2021-2025> (Accessed on 10 August 2023).

⁵⁸ African Development Bank Group., 'Climate Change.' Op Cit.

⁵⁹ Republic of Kenya., 'Kenya's Submission on the Objective of the New Collective Quantified Goal On Climate Finance with Respect Article two of the Paris Agreement.' Available at

<https://acrobat.adobe.com/link/review?uri=urn%3Aaaid%3AscDs%3AUS%3Aa62dd186-0d91-3d24-b799-eb0b32b939a> (Accessed on 10 August 2023).

⁶⁰ Nicholson. K., 'Kenya Climate and Nature Financing Options Analysis Final Report.' Available at

<https://acrobat.adobe.com/link/review?uri=urn%3Aaaid%3AscDs%3AUS%3A5f6c09bf-c917-3b18-9c63-4c2c03af8151> (Accessed on 10 August 2023).

⁶¹ Ibid.

⁶² Green Finance Platform., 'The Kenya Green Bond Programme.' Available at <https://www.greenfinanceplatform.org/policies-and-regulations/kenya-green-bond-programme> (Accessed on 10 August 2023).

⁶³ Ibid.

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

change.⁶⁴ This has enabled pastoralist communities to build community resilience and carry out climate-resilient development in a manner that fosters participation and community inclusion.⁶⁵ It has further been observed that county governments in the drylands of Kenya have established local-level climate adaptation funds with technical support from government and non-government organisations.⁶⁶ These funds are essential in supporting community-prioritized investments to build climate resilience.⁶⁷ The landscape of climate finance in Kenya looks promising due to the availability of public finance, private climate and nature finance and innovative options for climate and nature finance such as green bonds.⁶⁸

From the above discussion, it emerges that there are huge promises for climate finance at the global, regional and national levels. However, several problems hinder effective realization of the ideal of climate finance for development. It has been observed that despite developed economies committing to provide climate financing to developing countries, some of them have not followed through on their commitments.⁶⁹ Developed countries have failed to deliver on an

⁶⁴ Global Center on Adaptation., 'Kenya Pioneers Climate Finance for Pastoralist and Vulnerable Communities.' Available at <https://gca.org/kenya-pioneers-climate-finance-for-pastoralist-and-vulnerable-communities/> (Accessed on 10 August 2023).

⁶⁵ Ibid.

⁶⁶ International Institute for Environment and Development., 'Local Climate Finance Mechanism Helping to Fund Community-Prioritised Adaptation.' Available at <https://www.iied.org/local-climate-finance-mechanism-helping-fund-community-prioritised-adaptation> (Accessed on 10 August 2023).

⁶⁷ Ibid.

⁶⁸ Nicholson. K., 'Kenya Climate and Nature Financing Options Analysis Final Report.' Op Cit.

⁶⁹ Magoma. C., 'A Huge Financing Gap for Climate Action with Public Debt Sustainability Risks Looms in East Africa beyond COP27.' Available at <https://www.acepis.org/a-huge-financing-gap-for-climate-action-with-public-debt-sustainability-risks-looms-in-east-africa-beyond-cop27/> (Accessed on 10 August 2023).

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

agreed climate finance target of USD 100 billion annually by 2020.⁷⁰ This results in adequacy, imbalance and unpredictability of climate finance flows to developing countries.⁷¹ This has affected implementation of mitigation and adaptation measures in developing countries.⁷²

Africa also faces several problems in unlocking climate finance. African governments pledged \$ 264 Billion in domestic public resources to combat climate change a figure that falls short of the estimated USD 2.8 trillion required to implement Africa's Nationally Determined Contributions (NDCs) between 2020 and 2030.⁷³ It has also been observed that the debt crisis in Africa hinders the Continent's ability to unlock climate finance.⁷⁴ This has affected investor confidence and the ability of African countries to access international markets.⁷⁵ Further, it is argued that governance problems limit the potential of Africa to unlock climate concerns due to concerns about transparency, accountability, and efficient allocation of funds aimed towards climate action.⁷⁶ It has also been asserted that limited capacity, expertise and human resources can hinder the potential of developing countries to unlock climate finance due to concerns over ability to implement

⁷⁰ Kone. T., 'For Africa to meet its Climate Goals, Finance is Essential.' Available at <https://climatepromise.undp.org/news-and-stories/africa-meet-its-climate-goals-finance-essential> (Accessed on 10 August 2023).

⁷¹ United Nations., 'Accessing Climate Finance: Challenges and opportunities for Small Island Developing States.' Available at https://www.un.org/ohrrls/sites/www.un.org.ohrrls/files/accessing_climate_finance_challenges_sids_report.pdf (Accessed on 10 August 2023).

⁷² Magoma. C., 'A Huge Financing Gap for Climate Action with Public Debt Sustainability Risks Looms in East Africa beyond COP27' Op Cit.

⁷³ Ibid.

⁷⁴ Agyir. K., 'African Countries Must Act Strategically to Unlock Climate Finance in the Face of a Debt Crisis.' Available at <https://blogs.lse.ac.uk/africaatlse/2023/06/15/african-countries-must-act-strategically-to-unlock-climate-finance-in-the-face-of-a-debt-crisis/> (Accessed on 10 August 2023).

⁷⁵ Ibid.

⁷⁶ Ibid.

projects aimed at climate change mitigation and adaptation.⁷⁷ It is imperative to address these concerns in order to unlock climate finance in Africa and other developing countries.

Further, whereas the decision of COP 27 to establish and operationalize a loss and damage fund, particularly for nations most vulnerable to the climate crisis is commendable, there are still concerns about who should pay into the fund, where this money will come from and which countries will benefit.⁷⁸ There is need to address these concerns in order to unlock climate finance.

11.4. The African Leaders Nairobi Declaration on Climate Change and Call to Action: Financial Proposals for Africa

The *African Leaders Nairobi Declaration on Climate Change and Call to Action*, adopted during the Africa Climate Summit in Nairobi, called upon the global community to act with urgency in reducing emissions, fulfilling its obligations, keeping past promises, and supporting the continent in addressing climate change, specifically to, *inter alia*, honour the commitment to provide \$100 billion in annual climate finance, as promised 14 years ago at the Copenhagen conference.⁷⁹

The African leaders also called for the operationalization of the Loss & Damage fund as agreed at COP 27 and resolve for a measurable Global Goal on Adaptation (GGA) with indicators and targets to enable

⁷⁷ United Nations., 'Accessing Climate Finance: Challenges and opportunities for Small Island Developing States.' Op Cit.

⁷⁸ United Nations Environment Programme., 'COP27 Ends with Announcement of Historic Loss and Damage Fund.' Available at <https://www.unep.org/news-and-stories/story/cop27-ends-announcement-historic-loss-and-damage-fund> (Accessed on 10 August 2023)

⁷⁹ African Union, *African Leaders Nairobi Declaration on Climate Change and Call to Action*, A declaration made on 6th September 2023 by African leaders attending the Africa Climate Summit 2023 < <https://au.int/en/decisions/african-leaders-nairobi-declaration-climate-change-and-call-action-preamble>> Accessed on 10 August 2023.

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

assessment of progress against negative impacts of climate change.⁸⁰ They also committed to build effective partnerships between Africa and other regions, to meet the needs for financial, technical and technological support, and knowledge sharing for climate change adaptation.⁸¹

The African Heads of States and Governments who participated in the Africa Climate Summit in Nairobi, as a call to action, also invited Development Partners from both the global south and north to synchronise and harmonise their technical and financial resources aimed at Africa. This collaboration aims to facilitate the sustainable utilisation of Africa's natural resources, thereby advancing the continent's transition towards low carbon development and supporting global decarbonization efforts.⁸²

In addition to emphasizing the decision 31/COP 27, the leaders reiterated the need for a global shift towards a low-carbon economy. This transition is estimated to necessitate an annual investment of at least USD 4-6 trillion. Accomplishing such funding requires a fundamental transformation of the financial system, including its structures and processes. This transformation should involve the active participation of governments, central banks, commercial banks, institutional investors, and other financial stakeholders.⁸³

Also as part of the call to action, the African leaders called for collective global action to mobilise the necessary capital for both development and climate action, echoing the statement of the Paris Summit for a New

⁸⁰ Ibid., para. 20.

⁸¹ Ibid, para. 34.

⁸² African Union, *African Leaders Nairobi Declaration on Climate Change and Call to Action*, A declaration made on 6th September 2023 by African leaders attending the Africa Climate Summit 2023, para. 40.

⁸³ Ibid, para. 42.

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

Global Financing Pact, that no country should ever have to choose between development aspirations and climate action.⁸⁴

The leaders also called for concrete, time-bound action on the proposals to reform the multilateral financial system currently under discussion specifically to: Better leveraging of the balance sheets of Multilateral development banks, or MDBs to scale up concessional finance to at least \$500b per year.⁸⁵ They also proposed consideration of a new Special Drawing Rights (SDRs) issue for climate crisis response of at least the same magnitude as the Covid 19 issue (\$650b). In addition, they called for decisive action on the Promotion of inclusive and effective international tax cooperation at the United Nations (Resolution A/C.2/77/L.11/REV.1)- with the aim to reduce Africa's loss of \$ 27 billion annual corporate tax revenue through profit shifting, by at least 50% by 2030 and 75% by 2050.⁸⁶

The Africa Development Bank (AfDB) made a significant announcement during the summit, stating that it will provide \$23 billion in financing over the next 27 years to the Africa Climate Fund. This funding is specifically intended to support green growth, as well as activities related to mitigation and adaptation in the renewable energy sector. This announcement has been seen as further strengthening the ongoing efforts at the summit to increase investments in renewable energy.⁸⁷ The United Arab Emirates (UAE) made a financial commitment of \$4.5 billion, while Germany gave \$482.31 million to support the advancement of green energy infrastructure.⁸⁸

⁸⁴ Ibid., para. 43.

⁸⁵ Ibid., para. 44.

⁸⁶ Ibid., para. 44.

⁸⁷ 'African Leaders Seek Global Taxes for Climate Change at Nairobi Summit' <<https://www.aljazeera.com/news/2023/9/6/african-leaders-seek-global-taxes-for-climate-change-at-nairobi-summit>> accessed 8 October 2023.

⁸⁸ Ibid.

11.5. Way Forward

In order to unlock climate finance, it is imperative for countries to identify and mobilize effective and appropriate financing for climate action.⁸⁹ This can be achieved by finding ways to build public-private partnerships to attract financing for climate change, addressing the need for better access and mobilization of climate finance, promoting more simplified procedures, including direct access to international climate finance, and address challenges in accessing funds.⁹⁰ Such measures are vital in unlocking climate finance.

Financial institutions can also foster climate finance by investing in green products including green bonds and green infrastructure.⁹¹ Financial institutions such as banks represent the backbone of an economy and have both a direct and an indirect impact on the maintenance and development of the economy through their capacity as stewards of capital flows.⁹² It has been argued that through this intermediary role, the financial industry has an impact on other industries and can thus be central to achieving the Sustainable Development Goals (SDGs) by directly participating in projects to protect the environment, directing funds according to the environmental risk of the target companies, or promoting socially responsible products.⁹³ As a result, the finance industry can promote or

⁸⁹ United Nations Framework Convention on Climate Change., 'Climate Finance Access and Mobilization Strategy for The Least Developed Countries in Asia: 2022-2030.' Available at https://unfccc.int/sites/default/files/resource/UNFCCC_NBF_SD_AsianLDCA_final.pdf (Accessed on 10 August 2023).

⁹⁰ Ibid.

⁹¹ Asian Development Bank., 'Unlocking Islamic Climate Finance.' Available at <https://www.adb.org/sites/default/files/publication/838201/unlocking-islamic-climate-finance.pdf> (Accessed on 10 August 2023).

⁹² Zhixia, C., et al. 'Green Banking for Environmental Sustainability-Present Status and Future Agenda: Experience from Bangladesh.' *Asian Economic and Financial Review*, (2018) 8(5), 571-585.

⁹³ Zimmermann, S., 'Same but Different: How and Why Banks Approach Sustainability.' *Sustainability*, (2019) 11(8), 2267.

hinder (non-)sustainable behavior by states, companies and individuals and even trigger structural changes in society.⁹⁴ This has led to the emergence of the concept of sustainable finance.

It has been argued that the Environmental, Social, and Governance (ESG) revolution has created the need for an ethical and responsible finance industry.⁹⁵ Complying with ESG tenets requires financial institutions such as banks to embrace a sustainable, responsible and ethical investment environment including supporting investments geared towards climate change mitigation and adaptation.⁹⁶ Global and regional financial institutions such as the World Bank and the African Development Bank have been at the forefront in fostering climate finance through financial support and investments in developing countries.⁹⁷ However, it has been observed that while financial institutions have responded proactively to the challenge imposed by climate change and that there is a tendency in the banking sector to develop green products aimed at achieving sustainability results, it is considered that they are still isolated initiatives, not systemic or integrated ones, that fail to trigger significant climate outcomes at national or regional levels.⁹⁸ These processes undertaken individually by banking or financial entities could be strengthened through a national and regional approach that identifies barriers and

⁹⁴ Riegler. M., 'Towards a Definition of Sustainable Banking - A Consolidated Approach in the Context of Guidelines and Strategies.' *International Journal of Corporate Social Responsibility*, (2023), 8(5).

⁹⁵ Stuart. L.G et al., 'Firms and social responsibility: A review of ESG and CSR Research in Corporate Finance.' *Journal of Corporate Finance* 66 (2021): 101889.

⁹⁶ Ibid.

⁹⁷ See for example, the World Bank., '10 Things You Should Know About the World Bank Group's Climate Finance.' Op Cit and African Development Bank Group., 'Climate Change.' Op Cit.

⁹⁸ Green Climate Fund., 'Enhancing Climate Finance and Investment in LAC Banking Sector.' Available at <https://www.greenclimate.fund/document/enhancing-climate-finance-and-investment-lac-banking-sector#:~:text=These%20processes%20undertaken%20individually%20by,monitoring%20and%20following%20up%20impacts%2C> (Accessed on 10 August 2023).

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

opportunities for the climate financial business, while generating exchange of successful experiences, as well as mechanisms for monitoring and following up impacts.⁹⁹ Financial institutions thus have a vital role in unlocking climate finance.

Developed countries should also enhance financial support for developing countries especially those that are most vulnerable to the effects of climate change.¹⁰⁰ Despite efforts by some developed countries such as the USA and UK to provide funds to developing countries in form of climate finance, it has been observed that developed countries have failed to deliver on an agreed climate finance target of \$100 billion annually by 2020.¹⁰¹ It is therefore important for developed countries to increase climate funding to developing countries which face the greatest risks from climate change and require adequate funding to finance adaptation and mitigation measures.¹⁰²

The United Nations Framework Convention on Climate Change (UNFCCC) also has an important role to play in unlocking climate finance through its entities and programmes such as the Conference of the Parties (COP) and the Green Climate Fund.¹⁰³ The UNFCCC should thus spearhead its role in unlocking climate finance through increased financial support and investments to developing countries via the

⁹⁹ Ibid.

¹⁰⁰ Magoma. C., 'A Huge Financing Gap for Climate Action with Public Debt Sustainability Risks Looms in East Africa beyond COP27.' Op Cit.

¹⁰¹ Kone. T., 'For Africa to meet its Climate Goals, Finance is Essential.' Available at <https://climatepromise.undp.org/news-and-stories/africa-meet-its-climate-goals-finance-essential> (Accessed on 10 August 2023)

¹⁰² Georgieva. K et al., 'Poor and Vulnerable Countries Need Support to Adapt to Climate Change.' Available at <https://www.imf.org/en/Blogs/Articles/2022/03/23/blog032322-poor-and-vulnerable-countris-need-support-to-adapt-to-climate-change> (Accessed on 10 August 2023)

¹⁰³ United Nations Framework Convention on Climate Change., 'Climate Change.' Available at <https://unfccc.int/topics/climate-finance/the-big-picture/climate-finance-in-the-negotiations/climate-finance> (Accessed on 10 August 2023)

CHAPTER ELEVEN: *Climate Financing: Which Way for Africa?*

Green Climate Fund.¹⁰⁴ It is also imperative to implement the decision of COP 27 and operationalize the loss and damage climate fund in order to unlock climate finance in vulnerable countries hit hard by floods, droughts and other climate disasters.¹⁰⁵

Finally, in order to enhance climate finance in Africa, there is need for the Continent to rise above its governance and debt challenges and reposition itself to unlock the needed financing to boost climate resilience and inclusive socio-economic development.¹⁰⁶ It has been argued that there is need for African countries to establish robust governance structures including creating or enhancing the capacity of existing national bodies aimed at coordinating climate finance efforts in a manner that enhances transparency, accountability, and efficient allocation of funds.¹⁰⁷ In addition, there is need for African countries to remain vigilant and actively engage in global discussions on climate finance including COP meetings and other international conferences in order to safeguard their interests, secure necessary financial, technological, and capacity building resources, and contribute to shaping a more inclusive and equitable global financial landscape that puts the needs of the most vulnerable front and foremost.¹⁰⁸ Further, it has been observed that aligning climate action with national development priorities is crucial for accessing climate finance.¹⁰⁹ African countries need to integrate climate change considerations into

¹⁰⁴ Roberts. J et al., 'Rebooting a Failed Promise of Climate Finance.' Available at https://www.researchgate.net/profile/Romain-Weikmans/publication/349426191_Rebooting_a_failed_promise_of_climate_finance/links/60924fbd6fdccaebd093ff2/Rebooting-a-failed-promise-of-climate-finance.pdf (Accessed on 10 August 2023)

¹⁰⁵ United Nations Environment Programme., 'COP27 Ends with Announcement of Historic Loss and Damage Fund.' Op Cit.

¹⁰⁶ Aguir. K., 'African Countries Must Act Strategically to Unlock Climate Finance in the Face of a Debt Crisis.' Op Cit.

¹⁰⁷ Ibid.

¹⁰⁸ Kone. T., 'For Africa to meet its Climate Goals, Finance is Essential.' Op Cit.

¹⁰⁹ Samuwai. J., & Hills. J., 'Assessing Climate Finance Readiness in the Asia-Pacific Region.' *Sustainability*, Volume 10, No. 4 (2018).

their national development plans thereby demonstrating their commitment to addressing climate risks while pursuing sustainable economic growth.¹¹⁰ By incorporating climate targets, strategies, and indicators into their development frameworks, African countries can showcase the coherence of their climate and development agendas, thereby increasing their attractiveness to climate financiers and thus unlocking climate finance for development.¹¹¹ Adopting the above proposals is vital in unlocking climate finance especially in developing countries which are most vulnerable to the effects of climate change.

11.6. Conclusion

Climate finance plays a vital role in the climate agenda by enhancing the mitigation and adaptation capabilities of countries especially in the developing world.¹¹² Climate finance is also vital in fostering Climate Justice since it recognizes the inequalities between countries with developing countries which are most vulnerable to the effects of climate change requiring financial resources to aid their mitigation and adaptation programmes.¹¹³ There have been efforts towards unlocking climate finance at the global, regional and national levels through initiatives by the United Nations Framework Convention for Climate Change, funding from developed countries and international financial institutions such as the World Bank and the African Development Bank and national initiatives including public and private funding.¹¹⁴

¹¹⁰ Agyir. K., 'African Countries Must Act Strategically to Unlock Climate Finance in the Face of a Debt Crisis.' Op Cit.

¹¹¹ Ibid.

¹¹² Steckel. J. C., 'From Climate Finance Toward Sustainable Development Finance.' Op Cit.

¹¹³ Colenbrander. S et al., 'Using Climate Finance to Advance Climate Justice: The Politics and Practice of Channeling Resources to the Local Level.' Op Cit.

¹¹⁴ See for example UNFCCC., 'Decision -/CP.27 -/CMA.4: Funding Arrangements for Responding to Loss and Damage Associated with the Adverse Effects of Climate Change, Including a Focus on Addressing Loss and Damage.' Op Cit; The White House., 'FACT SHEET: President Biden to Catalyze Global Climate action through the Major Economies Forum on Energy and Climate.' Op Cit; and African Development

CHAPTER ELEVEN: Climate Financing: Which Way for Africa?

However, despite these efforts, several problems affect effect access to climate finance. These include failure by developed countries to deliver their promise on climate funding and problems in developing countries including debt crises and unfavourable investment environment.¹¹⁵ The landscape of climate finance can be enhanced through several measures including countries identifying and mobilizing effective and appropriate financing for climate action; financial institutions enhancing climate finance by investing in green products including green bonds; developed countries increasing financial support for developing countries especially those that are most vulnerable to the effects of climate change; the UNFCCC upscaling its mandate in climate finance through the Green Climate Fund and actualizing the loss and damage climate fund; and African countries creating a viable environment for climate finance.¹¹⁶ Unlocking climate finance for development can thus be realized.

Bank., 'African Development Bank Climate Change and Green Growth Strategic Framework: Action Plan 2021-2025.' Op Cit.

¹¹⁵ Agyir. K., 'African Countries Must Act Strategically to Unlock Climate Finance in the Face of a Debt Crisis.'

¹¹⁶ Roberts. J et al., 'Rebooting a Failed Promise of Climate Finance.' Op Cit.

CHAPTER TWELVE

Contemporary Issues in Climate Justice

12.1. Introduction

Since GHG emissions are transboundary by nature, global warming is indeed global, and the climate system is shared at the planetary level, we are all affected by climate change phenomena. Having said that, the emitter and/or beneficiary of GHG emissions is not necessarily the party most affected by such emissions and climate disruption.¹

This has deep implications in terms of the behaviour to be expected from States. For instance, it explains why all States must act decisively in order to curb GHG emissions and, in so doing, avoid crossing a dangerous threshold of climate disruption, but also why one State alone is a simple and helpless bystander. Therefore, climate change is the ultimate example of a problem requiring global cooperation between all States.² This chapter highlights some of the contemporary issues on various sectors that arise from the quest for climate justice.

¹ Rocha A, 'Suing States: The Role of Courts in Promoting States' Responsibility for Climate Change' in Maria da Glória Garcia and António Cortês (eds), *Blue Planet Law: The Ecology of our Economic and Technological World* (Springer International Publishing 2023) <https://doi.org/10.1007/978-3-031-24888-7_8> accessed 5 October 2023.

² Rocha A, 'Suing States: The Role of Courts in Promoting States' Responsibility for Climate Change' in Maria da Glória Garcia and António Cortês (eds), *Blue Planet Law: The Ecology of our Economic and Technological World* (Springer International Publishing 2023) <https://doi.org/10.1007/978-3-031-24888-7_8> accessed 5 October 2023.

12.2. Linking Alternative Dispute Resolution (ADR) and Environmental, Social and Governance (ESG) Tenets for Sustainable Development

12.2.1 Introduction

Alternative Dispute Resolution (ADR) has been defined as an all-encompassing term that entails multiple non-judicial methods of managing conflicts.³ ADR has also been defined as a set of mechanisms for resolving conflicts that function outside formal court litigation processes.⁴ ADR thus generally refers to a set of processes that are used to manage conflicts without resort to courts.⁵ These mechanisms include negotiation, mediation, arbitration, adjudication, neutral evaluation, enquiry, expert determination and conciliation.⁶ In Kenya, ADR mechanisms have been recognized under the Constitution which mandates courts and tribunals to promote alternative forms of dispute resolution.⁷ ADR mechanisms have been hailed for their advantages which include informality, privacy, confidentiality, party autonomy and the ability to foster expeditious and cost effective management of disputes.⁸ ADR mechanisms are thus viable in enhancing access to justice.

Issues such as climate change, corporate corruption and financial inequality have become pressing global concerns.⁹ In turn, corporations

³ Block. M. J., 'The Benefits of Alternate Dispute Resolution for International Commercial and Intellectual Property Disputes.' *Rutgers Law Record.*, Volume 44, 2016-2017

⁴ Uwazie. E., 'Alternative Dispute Resolution in Africa: Preventing Conflict and Enhancing Stability.' *Africa Security Brief*, No. 16 of 2011

⁵ Muigua. K., 'Alternative Dispute Resolution and Access to Justice in Kenya.' Glenwood Publishers Limited, 2015

⁶ Ibid

⁷ Constitution of Kenya, 2010, article 159 (2) (c), Government Printer, Nairobi

⁸ Muigua. K., 'Alternative Dispute Resolution and Access to Justice in Kenya.' Op Cit

⁹ CMS., 'Putting the 'S' in 'ESG'- a Corporate Guide.' Available at <https://cms.law/en/int/publication/social-aspect-of-esg-lexicon-of-most-important-terms-and-phrases> (Accessed on 11/07/2023)

have faced growing calls to be more environmentally sustainable, socially responsible and culturally transparent in how they run business.¹⁰ This has led to the emergence of the concept of Environmental, Social and Governance (ESG). This is a concept that seeks to achieve sustainable, responsible and ethical investment by incorporating Environmental, Social and Governance concerns in corporate decision making.¹¹ ESG is usually a standard and strategy used by investors to evaluate corporate behaviour and to determine the future financial performance of companies.¹² ESG entails a subset of non-financial performance indicators which include sustainable, ethical and corporate governance issues such as managing a company's carbon footprint and ensuring there are systems in place to ensure accountability.¹³ It involves monitoring and reporting environmental concerns such as carbon emissions, water consumption and waste generation; social concerns such as employee, product and customer related data and governance concerns such as political lobbying, anti-corruption initiatives and board diversity.¹⁴ The goal of ESG is to integrate Environmental, Social and Governance factors in corporate activities in order to enhance the sustainability and social impact of business activities¹⁵. ESG concerns have never been more important. They play into everything; increasingly driving investment decisions and commercial contracts to company strategy and culture.¹⁶ The concept of ESG is pertinent since Environmental, Social and

¹⁰ Ibid

¹¹ Stuart. L.G et al., 'Firms and social responsibility: A review of ESG and CSR research in corporate finance.' *Journal of Corporate Finance* 66 (2021): 101889.

¹² Li. T.T et al., 'ESG: Research Progress and Future Prospects.' *Sustainability*, No. 13 of 2021.

¹³ Stuart. L.G et al., 'Firms and social responsibility: A review of ESG and CSR research in corporate finance.' Op Cit.

¹⁴ Ibid.

¹⁵ Li. T.T et al., 'ESG: Research Progress and Future Prospects,' Op Cit.

¹⁶ Lexology., 'Real Estate Disputes and ESG - A Rise in Mediation?' Available at <https://www.lexology.com/library/detail.aspx?g=75560ce7-518f-4ea4-9dbb-399c2feedf9a> (Accessed on 11/07/2023).

CHAPTER TWELVE: Contemporary Issues in Climate Justice

Governance concerns have become a societal focal point in light of the Sustainable Development agenda.¹⁷

Sustainable Development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.¹⁸ It combines elements such as environmental protection, economic development and social concerns.¹⁹ The importance of this concept led to the adoption of the 2030 Agenda for Sustainable Development by member states of the United Nations in 2015 as a shared blue print for peace and prosperity for people and the planet in the quest towards the ideal of Sustainable Development.²⁰ At the heart of the 2030 Agenda for Sustainable Development are 17 Sustainable Development Goals which seek to strike a balance between social, economic and environmental sustainability.²¹ The Sustainable Development Goals seek to achieve global development within the ESG framework by addressing social concerns such as poverty, hunger, health, education, gender equality, access to clean water and employment through investments in areas such as energy, industry, innovation and infrastructure while mitigating the effects of climate change.²²

This section critically examines the relationship between ADR and ESG. It has been posited that ADR mechanisms such as arbitration and

¹⁷ Sriyani. C. & Heenetigala. K., 'Integrating Environmental, Social and Governance (ESG) Disclosure for a Sustainable Development: An Australian Study.' *Business Strategy and the Environment*, No. 26 of 2017.

¹⁸ World Commission on Environment and Development., 'Our Common Future.' Oxford, (Oxford University Press, 1987).

¹⁹ Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.'

International Sustainable Development Law., Vol 1.

²⁰ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.'

Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 08/07/2023).

²¹ Ibid.

²² Ibid.

mediation can be used to enforce ESG requirements such as human rights, environmental compliance and good corporate governance.²³ The section explores some of the ESG concerns in ADR. It further discusses practical ways through which ADR mechanisms can be used to realize ESG tenets in the quest for Sustainable Development.

12.2.2. The Nexus between ADR and ESG

It has been pointed out that ADR mechanisms such as arbitration can aid in enforcing ESG concerns including human rights standards.²⁴ Business entities such as Multinational Corporations have been accused of perpetrating human right abuses through acts such as killings, rape, and other forms of sexual and gender-based violence, bad labour practices, displacement of people and land injustices against the neighbouring communities while undertaking investment activities in developing countries.²⁵ Further, the activities of multinational corporations especially those involved in the exploration of natural resources have resulted in environmental concerns such as environmental degradation, extinction of biodiversity, contamination and destruction of soil and air pollution affecting the socio-economic lives of indigenous populations.²⁶ This affects realizing the Environmental and Social tenets of the ESG framework.²⁷ ADR mechanisms can thus be used to enforce ESG standards by holding businesses responsible for violation of environmental and human rights standards.²⁸ Indeed there has been rise in investment treaty arbitration

²³ Gramatidis.B & Emvalomenos. D., 'Sustainability in Dispute Resolution -Mediation as an ESG Practice.' Available at <https://www.bahagram.com/sustainability-in-dispute-resolution-mediation-as-an-esg-practice/> (Accessed on 08/07/2023).

²⁴ Ajibade, L.T & Awomuti, A.A. 'Petroleum Exploitation or Human Exploitation? An Overview of Niger Delta Oil Producing Communities in Nigeria' *African Research Review*, Vol. 3 (1), 2009, pp. 111-124.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Li. T.T et al., 'ESG: Research Progress and Future Prospects,' Op Cit.

²⁸ Ismayilova. A & Jedrzejowski. P., 'ESG and ADR.' Available at <https://www.cpradr.org/news/at-the-council--esg-and-adr##> (Accessed on 11/07/2023).

across the globe including Africa where Multinational Corporations are contractually bound through investment treaties to comply with ESG standards such as environmental governance and respect for human rights and are further subjected to ADR mechanisms especially arbitration when they violate ESG requirements stipulated in investment treaties.²⁹ Further, the *United Nations Guiding Principles on Business and Human Rights* provide a framework for realizing Environmental, Social and Governance standards by enshrining the corporate responsibility to respect human rights towards attaining the ESG pillars through sound environmental management, protection of human rights and good corporate governance.³⁰ The *Hague Rules on Business and Human Rights Arbitration* flow from the UN Guiding Principles on Business and Human Rights and provide a framework through which business entities can be compelled to comply with ESG standards through arbitration.³¹ The nexus between ADR and ESG is therefore demonstrated through the use of ADR mechanisms to enforce ESG tenets.

ADR mechanisms are also ideal in managing ESG disputes by fostering privacy, cost effective and expeditious management of disputes while also allowing parties to select experts to hear and determine contentious ESG matters.³² Business would normally prefer to have their disputes managed in a private manner in order to prevent ruining their image in public and also in an expeditious and cost effective manner in order to

²⁹ Dagbanja, D., 'The Environment, Human Rights, and Investment Treaties in Africa: A Constitutional Perspective.' *Handbook on International Investment Law and Policy*, 2020, pp. 1-30

³⁰ United Nations Guiding Principles on Business and Human Rights., Available at https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf (Accessed on 11/07/2023).

³¹ The Hague Rules on Business and Human Rights Arbitration., Available at https://www.cilc.nl/cms/wp-content/uploads/2019/12/The-Hague-Rules-on-Business-and-Human-Rights-Arbitration_CILC-digital-version.pdf (Accessed on 11/07/2023).

³² Thailand Arbitration Center., 'Alternative Dispute Resolution: Significance of ESG in Arbitration.' Available at <https://thac.or.th/alternative-dispute-resolution-significance-esg-arbitration/> (Accessed on 11/07/2023).

protect business interests.³³ ADR mechanisms such as International Commercial Arbitration and International Commercial Mediation allows businesses to attain these benefits by ensuring privacy, confidentiality, cost effectiveness and expeditiousness in management of disputes and further promoting the enforceability of decisions.³⁴ ADR mechanisms also allow business to select expert decision makers such as arbitrators and mediators who are knowledgeable on ESG issues such as human rights, renewable energy and climate change thus fostering effective and efficient management of disputes.³⁵ The growing interest of governments, regulators, Non-Governmental Organisations (NGOs) and private companies in ESG has led to a corresponding increase in the number of disputes involving ESG concerns.³⁶ Such disputes may be cross border in nature therefore requiring interpretation of laws from different nations.³⁷ ADR mechanisms such as International Commercial Arbitration and International Commercial Mediation are thus ideal in managing ESG related disputes since they have a transnational applicability and can foster privacy, confidentiality, expeditious and cost effective management of disputes. Further, mechanisms such as arbitration can ensure grant of interim reliefs in ESG related disputes important in instances like irreversible environmental damage or gross violation of human rights.³⁸ Injunctive relief can be obtained in an expedited manner, and since ESG disputes usually require initial adjudication that cannot be delayed, injunctive reliefs from arbitration

³³ Ibid.

³⁴ Moses. M., 'The Principles and Practice of International Commercial Arbitration.' Cambridge University Press, 2017.

³⁵ Muigua. K., 'The Viability of Arbitration in management of Climate Change Related Disputes in Kenya.' Available at <http://kmco.co.ke/wp-content/uploads/2022/04/The-Viability-of-Arbitration-in-management-of-Climata-Change-Related-Disputes-in-Kenya-11th-April-2022.pdf> (Accessed on 11/07/2023).

³⁶ Financier Worldwide., 'The Rise of ESG Disputes and the Role of Arbitration in Resolving Them.' Available at <https://www.financierworldwide.com/the-rise-of-esg-disputes-and-the-role-of-arbitration-in-resolving-them> (Accessed on 11/07/2023).

³⁷ Ibid.

³⁸ Mondaq., 'International Arbitration and ESG: A New Trend in Dispute Resolution.' Available at <https://www.mondaq.com/pdf/1273354.pdf> (Accessed on 11/07/2023).

proceedings are best suited for such purposes.³⁹ For instance, in the event that a business practice could cause irreparable environmental damage, the parties concerned could take advantage of emergency arbitration procedures before the constitution of the arbitral tribunal.⁴⁰ It has also been pointed out that the use of ADR mechanisms such as mediation in managing ESG related disputes is a practical demonstration of a sustainability-oriented business culture since mediation can offer a quick, flexible, consensual and win-win solution based on the mutually accepted interests of the parties.⁴¹ Consequently, it has been asserted that mediation is an ESG tool and its use adds ESG value to businesses.⁴² It is thus ideal in managing ESG disputes including real estate disputes, environmental disputes and disputes relating to consumer and business relationships.⁴³ ADR mechanisms are thus viable in managing ESG related disputes.

In addition, it has been argued that parties can use ADR mechanisms such as negotiation to achieve ESG requirements at workplaces such as fair labour practices that entails the right to equal pay, workplace safety and leave among other entitlements.⁴⁴ Fair labour practices are a crucial component of the 'Social' pillar in the ESG debate.⁴⁵ Social factors in the ESG debate include working conditions, health and safety, employee relations, diversity, equity & inclusion, operations in conflict

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Gramatidis.B & Emvalomenos. D., '*Sustainability in Dispute Resolution -Mediation as an ESG Practice.*' Op Cit.

⁴² Ibid.

⁴³ Lexology., '*Real Estate Disputes and ESG - A Rise in Mediation?*' Op Cit; See also Teixeira. A., '*The ESG Concept and Mediation.*' Available at <https://www.linkedin.com/pulse/esg-concept-mediation-antonio-carlos-menezes-teixeira/> (Accessed on 11/07/2023).

⁴⁴ ESG., '*The Path to Equal Pay is Through Negotiation.*' Available at <https://esgnews.bg/en/the-path-to-equal-pay-is-through-negotiation/> (Accessed on 11/07/2023b).

⁴⁵ Stuart. L.G et al., '*Firms and social responsibility: A review of ESG and CSR research in corporate finance.*' Op Cit.

regions, and a vast array of further topics connected with sustainable labour relations.⁴⁶ It has been pointed out that negotiation is a big part of life and can be used effectively at workplaces by employees to negotiate with their employers for favorable working terms and conditions including fair labor practices which are vital in the ESG debate.⁴⁷ Negotiation has been described as an informal process that involves the parties meeting to identify and discuss issues at hand so as to arrive at a mutually acceptable solution without the help of a third party.⁴⁸ It can facilitate parties in coming up with creative solutions in various contexts including the workplace.⁴⁹ ADR mechanisms such as negotiation are thus viable in achieving ESG requirements by businesses such as fair labour practices.

It is thus evident that ADR and ESG are interrelated concepts. ADR mechanisms can foster efficient management of ESG related disputes such as those concerning human rights and climate change.⁵⁰ Further, ADR mechanisms such as arbitration can aid in enforcing ESG concerns including human rights standards.⁵¹ In addition, mechanisms such negotiation can be used to achieve ESG requirements at workplaces such as fair labour practices.⁵² Linking ADR and ESG tenets is thus vital in fostering Sustainable Development by addressing social concerns such as poverty, hunger, health, education, gender equality, access to clean water and employment through investments in areas such as energy, industry, innovation and infrastructure while mitigating the effects of climate change as envisaged under the United Nations 2030

⁴⁶ CMS., 'Putting the 'S' in 'ESG' - a Corporate Guide.' Op Cit

⁴⁷ ESG., 'The Path to Equal Pay is Through Negotiation.' Op Cit

⁴⁸ Muigua. K., 'Alternative Dispute Resolution and Access to Justice in Kenya.' Op Cit

⁴⁹ ESG., 'The Path to Equal Pay is Through Negotiation.' Op Cit

⁵⁰ Thailand Arbitration Center., 'Alternative Dispute Resolution: Significance of ESG in Arbitration.' Op Cit

⁵¹ Ajibade, L.T & Awomuti, A.A. 'Petroleum Exploitation or Human Exploitation? An Overview of Niger Delta Oil Producing Communities in Nigeria' Op Cit

⁵² ESG., 'The Path to Equal Pay is Through Negotiation.' Op Cit

Agenda for Sustainable Development.⁵³ It is therefore imperative to link ADR and ESG tenets in order to achieve Sustainable Development.

12.2.3. Way Forward

There is need to link ADR and ESG tenets in order to expedite the realization of the Sustainable Development agenda across the globe. One way through which this goal can be achieved is by incorporating ESG clauses in commercial contracts such as those concerning respect for human rights, environmental management and climate change.⁵⁴ This can ensure enforcement and compliance with ESG requirements by businesses.⁵⁵ In addition, parties should consider managing disputes concerning ESG requirements through ADR mechanisms such as arbitration and mediation. It has been observed that ESG disputes are increasingly being managed through ADR mechanisms such as arbitration which are very suitable means of resolving ESG related disputes.⁵⁶ Businesses should tap into this opportunity and embrace ADR mechanisms in managing ESG disputes in order to promote flexibility, privacy, confidentiality, expeditiousness and cost effective management of such disputes.⁵⁷

In addition, it is imperative for ADR practitioners such as arbitrators, mediators and adjudicators become familiar with ESG-related trends, regulations and standards, and ensure that they are proactive in complying with best practices so as to promote appropriate ADR

⁵³ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

⁵⁴ Millar. L., 'Reviewing and Negotiating Climate Change and other ESG clauses in Commercial Contracts.' Available at <http://in-houseblog.practicallaw.com/reviewing-and-negotiating-climate-change-and-other-esg-clauses-in-commercial-contracts/> (Accessed on 12/07/2023)

⁵⁵ Ibid

⁵⁶ Mondaq., 'International Arbitration and ESG: A New Trend in Dispute Resolution.' Op Cit

⁵⁷ Thailand Arbitration Center., 'Alternative Dispute Resolution: Significance of ESG in Arbitration.' Op Cit

procedures for ESG-related disputes.⁵⁸ ADR practitioners should also seek expert assistance on complex ESG matters such as determining compliance with climate change commitments.⁵⁹ Organizations can also seek expertise from qualified personnel to help them navigate the complexity of ESG and put in place measures to ensure compliance with ESG standards.⁶⁰

It is also pertinent for organizations to uphold ESG practices such as green innovation in order to foster Sustainable Development.⁶¹ Green innovation incorporates technological improvements that save energy, prevent pollution or enable waste recycling and can include green product design.⁶² This will ensure compliance with ESG requirements such as environmental protection while promoting the financial performance of organizations.⁶³ In the context of ADR, it is essential for practitioners such as mediators, arbitrators and adjudicators to embrace sustainable practice through measures such as the use of electronic correspondence and electronic submissions; avoiding printing unnecessarily and promoting the use of electronic bundles at hearings; encouraging the use of videoconferencing facilities as an alternative to

⁵⁸ Mondaq., 'International Arbitration and ESG: A New Trend in Dispute Resolution.' Op Cit

⁵⁹ Muigua. K., 'The Viability of Arbitration in management of Climate Change Related Disputes in Kenya.' Op Cit

⁶⁰ CEDR., 'Environmental, Social and Governance (ESG) Expertise.' Available at <https://www.cedr.com/commercial/esg/> (Accessed on 12/07/2023)

⁶¹ Zhang. F et al., 'The Interaction Effect between ESG and Green Innovation and Its Impact on Firm Value from the Perspective of Information Disclosure.' Available at <https://pdfs.semanticscholar.org/103a/4aa7542fe368e99c42614c11b05a1f4097d7.pdf> (Accessed on 12/07/2023).

⁶² Chouaibi. S & Chouaibi. J., 'ESG and Corporate Financial Performance: The Mediating Role of Green Innovation: UK common Law versus Germany Civil Law.' Available at https://www.researchgate.net/profile/Jamel-Chouaibi/publication/348476713_ESG_and_corporate_financial_performance_the_mediating_role_of_green_innovation_UK_common_law_versus_Germany_civil_law/links/61fedadd702c892cef07ac56/ESG-and-corporate-financial-performance-the-mediating-role-of-green-innovation-UK-common-law-versus-Germany-civil-law.pdf (Accessed on 12/07/2023).

⁶³ Ibid.

travel, where appropriate (including for the purpose of fact-finding interviews with witnesses and cross-examination of witnesses or experts); selecting suppliers and service providers that are committed to reducing their environmental impact; and avoiding unnecessary travel and offsetting carbon emissions for ADR-related travel.⁶⁴ This will enhance Sustainable Development while also achieving ESG tenets such as sound environmental management. ADR practitioners such as arbitrators should also ensure that their awards promote ESG tenets such as respect for human rights.⁶⁵ It is also imperative for ADR practitioners to enforce good governance practices such as transparency, accountability, reporting and disclosure in their decisions.⁶⁶ This will enhance good governance which is a vital component of the ESG discourse.⁶⁷ Through these among other measures, Sustainable Development will be achieved through linking ADR and ESG tenets.

12.2.4. Conclusion

ADR and ESG are connected concepts. ADR mechanisms such as arbitration, mediation and adjudication are viable in managing ESG related disputes.⁶⁸ ADR mechanisms can also aid in enforcing ESG standards including sound environmental management, respect for

⁶⁴ Muigua. K., 'Green Arbitration: Aligning Arbitration with Sustainable Development.' Available at <http://kmco.co.ke/wp-content/uploads/2023/04/Green-Arbitration-Aligning-Arbitration-with-Sustainable-Development-Kariuki-Muigua-April-2023.pdf> (Accessed on 12/07/2023).

⁶⁵ Muigua. K., 'Reflections on Human Rights in Arbitration.' Available at <http://kmco.co.ke/wp-content/uploads/2023/06/Reflections-on-Human-Rights-in-Arbitration.pdf> (Accessed on 12/07/2023).

⁶⁶ Mazhorina. M., 'ESG Principles in International Business and Sustainable Contracts.' Available at https://aprp.msai.ru/jour/article/view/3223?locale=en_US (Accessed on 12/07/2023).

⁶⁷ Ibid.

⁶⁸ Thailand Arbitration Center., 'Alternative Dispute Resolution: Significance of ESG in Arbitration.' Op Cit.

human rights and good governance.⁶⁹ Connecting ADR and ESG tenets is thus vital in realizing Sustainable Development by addressing social concerns such as poverty, hunger, health, education, gender equality, access to clean water and employment through investments in areas such as energy, industry, innovation and infrastructure while mitigating the effects of climate change as envisaged under the United Nations 2030 Agenda for Sustainable Development.⁷⁰ Linking ADR and ESG tenets for Sustainable Development is a quest worth pursuing.

12.3. Fostering Sustainable Tourism in Kenya

12.3.1. Introduction

Tourism has been defined as a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual place of residence for personal or business/professional purposes.⁷¹ Tourism involves both leisure and business travel, as well as the philosophy and practice of travelling, the industry of attracting, hosting, and entertaining visitors, and the industry of running tours.⁷² Some of the main concepts related to tourism are leisure, entertainment, hospitality and recreation.⁷³ Tourism can be classified into domestic and international.⁷⁴ Domestic tourism

⁶⁹ Mazhorina. M., 'ESG Principles in International Business and Sustainable Contracts.' Op Cit.

⁷⁰ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Op Cit

⁷¹ World Tourism Organization., 'Glossary of Tourism Terms.' Available at <https://www.unwto.org/glossary-tourism-terms> (Accessed on 19/08/2023)

⁷² IGI Global., 'What is Tourism?' Available at <https://www.igi-global.com/dictionary/which-sociology-of-urban-tourism-in-the-day-after-viral-society/30288> (Accessed on 19/08/2023)

⁷³ Netto. A.P., 'What is Tourism? Definitions, Theoretical Phases and Principles' Available

at https://books.google.co.ke/books?hl=en&lr=&id=3XAHXFpPYSIC&oi=fnd&pg=PA43&ots=aa8oHwbfdx&sig=bxoclunLn-3c4Z23uEQ9Zre3OY&redir_esc=y#v=onepage&q&f=false (Accessed on 19/08/2023)

⁷⁴ World Tourism Organization., 'Glossary of Tourism Terms.' Op Cit

CHAPTER TWELVE: Contemporary Issues in Climate Justice

entails tourism activities conducted with one's own country.⁷⁵ International tourism, on the other hand, involves tourism activities conducted outside a person's country of residence.⁷⁶

It has been observed that tourism is among the world's largest industries.⁷⁷ Further, it has been asserted that tourism is one of the fastest growing sectors in the world and can provide an essential economic boost for countries pitching themselves as holiday destinations.⁷⁸ Tourism is one of the key sectors driving social-economic development in the continent of Africa.⁷⁹ In Kenya, tourism remains the cornerstone of the economy, and a leading foreign exchange earner for the country.⁸⁰ Kenya has been described as an ideal tourist destination with many attractions ranging from the sandy beaches at the coast, diverse flora and fauna, game parks, cultural heritage, scenic landscapes among others⁸¹. According to the Annual Tourism Sector Performance Report, in 2022, Kenya international tourist arrivals were 1,483,752 which represents 70.45% increase as compared to 2021 arrivals of 870,465.⁸² The inbound receipts grew up to Kshs. 268.09 Billion

⁷⁵ Ibid

⁷⁶ Ibid

⁷⁷ Sinclair-Maragh. G., 'The 5Ps of the Tourism World Today.' Available at <https://www.jamaicaobserver.com/columns/the-5ps-of-the-tourism-world-today/> (Accessed on 19/08/2023)

⁷⁸ Sustainability Management School., '5 Examples of Sustainable Tourism around the World.' Available at <https://sumas.ch/5-examples-of-sustainable-tourism-around-the-world/> (Accessed on 19/08/2023)

⁷⁹ United Nations Environment Programme., 'Sustainable Tourism in Africa: Focus on Ecotourism.' Available at <https://wedocs.unep.org/handle/20.500.11822/34622;jsessionid=5F4FF95871609496F19F0B9AF5A09865> (Accessed on 19/08/2023)

⁸⁰ Republic of Kenya., 'Ministry of Tourism: Sessional Paper No. 1 of 2010 on Enhancing Sustainable Tourism in Kenya.' Government Printer, Nairobi

⁸¹ Republic of Kenya., 'Kenya, Africa's Leading Tourist Destination.' Available at <https://kenyahighcommission.ca/tourism/> (Accessed on 19/08/2023)

⁸² Ministry of Tourism, Wildlife & Heritage., 'Annual Tourism Sector Performance Report-2022.' Available at <https://www.tourism.go.ke/wp-content/uploads/2023/02/ANNUAL-TOURISM-SECTOR-PERFORMANCE-REPORT-2022-2.pdf> (Accessed on 19/08/2023).

compared to Kshs. 146.51 Billion in 2021 which is a growth of 83%.⁸³ The tourism sector in Kenya accounts for 10.4% of the country's Gross Domestic Product (GDP), 5.5% of Kenya's formal employment and contributes to 4.2% of National Gross Fixed Capital Formation (new investments).⁸⁴ Moreover, the sector has high multiplier effects as its growth stimulates further development in other activities.⁸⁵ The tourism industry is therefore thriving in Kenya.

However, despite the viability of the tourism sector in Kenya, Africa and across the globe, it has been argued that tourism has historically had devastating effects on the environment, people and their cultural identities.⁸⁶ Tourism can destroy the very resources on which it depends, thus, the importance of managing its development in a responsible way.⁸⁷ African economies are highly dependent on natural resource sectors such as mining, *tourism*(emphasis added), agriculture, forestry and fishing among others and ensuring that these resources are sustainable is crucial for future generations.⁸⁸ This has led to the emergence of the concept of sustainable tourism.

The section critically interrogates sustainable tourism. It defines sustainable tourism and identifies its salient elements. The section further discusses how the concept of sustainable tourism has been embraced in Kenya. It also examines the challenges facing sustainable tourism in the country and proposes recommendations towards fostering sustainable tourism in Kenya.

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Republic of Kenya., 'Ministry of Tourism: Sessional Paper No. 1 of 2010 on Enhancing Sustainable Tourism in Kenya' Op Cit.

⁸⁶ Sustainability Management School., '5 Examples of Sustainable Tourism around the World,' Op Cit.

⁸⁷ Sinclair-Maragh. G., 'The 5Ps of the Tourism World Today.' Op Cit

⁸⁸ United Nations Environment Programme., 'Sustainable Tourism in Africa: Focus on Ecotourism.' Op Cit

13.3.2. The Concept of Sustainable Tourism

The World Tourism Organization defines sustainable tourism as that which takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.⁸⁹ Sustainable tourism factors in the economic, environmental, and social aspects of tourism, ensuring that it does not have any negative consequences on the environment.⁹⁰ Sustainable tourism has also been linked with eco-tourism which is primarily a low impact nature of tourism which contributes to the maintenance of species and habitats either directly through contribution to conservation and/or indirectly by providing revenues sufficient for local people to value, and therefore, protect their wildlife and heritage areas.⁹¹ Sustainable tourism involves the adoption of sustainable practices with the aim of minimizing the negative impacts and maximizing the positive effects of tourism.⁹² Sustainable tourism acknowledges the negative impacts that tourism can have on a country or destination⁹³. Tourism is associated with a lot of travelling, a situation that contributes to the problem of climate change due to greenhouse gas emissions when modes of transport such as airplanes are used.⁹⁴ Sustainable tourism envisages developing tourism in a sustainable way so as to preserve the resources of destinations, inclusive of the people,

⁸⁹ World Tourism Organization., 'Sustainable Development.' Available at <https://www.unwto.org/sustainable-development> (Accessed on 19/08/2023)

⁹⁰ Sustainability Success., '10 Sustainable Tourism Examples.' Available at https://sustainability-success.com/sustainable-tourism-examples/#google_vignette (Accessed on 19/08/2023)

⁹¹ Chebus. P., 'The Effect of Ecotourism Initiatives on the Livelihood of Local Community around Kit Mikayi Site in Kisumu County, Kenya.' *International Journal of Progressive Sciences and Technologies.*, Volume 7, No. 1 (2018)

⁹² Angeli. S., 'What is Sustainable Travel: 8 Best Practices.' Available at <https://ecobnb.com/blog/2022/03/sustainable-travel-good-practices/> (Accessed on 19/08/2023)

⁹³ Ibid

⁹⁴ CBI., 'How to be a Sustainable Tourism Business.' Available at <https://www.cbi.eu/market-information/tourism/how-be-sustainable-tourism-business> (Accessed on 19/08/2023)

culture, and natural and physical environments.⁹⁵ Sustainable tourism has also been described as ‘green’ tourism.⁹⁶ The greening of the tourism industry in pursuit of moving towards sustainability has risen in the global agenda of Sustainable Development due to its vast potential and increased awareness of tourists demanding greening of the industry and better information on the effects of their travelling to the surrounding natural and social environments.⁹⁷

According to the World Tourism Organization, sustainable tourism must conserve environmental resources and protect biodiversity; respect and preserve the cultures of host communities whilst benefiting them and address the needs of the visitors and industry whilst providing socio-economic benefit to all.⁹⁸ Sustainable Tourism therefore encapsulates various facets including making optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity⁹⁹; respecting the socio-cultural authenticity of host communities; conserving their built and living cultural heritage and traditional values, and contributing to intercultural understanding and tolerance;* and ensuring viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation¹⁰⁰

⁹⁵ Sinclair-Maragh, G., ‘The 5Ps of the Tourism World Today.’ Op Cit

⁹⁶ International Labour Organization., ‘Sustainable Tourism.’ Available at <https://www.ilo.org/global/industries-and-sectors/hotels-catering-tourism/lang-en/index.htm#:~:text=The%20hotels%2C%20catering%20and%20tourism,employment%20in%20other%20related%20sectors.> (Accessed on 19/08/2023)

⁹⁷ Ibid

⁹⁸ World Tourism Organization., ‘Sustainable Development.’ Op Cit.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

CHAPTER TWELVE: Contemporary Issues in Climate Justice

It has been argued that sustainable tourism is anchored on four pillars which are environmental responsibility, social equity, economic development and cultural vitality.¹⁰¹ The International Labour Organization (ILO) further observes that sustainable tourism is based on the pillars of social justice, economic development and environmental integrity.¹⁰² Sustainable tourism is also linked with elements such as fostering energy efficiency, promoting water conservation and waste management, reducing greenhouse gas emissions and carbon offsetting schemes, enhancing community relations, labour practices and human rights, promoting positive impacts on local cultures and ensuring the health and safety of all stakeholders.¹⁰³ Integration of these pillars and elements can drive sustainability in the tourism sector.¹⁰⁴ Sustainable tourism seeks to achieve several goals including economic viability, local prosperity, employment quality, social equity, visitor fulfilment, local control, community wellbeing, cultural richness, physical integrity, conservation of biological diversity, promoting resource efficiency and ensuring environmental purity.¹⁰⁵

It has been argued that sustainable tourism can enhance realization of the Sustainable Development agenda.¹⁰⁶ Sustainability in tourism is strongly connected to the United Nations Sustainable Development

¹⁰¹ The Four Pillar Approach to Sustainable Tourism., Available at <https://thisiscarpedm.com/the-4-pillar-approach-to-sustainable-tourism/> (Accessed on 19/08/2023)

¹⁰² International Labour Organization., 'ILO Guidelines on Decent Work and Socially Responsible Tourism.' Available at https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/normativeinstrument/wcms_546337.pdf (Accessed on 19/08/2023)

¹⁰³ CBI., 'How to be a Sustainable Tourism Business.' Op Cit

¹⁰⁴ Ibid

¹⁰⁵ World Tourism Organization., 'Making Tourism More Sustainable : A Guide for Policy Makers', UNEP and UNWTO, 2005, p.11-12 Available at <http://www.unep.fr/shared/publications/pdf/DTIx0592xPA-TourismPolicyEN.pdf> (Accessed on 19/08/2023)

¹⁰⁶ CBI., 'How to be a Sustainable Tourism Business.' Op Cit

Goals (SDGs), developed by the United Nations as a call to action to promote global prosperity while protecting the planet.¹⁰⁷ Tourism is recognised as a key sector in the challenge to meet the 17 SDGs.¹⁰⁸ The United Nations 2030 Agenda for Sustainable Development envisages the promotion of sustainable tourism that creates jobs and promotes local culture and products.¹⁰⁹ The recognition of the role of tourism in sustainable development and the emphasis placed in the SDGs on the development of public policies for sustainable tourism is a landmark breakthrough that provides a unique opportunity for all governments to create a sound and favourable policy foundation towards fostering sustainable tourism¹¹⁰. Fostering sustainable tourism is therefore vital in realizing the Sustainable Development agenda.

12.3.3. Sustainable Tourism in Kenya: Prospects and Pitfalls

Fostering sustainable tourism is not only a point of focus in Kenya but across Africa. Africa Union's *Agenda 2063* identifies tourism and hospitality as one of the priority areas in realization of the aspiration of a prosperous Africa, based on inclusive growth and Sustainable Development.¹¹¹ Among the targets of Agenda 2063 in the tourism sector is fostering eco-friendly tourism in Africa; increasing intra-African tourism; implementing an African tourism strategy and

¹⁰⁷ Ibid

¹⁰⁸ Ibid

¹⁰⁹ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 19/08/2023); See also the Sustainable Development Goals, Goal 8.9

¹¹⁰ Republic of Kenya., 'Second Voluntary National Review Report on the Implementation of the Sustainable Development Goals.' Available at https://sustainabledevelopment.un.org/content/documents/26360VNR_2020_Kenya_Report.pdf (Accessed on 19/08/2023)

¹¹¹ Africa Union., 'Agenda 2063.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 19/08/2023)

creating/nurturing an African tourism organization.¹¹² Realizing the vision of Agenda 2063 can foster sustainable tourism in Africa.

In addition, the *African Tourism Strategic Framework*¹¹³ seeks to provide a strategic action plan geared towards development of a competitive, sustainable and integrated tourism industry in Africa.¹¹⁴ Among the guiding principles of the Framework is tourism development in Africa while pursuing sustainability principles and ensuring a balance between economic benefits and socio-cultural and environmental costs.¹¹⁵ The Framework seeks to establish and operationalize an African Tourism Organisation as an institutional coordinator and driver for continental tourism development.¹¹⁶ The Framework is guided by the vision of Africa becoming a preferred destination for tourism offering unique and diverse African experience and committed to *sustainable and inclusive tourism(emphasis added)* development that contributes to regional integration and the socio-economic well-being of the African People.¹¹⁷ It also recognizes the role of sustainable tourism in preserving the rich cultural and natural heritage in Africa.¹¹⁸ Implementing this Framework can foster sustainable tourism in Africa. Further, the *East African Community Tourism Marketing Strategy*¹¹⁹ seeks to develop and promote inclusive and sustainable intra-regional and international tourism across the East African Community (EAC)

¹¹² Ibid

¹¹³ Africa Union., 'African Tourism Strategic Framework (2019-2028).' Available at <https://www.tralac.org/documents/resources/african-union/3118-african-tourism-strategic-framework-2019-2028-executive-summary/file.html#:~:text=The%20African%20Tourism%20Strategic%20Framework,for%20a%20continental%20tourism%20development> (Accessed on 19/08/2023)

¹¹⁴ Ibid

¹¹⁵ Ibid

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ Ibid.

¹¹⁹ East African Community., 'Tourism Marketing Strategy 2021-2025.' Available at <https://www.eac.int/tourism/78-sector/tourism-wildlife-management#:~:text=The%20EAC%20Tourism%20Marketing%20Strategy,tourism%20across%20the%20EAC%20region> (Accessed on 19/08/2023).

region.¹²⁰ It urges member states of the EAC to implement key strategic actions in order to enhance their competitiveness, position the EAC region as the leading sustainable tourism destination in Africa and realize the full potential of the sector in the region.¹²¹ The strategy identifies tourism as one of the sectors that can greatly contribute to inclusive growth and Sustainable Development.¹²² Realizing the ideal of this Strategy can enhance sustainable tourism with the EAC community.

The idea of sustainable tourism is also recognized in Kenya. The *Tourism Act*¹²³ is an Act of Parliament that provides for the development, management, marketing and regulation of sustainable tourism and tourism-related activities and services in Kenya. The Act defines sustainable tourism as that meets the needs of present visitors and hosts while protecting and enhancing opportunity for the future.¹²⁴ The Act envisages the formulation of a National Tourism Strategy in order to foster sustainable tourism in Kenya.¹²⁵ The Act requires the National Tourism Strategy to prescribe innovative schemes, incentives and ethics to be applied in the development and marketing of sustainable tourism, including public private partnerships.¹²⁶ The Act also establishes the Tourism Regulatory Authority whose functions include inter alia to formulate guidelines and prescribe measures for sustainable establishments and operations to realize sustainable tourism development throughout the country and to monitor and assess tourist activities and services to enhance continuous improvement and adherence to sound principles and practices of sustainable tourism.¹²⁷ The Act further establishes the Tourism Research Institute which is

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Ibid.

¹²³ Tourism Act, No. 28 of 2011, Laws of Kenya, Government Printer, Nairobi.

¹²⁴ Ibid, S 2.

¹²⁵ Ibid, Part II.

¹²⁶ Ibid, S 3 (2) (e).

¹²⁷ Ibid, S 7.

tasked with collecting and analyzing information relating to processes or activities likely to impact on sustainable tourism researching on sustainable tourism and other emerging areas.¹²⁸ The tourism Act also envisions the use of tax and other fiscal incentives, disincentives or fees to induce or promote the development of sustainable tourism in Kenya.¹²⁹

Sustainable tourism in Kenya is also recognized under the *National Tourism Blueprint*¹³⁰. The Blueprint seeks to achieve a booming and *sustainable tourism* industry that is vibrant and innovative, and where local, African and international visitors can freely explore tourist destinations in Kenya.¹³¹ It identifies the need to set policies and identify programmes that will make tourism a catalyst to sustainable national development, engine in protecting the environment and preservation of cultural heritage, creating shared value of tourism to surrounding communities and enhancing gender equality.¹³²

In addition, sustainable tourism in Kenya is also provided for under *Sessional Paper No. 1 of 2010 on Enhancing Sustainable Tourism in Kenya*¹³³ which advocates the need to shift from traditional tourism products to sustainable tourism.¹³⁴ According to the Sessional Paper, it would be vital to invest in sustainable tourism products and services if the country has to deliver an environmentally sustainable and socially

¹²⁸ Ibid, S 53.

¹²⁹ Ibid, S 106.

¹³⁰ Republic of Kenya., 'National Tourism Blueprint 2030.' Available at <https://www.tourism.go.ke/wp-content/uploads/2018/06/NTB2030-Web-Version-1.0-1.pdf> (Accessed on 19/08/2023).

¹³¹ Ibid.

¹³² Ibid.

¹³³ Republic of Kenya., 'Sessional Paper No. 1 of 2010 on Enhancing Sustainable Tourism in Kenya.' Available at https://repository.kippra.or.ke/bitstream/handle/123456789/1125/REPUBLIC_OF_KENYA_MINISTRY_OF_TOURISM_SE.pdf?sequence=1&isAllowed=y (Accessed on 19/08/2023).

¹³⁴ Ibid.

CHAPTER TWELVE: *Contemporary Issues in Climate Justice*

responsible tourism towards the aspirations espoused in Vision 2030.¹³⁵ It acknowledges that Kenya's tourism industry is closely linked to the ecologically sustainable development of the country's natural and heritage resources hence the need to promote sustainable tourism.¹³⁶ According to the sessional paper, sustainable tourism enhances economic development, environmental sustainability and social justice.¹³⁷ In order to foster sustainable tourism, the Sessional paper requires that tourism be undertaken in a manner that does not compromise the quality and value of the resource, or degrade the carrying capacity of supporting ecosystems.¹³⁸ Further, it requires tourism to be based on the principles of inter and intra generational equity wherein tourism management is based on long term objectives where present generations make choices that will benefit future generations.¹³⁹ Sessional Paper No. 1 of 2010 therefore succinctly captures the salient components that are vital in fostering sustainable tourism in Kenya.

From the foregoing, it is evident that the concept of sustainable tourism is well recognized in Kenya. It has been observed that the country has implemented various measures to promote sustainable tourism, including an eco-rating scheme that is consistent with the Global Sustainable Tourism Criteria (GSTC), an annual eco-warrior award, and has developed green destinations guidelines.¹⁴⁰ The Eco-rating certification scheme affirms Kenya's commitment to promote sustainable tourism products and services.¹⁴¹ The ecowarrior award is

¹³⁵ Ibid.

¹³⁶ Ibid.

¹³⁷ Ibid.

¹³⁸ Ibid.

¹³⁹ Ibid.

¹⁴⁰ United Nations Environment Programme., 'Sustainable Tourism in Africa: Focus on Ecotourism.' Op Cit.

¹⁴¹Global Sustainable Tourism Council., ' Ecotourism Kenya Eco-rating Certification Scheme Achieves GSTC Recognition' Available at

an annual prize that recognizes individuals and companies who promote sustainable tourism in Kenya through measures such as promoting local economies, addressing climate change through adaptation and mitigation, promoting biodiversity conservation, promoting responsible tourism practices in operations and promoting heritage and cultural integration.¹⁴² These initiatives have enhanced ecotourism practices in Kenya such as investing in renewable energy sources, waste segregation among others.¹⁴³ Kenya also recently embraced the green tour project that was designed to create a socially and environmentally sustainable Kenya tourism supply chain by providing guidance, support, and best practices to African tourism companies to adapt and replicate globally proven sustainable consumer products supply chain methodologies¹⁴⁴; increasing the implementation of best eco and socially responsible practices among African tour operators, accommodation providers, and their suppliers and marketing sustainable tourism products, strengthening business and destination promotion between international buyers and Kenyan suppliers.¹⁴⁵ It has been observed that the foregoing measures can motivate the tourism industry in Kenya to embrace practices that are ecologically and ethically sustainable.¹⁴⁶

There have also been efforts towards fostering community-based tourism in Kenya.¹⁴⁷ Community-Based Tourism (CBT) has been

<https://www.gstcouncil.org/ecotourism-kenya-eco-rating-certification-scheme-achieves-gstc-recognition/> (Accessed on 20/08/2023).

¹⁴² Ecotourism Kenya., 'Ecowarrior Awards 2023.' Available at <https://ecotourismkenya.org/ecowarrioraward/#:~:text=The%20award%20would%20like%20to,in%20promoting%20sustainable%20tourism%20practices.> (Accessed on 20/08/2023)

¹⁴³ Ecotourism World., 'A Sustainable Vacation in Kenya.' Available at <https://ecotourism-world.com/a-sustainable-vacation-in-kenya/> (Accessed on 20/08/2023)

¹⁴⁴ Ibid

¹⁴⁵ Ecotourism Kenya., 'Green tour Kenya Project Comes to a Close.' Available at <https://ecotourismkenya.org/greentour/greentour-kenya-project-comes-to-a-close/> (Accessed on 20/08/2023)

¹⁴⁶ Ibid

¹⁴⁷ United Nations Environment Programme., 'Sustainable Tourism in Africa: Focus on Ecotourism.' Op Cit.

pushed as one of the strategies for poverty alleviation and it might enhance the sustainability of marginalized regions and communities.¹⁴⁸ CBT is characterized by the fact that it is the community itself which has control over tourism management and gets a significant proportion of the benefits generated by such activity.¹⁴⁹ This kind of tourism has emerged as a possible solution to the negative effects of mass tourism in developing countries.¹⁵⁰ CBT can foster sustainable tourism since it has a positive impact on the conservation of natural and cultural resources in regions and enhances socio-economic development among local communities.¹⁵¹ Some of the CBT initiatives in Kenya include cultural villages, Lodges owned and managed by community such IL Ngwesi in Laikipia county, beadwork and craft, bandas and cottages owned and managed by communities and excursions in forests, caves and historic sites.¹⁵² CBT can therefore foster sustainable tourism in Kenya.

In addition, it has been asserted that the conservancy model which has been embraced in Kenya has fostered sustainable tourism by permitting the coexistence of local communities and wildlife.¹⁵³ Conservancies have begun to spring up across the country, particularly in areas surrounding the Maasai Mara Game Reserve, Laikipia and Northern Kenya where an abundance of wildlife can be found.¹⁵⁴ It has been

¹⁴⁸ Juma. L., & Khademi-Vidra. A., 'Community-Based Tourism and Sustainable Development of Rural Regions in Kenya; Perceptions of the Citizenry.' *Sustainability*, 11(17) 2019

¹⁴⁹ Ibid

¹⁵⁰ Ibid.

¹⁵¹ Armstrong. R., 'An analysis of the Conditions for Success of Community Based Tourism Enterprises.' *Int. Cent. Responsible Tour.* 2012, 21, 1-52.

¹⁵² United Nations Environment Programme., 'Status of Community Based Tourism in Kenya.' Available at <https://wedocs.unep.org/handle/20.500.11822/33373;jsessionid=082194E711446103C2FE7B52B468AD4C> (Accessed on 20/08/2023).

¹⁵³ Tubey. W., Kyalo. D., & Mulwa. A., 'Socio-Cultural Conservation Strategies and Sustainability of Community Based Tourism Projects in Kenya: A Case of Maasai Mara Conservancies.' *Journal of Sustainable Development*; Vol. 12, No. 6 (2019).

¹⁵⁴ Ibid.

argued that conservancies provide connected landscapes which complement national parks and reserves while enabling communities to benefit from wildlife management.¹⁵⁵ In the Maasai Mara, for example, 15 conservancies protect over 450,000 acres of a critical habitat for the great Serengeti-Mara wildebeest migration.¹⁵⁶ Some of the well-known conservancies in Kenya include the Northern Rangeland Trust, Lewa Wildlife Conservancy and the Ol Pejeta Wildlife Conservancy.¹⁵⁷ Conservancies can foster sustainable tourism since they allow tourists to gain an insight into local lifestyles; allow community members are able to stay on their land and generate a sustainable income; reduce the rate of encroachment to wildlife areas; promote socio-economic development since the fees and lease money paid to the conservancies is sometimes directly reinvested in the land and the communities and avoid the overexploitation of the environment since they have fewer visitors and beds per square kilometre which creates a much more personalized experience for tourists that is environmental friendly.¹⁵⁸ The use of conservancies can thus aid in the realization of sustainable tourism in Kenya.

From the foregoing it is evident that there is immense potential for sustainable tourism in Kenya. The country has been ranked among the top performers on the sustainability of the tourism industry.¹⁵⁹ However, despite the promises of sustainable tourism in Kenya, several challenges hinder effective realization of this idea in Kenya.

¹⁵⁵ Ibid.

¹⁵⁶ Tubey. W., Kyalo. D., & Mulwa. A., 'Environmental Conservation Strategies and Sustainability of Community Based Tourism in Kenya: A Case of Maasai Mara Conservancies.' *International Journal of Tourism Policy*, Volume 10, No. 2 (2020).

¹⁵⁷ Ibid.

¹⁵⁸ Ibid

¹⁵⁹ United Nations Environment Programme., 'Sustainable Tourism in Africa: Focus on Ecotourism.' Op Cit.

CHAPTER TWELVE: Contemporary Issues in Climate Justice

Among the key problems facing sustainable tourism in Kenya is climate change.¹⁶⁰ Adverse impacts arising from changes in climate are already being observed as evidenced by vanishing glaciers on Mt. Kenya and Kilimanjaro, rise in sea level, loss of biodiversity, among others.¹⁶¹ People and the environment are increasingly suffering from the effects of natural disasters such as floods, landslides and prolonged droughts.¹⁶² There is need to practice sustainable tourism to mitigate the impacts of climate change. Further, it has been observed that poaching hinders sustainable tourism in Kenya.¹⁶³ The rise in demand for wildlife products in the international market has led to a resurgence of elephant and rhino poaching.¹⁶⁴ Escalating incidences of poaching, smuggling and trafficking of their trophies like ivory and rhino horns has led to loss of wildlife in their natural habitat.¹⁶⁵ An increase in poaching is deemed proportionate to tourist security and affects the tourist's interest in the destination.¹⁶⁶ There is need to address this challenge in order to foster sustainable tourism in Kenya.

It has also been observed that tourist activities can sometimes result in environmental pollution, overcrowding which puts too much pressure on ecosystems and negative effects on local communities and cultures.¹⁶⁷ These challenges hinder the realization of sustainable

¹⁶⁰ Nyamwange. M., 'Impacts of Climate Change on Tourism in Kenya.' *Journal of Geography and Earth Sciences.*, Volume 4, No. 2 (2016).

¹⁶¹ Ministry of Tourism & Wildlife., 'Revised National Tourism Policy, 2020 on Enhancing Resilience and Sustainable Tourism in Kenya.' Available at <https://www.tourism.go.ke/wp-content/uploads/2020/09/28th-August-National-Tourism-Policy-Review.pdf> (Accessed on 20/08/2023).

¹⁶² Ibid.

¹⁶³ Onchwati.J., Sommerville. H., & Brockway. N., 'Sustainable Tourism Development in the Masai Mara, National Reserve, Kenya, East Africa.' *Sustainable Tourism* IV 319.

¹⁶⁴ Ministry of Tourism & Wildlife., 'Revised National Tourism Policy, 2020 on Enhancing Resilience and Sustainable Tourism in Kenya.' Op Cit.

¹⁶⁵ Ibid.

¹⁶⁶ Onchwati.J., Sommerville. H., & Brockway. N., 'Sustainable Tourism Development in the Masai Mara, National Reserve, Kenya, East Africa.' Op Cit.

¹⁶⁷ CBI., 'How to be a Sustainable Tourism Business,' Op Cit.

tourism. There is need to address these among other challenges in order to realize sustainable tourism in Kenya.

12.3.4. Way Forward

In order to foster sustainable tourism in Kenya, there it is necessary to continue embracing green tourism practices such as eco- tours.¹⁶⁸ Eco-tourism initiatives in Kenya such as the rhino charge and the Lewa safari marathon have enhanced sustainable tourism by raising money which has been challenges into wildlife conservation and socio-economic development.¹⁶⁹ There is need to continue embracing these practices in order to foster sustainable tourism in Kenya.

Further, there is need to create visitor awareness of responsible behaviour in communities and the environment.¹⁷⁰ Both local and international tourist should therefore be encouraged to embrace sustainable practices such as staying in eco-friendly accommodations and avoiding the use of single-use plastics.¹⁷¹ Such practices can minimize the impact of tourism on the environment.¹⁷² In addition, it has been pointed out there is need to encourage international tourists to promote socio-economic development in places where they visit through measures such as respecting the culture of local communities and buying from and supporting local businesses.¹⁷³ These measures can enhance sustainable tourism in Kenya.

Tourism is associated with a lot of travelling a situation that contributes to the problem of climate change due to greenhouse gas emissions when

¹⁶⁸ Ecotourism World., 'A Sustainable Vacation in Kenya.' Op Cit.

¹⁶⁹ Ibid.

¹⁷⁰ Ministry of Tourism & Wildlife., 'Revised National Tourism Policy, 2020 on Enhancing Resilience and Sustainable Tourism in Kenya.' Op Cit.

¹⁷¹ Angeli. S., 'What is Sustainable Travel: 8 Best Practices.' Op Cit.

¹⁷² Ibid.

¹⁷³ Ibid.

modes of transport such as airplanes are used.¹⁷⁴ It has been observed that in order to address this challenge, there is need to foster sustainable travel models in the tourism industry such as the use of trains and public transport in order to minimize greenhouse gas emissions.¹⁷⁵ Further, there is need to encourage domestic tourism in order to foster sustainable tourism.¹⁷⁶ Domestic tourism can foster sustainable tourism by minimizing the effects of transport, injecting more money into the economy and supporting local businesses.¹⁷⁷

It is also imperative for the government to enhance sustainable tourism in Kenya. This can be achieved through developing national minimum standards for responsible tourism, implementing policies and guidelines on sustainable tourism in Kenya, facilitating awareness and capacity-building on responsible tourism and providing support such as training, finances and information sources to tourism businesses and communities to enable implementation of responsible tourism practices.¹⁷⁸ The government is therefore a key stakeholder in fostering sustainable tourism in Kenya.

Finally, it is important to market Kenya as a destination for sustainable tourism.¹⁷⁹ The country is blessed with an abundance of natural and cultural heritage including sandy beaches at the coast, diverse flora and fauna, game parks, scenic landscapes among others.¹⁸⁰ There is need to market these destinations in order to foster sustainable tourism in Kenya. Players in the tourism industry such as hotels and tour

¹⁷⁴ CBI., 'How to be a Sustainable Tourism Business.' Op Cit.

¹⁷⁵ Conserve Energy Future., '13+ Ultimate Ways to Promote Sustainable Tourism.' Available at <https://www.conserve-energy-future.com/ways-promote-sustainable-tourism.php> (Accessed on 20/08/2023).

¹⁷⁶ Ibid.

¹⁷⁷ Ibid.

¹⁷⁸ Ministry of Tourism & Wildlife., 'Revised National Tourism Policy, 2020 on Enhancing Resilience and Sustainable Tourism in Kenya.' Op Cit.

¹⁷⁹ Ibid.

¹⁸⁰ Republic of Kenya., 'Kenya, Africa's Leading Tourist Destination.' Op Cit.

companies should be encouraged to embrace sustainable tourism by investing in ecofriendly products and services such as eco- lodges, eco-tours, sustainable waste management and sustainable tour operations.¹⁸¹ The government through its various agencies and entities such as the Kenya Wildlife Service, the Kenya Forest Service and the National Museums of Kenya should also foster the respect, conservation and sustainable utilization of biodiversity and the natural and cultural heritage of Kenya.¹⁸² These initiatives will market Kenya as an ideal destination for sustainable tourism and enhance the realization of this idea in the country.

12.3.5. Conclusion

Sustainable tourism is a fundamental idea that as that takes full account of the current and future economic, social and environmental impacts of tourism by addressing the needs of visitors, the tourism industry, the environment and host communities¹⁸³. Sustainable tourism has been acknowledged in Kenya and there have been attempts towards fostering this idea¹⁸⁴. However, in the wake of challenges including the threat of climate change and loss of biodiversity, there is an urgent need to effectively unlock sustainable tourism in Kenya¹⁸⁵. Sustainable tourism has the ability to enhance the viability of the tourism industry in Kenya in a manner that ensures its contribution to national development while promoting environmental conservation, protection of biodiversity and socio-economic development in local communities.¹⁸⁶ In order to realize sustainable tourism in Kenya, there

¹⁸¹ United Nations Environment Programme., 'Sustainable Tourism in Africa: Focus on Ecotourism,' Op Cit.

¹⁸² Republic of Kenya., 'Ministry of Tourism: Sessional Paper No. 1 of 2010 on Enhancing Sustainable Tourism in Kenya,' Op Cit.

¹⁸³ World Tourism Organization, 'Sustainable Development,' Op Cit.

¹⁸⁴ Republic of Kenya., 'Ministry of Tourism: Sessional Paper No. 1 of 2010 on Enhancing Sustainable Tourism in Kenya,' Op Cit.

¹⁸⁵ Ibid.

¹⁸⁶ Ministry of Tourism & Wildlife, 'Revised National Tourism Policy, 2020 on Enhancing Resilience and Sustainable Tourism in Kenya,' Op Cit.

is need to embrace green tourism practices, create visitor awareness of responsible behaviour in communities and the environment, foster sustainable travel practices, enhanced government support and marketing Kenya as a destination for sustainable tourism.¹⁸⁷ It is therefore possible to foster sustainable tourism in Kenya.

12.4. Climate Smart Agriculture

In order to effectively confront climate change and its effects in Africa, there is need to boost climate smart agriculture in order to enhance food security.¹⁸⁸ Achieving the goals of eradicating hunger and poverty while addressing the climate change impacts as envisaged under the 2030 Agenda for Sustainable Development need a climate-smart approach in agriculture that is based on the objectives of sustainably enhancing food production, climate adaptation and resilience and reduction in GHGs emission.¹⁸⁹ It has been proved that traditional agricultural practices like agro forestry, intercropping, crop rotation, cover cropping, traditional organic composting and integrated crop-animal farming all have potentials for enhancing crop productivity and mitigating climate change.¹⁹⁰ In addition, it has been suggested that adoption of regenerative agricultural practices such as crop rotation, agroforestry, use of drought- and heat-resistant crops, integrated pest control systems, water harvesting and irrigation can foster high-yielding, climate resilient, and adaptive practices.¹⁹¹ There is need to adopt these practices in order to effectively confront climate change in Africa.

¹⁸⁷ Ibid.

¹⁸⁸ Diagana. O., '3 key Fronts on Which Africa Must Combat Climate Change.' Available at <https://blogs.worldbank.org/africacan/3-key-fronts-which-africa-must-combat-climate-change> (Accessed on 16/08/2023).

¹⁸⁹ Rinku S. & Singh. G., 'Traditional Agriculture: A Climate-Smart Approach for Sustainable Food Production' *Energy, Ecology and Environment*, No. 2 of 2017, 296.

¹⁹⁰ Ibid.

¹⁹¹ Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Available at <https://climatechampions.unfccc.int/call-to-action-for-climate-resilient-sustainable-food-systems-inafrica/> (Accessed on 16/08/2023)

It is also imperative for African countries to focus and invest in climate adaptation.¹⁹² It has been asserted that the potential to deliver a robust portfolio of green, resilient, and inclusive investments driving transformation and innovation in areas such as energy, infrastructure, agriculture the blue economy and other climate change mitigation and adaptation strategies.¹⁹³ Strong climate action and increased climate financing are vital in helping the continent achieve these goals.¹⁹⁴ It is thus imperative for African countries to identify and mobilize effective and appropriate financing for climate action in order to confront climate change.¹⁹⁵ International, regional and national financial institutions can also support the capacity of African countries to confront climate change through investments in mitigation and adaptation strategies and, green products including green bonds and green infrastructure.¹⁹⁶ Developed countries should also enhance financial support for African countries in order to enhance their climate resilience.¹⁹⁷

Further, there is need for African countries to foster environmental education and creating awareness on climate change mitigation and resilience.¹⁹⁸ It has been asserted that it is important for various stakeholders to work closely with communities as a way of creating

¹⁹² Diagana. O., '3 key Fronts on Which Africa Must Combat Climate Change.' Op Cit

¹⁹³ Ibid

¹⁹⁴ Ibid

¹⁹⁵ United Nations Framework Convention on Climate Change., 'Climate Finance Access and Mobilization Strategy for The Least Developed Countries in Asia: 2022-2030.' Available at https://unfccc.int/sites/default/files/resource/UNFCCC_NBF_SD_AsianLDCA_final.pdf (Accessed on 16/08/2023).

¹⁹⁶ Asian Development Bank., 'Unlocking Islamic Climate Finance.' Available at <https://www.adb.org/sites/default/files/publication/838201/unlocking-islamic-climate-finance.pdf> (Accessed on 16/08/2023).

¹⁹⁷ Magoma. C., 'A Huge Financing Gap for Climate Action with Public Debt Sustainability Risks Looms in East Africa beyond COP27,' Op Cit.

¹⁹⁸ Muigua. K., 'Combating Climate Change in Kenya for Sustainable Development.' Available at <http://kmco.co.ke/wp-content/uploads/2021/01/Combating-Climate-Change-for-Sustainable-Development-in-Kenya-Kariuki-Muigua-Ph.D-23rd-Jan-2021.pdf> (Accessed on 16/08/2023).

CHAPTER TWELVE: Contemporary Issues in Climate Justice

awareness on how their day to day activities are likely to affect the environment and the climatic conditions in general.¹⁹⁹ Dissemination of environmental knowledge as well as creating opportunities for collaborative approaches to combating climate change can go a long way in not only mitigation and adaptation measures but also creating resilient economies and livelihoods.²⁰⁰ Further, climate change knowledge should also be incorporated into the primary, secondary and all tertiary level curricula in order to inculcate a sense of environmental ethics in all people from an early age and to ensure that the knowledge acquired will go a long way in combating climate change.²⁰¹ Education gives people the knowledge and tools they need to adapt to the impacts of climate change and the risks it poses to lives, livelihoods and well-being.²⁰² Education can also be a powerful driver for more Sustainable Development, including a transition to greener societies.²⁰³ Africa should therefore embrace education as a tool of confronting climate change.

In addition, it is essential for Africa to adopt science, technology and innovation in order to efficiently confront climate change.²⁰⁴ The *Paris Agreement* recognizes the role of science, technology and innovation in climate change mitigation and adaptation.²⁰⁵ To this extent, it calls for the use of scientific knowledge in planning, policies and implementation in relation to climate change adaptation and mitigation

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

²⁰¹ Ibid.

²⁰² Global Partnership for Education., 'Confronting Climate Change through Education.' Available at <https://www.globalpartnership.org/node/document/download?file=document/file/2023-04-confronting-climate-change-through-education.pdf> (Accessed on 16/08/2023).

²⁰³ Ibid

²⁰⁴ Muigua. K., 'Embracing Science, Technology and Innovation for Sustainable Development.' Available at <http://kmco.co.ke/wp-content/uploads/2023/08/Embracing-Science-Technology-and-Innovation-for-Sustainable-Development.pdf> (Accessed on 16/08/2023)

²⁰⁵ Paris Agreement, Op Cit

actions; technology development and transfer and accelerating, encouraging and enabling innovation in order to improve global resilience to climate change and foster Sustainable Development.²⁰⁶ Science, technology and innovation have enhanced the global response to the threat of climate change through measures such as the adoption of clean and green sources of energy including renewable energy, electric cars, use of carbon sequestration technologies and adoption of smart waste technologies.²⁰⁷ African countries should therefore embrace science, technology and innovation in order to enhance their efforts in confronting climate change. International cooperation in this area through technology transfer as envisaged under the Paris Agreement can also enhance the capacity of African countries to confront climate change²⁰⁸. African countries can also utilize traditional knowledge to confront climate change in areas such as the conservation of biodiversity.²⁰⁹ Through these measures, the ability of African countries to confront climate change will be enhanced.

12.4.1. Conclusion

Climate change remains one of the main global challenges that is affecting both developed and developing countries in their efforts towards realization of the Sustainable Development agenda.²¹⁰ Africa is classified as a continent that is highly vulnerable to climate change.²¹¹ Cases of devastating floods, invasion of desert locusts and severe droughts are vivid examples of the impacts of climate change on the

²⁰⁶ Ibid

²⁰⁷ United Nations Economic and Social Commission for Asia and the Pacific., 'Science, Technology and Innovation for Sustainable Development.' E/ESCAP/72/32

²⁰⁸ Paris Agreement., Op Cit

²⁰⁹ Muigua. K., 'Combating Climate Change in Kenya for Sustainable Development.' Op Cit

²¹⁰ Muigua. K., 'Achieving Sustainable Development, Peace and Environmental Security.' Op Cit.

²¹¹ Kimaro. Didas et al., 'Climate Change Mitigation and Adaptation in ECA/SADC/COMESA Region: Opportunities and Challenges.' Op Cit.

CHAPTER TWELVE: Contemporary Issues in Climate Justice

continent.²¹² Confronting climate change in Africa is thus an urgent need if the continent is to realize the Sustainable Development agenda.²¹³ There has been progress towards combating climate change in Africa through adoption of renewable sources of energy, investing in sustainable agriculture and addressing deforestation.²¹⁴ However, the persisting threat of climate change calls for more to be done in order to confront climate change in Africa. This can be achieved through boosting climate smart agriculture, investing in climate adaptation, strong climate action and increased climate finance in Africa, fostering environmental education and creating awareness on climate change mitigation and resilience and adopting science, technology and innovation.²¹⁵ Through these measures, the response towards climate change in Africa will be enhanced. Confronting climate change in Africa is an achievable target.

²¹² United Nations Framework Convention on Climate Change., 'Climate Change is an Increasing Threat to Africa.'

²¹³ Ibid.

²¹⁴ United Nations Framework Convention on Climate Change., 'Four Countries Showcased their Ambitious Climate Action During Africa Climate Week,' Op Cit.

²¹⁵ ²¹⁵ Muigua. K., 'Combating Climate Change in Kenya for Sustainable Development,' Op Cit.

CHAPTER THIRTEEN

Conclusion and Way Forward

13.1. Introduction

The effects of climate change and the ensuing mitigation and adaptation measures have resulted in justice concerns including economic inequalities, gender inequalities, inter and intra generational inequalities, discrimination, environmental racism and displacement of people resulting in climate refugees.¹ Climate Justice seeks to address the causes and impacts of climate change in a manner that recognizes and fosters the rights and concerns of vulnerable people, communities and countries.² It seeks to achieve the ideal of public participation, access to information, access to justice and access to remedies in climate action.³ There have been efforts to foster Climate Justice through measures such as adoption of the principles of Climate Justice in laws and policies, climate funding and climate litigation.⁴ However, in the wake of continued climate injustices, there is need to foster Climate Justice through promoting public participation and access to information, giving voice to women, youth and person with disabilities in climate action, increasing climate funding to developing countries, complying with NDCs especially for developed countries and enhancing climate litigation.⁵ Through these measures, the ideal of Climate Justice will be fostered at the national, regional and global levels in the quest towards Sustainable Development. This chapter not

¹ Concern Worldwide., '10 Climate Injustices and How to Fight Them,' Op Cit.

² Schlosberg. D & Collins. L., 'From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice.' Op Cit.

³ Sultana. F., 'Critical Climate Justice' Op Cit.

⁴ United Nations., 'Financing Climate Action.' Op Cit.

⁵ International Development Law Organization., 'Climate Justice: A Rule of Law Approach for Transformative Climate Action.' Op Cit.

only rehashes the theme of this book but also discusses the need for promoting low carbon development in the country.

3.2. Combating Climate Change for Sustainability

Responding to climate change involves a two-pronged approach that entails mitigation and adaptation mechanisms.⁶ Mitigation involves reducing the flow of heat-trapping greenhouse gases into the atmosphere, either by reducing sources of these gases (for example, the burning of fossil fuels for electricity, heat, or transport) or enhancing the “sinks” that accumulate and store these gases (such as the oceans, forests, and soil)⁷. Mitigation therefore envisages making the impacts of climate change less severe by preventing or reducing the emission of greenhouse gases (GHG) into the atmosphere.⁸ The goal of mitigation is to avoid significant human interference with Earth's climate, “stabilize greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner.”⁹ Adaptation on the other hand means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause, or taking advantage of opportunities that may arise.¹⁰ Examples of adaptation measures include large-scale infrastructure changes, such as building defenses to protect against sea-level rise, as well behavioral shifts, such as

⁶ NASA., ‘Responding to Climate Change.’ Available at [\(https://climate.nasa.gov/solutions/adaptation-mitigation/#:~:text=Responding%20to%20climate%20change%20involves%20two%20possible%20approaches%3A%20reducing%20and,pipeline%20\(%E2%80%9Cadaptation%E2%80%9D\)\)](https://climate.nasa.gov/solutions/adaptation-mitigation/#:~:text=Responding%20to%20climate%20change%20involves%20two%20possible%20approaches%3A%20reducing%20and,pipeline%20(%E2%80%9Cadaptation%E2%80%9D)) (Accessed on 07/09/2023)

⁷ Ibid

⁸ European Environment Agency., ‘What is the Difference between Adaptation and Mitigation?’ Available at [\(https://www.eea.europa.eu/help/faq/what-is-the-difference-between#:~:text=In%20essence%2C%20adaptation%20can%20be,\(GHG\)%20into%20the%20atmosphere\)](https://www.eea.europa.eu/help/faq/what-is-the-difference-between#:~:text=In%20essence%2C%20adaptation%20can%20be,(GHG)%20into%20the%20atmosphere) (Accessed on 07/09/2023)

⁹ NASA., ‘Responding to Climate Change.’ Op Cit

¹⁰ European Environment Agency., ‘What is the Difference between Adaptation and Mitigation?’ Op Cit

individuals reducing their food waste.¹¹ The aim of mitigation is to reduce our risks from the harmful effects of climate change such sea-level rise, more intense extreme weather events, or food insecurity¹². It also includes making the most of any potential beneficial opportunities associated with climate change for example, longer growing seasons or increased yields in some regions.¹³

One of the mitigation mechanisms that has been embraced in efforts towards confronting climate change is the idea of low carbon development¹⁴. The concept of low carbon development which is also expressed using the term Low-Emission Development Strategies (LEDS) also known as low-carbon development strategies, or low-carbon growth plans refers to forward-looking national economic development plans or strategies that encompass low-emission and/or climate-resilient economic growth¹⁵. Low carbon development has also been defined as forward-looking, climate-friendly growth strategies that can highlight a country's priority actions for climate mitigation and adaptation, and a country's role in the global effort against climate change¹⁶. The idea of low-carbon development aims to achieve the goals of reducing greenhouse gas emissions, exploiting low-carbon energy, and ensuring economic growth¹⁷. It has been observed that LEDS have attracted interest in the climate negotiations as a soft alternative to voluntary or obligatory GHG emission reduction targets in developing

¹¹ Ibid

¹² NASA., 'Responding to Climate Change.' Op Cit

¹³ Ibid

¹⁴ United Nations., 'Low Carbon Development.' Available at <https://sustainabledevelopment.un.org/index.php?menu=1448#:~:text=The%20concept%20of%20low%20carbon,low%2Dcarbon%20growth%20plans> (Accessed on 07/09/2023)

¹⁵ Ibid

¹⁶ United Nations Economic and Social Commission for Asia and the Pacific., 'Low-Carbon Development Plan.' Available at <https://www.unescap.org/sites/default/files/45.%20FS-Low-Carbon-Development-Plan.pdf> (Accessed on 07/09/2023)

¹⁷ Yuan. H, Zhou. P, & Zhou. D., 'What is Low-Carbon Development? A Conceptual Analysis.' *Energy Procedia*, 5 (2011) 1706–1712

countries¹⁸. Low carbon development focuses on addressing and integrating climate change with development objectives and is therefore a more useful approach for developing countries¹⁹. The idea of low carbon development has been advocated as the inevitable choice to confront climate change and achieve Sustainable Development²⁰. To effectively reduce greenhouse gas emissions while fostering economic growth, different countries have begun to search for new development paths among which low-carbon development has become a widely advocated one²¹.

In order to foster Climate Justice there is need to promote access to information and public and community participation and access to in decision making processes including the design and implementation of projects and formulation of laws, policies and guidelines concerning climate change.²² Access to information and public participation are fundamental principles of Climate Justice and have been captured in various legal instruments on climate change.²³ Public participation is fundamental in climate change mitigation and adaptation since it enhances the capacity to cope with climate change risks and further ensures that decisions reflect local values.²⁴ It can also foster investment in people-centered laws and institutions to promote transformative

¹⁸ ¹⁸ United Nations., 'Low Carbon Development.' Op Cit.

¹⁹ Ibid.

²⁰ Xin. X, Yuding. W, & Jianzhong. W., 'The Problems and Strategies of the Low Carbon Economy Development.' *Energy Procedia* 5 (2011) 1831-1836.

²¹ Yuan. H, Zhou. P, & Zhou. D., 'What is Low-Carbon Development? A Conceptual Analysis.' Op Cit.

²² Brower. A., 'Fighting Climate Injustice: 10 Strategies for Action.' Available at <https://www.gensler.com/blog/fighting-climate-injustice-10-strategies-for-action> (Accessed on 29/07/2023).

²³ See for example Principle 10 of the Rio Declaration; Article 6 (a) of the United Nations Framework Convention on Climate Change (UNFCCC); The Preamble to the Paris Agreement and, S 3 (2) (h) of the Climate Change Act, No. 11 of 2016, Laws of Kenya.

²⁴ Hugel. S., & Davies. A., 'Public Participation, Engagement, and Climate Change Adaptation: A Review of the Research Literature.' *WIREs Climate Change*, 2020.

climate action and adoption of customary, informal and indigenous approaches to protect biodiversity and promote sustainable use of natural resources.²⁵ Public participation should thus be embraced in order to realize Climate Justice.

There is also need to eliminate structural inequalities in climate action including gender and intragenerational inequalities.²⁶ It has been asserted that women often bear the brunt of climate disasters since they depend more heavily on natural resources like water and firewood, meaning that if these items become scarce, they may need to travel farther for them.²⁷ However, women, youth and person with disabilities among other marginalized groups are often excluded from the decision-making table when disaster risk reduction solutions and other climate change responses are designed and implemented contributing to climate injustices.²⁸ Unequal participation in decision-making processes and labour markets by these groups compound inequalities and often prevent them from fully contributing to climate-related planning, policy-making and implementation.²⁹ Women can and do play a critical role in response to climate change due to their local knowledge of and leadership in areas such as sustainable resource management and leading sustainable practices at the household and community level.³⁰ It has also been asserted that the voice of the youth is pertinent in climate action since the younger generation, will suffer the consequences of climate change more greatly than their parents and

²⁵ International Development Law Organization., 'Climate Justice: A Rule of Law Approach for Transformative Climate Action.' Op Cit.

²⁶ Ibid.

²⁷ Pearse. R., 'Gender and Climate Change.' Op Cit.

²⁸ Ibid.

²⁹ United Nations Framework Convention on Climate Change., 'Introduction to Gender and Climate Change.' Available at <https://unfccc.int/gender> (Accessed on 29/07/2023).

³⁰ Ibid

grandparents.³¹ In addition, people with disabilities may be severely affected by the effects of climate change due to the difficulty in accessing vital resources in case of food insecurity and water scarcity and difficulties in responding to emergencies in case of disasters associated with climate change such as floods.³² It is thus imperative to foster the participation of women, youth, person with disabilities and other marginalized groups in climate action in order to realize Climate Justice. It is also essential to increase funding to developing countries and regions of the world in order to enhance their ability to respond to the effects of climate change.³³ It has been observed that developing countries in Africa, Asia, the Caribbean Islands and the Pacific Islands which due to an unfortunate mixture of economic and geographic vulnerability, continue to shoulder the brunt of the burdens of climate change despite their relative innocence in causing it.³⁴

Consequently, these countries have suffered from catastrophic consequences of climate change including severe storms, tropical cyclones, flooding and drought resulting in loss of lives, destruction of property and vital infrastructure and food insecurity among others.³⁵ Due to their geographical vulnerability and low economic development, most of these countries are unable to effectively respond to the effects of climate change thus compounding the problem.³⁶ Therefore, it is imperative for developed countries and international financial institutions such as the World Bank to increase or keep their

³¹ United Nations Children's Fund., 'What is Climate Justice? And what can we do Achieve It?' Available at <https://www.unicef.org/globalinsight/what-climate-justice-and-what-can-we-do-achieve-it> (Accessed on 29/07/2023)

³² Almomani. S., 'Climate Justice for People with Disabilities.' Available at <https://www.worldforgottenchildren.org/blog/climate-justice-for-people-with-disabilities/154> (Accessed on 29/07/2023)

³³ Hong. H., 'Climate Finance.' Op Cit

³⁴ Giles. M., 'The Principles of Climate Justice at CoP27.' Op Cit

³⁵ United Nations Development Programme., 'Can Groundwater act as a Catalyst for Sustainable Development in Africa's borderlands?' Op Cit

³⁶ Giles. M., 'The Principles of Climate Justice at CoP27.' Op Cit

CHAPTER THIRTEEN: Conclusion and Way Forward

pledges on climate funding to these countries in order to enhance their climate resilience through measures such as investments in food security, clean technology, renewable energy and sustainable forestry.³⁷ There is also need for developed countries which are the largest contributors to global greenhouse emissions to comply with their climate commitments under the Paris Agreement.³⁸ At the heart of the Paris Agreement are national pledges to contribute to global mitigation and adaptation goals.³⁹ The Paris Agreement sets out a mechanism under which each country produces a Nationally Determined Contribution (NDC), which must be submitted at a maximum of five-yearly intervals.⁴⁰ These NDCs are determined unilaterally and are expected to include targets for greenhouse gas emission reductions and adaptation.⁴¹ Consequently, countries such as the United States of America (USA), which accounts for 12.74% of global greenhouse gas emissions have committed to reducing their net greenhouse gas emissions by 50-52 % below 2005 levels by the year 2030.⁴² Further, China which accounts for 27.79% of global greenhouse gas emissions has set various targets under its NDC including having CO₂ emissions peak before 2030; achieving carbon neutrality before 2060 and lowering CO₂ emissions per unit of GDP by over 65% from the 2005 level.⁴³ It is

³⁷ The World Bank., '3 Things You Need to Know About Climate Finance.' Op Cit

³⁸ Mace. M., 'Mitigation Commitments under the Paris Agreement and the Way Forward.' *Climate Law*, No. 6 of 2016, pp 21-39

³⁹ European Bank for Reconstruction and Development., 'The Paris Agreement.' Available at <https://www.ebrd.com/paris-agreement> (Accessed on 29/07/2023)

⁴⁰ Paris Agreement, Article 4

⁴¹ Mace. M., 'Mitigation Commitments under the Paris Agreement and the Way Forward.' Op Cit

⁴² United Nations Framework Convention on Climate Change., 'The United States of America Nationally Determined Contribution.' Available at <https://unfccc.int/sites/default/files/NDC/202206/United%20States%20NDC%20April%2021%202021%20Final.pdf> (Accessed on 29/07/2023)

⁴³ United Nations Framework Convention on Climate Change., 'China's Achievements, New Goals and New Measures for Nationally Determined Contributions.' Available at [https://unfccc.int/sites/default/files/NDC/202206/China%E2%80%99s%20Achievements%](https://unfccc.int/sites/default/files/NDC/202206/China%E2%80%99s%20Achievements%20and%20New%20Goals%20and%20New%20Measures%20for%20Nationally%20Determined%20Contributions.pdf)

important for developed countries to comply with their commitments under NDCs in order to foster Climate Justice.

Finally, it is vital to enhance climate litigation in order to realize Climate Justice. Climate litigation has become a tool to enforce or enhance climate commitments by countries across the globe.⁴⁴ It can be used to foster Climate Justice by promoting its principles such as public participation, access to information, access to justice and access to remedies and holding countries accountable in respect of laws and policies on climate change.⁴⁵ Climate litigation can also strengthen prospects for sustaining peace and stability by preventing and resolving climate-related disputes.⁴⁶ The public, environmental activists, Non-Governmental Organizations and members of the legal profession can foster Climate Justice through climate litigation.⁴⁷ Climate litigation should thus be embraced as a tool to promote Climate Justice. Through these measures, the idea of Climate Justice will be fostered.

13.3. Adopting Effective Legal Framework on Low Carbon Development

The concept of low carbon development has its roots in the *United Nations Framework Convention on Climate Change (UNFCCC)*⁴⁸ adopted in 1992. The objective of the UNFCCC is to achieve stabilization of

2C%20New%20Goals%20and%20New%20Measures%20for%20Nationally%20Determined%20Contributions.pdf (Accessed on 29/07/2023)

⁴⁴ Setzer, J. & Higham, C., 'Global Trends in Climate Change Litigation: 2022 Snapshot' Op Cit

⁴⁵ Setzer, J., 'Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance.' Op Cit

⁴⁶ International Development Law Organization., 'Climate Justice: A Rule of Law Approach for Transformative Climate Action.' Op Cit

⁴⁷ Muigua, K., 'Redefining the Role of Lawyers in Climate Justice.' Available at <http://kmco.co.ke/wp-content/uploads/2023/06/Redefining-the-Role-of-Lawyers-in-Climate-Justice-.pdf> (Accessed on 29/07/2023)

⁴⁸ United Nations Framework Convention on Climate Change, United Nations, 1992., Available at <https://unfccc.int/resource/docs/convkp/conveng.pdf> (Accessed on 07/09/2023)

greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system⁴⁹. According to the UNFCCC, such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner⁵⁰. The UNFCCC further provides that policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change⁵¹. The UNFCCC therefore envisions low carbon development through states pursuing economic development while integrating climate change mitigation and adaptation measures in their national development programmes. It further stipulates several commitments by state parties which are vital in realizing low carbon development such as promoting and cooperating in the development; application and diffusion, including transfer, of technologies; practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases; promoting sustainable management, and promoting and cooperating in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases; cooperating in preparing for adaptation to the impacts of climate change and taking climate change considerations into account, to the extent feasible, in relevant social, economic and environmental policies and actions; and employing appropriate methods, for example impact assessments towards confronting climate change⁵². Achieving the commitments stipulated under the UNFCCC is vital in enhancing low carbon development at the global level.

⁴⁹ Ibid, Article 2.

⁵⁰ Ibid.

⁵¹ Ibid, Article 3 (4).

⁵² Ibid, Article 4.

Fostering low carbon development was also a major point of concern under the *Kyoto Protocol*⁵³ to the UNFCCC which sought to operationalize the United Nations Framework Convention on Climate Change by committing industrialized countries and economies in transition to limit and reduce greenhouse gases emissions in accordance with agreed individual targets.⁵⁴ The Protocol required these countries to implement measures and policies geared towards low carbon development by achieving their emission limitation and reduction commitments.⁵⁵ These measures include enhancement of energy efficiency; promotion of sustainable forms of agriculture in light of climate change considerations; research on, and promotion, development and increased use of, new and renewable forms of energy, of carbon dioxide sequestration technologies and of advanced and innovative environmentally sound technologies and cooperation between states to enhance the individual and combined effectiveness of their policies and measures adopted towards confronting climate change.⁵⁶ The Kyoto Protocol also required member states to formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate change⁵⁷.

Among the salient provisions of the Kyoto Protocol geared towards fostering low carbon development is the idea of clean development mechanisms⁵⁸. According to the Protocol, the purpose of a clean development mechanism is to assist parties in achieving Sustainable

⁵³ United Nations Framework Convention on Climate Change, 'Kyoto Protocol to the United Nations Framework Convention on Climate Change.' Available at <https://unfccc.int/resource/docs/convkp/kpeng.pdf> (Accessed on 07/09/2023)

⁵⁴ United Nations Framework Convention on Climate Change, 'Kyoto Protocol to the United Nations Framework Convention on Climate Change.'

⁵⁵ *Ibid*, Article 2.

⁵⁶ *Ibid*.

⁵⁷ *Ibid*, Article 10 (a).

⁵⁸ *Ibid*, Article 12.

CHAPTER THIRTEEN: Conclusion and Way Forward

Development and in contributing to the ultimate objective of the UNFCCC by achieving compliance with their quantified emission limitation and reduction commitments⁵⁹. The Clean Development Mechanism(CDM) was aimed at enabling parties to benefit from project activities resulting in certified emission reductions and using the certified emission reductions accruing from such project activities to contribute to compliance with part of their quantified emission limitation and reduction commitments⁶⁰. The Clean Development Mechanism set out under the Kyoto Protocol was vital in enhancing low carbon development by stimulating Sustainable Development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction or limitation targets.⁶¹ The Kyoto Protocol established the first global, environmental investment and credit scheme of its kind, providing a standardized instrument for offsetting emissions, known as certified emission reductions.⁶² The Kyoto Protocol was vital in fostering low carbon development at the global level until the adoption of the Paris Agreement⁶³.

The *Paris Agreement*⁶⁴ was adopted to strengthen the global response to the threat of climate change, in the context of Sustainable Development and efforts to eradicate poverty⁶⁵. It seeks to achieve this goal through measures such as holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to

⁵⁹ Ibid, Article 12 (2).

⁶⁰ Ibid, Article 12 (3).

⁶¹ United Nations Framework Convention on Climate Change., 'The Kyoto Protocol Mechanisms.' Available at https://cdm.unfccc.int/about/cdm_kpm.pdf (Accessed on 07/09/2023).

⁶² Ibid.

⁶³ Ibid.

⁶⁴ United Nations Framework Convention on Climate Change., 'Paris Agreement.' Available at https://unfccc.int/sites/default/files/english_paris_agreement.pdf (Accessed on 07/09/2023).

⁶⁵ Ibid, Article 2 (1).

limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change; increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production and making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development⁶⁶. A key provision of the Paris Agreement aimed at fostering low carbon development is the requirement of state parties to communicate and maintain successive Nationally Determined Contributions (NDCs) that they intend to achieve⁶⁷. The Paris Agreement further requires parties to pursue domestic mitigation measures, with the aim of achieving the objectives of such NDCs.⁶⁸ Nationally Determined Contributions envisaged under the Paris Agreement are vital in combating climate change and unleashing national actions and investments towards a low carbon and sustainable future.⁶⁹ States through their NDCs have set out ambitious targets towards reducing greenhouse gas emissions through measures such as investments in renewable energy, adopting sustainable agricultural practices and fostering green transport and infrastructure.⁷⁰ The Paris Agreement is therefore of utmost importance in enhancing low carbon development.

At the regional level, the *East African Community Climate Change Policy*⁷¹ recognizes the adverse impacts of climate change as a major challenge

⁶⁶ Ibid.

⁶⁷ Ibid, Article 4 (2).

⁶⁸ Ibid.

⁶⁹ Fragkos. P et al., 'Energy System Impacts and Policy Implications of the European Intended Nationally Determined Contribution and Low-Carbon Pathway to 2050.' *Energy Policy* 100 (2017) 216–226.

⁷⁰ Ibid.

⁷¹ East African Community., 'East African Community Climate Change Policy.' Available at <https://www.eac.int/environment/climate-change/eac-climate-change-policy-framework> (Accessed on 07/09/2023).

to socio-economic development globally. The Policy is aimed at contributing to Sustainable Development in the East African Community region through harmonized and coordinated regional strategies, programmes and actions to respond to climate change.⁷² It further seeks to address the adverse impacts of climate change in the region and harness any potential opportunities posed by climate change in the context of the principle of Sustainable Development.⁷³ The Policy also seeks to support the integration of climate change into regional development processes and planning including disaster risk management and gender development among other targets.⁷⁴ Towards fostering low carbon development in the region, the Policy emphasizes the importance of mainstreaming climate change adaptation and mitigation into national and regional development plans, taking a sectoral approach, with an emphasis on key socio-economic sectors and sub-sectors adversely impacted by climate change and with potential opportunities to contribute to mitigation efforts and Sustainable Development of the East African region⁷⁵. These sectors include, but are not limited to: water resources, agriculture and food security (crop, livestock, fisheries production), energy, biodiversity and ecosystem services (forests, wildlife, wetlands, coastal and marine ecosystems), land use and soil protection, human health, tourism, industry, transport and infrastructure, disaster risk management, gender and community development, education, training and research and development.⁷⁶

The Policy also acknowledges that climate change mitigation presents an opportunity for East Africa to benefit from project activities that result in Certified Emission Reductions (CERs) under the CDM as provided for under the *Kyoto Protocol* to the UNFCCC or under similar

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Ibid, Part 3.0.

⁷⁶ Ibid.

provisions of any other future agreement⁷⁷. It further acknowledges that CDM can foster Sustainable Development in the region while at the same time contributing to the ultimate objective of the UNFCCC which is to reduce greenhouse gas emissions and further assisting the region in securing funding of certified project activities within the sectors with significant mitigation such as energy, forestry, agriculture, waste management and transport⁷⁸. In addition, the Policy urges East African countries to exploit opportunities in Reducing Emissions from Deforestation and Forest Degradation (REDD) and REDD+ through a suite of relevant policies for conservation and sustainable management of forests and enhancement of forest carbon stocks.⁷⁹ The Policy is vital in enhancing low carbon development in the East African region since it recognizes the critical need for the development of climate change adaptation and mitigation strategies to secure economic growth, social development and environmental sustainability of the region.⁸⁰ Actualizing this Policy is crucial in enhancing low carbon development in the region.

Enhancing low carbon development is also a pertinent objective under the climate change agenda in Kenya as envisioned under the *Climate Change Act*⁸¹. The Act seeks to provide for a regulatory framework for enhanced response to climate change; to provide for mechanism and measures to achieve low carbon climate development among other purposes⁸². The Act has since been amended by the *Climate Change (Amendment) Act*⁸³, 2023 in order to enhance climate change mitigation and adaption measures in Kenya. The Amendment Act introduces the idea of carbon trading in Kenya and defines a carbon market as a

⁷⁷ Ibid, Part 3.2.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Climate Change Act, No. 11 of 2016, Laws of Kenya, Government Printer, Nairobi.

⁸² Ibid.

⁸³ Climate Change (Amendment) Act, 2023.

mechanism that enables and allows public and private entities to transfer and transact emission reduction units, mitigation outcomes or offsets generated through carbon initiatives, programmes and projects subject to compliance of national and international laws⁸⁴. It also introduces the idea of carbon offset which refers to a reduction or removal of emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere⁸⁵. The Amended Act further requires national and county governments to provide guidance in the development and implementation of carbon markets and nonmarket approaches in compliance with international obligations⁸⁶.

Part IV A of the Amended Act provides the framework for the regulation of carbon markets in Kenya⁸⁷. It requires the state to formulate a policy direction on carbon markets which should prescribe carbon reduction credits that aim to reduce emissions from current sources through projects, removal or sequestration credits that take carbon dioxide out of the atmosphere and either use or store it via afforestation, reforestation, nature-based solutions or technology-based removal and technologies and projects towards this end⁸⁸. The Act requires the trade in carbon markets in Kenya to ensure that transactions in carbon trading aim towards a reduction of greenhouse gas emissions as per the prescribed carbon standards⁸⁹. The Act envisions the participation in carbon markets through bilateral or multilateral trading agreement, trading with private entities and voluntary carbon markets⁹⁰. Towards this end, the Act gives the Cabinet Secretary in charge of the Ministry of Environment, Climate Change

⁸⁴ Ibid, S 2

⁸⁵ Ibid

⁸⁶ Ibid, S 3

⁸⁷ Ibid, Part IV A

⁸⁸ Ibid, S 23 A

⁸⁹ Ibid, S 23 B

⁹⁰ Ibid, S 23 C (1)

and Forestry power to enter into a bilateral or multilateral agreement with another state party to trade carbon for emission reductions and removals⁹¹. In pursuance of the principles of Sustainable Development, the Act requires every carbon trading project authorized to undergo an Environmental and Social Impact Assessment in accordance Environmental Management and Coordination Act, 1999⁹². It also requires every carbon project undertaken pursuant to the Act to take into consideration and aim to improve the economic, social and cultural wellbeing of the community around the project⁹³.

The amended Climate Change Act is an important milestone in fostering low carbon development in Kenya by providing the legal framework for carbon trading. Although the Climate Change Act, 2016 was intended to enhance national response to climate change and provided mechanisms and measures to achieve low carbon climate-resilient development, it did not envisage the concept of carbon trading⁹⁴. The Amended Act has the potential to facilitate the effective implementation of carbon markets and trading making it possible for Kenya to engage a broader range of stakeholders and support its emissions reduction goals⁹⁵. It has been pointed out that if well designed, carbon markets can be an effective, credible and transparent tool for helping to achieve low-cost emissions reductions in ways that mobilize private sector actors, attract investment, and encourage international cooperation⁹⁶. A price on carbon makes clean energy more

⁹¹ Ibid, S 23 C (2)

⁹² Ibid, S 23 D (1)

⁹³ Ibid, S 23 E (7)

⁹⁴ Section 3 of the Climate Change Act, 2016 stipulates mechanisms and measures to enhance climate change resilience and low carbon development for the Sustainable Development of Kenya. However, it does not embrace the idea of carbon trading

⁹⁵ Kipkemoi. F., 'Key Highlights of Amended Climate Change Act.' Available at <https://www.the-star.co.ke/news/realtime/2023-09-01-key-highlights-of-amended-climate-change-act/> (Accessed on 07/09/2023)

⁹⁶ Natural Justice., 'Kenya's Climate Change Bill: Paving the Way for Sustainable Development and Carbon Markets.' Available at <https://naturaljustice.org/kenyas->

profitable, allows energy efficiency to earn a greater return, makes low-carbon products more competitive, and values the carbon stored in forests⁹⁷. The amended Climate Change Act can therefore usher in an era of low carbon development in Kenya by incorporating carbon markets and participation in them as a way to enhance national response to climate change.

Enhancing low carbon development in Kenya is also a priority under the *Energy Act*⁹⁸ and the *National Climate Change Action Plan*⁹⁹ (NCCAP) 2023-2027. The Energy Act requires the state to take measures towards harnessing opportunities offered under CDM and other mechanisms including, but not limited to, carbon credit trading to promote the development and exploitation of renewable energy sources¹⁰⁰. The NCCAP seeks to enhance low carbon development through measures such as developing carbon market frameworks for climate change adaptation and mitigation programs and providing incentives for investments in carbon markets and developing and operationalizing ecosystem and carbon benefit sharing framework¹⁰¹. The NCCAP outlines key priority climate action areas, with adaptation and mitigation actions across policy and regulatory environments; capacity building; knowledge management; technology and innovation; climate finance; and monitoring; reporting and verification¹⁰². Kenya has therefore adopted an ambitious plan towards enhancing low carbon development. Enhancing low carbon development in Kenya is

climate-change-bill-paving-the-way-for-sustainable-development-and-carbon-markets/
(Accessed on 07/09/2023)

⁹⁷ Ibid

⁹⁸ Energy Act, No. 1 of 2019, Government Printer, Nairobi

⁹⁹ Ministry of Environment, Climate Change and Forestry., 'Draft Strategic Plan: 2023-2027' Available at <https://www.environment.go.ke/wp-content/uploads/2023/05/MoECCF-Strategic-Plan-Draft-07.05.2023-updated.pdf> (Accessed on 07/09/2023)

¹⁰⁰ Energy Act, S 75 (2) (g)

¹⁰¹ Ministry of Environment, Climate Change and Forestry., 'Draft Strategic Plan: 2023-2027' Op Cit

¹⁰² Ibid

necessary in meeting the country's NDC target of a 32% reduction in greenhouse gas emissions by 2030¹⁰³.

From the foregoing, it is evident that there are global, regional and national efforts towards enhancing low carbon development for sustainability.

13.4. Enhancing Low Carbon Development for Sustainability: Promises and Drawbacks

Enhancing low carbon development has become a global concern in light of the persisting threat of climate change. The COP 27 cover decision known as the *Sharm El-Sheikh Implementation Plan*¹⁰⁴ highlights that a global transformation to a low-carbon economy is expected to require investments of at least USD 4 trillion to USD 6 trillion a year¹⁰⁵. It points out that the world needs USD 4 trillion per year needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050, and that, furthermore, a global transformation to a low-carbon economy is expected to require investment of at least USD 4–6 trillion per year¹⁰⁶.

Various techniques and approaches have been adopted towards fostering the idea of low carbon development. These include carbon offsets which have become a popular tool in global efforts to mitigate climate change¹⁰⁷. Carbon offset programs work by offering regulated polluters the opportunity to increase their own emissions if they

¹⁰³ NDC Partnership., 'Kenya Unveils Comprehensive Legal Framework to Accelerate Climate Action.' Available at <https://ndcpartnership.org/news/kenya-unveils-comprehensive-legal-framework-accelerate-climate-actio> (Accessed on 07/09/2023)

¹⁰⁴ United Nations Framework Convention on Climate Change., 'Decision -/CP.27: Sharm El-Sheikh Implementation Plan.' Available at <https://unfccc.int/documents/624444> (Accessed on 08/09/2023)

¹⁰⁵ Ibid

¹⁰⁶ Ibid

¹⁰⁷ Calel. R, 'Do Carbon Offsets Offset Carbon?' Available at <https://cep.lse.ac.uk/pubs/download/dp1808.pdf> (Accessed on 08/09/2023)

CHAPTER THIRTEEN: Conclusion and Way Forward

subsidize equivalent emission reductions in unregulated markets¹⁰⁸. Carbon offsets allow emission reductions in one location to compensate for emissions made elsewhere¹⁰⁹. They create flexible mechanisms for states, companies, organizations, and individuals to purchase carbon credits when their direct emission reductions are too costly or difficult to implement¹¹⁰. These mechanisms were institutionalized at the global level through the Kyoto Protocol through its flexible mechanisms, including the CDM¹¹¹. Carbon offsets have since been embraced as a technique to enhance low carbon development¹¹².

The world's largest carbon offset program, the CDM has supported more than USD 90 billion of renewable energy investments in developing countries, equivalent to 13% of their total renewable energy investments¹¹³. The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO₂¹¹⁴. These CERs can be traded and

¹⁰⁸ Ibid

¹⁰⁹ Andonova, L, & Sun, Y., 'Private Governance in Developing Countries: Drivers of Voluntary Carbon Offset Programs.' Available at https://dlwqtxts1xzle7.cloudfront.net/81071680/glep_a_00496-libre.pdf?1645352500=&response-content-disposition=inline%3B+filename%3DPrivate_Governance_in_Developing_Countri.pdf&Expires=1694170071&Signature=Acp6vkhp64d5t9RD97FC5hc6lin0n4bIABB4pFgANsb01nE GWXXh4TTvnWNC09BbBz5HAn~XJENfjKHfYLu12V-gfCZq5-x9LMbqCe7wRFutQFLsRoSC8dChKGIDcGwzx-5AG9mKhYaEkHwfV9a4FGCSkLSBj-wl3ZdlJBA1N~XVIIpY8UO75deHZOLY2TTG~A~arO~eRbGMF-MOI7eflT2R4tZCYtPwE29wNW4APrdvpmompl~jbpEvA08CsOFq2oqAEv-OXWKUpN6W4f3mYJJ0WzMO2vGv1kBMcx3jnn~AGCYnuHQJ9RwQXSYruaf6fQXiaMLDgv2oH6TnM1xEN~Q__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA (Accessed on 08/09/2023)

¹¹⁰ Ibid

¹¹¹ Kyoto Protocol, Article 12

¹¹² Andonova, L, & Sun, Y., 'Private Governance in Developing Countries: Drivers of Voluntary Carbon Offset Programs.' Op Cit

¹¹³ Calel, R, 'Do Carbon Offsets Offset Carbon?' Op Cit.

¹¹⁴ United Nations Framework Convention on Climate Change., 'What is the Clean Development Mechanism?'

<https://cdm.unfccc.int/about/index.html#:~:text=The%20CDM%20allows%20emission%2Dreduction,targets%20under%20the%20Kyoto%20Protocol> (Accessed on 08/09/2023)

sold, and used by industrialized countries to meet a part of their emission reduction targets under the Kyoto Protocol¹¹⁵. It has been observed that the CDM mechanism stimulates Sustainable Development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction limitation targets¹¹⁶.

The United Nations has also developed a Carbon Offset Platform, an e-commerce platform where a company, an organization or a regular citizen can purchase units (carbon credits) to compensate greenhouse gas emissions or towards supporting climate action¹¹⁷. The platform features UNFCCC certified projects that reduce, avoid or remove greenhouse gas emissions from the atmosphere¹¹⁸. The projects are majorly implemented in developing countries and are rewarded with Certified Emission Reductions (CERs), a type of carbon offset measured in tonnes of CO₂ equivalent¹¹⁹. The CERs are available for everyone to purchase to offset emissions or in support of the projects¹²⁰. This platform has aided low carbon development in developing countries through investments in renewable sources of energy such as wind power, hydro power, natural gas and biomass based renewable energy¹²¹. Carbon offsets are therefore very essential in enhancing low carbon development. In addition to emission reductions, they also support Sustainable Development in the communities where environmentally friendly projects are implemented, ensuring job

¹¹⁵ Ibid

¹¹⁶ Ibid

¹¹⁷ United Nations Framework Convention on Climate Change., 'United Nations Carbon Offset Platform.' Available at <https://unfccc.int/climate-action/united-nations-carbon-offset-platform> (Accessed on 08/09/2023)

¹¹⁸ Ibid

¹¹⁹ Ibid

¹²⁰ Ibid

¹²¹ Ibid

creation and continuity, health improvements and many more co-benefits¹²².

The idea of emissions trading has also been adopted as a mechanism for enhancing low carbon development as envisaged under the Kyoto Protocol¹²³. According to the UNFCCC, emissions trading 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 through carbon markets¹²⁴. It has been pointed out that emissions or carbon trading is a vital instrument in reducing greenhouse gases and enhancing the global fight against climate change¹²⁵. Carbon trading works by getting companies and other entities to pay for every ton of CO₂ emitted into the atmosphere¹²⁶. This can be achieved through a carbon tax, which is a fixed price that must be paid for every ton of CO₂ emitted and a 'trade and cap' system which is a concept that caps an organization's total emissions, and allows it to trade any excess allocation¹²⁷. The UNFCCC opines that emissions trading schemes may be established as climate policy instruments at the national level and the regional level whereby governments set emissions obligations to be reached by the participating entities¹²⁸. Countries such as the United States of America (USA) have unveiled voluntary carbon trading market schemes with the aim of boosting

¹²² Ibid

¹²³ Kyoto Protocol, Article 17

¹²⁴ United Nations Framework Convention on Climate Change., 'Emissions Trading.' Available at <https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading> (Accessed on 08/09/2023)

¹²⁵ Channel News Asia., 'CNA Explains: What is Carbon Trading and How Does it Work?.' Available at <https://www.channelnewsasia.com/sustainability/cna-explains-carbon-trading-tax-climate-change-global-warming-3424796> (Accessed on 08/09/2023)

¹²⁶ Ibid

¹²⁷ Ibid

¹²⁸ United Nations Framework Convention on Climate Change., 'Emissions Trading.' Op Cit

CHAPTER THIRTEEN: Conclusion and Way Forward

private investment in clean energy projects in developing countries¹²⁹. At the regional level, the African Carbon Markets Initiative (ACMI) has been developed in order to unlock the potential of voluntary carbon markets for financing Africa's energy, climate and development goals¹³⁰. The ACMI was inaugurated at COP 27 and aims to support the growth of carbon credit production and create jobs in Africa¹³¹. This idea has been introduced in Kenya under the amended *Climate Change Act* which introduces carbon markets as a mechanism that enables and allows public and private entities to transfer and transact emission reduction units, mitigation outcomes or offsets generated through carbon initiatives, programmes and projects subject to compliance of national and international laws¹³². Giving effect to the provisions of the Act on emissions trading will enhance low carbon development in Kenya. Carbon markets are therefore vital in enhancing low carbon development. Carbon markets offer an incredible opportunity to unlock billions for the climate finance needs of African economies while expanding energy access, creating jobs, protecting biodiversity, and driving climate action¹³³. It is thus imperative to embrace carbon markets in Africa for low carbon development.

In addition, fostering green growth through initiatives such as low carbon infrastructure, smart agricultural practices and sustainable cities

¹²⁹ Milman. O, & Lakhani. N., 'US Introduces New Carbon Trading Scheme to Boost Investment in Developing Countries.' Available at <https://www.theguardian.com/environment/2022/nov/09/cop27-us-carbon-trading-scheme> (Accessed on 08/09/2023)

¹³⁰ Sustainable Energy for All., 'Africa Carbon Markets Initiative (ACMI).' Available at <https://www.seforall.org/our-work/initiatives-projects/ACMI> (Accessed on 08/09/2023)

¹³¹ Ibid

¹³² Climate Change (Amendment) Act, 2023, S 2

¹³³ Climate Champions., 'Africa Carbon Markets Initiative Launched to Dramatically Expand Africa's Participation in Voluntary Carbon Market.' Available at https://climatechampions.unfccc.int/africa-carbon-markets-initiative/?gclid=CjwKCAjwjOunBhB4EiwA94jWsJZ_t3NzOZHvgrVH50425NnhonFqhjUlelc_hKi8OzQKEaq4xFBFwBoC6tIQAvD_BwE (Accessed on 08/09/2023)

is essential in enhancing low carbon development¹³⁴. It has been asserted that approximately 79% of global greenhouse gas emissions come from infrastructure construction and operations such as power plants, buildings, and transport¹³⁵. In order to curb this situation while maintaining infrastructure as a priority sector for climate action, and national growth in general, climate experts have argued that governments need to radically rethink how infrastructure is planned, delivered and managed in order to make it suitable for a low-emission and resilient future¹³⁶. Low-carbon infrastructure development is therefore necessary in enhancing low carbon development since it generates fewer carbon emissions than traditional infrastructure and helps build resilience in vulnerable countries while protecting against exposure to extreme climate change events¹³⁷. Low carbon infrastructure projects such as railway infrastructure, urban transport projects, such as Metros and Light Rail projects which reduce car usage and renewable energy projects including solar, wind, and hydropower are therefore crucial in enhancing low carbon development¹³⁸. In addition, cities are increasingly adopting Low Carbon City Development Programmes which stipulate a framework and set of comprehensive requirements to help in planning, implementation, monitoring, and accounting for low carbon investments and climate

¹³⁴ Xin. X, Yuding. W, & Jianzhong. W., 'The Problems and Strategies of the Low Carbon Economy Development.' Op Cit

¹³⁵ Brickstone., 'Low-Carbon Infrastructure in Curbing Climate Change.' Available at <https://brickstone.africa/low-carbon-infrastructure-in-climate-change/#:~:text=Urban%20transport%20projects%2C%20such%20as,emissions%20compared%20to%20fossil%20fuels> (Accessed on 08/09/2023)

¹³⁶ Ibid

¹³⁷ Kennedy. C, Ibrahim. N, & Hoornweg. D., 'Low-Carbon Infrastructure Strategies for Cities.' Available at https://www.researchgate.net/profile/Nadine-Ibrahim-2/publication/262954714_Low-carbon_infrastructure_strategies_for_cities/links/5705559e08ae13eb88b9644e/Low-carbon-infrastructure-strategies-for-cities.pdf (Accessed on 08/09/2023)

¹³⁸ Ibid

change mitigation actions across all sectors¹³⁹. Further, climate smart agriculture is vital in enhancing the resilience of the agriculture sector, promoting food security while curbing greenhouse gas emissions¹⁴⁰. Climate smart agriculture is an integrated approach to managing landscapes including cropland, livestock, forests and fisheries that addresses the interlinked challenges of food security and accelerating climate change¹⁴¹. Embracing climate smart agricultural practices can therefore accelerate low carbon development.

Finally, climate finance has also been embraced as a strategy to enhance low carbon development. Climate finance refers to local and global financing of public and private investment that seeks to support mitigation of and adaptation to climate change¹⁴². It has also been defined as finance for activities aimed at mitigating or adapting to the impacts of climate change¹⁴³. Climate finance is vital in climate change mitigation and adaptation by accelerating clean energy transitions and building resilience in the most vulnerable countries¹⁴⁴. The UNFCCC acknowledges the importance of climate finance and seek to mobilise USD 100 billion in climate finance per year to support developing countries¹⁴⁵. At COP27, a breakthrough agreement was reached to

¹³⁹ The World Bank., 'Rio de Janeiro Low-Carbon City Development Program.' Available at <https://www.worldbank.org/en/topic/urbandevelopment/publication/rio-low-carbon-city-program> (Accessed on 08/09/2023)

¹⁴⁰ The World Bank., 'Climate-Smart Agriculture.' Available at <https://www.worldbank.org/en/topic/climate-smart-agriculture> (Accessed on 08/09/2023)

¹⁴¹ Ibid

¹⁴² Hong. H., Karolyi. G. A., & Scheinkman. J.A., 'Climate Finance.' *Review of Financial Studies*, Volume 33, Issue 3 (2020)

¹⁴³ The London School of Economics and Political Science., 'What is Climate Finance?' Available at <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-climate-finance-and-where-will-it-comefrom/> (Accessed on 08/09/2023)

¹⁴⁴ Hill. A., & Babin. M 'Why Climate Finance is Critical for Accelerating Global Action.' Available at <https://www.cfr.org/in-brief/why-climate-finance-critical-accelerating-global-action> (Accessed on 08/09/2023)

¹⁴⁵ United Nations Framework Convention on Climate Change., 'Introduction to Climate Finance.' Available at <https://unfccc.int/topics/introduction-to->

CHAPTER THIRTEEN: Conclusion and Way Forward

provide loss and damage funding for vulnerable countries hit hard by floods, droughts and other climate disasters¹⁴⁶. This decision has been lauded as historic since it recognizes the need for finance to respond to loss and damage associated with the severe consequences of climate change¹⁴⁷. It has also been argued that creation of the Loss and Damage Fund will have a positive impact on the adoption of the carbon market as an addition avenue for climate finance¹⁴⁸. Climate finance is therefore an essential tool of enhancing low carbon development.

From the foregoing discussion, it can be deduced that there has been progress towards enhancing low carbon development. However, despite the efficacy of low carbon development in enhancing sustainability, there are several drawbacks hindering its practice. In the field of carbon trading, it has been pointed out that major polluters might relocate across borders to more lenient jurisdictions in a move known as carbon leakage¹⁴⁹. Carbon leakage has resulted in companies moving emissions-intensive operations abroad to escape regulation impeding many, perhaps most, mitigation policy options given the perceived risk of these shifting to jurisdictions with weaker climate

climatefinance?gclid=EAIaIQobChMI18L91LDRgAMVAlpoCR2_kQzJEAAYAiAAEgI4cfD_BwE (Accessed on 08/09/2023)

¹⁴⁶ United Nations Framework Convention on Climate Change., 'Decision -/CP.27 -/CMA.4: Funding Arrangements for Responding to Loss and Damage Associated with the Adverse Effects of Climate Change, Including a Focus on Addressing Loss and Damage.' Available at https://unfccc.int/sites/default/files/resource/cma4_auv_8f.pdf (Accessed on 08/09/2023)

¹⁴⁷ United Nations Framework Convention on Climate Change., 'Five Key Takeaways from COP 27.' Available at https://unfccc.int/process-andmeetings/conferences/sharm-el-sheikh-climate-change-conference-november-2022/five-key-takeawaysfrom-cop27?gclid=EAIaIQobChMI-5_C16jRgAMVDzAGAB1Ikw6NEAAYASAAEgI_QfD_BwE (Accessed on 08/09/2023)

¹⁴⁸ Climate Trade., 'Top 5 Carbon Market Developments at COP 27.' Available at <https://climatetrade.com/top-5-carbon-market-developments-at-cop27/> (Accessed on 08/09/2023)

¹⁴⁹ Channel News Asia., 'CNA Explains: What is Carbon Trading and How Does it Work?.' Op Cit

CHAPTER THIRTEEN: Conclusion and Way Forward

policies¹⁵⁰. Carbon markets have also been accused of resulting in minimal emissions reductions while burnishing the green reputations of large companies¹⁵¹. Consequently, it has been asserted that the idea of carbon offsetting allows polluters to keep polluting instead of reducing greenhouse gas emissions¹⁵². In addition, transparency concerns have been raised in relation to carbon markets¹⁵³. It has been argued that carbon trading focus could encourage dubious carbon accounting and offsetting practices¹⁵⁴. There is also the risk of double counting in unregulated voluntary carbon market because they do not fall under jurisdiction of the UNFCCC¹⁵⁵.

Further, another pertinent concern is the potential of human rights violation since such schemes often involve forests and agricultural land where indigenous and pastoral communities have lived sustainably resulting in widespread reports of land grabs and higher food prices linked to carbon markets in some countries¹⁵⁶. It has been argued that carbon markets have historically failed to fulfil climate goals and often profoundly harm communities and undermine human rights¹⁵⁷. Carbon markets have been associated with challenges such as exploitation,

¹⁵⁰ Grubb, M., 'Carbon Leakage, Consumption, and Trade.' *Annual Review of Environment and Resources.*, 2022. 47:753–95

¹⁵¹ Milman. O, & Lakhani. N., 'US Introduces New Carbon Trading Scheme to Boost Investment in Developing Countries.' Op Cit

¹⁵² Ibid

¹⁵³ Luhn. A., 'COP27 Boosts Carbon Trading and 'Non-Market' Conservation: But Can They Save Forests?' Available at <https://news.mongabay.com/2022/11/cop27-boosts-carbon-trading-and-non-market-conservation-but-can-they-save-forests/> (Accessed on 09/09/2023)

¹⁵⁴ Ibid

¹⁵⁵ Crook. J., 'Was COP 27 the Beginning of the End for Corporate Offsetting?' Available at <https://carbonmarketwatch.org/2022/12/07/was-cop27-the-beginning-of-the-end-for-corporate-offsetting/> (Accessed on 09/09/2023)

¹⁵⁶ Milman. O, & Lakhani. N., 'US Introduces New Carbon Trading Scheme to Boost Investment in Developing Countries.' Op Cit

¹⁵⁷ Michaelowa. A., 'Failures of Global Carbon Markets and CDM?.' Available at <https://www.tandfonline.com/doi/pdf/10.3763/cpol.2010.0688> (Accessed on 09/09/2023)

inequalities and perverse speculations and financial bubbles¹⁵⁸. There is need to effectively implement carbon markets in order to enhance their role in low carbon development.

Finally, fostering low carbon development in most countries has been hindered by challenges such as economic barriers, infrastructural and operational challenges, lack of proper policy mechanisms and market barriers¹⁵⁹. There is need to address these challenges in order to enhance low carbon development.

13.5. Confronting Climate Change in Africa: Prospects and Challenges

Confronting climate change has become an urgent concern not only in Africa but also across the world. Various laws, treaties, conventions, protocols and policies have been adopted towards confronting climate change at the international, regional and national levels.

The *Kyoto Protocol*¹⁶⁰ to the UNFCCC was an international legal instrument that sought to operationalize the United Nations Framework Convention on Climate Change by committing industrialized countries and economies in transition to limit and reduce Greenhouse Gases (GHG) emissions in accordance with agreed individual targets¹⁶¹. The Protocol requires these countries to implement measures and policies geared towards achieving their

¹⁵⁸ Ibid

¹⁵⁹ Luthra. K et al., 'Analysing the Adoption Barriers of Low-Carbon Operations: A Step Forward for Achieving Net-Zero Emissions.' Available at <https://repository.derby.ac.uk/item/9vz84/analysing-the-adoption-barriers-of-low-carbon-operations-a-step-forward-for-achieving-net-zero-emissions#:~:text=The%20results%20also%20show%20that,and%20achieving%20net%2Dzero%20emissions> (Accessed on 09/09/2023)

¹⁶⁰ United Nations Framework Convention on Climate Change., 'Kyoto Protocol to the United Nations Framework Convention on Climate Change.' Available at <https://unfccc.int/resource/docs/convkp/kpeng.pdf> (Accessed on 15/08/2023)

¹⁶¹ Ibid

CHAPTER THIRTEEN: Conclusion and Way Forward

emission limitation and reduction commitments¹⁶². These include enhancement of energy efficiency; promotion of sustainable forms of agriculture in light of climate change considerations; research on, and promotion, development and increased use of, new and renewable forms of energy, of carbon dioxide sequestration technologies and of advanced and innovative environmentally sound technologies and cooperation between states to enhance the individual and combined effectiveness of their policies and measures adopted towards confronting climate change¹⁶³. The Kyoto Protocol only binds developed countries, and places a heavier burden on them under the principle of *common but differentiated responsibility and respective capabilities* since it recognizes that they are largely responsible for the current high levels of GHG emissions in the atmosphere¹⁶⁴. On 8th December 2012, the *Doha Amendment*¹⁶⁵ to the Kyoto Protocol was adopted for a second commitment period, starting in 2013 and lasting until 2020¹⁶⁶.

Further, the *Paris Agreement*¹⁶⁷ was adopted to strengthen the global response to the threat of climate change, in the context of Sustainable Development and efforts to eradicate poverty¹⁶⁸. It seeks to achieve this goal through measures such as holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-

¹⁶² Ibid, Article 2

¹⁶³ Ibid

¹⁶⁴ United Nations Framework Convention on Climate Change., 'What is the Kyoto Protocol?' Available at https://unfccc.int/kyoto_protocol (Accessed on 15/08/2023)

¹⁶⁵ United Nations., 'Doha Amendment to the Kyoto Protocol.' Available at <https://treaties.un.org/doc/Publication/MTDGS/Volume%20II/Chapter%20XXVII/xxvii-7-c.en.pdf> (Accessed on 15/08/2023)

¹⁶⁶ United Nations Framework Convention on Climate Change., 'What is the Kyoto Protocol?' Op Cit

¹⁶⁷ United Nations Framework Convention on Climate Change., 'Paris Agreement.' Available at https://unfccc.int/sites/default/files/english_paris_agreement.pdf (Accessed on 15/08/2023)

¹⁶⁸ Ibid, Article 2 (1)

CHAPTER THIRTEEN: Conclusion and Way Forward

industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change; increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production and making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development¹⁶⁹. The Agreement further requires parties to prepare, communicate and maintain successive Nationally Determined Contributions that they intend to achieve¹⁷⁰. It further requires parties to pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions¹⁷¹. The Agreement further acknowledges the special circumstances of developing countries some which are more vulnerable to the effects of climate change and requires developed countries to support them in their efforts to confront climate change through measures such as provision of financial resources and technology transfer¹⁷². Achieving the targets and measures set out under the Paris Agreement is therefore vital in confronting climate change.

Confronting climate change has also been the pertinent topic during the United Nations Climate Change Conferences/Conference of the Parties of the UNFCCC (COP meetings). At COP 27 a breakthrough agreement was reached towards confronting climate change whereby parties agreed to provide loss and damage funding for vulnerable countries hit hard by floods, droughts and other climate disasters¹⁷³. Parties further reaffirmed their commitment to limit global temperature rise to 1.5°C above pre-industrial levels as envisaged under the Paris Agreement¹⁷⁴.

¹⁶⁹ Ibid

¹⁷⁰ Ibid, Article 4 (2)

¹⁷¹ Ibid

¹⁷² Ibid, Articles 9 (1) & 10

¹⁷³ United Nations Framework Convention on Climate Change., 'Sharm El-Sheikh Climate Change Conference - November 2022.' Available at <https://unfccc.int/cop27> (Accessed on 16/08/2023)

¹⁷⁴ Ibid

CHAPTER THIRTEEN: Conclusion and Way Forward

In addition, parties agreed to mobilize more financial support for developing countries towards low emissions and climate resilient development¹⁷⁵. COP 27 acknowledged that finance is at the heart of all that the world is doing to confront climate change since mitigation, adaptation, loss and damage and climate technology require sufficient funds to function properly and to yield the desired results¹⁷⁶. COP 28 is aimed at assessing global progress towards confronting climate change and come up with concrete plans and actions on thematic areas including finance, trade, energy, industry, urbanization, built environment, nature, land use and oceans in strengthening global resilience on climate change¹⁷⁷.

At the regional level, the *East African Community Climate Change Policy*¹⁷⁸ recognizes the adverse impacts of climate change as a major challenge to socio-economic development globally. According to the Policy, the African continent including the East African region is particularly vulnerable to impacts of climate change affecting key economic drivers such as water resources, agriculture, energy, transport, health, forestry, wildlife, land and infrastructure, disaster risk management among others¹⁷⁹. It further recognizes that impacts of climate change in the region include; water stress and scarcity, food insecurity, diminished hydropower generation potential, loss of biodiversity and ecosystem degradation, increased incidence of disease burden, destruction of infrastructure, high costs of disaster management as result of increased frequency and intensity of droughts, floods and landslides associated

¹⁷⁵ Ibid

¹⁷⁶ Ibid

¹⁷⁷United Nations Framework Convention on Climate Change., 'UN Climate Change Conference - United Arab Emirates Nov/Dec 2023.' Available at <https://unfccc.int/cop28> (Accessed on 16/08/2023)

¹⁷⁸ East African Community., 'East African Community Climate Change Policy.' Available at <https://www.eac.int/environment/climate-change/eac-climate-change-policy-framework> (Accessed on 15/08/2023)

¹⁷⁹ Ibid

with the *El Niño* phenomenon¹⁸⁰. The Policy is aimed at contributing to Sustainable Development in the EAC region through harmonized and coordinated regional strategies, programmes and actions to respond to climate change¹⁸¹. It identifies several ways of confronting climate change in the region which include establishing a regional framework to guide the harmonization, coordination and implementation of climate change initiatives amongst partner states; identifying priority adaptation and mitigation action areas and roles of partner states and other stakeholders to address climate change in the region; promoting public awareness and socio-economic importance of climate change including; vulnerability, impacts, risks, and response measures in the region an promoting capacity building efforts through inter alia education, training, research, technology development and transfer, information and knowledge management¹⁸². Actualizing this Policy is vital in confronting climate change in the East African Region.

In Kenya, the *Climate Change Act*¹⁸³ seeks to enhance the national response to climate change and achieve low carbon climate development for the Sustainable Development of Kenya¹⁸⁴. It identifies several ways of achieving this goal such as mainstreaming climate change responses into development planning, decision making and implementation; build national resilience and enhancing adaptive capacity to the impacts of climate change; formulating programmes and plans to enhance the resilience and adaptive capacity of human and ecological systems to the impacts of climate change; mainstreaming intergenerational and gender equity in all aspects of climate change responses; promoting low carbon technologies, improving efficiency and reducing emissions intensity by facilitating approaches and uptake of technologies that support low carbon, and climate resilient

¹⁸⁰ Ibid

¹⁸¹ Ibid

¹⁸² Ibid

¹⁸³ Climate Change Act., No. 11 of 2016, Government Printer, Nairobi

¹⁸⁴ Ibid, S 3 (1)

CHAPTER THIRTEEN: Conclusion and Way Forward

development and facilitating capacity development for public participation in climate change responses through awareness creation, consultation, representation and access to information¹⁸⁵. Achieving the targets set out in the Climate Change Act is critical in confronting climate change in Kenya.

From the foregoing discussion, it is evident that confronting climate change is a global, regional and national concern. *Agenda 2063*¹⁸⁶ recognizes while Africa has played a relatively minor role and contributed little to the accumulation of greenhouse gases and the attendant climate change, it is the most vulnerable region to climate change risks. It seeks to foster environmentally sustainable and climate resilient economies and communities in Africa¹⁸⁷. It has been observed that African countries are scaling up the fight against climate change¹⁸⁸. There has been progress towards adoption of renewable sources of energy such as solar, wind and hydro power which is vital step in confronting climate change¹⁸⁹. Further, progress has been made towards investing in sustainable agriculture and addressing deforestation¹⁹⁰. In addition, most African countries have submitted their Nationally Determined Contributions (NDCs) to the UNFCCC with some committing to reduce their greenhouse gas emissions by 30% by the

¹⁸⁵ Ibid, S 3 (2)

¹⁸⁶ Africa Union., 'Agenda 2063: The Africa we Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 16/08/2023)

¹⁸⁷ Ibid

¹⁸⁸ Official Monetary and Financial Institutions Forum., 'African Countries are Scaling Up the Fight Against Climate Change.' Available at <https://www.omfif.org/2023/02/african-countries-are-scaling-up-the-fight-against-climate-change/> (Accessed on 16/08/2023)

¹⁸⁹ United Nations Framework Convention on Climate Change., 'Four Countries Showcased their Ambitious Climate Action During Africa Climate Week.' Available at <https://unfccc.int/news/four-countries-showcased-their-ambitious-climate-action-during-africa-climate-week> (Accessed on 16/08/2023)

¹⁹⁰ Ibid

year 2030¹⁹¹. It is therefore evident that there is immense potential in confronting climate change in Africa.

However, several problems hinder the effectiveness of African countries in confronting climate change. One of the key challenges to the implementation of climate change mitigation and adaptation strategies in Africa is financing¹⁹². It has been observed that costs of adaptation could reach \$ 300 Billion for Africa plus \$ 3 Billion per year for maintenance numbers which sharply contrast with the limited resources currently devoted to climate change mitigation and adaptation in Africa¹⁹³. African governments pledged \$ 264 Billion in domestic public resources to combat climate change, a figure that falls short of the estimated \$ 2.8 trillion required to implement Africa's Nationally Determined Contributions (NDCs) between 2020 and 2030¹⁹⁴.

In addition, it has been observed that most African countries lack the technical capacity to adapt to the impacts of climate change, and to develop appropriate low carbon technologies¹⁹⁵. Further, another big challenge facing Africa is the lack of access to modern and clean sources of energy such as electricity¹⁹⁶. This results in the use of traditional

¹⁹¹ United Nations Framework Convention on Climate Change., 'Nationally Determined Contributions Registry.' Available at <https://unfccc.int/NDCREG> (Accessed on 16/08/2023)

¹⁹² Mbaye. A., 'Confronting the Challenges of Climate Change on Africa's Coastal Areas.' Available at <https://www.brookings.edu/articles/confronting-the-challenges-of-climate-change-on-africas-coastal-areas/> (Accessed on 16/08/2023)

¹⁹³ Ibid

¹⁹⁴ Magoma. C., 'A Huge Financing Gap for Climate Action with Public Debt Sustainability Risks Looms in East Africa beyond COP27.' Available at <https://www.acepis.org/a-huge-financing-gap-for-climateaction-with-public-debt-sustainability-risks-looms-in-east-africa-beyond-cop27/> (Accessed on 16/08/2023)

¹⁹⁵ United Nations Environment Programme., 'Climate Change Challenges for Africa.' April, 2012

¹⁹⁶ Muigua. K., 'Delivering Clean and Affordable Energy for All.' Available at <http://kmco.co.ke/wp-content/uploads/2021/05/Delivering-Clean-and-Affordable-Energy-for-All-Kariuki-Muigua-Ph.D-24th-April-2021-1.pdf> (Accessed on 16/08/2023)

sources of energy such as coal which have negative environmental consequences¹⁹⁷. Further, unsustainable farming practices have also contributed to climate change and degradation of soils leading to food insecurity¹⁹⁸. There is need to address these challenges in order to effectively confront climate change in Africa.

13.6. Way Forward

In order to enhance low carbon development, it is vital for countries to fulfill their obligations as stipulated under the international climate change framework including the UNFCCC and the Paris Agreement.¹⁹⁹ The *Paris Agreement* seeks to confront climate change by holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels²⁰⁰. The United Nations observes that in order to keep global warming to no more than 1.5°C – as called for in the Paris Agreement – emissions need to be reduced by 45% by 2030 and reach net zero by 2050²⁰¹. It is therefore important for countries to significantly strengthen their Nationally Determined Contributions (NDCs) and take bold, immediate steps towards reducing emissions in order to realize low carbon development and confront climate change²⁰².

Further, there is need to establish an international carbon market in order to allow countries to offset their emissions with credits based on

¹⁹⁷ Ibid

¹⁹⁸ Hillsdon. M., 'Regenerative Agriculture Seen as Answer to Averting Africa's Growing Food Crisis.' Available at <https://www.reuters.com/business/sustainable-business/regenerative-agriculture-seen-answer-averting-africas-growing-food-crisis-2022-11-07/> (Accessed on 16/08/2023)

¹⁹⁹ United Nations., 'For a Livable Climate: Net-Zero Commitments Must be Backed by Credible Action,' Available at <https://www.un.org/en/climatechange/net-zero-coalition> (Accessed on 09/09/2023)

²⁰⁰ Paris Agreement, Article 2 (1)

²⁰¹ United Nations., 'For a Livable Climate: Net-Zero Commitments Must be Backed by Credible Action,' Op Cit

²⁰² Ibid

CHAPTER THIRTEEN: Conclusion and Way Forward

greenhouse gas-reducing projects elsewhere as envisaged under the Paris Agreement²⁰³. The Paris Agreement envisages the development of carbon markets through internationally transferred mitigation outcomes and voluntary cooperation between countries among other measures²⁰⁴. It is imperative to fulfill these provisions in order to develop carbon markets as tools of low carbon development. The outcome of COP 27 was vital in enhancing carbon markets through initiatives such as the establishment of the Loss and Damage Fund and development of the African Carbon Markets Initiative²⁰⁵. There is need to further these efforts through appropriate global and regional initiatives including COP 28 in order to strengthen the role of carbon markets in enhancing sustainability²⁰⁶.

It is also imperative for countries to embrace carbon market initiatives including emissions trading as climate policy instrument at the national level²⁰⁷. There has been progress towards realizing this goal in Kenya through the enactment of the *Climate Change (Amendment) Act* which introduces carbon markets as a mechanism that enables and allows public and private entities to transfer and transact emission reduction units, mitigation outcomes or offsets generated through carbon initiatives, programmes and projects subject to compliance of national and international laws²⁰⁸. Global and regional cooperation in this sector is also vital in enhancing low carbon development²⁰⁹.

²⁰³ Nasralla, S, & Abnett, K., 'U.N. Carbon Market Talks to Drag Beyond COP27 as Deals Elusive.' Available at <https://www.reuters.com/business/cop/un-carbon-market-talks-drag-beyond-cop27-deals-elusive-2022-11-17/> (Accessed on 09/09/2023)

²⁰⁴ Paris Agreement, Article 6

²⁰⁵ United Nations Framework Convention on Climate Change., 'Five Key Takeaways from COP 27.' Op Cit

²⁰⁶ Climate Trade., 'Top 5 Carbon Market Developments at COP 27.' Op Cit

²⁰⁷ United Nations Framework Convention on Climate Change., 'Emissions Trading.' Op Cit

²⁰⁸ Climate Change (Amendment) Act, 2023, S 2

²⁰⁹ United Nations Framework Convention on Climate Change., 'Emissions Trading.' Op Cit

Low carbon development can also be achieved by countries ‘greening’ their economies²¹⁰. The concept of ‘greening’ economies has become a pertinent concern in global politics in the wake of challenges facing the planet including the threat of climate change²¹¹. The idea of ‘green economy’ is a policy focus that emphasizes environmentally sustainable economic progress to foster low-carbon, socially inclusive development²¹². Countries should therefore embrace the idea of green economies through measures such as embracing renewable sources of energy including solar, wind and hydropower, adopting climate smart agricultural techniques, fostering sustainable cities and infrastructure and adoption of sustainable waste management techniques²¹³. It is also vital for countries to embrace the concept of REDD+, or Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, as a mechanism for sustainable management of forests²¹⁴. Forests absorb vast amounts of carbon dioxide and can be a source of greenhouse gas emissions when destroyed or damaged²¹⁵. REDD + can enhance low carbon development through sustainable management of forests and the conservation and enhancement of forest carbon stocks²¹⁶. Finally, it is essential for countries to unlock climate finance as an essential tool of confronting climate change and enhancing low carbon

²¹⁰ Bergius. M., ‘Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.’ *Journal of Political Ecology*, 2019

²¹¹ Ibid

²¹² United Nations Economic and Social Commission for Asia and the Pacific., ‘Green Growth Uptake in Asia-Pacific Region.’ Available at https://unece.org/fileadmin/DAM/env/cep/CEP20/ppp/Item10_b__ESCAP_GreenGrowthUptake_e_sm.pdf (Accessed on 09/09/2023)

²¹³ Muigua. K., ‘Actualizing Africa’s Green Dream.’ Available at <http://kmco.co.ke/wp-content/uploads/2023/07/Actualizing-Africas-Green-Dream.pdf> (Accessed on 09/09/2023)

²¹⁴ Luhn. A., ‘COP27 Boosts Carbon Trading and ‘Non-Market’ Conservation: But Can They Save Forests?’ Op Cit

²¹⁵ United Nations Framework Convention on Climate Change., ‘What is REDD+?’ Available at <https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd> (Accessed on 09/09/2023)

²¹⁶ Ibid

development²¹⁷. Climate finance is vital in climate change mitigation and adaptation by accelerating clean energy transitions and building resilience in the most vulnerable countries²¹⁸. The outcome of COP 27, the *Sharm El-Sheikh Implementation Plan*,²¹⁹ highlights the world needs USD 4 trillion per year needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050, and that, furthermore, a global transformation to a low-carbon economy is expected to require investment of at least USD 4–6 trillion per year²²⁰. It is therefore imperative for countries to identify and mobilize effective and appropriate financing for climate action in order to enhance their resilience and effectively confront climate change²²¹. These measures are integral in enhancing low carbon development for sustainability.

13.7. Conclusion

The idea of low carbon development has been advocated as the inevitable choice to confront climate change and achieve Sustainable Development²²². The need for low carbon development has been recognized at the global, regional and national levels with various efforts being undertaken towards realizing this ideal²²³. Despite progress being made towards realizing carbon development, concerns such as economic barriers, infrastructural and operational challenges,

²¹⁷ Muigua. K., 'Unlocking Climate Finance for Development.' Available at <http://kmco.co.ke/wp-content/uploads/2023/08/Unlocking-Climate-Finance-for-Development.pdf> (Accessed on 09/09/2023)

²¹⁸ Hill. A., & Babin. M 'Why Climate Finance is Critical for Accelerating Global Action.' Op Cit

²¹⁹ Sharm El-Sheikh Implementation Plan.' Op Cit.

²²⁰ Ibid.

²²¹ United Nations Framework Convention on Climate Change., 'Climate Finance Access and Mobilization Strategy for The Least Developed Countries in Asia: 2022-2030.' Available at https://unfccc.int/sites/default/files/resource/UNFCCC_NBF_SD_AsianLDCA_final.pdf (Accessed on 09/09/2023)

²²² Xin. X, Yuding. W, & Jianzhong. W., 'The Problems and Strategies of the Low Carbon Economy Development.' Op Cit

²²³ Yuan. H, Zhou. P, & Zhou. D., 'What is Low-Carbon Development? A Conceptual Analysis.' Op Cit

lack of proper policy mechanisms and market barriers are hindering its effective realization²²⁴. Low carbon development can be realized through mechanisms such as countries fulfilling their obligations as stipulated under the international climate change framework including the UNFCCC and the Paris Agreement, establishing an international carbon market, countries embracing carbon market initiatives including emissions trading as climate policy instrument at the national level, greening of economies and accelerating climate finance.²²⁵ Enhancing low carbon development for sustainability is an achievable mandatory objective in light of the Sustainable Development agenda.

Mainstreaming climate change mitigation and adaptation measures into development policies is the only way to ensure that countries achieve lasting results in their development efforts.

It is possible to adopt socio-economic models that safeguard the fundamental rights to clean air, land, water, food and healthy ecosystems. It is vital for all countries to address climate change in a manner that is democratically accountable to their people. It is also imperative to adopt solutions to climate change that do not externalize costs to the environment and communities, and are in line with the principles of a just transition.²²⁶

The time is now for the world to take urgent action to Achieve Climate Justice for Development.

²²⁴ Luthra. K et al., 'Analysing the Adoption Barriers of Low-Carbon Operations: A Step Forward for Achieving Net-Zero Emissions.' Op Cit

²²⁵ Yuan. H, Zhou. P, & Zhou. D., 'What is Low-Carbon Development? A Conceptual Analysis.' Op Cit

²²⁶ Bali Principles of Climate Justice. Available at <https://acrobat.adobe.com/id/urn:aaid:sc:EU:99098795-8c02-4a51-a4f5-dede4417440b> (Accessed on 13/10/2023).

CHAPTER THIRTEEN: Conclusion and Way Forward

Achieving Climate Justice for Development is an imperative whose time is now.

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Index

A

access to environmental resources, 72
access to information on climate change,
35
access to natural resources, 60
accruing benefits, 28
achieve Sustainable Development, 231
adaptation, 38, 200
addressing deforestation, 256
ADR mechanisms, 223, 230
agroforestry, 102
Alternative Dispute Resolution and, 297
and combatting injustices, 9
anthropocentric, 26
arbitration, 192

B

biodiversity, 13, 15, 21, 24, 26, 39, 44, 54,
62, 72, 77, 83, 84, 87, 163, 197, 210, 226,
238, 245, 248, 251, 255, 261, 269, 278,
286, 308

C

carbon development, 291
carbon market, 294
climate action, 11
climate disruption, 222
conflict, xii
confronting climate change, 34, 254, 255,
259, 265, 266, 283, 284, 285, 287, 288,
289, 292
Corporate Social Responsibility, 56, 57,
119, 121, 135, 136, 139, 140, 141, 217,
303, 307, 312

D

Deforestation, 292
disproportionately, 32
Dispute Resolution, 223

E

ecocentric, 26
ecofriendly, 251
ecological, 238
Ecological Economic, 156, 303
ecological systems, 12, 50, 52, 75, 202, 287
economic barriers, 293
ecosystem degradation, 16, 286
emissions reductions, 272
Empowerment, 181
encroachment, 247
Environment and Land Court, 48
Environmental Audits, 122
environmental changes, 55, 68
environmental conservation, 27
environmental degradation, 48, 61, 88, 128,
146, 179, 185, 226
environmental governance, 15, 62, 66, 77,
97, 113, 127, 227
Environmental governance, 15
environmental harm, 25, 126
environmental issues, 14, 25, 34, 76, 113,
122, 126, 185
Environmental Justice, 32
environmental policies, 14
environmental protection, 34, 51, 96, 97,
146, 177, 180, 225, 232
environmental sustainability, 21
equity and equality, 59
eradication of poverty, 3
ESG disputes, 227

F

food security, 22, 50, 55, 71, 74, 80, 84, 105,
115, 146, 148, 149, 150, 152, 157, 160,
252, 263, 269, 280
fossil fuels, 2

G

gender equity, 52, 54, 56, 57, 58, 59, 60, 62, 64, 65, 66, 287
global investment, 41
global transformation, 274
good governance, 51, 92, 93, 233, 234
government, 40

H

healthy and sustainable environment, 59, 197
Healthy Environment, 41
human development, 4, 69, 95
Human Rights Based Approach, 180, 190, 306
human-rights, 198

I

implementation of climate change, 45, 287, 289
indigenous populations, 19
institutional framework, 47
interventions, 64, 90, 206

L

legal framework, 31
legal mechanisms, xv
low carbon development, 293

M

management of disputes, 228
management; biodiversity conservation, 39
mitigation, 291
mitigation strategies, 50, 60, 270
momentum, 57
multilateral environmental, 197

P

party autonomy, 223

policy making, 57
polluter-pays principle, 48
poverty, xiv, 4, 15, 16, 17, 18, 22, 51, 53, 55, 68, 69, 71, 72, 74, 77, 78, 81, 99, 117, 145, 146, 153, 163, 174, 182, 225, 230, 234, 238, 246, 252, 267, 284, 320
Poverty Eradication, 182, 299
procedural justice, 36
Procedural justice, 8
public participation, 9, 27, 28, 35, 36, 41, 42, 43, 44, 46, 48, 49, 52, 59, 63, 66, 113, 257, 260, 264, 288

R

rights-based approach, 197

S

safeguarding environmental, 47
socio-economic, 35
socio-economic development, xiv, 16, 17, 18, 99, 101, 219, 246, 247, 249, 251, 269, 286
socio-economic rights, 13
stakeholders, 181
Strategic Environmental Assessments, 121
Sustainability, i, ii, iii, iv, v, xix, 11, 12, 13, 15, 20, 21, 22, 23, 27, 56, 57, 61, 75, 77, 89, 113, 114, 119, 126, 128, 129, 130, 131, 132, 133, 134, 136, 137, 138, 139, 140, 144, 147, 192, 211, 212, 216, 218, 219, 224, 226, 229, 235, 236, 237, 239, 246, 247, 253, 258, 274, 289, 296, 299, 301, 302, 303, 304, 305, 306, 307, 308, 310, 311, 312, 314, 316, 318
Sustainable Development, i, 182, 198, 301
Sustainable Development Goals, 182, 198, 301
sustainable waste management, 251

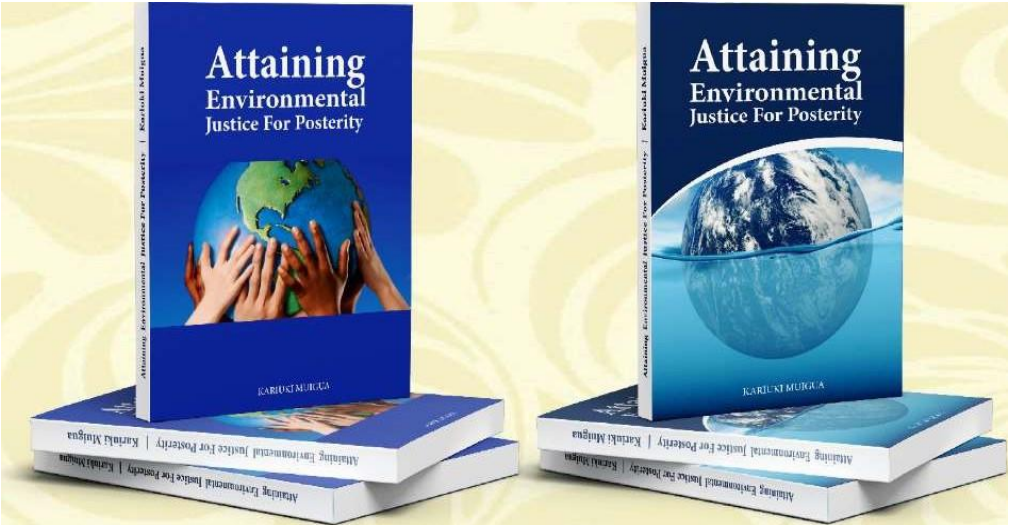
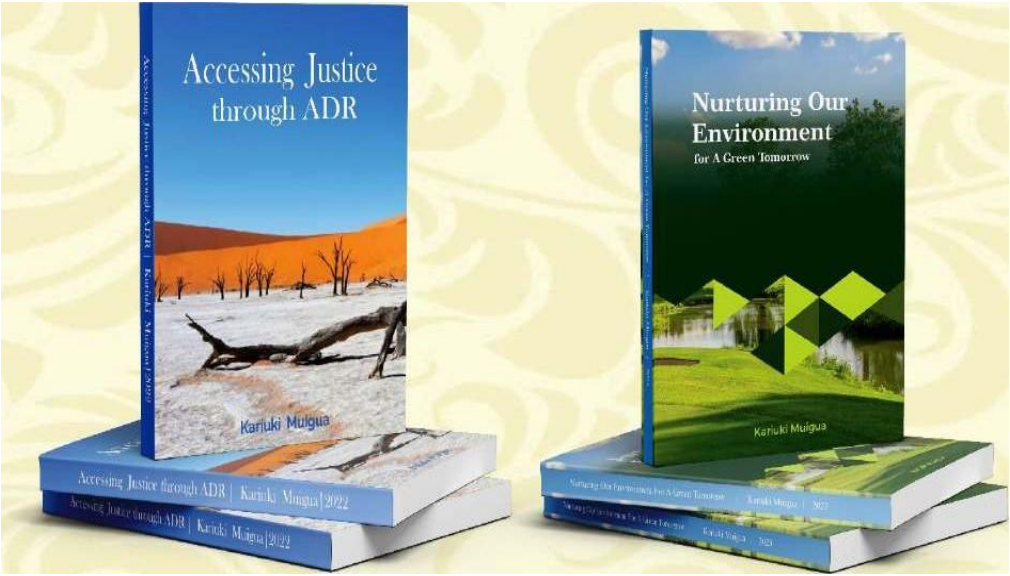
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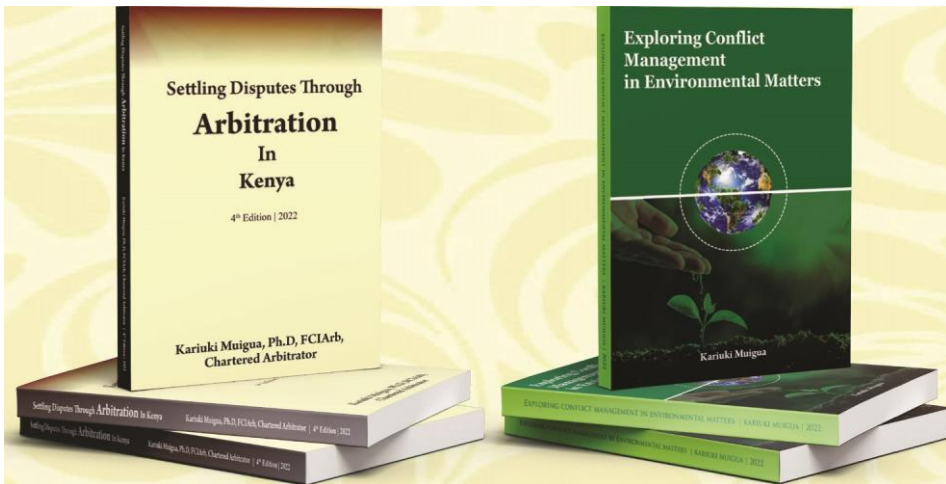
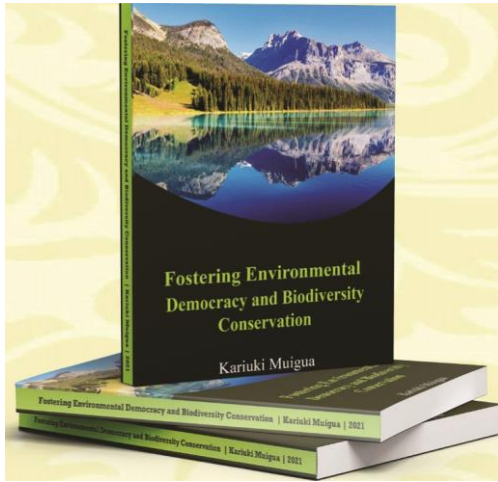
wildlife management, 247
will foster Climate Justice, 45

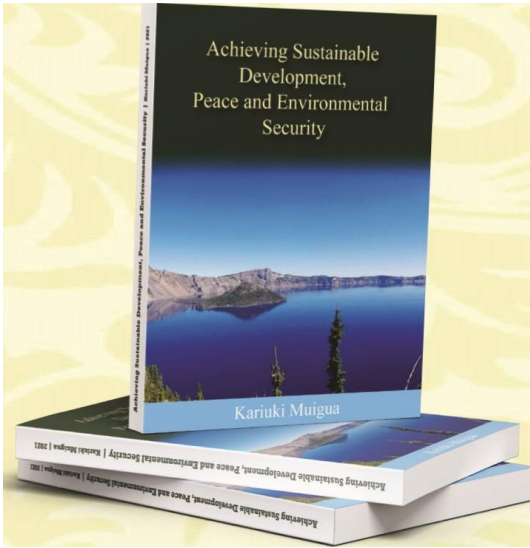
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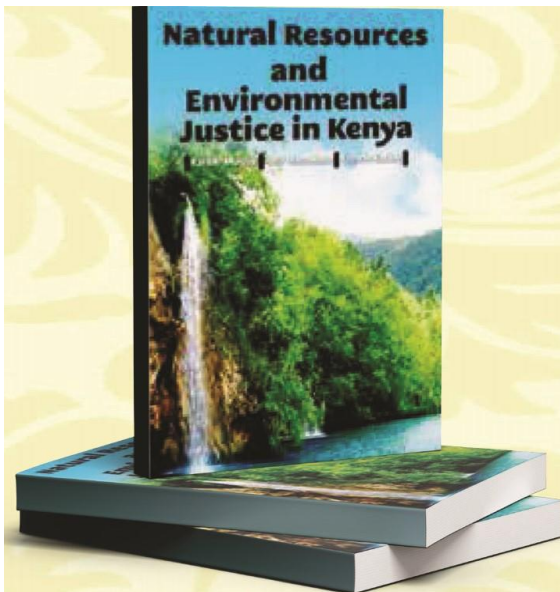
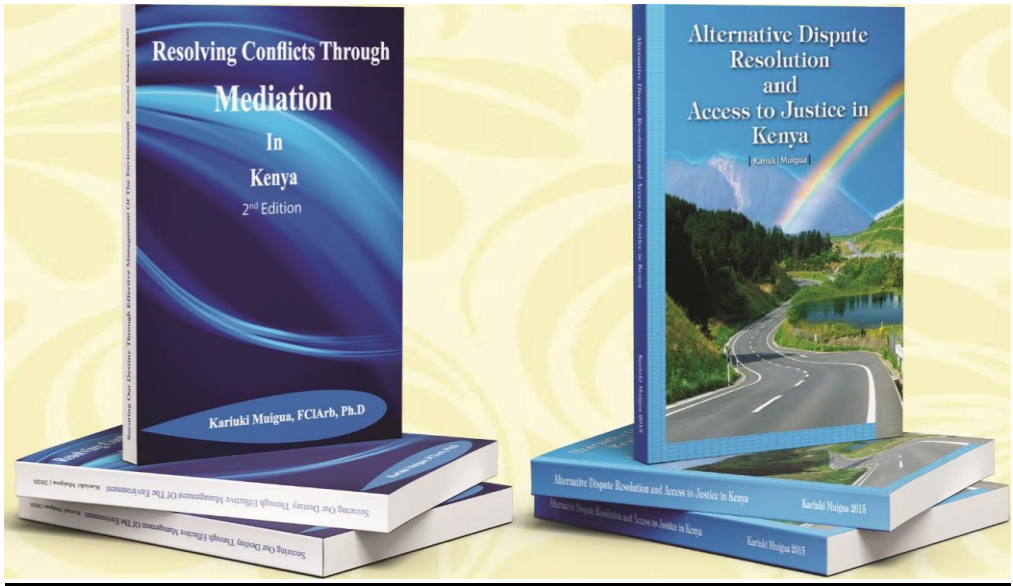












Achieving Climate Justice for Development is a book that explores the idea of climate justice and discusses the efficacy of the measures adopted towards achieving climate justice for development.

The discourse not only adds to the already existing debates in this area but also offers solutions for achieving climate justice for development. The discussion also explores the global and regional approaches to achieving climate justice for development.

Achieving Climate Justice for Development is an ideal whose time is now.

Author's Bio-data

Hon. Dr. Kariuki Muigua a holder a Doctor of Philosophy (Ph.D.) degree in law from the University of Nairobi attained in 2011. He also holds a Master of Laws (LL.M) degree attained in 2005 and Bachelor of Laws (LL.B) degree awarded in 1988 both from the University of Nairobi.

He is a senior law Lecturer at the University of Nairobi Faculty of Law and the Centre for Advanced Studies in Environmental Law and Policy (CASELAP). He also teaches at the Wangari Maathai Institute for Peace and Environmental Studies.

He is a Member of the Permanent Court of Arbitration (PCA) nominated by the Republic of Kenya and a Member of the National Environment Tribunal. He is a distinguished law scholar, Environmental Consultant, an accredited mediator and a Chartered arbitrator. He has widespread training and experience in both international and national commercial arbitration and mediation. He has received numerous awards and honours due to his exemplary work in academia and Alternative Dispute Resolution.

Chambers and Partners Global Guide 2023 ranked him in Band 1 of Dispute Resolution (Arbitrators), the ranking which recognizes the Top 6 Arbitrators in Kenya noting that he is "highly recommended as a leading lawyer". He was awarded the Outstanding Mentor Award by his mentees in recognition of his guidance, care and support. He was recognized and awarded for his role as the Chartered Institute of Arbitrators (CI Arb) Africa Trustee from 2019 to 2022 by CI Arb Kenya Branch at the CI Arb Kenya Branch ADR Excellence Awards 2022. His book, *Settling Disputes through Arbitration in Kenya, 4th Edition*; Glenwood publishers 2022, was awarded the Publication of the Year Award 2022 by CI Arb Kenya Branch at the CI Arb Kenya Branch ADR Excellence Awards 2022. He is the winner of ADR Practitioner of the Year Award at the AfAA Awards 2022. He is also the winner of the African Arbitrator of the Year 2022 award at the 3rd African Arbitration Awards held at Kigali Rwanda beating other competitors from Egypt, Mauritius, Ethiopia, Nigeria and Kenya. In 2022, Chambers and Partners ranked him in Band 1 of Dispute Resolution (Arbitrators) noting that "He has been involved in several ground-breaking arbitrations," "has an astute understanding of arbitration" and "is respected for litigation." He was awarded the Inaugural CI Arb (Kenya Branch) ADR Lifetime Achievement Award 2021 as well as the ADR Publication of the Year Award 2021 by the Chartered Institute of Arbitrators (Kenya Branch). He also received the ADR Practitioner of the Year Award 2021 by the Law Society of Kenya, Nairobi Branch at the Nairobi Legal Awards. He is a recipient of the 8th C.B. Madan Prize of 2020 for commitment and outstanding scholarly contribution to constitutionalism and the rule of law in Kenya.

Hon. Dr. Muigua has on various occasions been appointed by leading arbitral institutions including the Chartered Institute of Arbitrators (CI Arb-Kenya), the Nairobi Centre for International Arbitration (NCIA), the International Chamber of Commerce (ICC) and the London Court of International Arbitration (LCIA) among other institutions, as both a sole arbitrator and a member of an arbitral tribunal in arbitrations involving commercial disputes.

He is a Fellow of Chartered Institute of Arbitrators (CI Arb)-Kenya chapter. He is a member of the International Bar Association (IBA), the International Commission of Jurists, Human Rights Institute of the International Bar Association, the London Court of International Arbitration (LCIA), Chartered Institute of Arbitrators (UK) and Kenya Branch, Member of Commonwealth Lawyers Association and fellow of the Institute of Certified Public Secretaries of Kenya. He served as the Branch Chairman of CI Arb-Kenya from 2012 to 2015. He was elected (unopposed) to the Chartered Institute of Arbitrators (CI Arb) Board of Trustees as the Regional Trustee for Africa, for the term beginning 1st January 2019 for a term of four years until 31st December 2022.

Dr. Muigua also serves as the Editor in Chief of two leading peer reviewed journals in East Africa, the *Alternative Dispute Resolution Journal* and the *Journal of Conflict Management and Sustainable Development*. The two journals have been hailed as leading publications in the fields of ADR, Conflict Management and Sustainable Development. The *Alternative Dispute Resolution Journal* was awarded the Arbitration Publication of the Year Award 2020 at the Africa Arbitration Awards.

He is an Advocate of the High Court of Kenya of over 30 years standing and practicing at Kariuki Muigua & Co. Advocates, a firm that specialises in environmental and commercial law litigation and Alternative Dispute Resolution. The firm is also listed as a leading Kenyan commercial law firm in the distinguished Martindale Hubbell Directory.

He has authored the following books: *Alternative Dispute Resolution and Access to Justice in Kenya*, (Glenwood Publishers, Nairobi, 2015); *Resolving Conflicts through Mediation in Kenya*, (Glenwood Publishers, Nairobi, 2013); *Natural Resources and Environmental Justice in Kenya*, (Glenwood Publishers, Nairobi, 2015); *Nurturing Our Environment for Sustainable Development*, (Glenwood Publishers, Nairobi, 2016); *Settling Disputes through Arbitration in Kenya* (Glenwood Publishers, Nairobi) 1st Edition (2012); 2nd Edition (2012); 3rd Edition (2017); and 4th Edition (2022).

His other works include *Securing Our Destiny through Effective Management of the Environment*, (Glenwood Publishers, Nairobi-2020); *Achieving Sustainable Development, Peace and Environmental Security* (Glenwood Publishers, Nairobi, 2021); *Fostering Environmental Democracy and Biodiversity Conservation*, (Glenwood Publishers 2021); *Exploring Conflict Management in Environmental Matters* (Glenwood Publishers 2022); *Attaining Environmental Justice for Posterity*, Volume 1 and 2, (Glenwood Publishers 2022); *Accessing Justice Through ADR*, (Glenwood Publishers 2022); *Nurturing our Environment for a Green Tomorrow*, (Glenwood Publishers 2023); *Realizing True Sustainable Development*, (Glenwood Publishers 2023); *Embracing Environmental Social and Governance (ESG) tenets for Sustainable Development*, (Glenwood Publishers 2023); and *Combating Climate Change for Sustainability*, (Glenwood Publishers 2023).

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