

Journal of Conflict Management & Sustainable Development



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Journal of Conflict Management and Sustainable Development

Editor's Note Volume 8 No. 2

Welcome to the latest issue of the Journal of Conflict Management and Sustainable Development, Volume 8 No. 2. This is the second issue of the Journal in the year 2022 demonstrating our commitment towards spearheading scholarly discourse on the themes of Conflict Management and Sustainable Development.

Since it was launched, the Journal has continued to grow as a key academic resource in the fields of Conflict Management, Sustainable Development and related fields of knowledge. It focuses on emerging and pertinent areas and challenges in these fields and proposes necessary legal, institutional and policy reforms towards addressing these issues. The Journal is now one of the most cited and authoritative publications in the fields of Conflict Management and Sustainable Development.

We are committed to ensuring that the Journal adheres to the highest quality of scholarly standards and credibility of information. To this extent, the Journal is peer reviewed and referred.

This volume covers relevant topics and themes on Conflict Management and Sustainable Development which are: *Fulfilling the Right to Water as a Socio-economic Right for the People of Kenya; Unequal Pay for Education of Equal Value: A Subtle Discrimination Against Non-SADC International Undergraduate Students - Lessons from Larbi-Odam V Mec for Education (North-West Province) 1998 1 SA 745 (CC), South Africa; Decarbonising Africa's Agriculture and Forestry: Synergies and Trade-offs for Sub-Saharan Africa. An Analysis Paper; Neg- Med Model; A Special Tool for Resolving Boko Haram Insurgency in Nigeria; Corruption and Sustainable Development: Tracing the Root Cause and Radical Proposals for Way Forward; Utilising Science and Technology for Environmental*

Management in Kenya; Realising Sustainable Use of Biomass Energy in Kenya: Appraising the Regulatory and Institutional Framework and Uti Possidetis, Self-determination and Conflicts in the Horn of Africa: The Case of Eritrea's Secession from and Border Conflict with Ethiopia'

I wish to thank the contributing authors, Editorial Team, reviewers and all those who have made it possible to continue publishing this Journal whose impact has been acknowledged both in Kenya and across the globe.

The Editorial team welcomes feedback from our audience across the world to enable us continue improving the Journal and align it to current trends in academia and specifically in the fields of Conflict Management and Sustainable Development.

The Journal adopts an open publication policy and does not discriminate against authors on any grounds. We thus encourage submission of papers from all persons including professionals, students, policy makers and the public at large. These submissions should be channeled to editor@journalofcmsd.net and copied to admin@kmco.co.ke

The Journal can be accessed on <https://journalofcmsd.net>

Dr. Kariuki Muigua, Ph.D., FCI Arb, (Ch.Arb), Accredited Mediator.

Editor, Nairobi,

March, 2022.

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Fulfilling the Right to Water as a Socio-economic Right for the People of Kenya

By: **Kariuki Muigua***

Abstract

Water is considered to be a basic human right both under international and national laws. In fact, the right to water is considered as part of the socioeconomic rights. As such, all states the world over are expected to work towards ensuring that their citizens have access to clean and adequate amounts of water. However, for most states, including Kenya, this remains a challenge. This is attributable to climatic, political, economic and social reasons. This paper critically discusses these challenges that have hindered the realization of this right in Kenya and offers some recommendations on how the same can be overcome as part of realization of the constitutionally guaranteed socioeconomic rights in Kenya.

1. Introduction

Water is a basic human right which is recognized as such both under international and national laws.¹ It is one of the socioeconomic rights recognized under Article 43(1) of the Constitution of Kenya 2010.² The

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¹ McGraw, George S. "Defining and defending the right to water and its minimum core: legal construction and the role of national jurisprudence." *Loy. U. Chi. Int'l L. Rev.* 8 (2010): 127.

² 43. Economic and social rights

- (1) Every person has the right--
 - (a) to the highest attainable standard of health, which includes the right to health care services, including reproductive health care;
 - (b) to accessible and adequate housing, and to reasonable standards of sanitation;
 - (c) to be free from hunger, and to have adequate food of acceptable quality;

international legal instruments especially those on human rights obligate all states the world over to work towards ensuring that their citizens have access to clean and adequate amounts of water.³ However, for most States, including Kenya, this remains a challenge mostly attributable to climatic, political, economic and social reasons.⁴ Indeed, it has been argued that water is a key medium through which climate change impacts on human populations, society and ecosystems, particularly due to predicted changes in its quality and quantity.⁵ Water is also considered to be at the core of sustainable development agenda and is critical for socio-economic development, energy and food production, healthy ecosystems and for human survival itself.⁶ It is also said to be at the heart of adaptation to climate change, serving as the crucial link between society and the environment.⁷ Despite this important role of water, it is estimated that as at 2020, 2.2 billion people currently do not have access to safely managed drinking water, and 4.2 billion, or 55% of the world's population, are without

-
- (d) to clean and safe water in adequate quantities;
 - (e) to social security; and
 - (f) to education.

³ Kiefer, Th, I. Winkler, and S. Cacciaguidi-Fahy, "Legal Resources for the Right to Water and Sanitation. International and National Standards." *International and National Standards* – 2nd Edition (2008).

⁴ "“There Is No Time Left.”” *Human Rights Watch*, 2 Jan. 2019, www.hrw.org/report/2015/10/15/there-no-time-left/climate-change-environmental-threats-and-human-rights-turkana; Albuquerque, Catarina de, "Climate Change and the Human Rights to Water and Sanitation." (2010) <https://www2.ohchr.org/english/issues/water/iexpert/docs/ClimateChange_HRtWS.pdf> Accessed 27 October 2020; S Dos Santos and others, 'Urban Growth and Water Access in Sub-Saharan Africa: Progress, Challenges, and Emerging Research Directions' (2017) 607–608 *Science of The Total Environment* 497.

⁵ Albuquerque, Catarina de, "Climate Change and the Human Rights to Water and Sanitation." (2010) <https://www2.ohchr.org/english/issues/water/iexpert/docs/ClimateChange_HRtW_S.pdf>

Accessed 27 October 2020.

⁶ 'Water' (21 December 2015) <<https://www.un.org/en/sections/issues-depth/water/>> accessed 28 October 2020.

⁷ *Ibid.*

safely managed sanitation.⁸ Recent studies have shown that the Corona Virus (Covid-19) global pandemic has not only made things worse as far as access to safe drinking water is concerned but has in fact served to expose how dire the situation is and how there are many people from the poor sections of the society who have no access to clean and safe drinking water.⁹ The World Health Organization has already affirmed that the provision of safe water, sanitation and hygienic conditions is essential for protecting human health during all infectious disease outbreaks, including of Corona Virus Disease 2019 (COVID-19).¹⁰

This paper critically discusses these challenges that have hindered the realization of this right in Kenya and offers some recommendations on how the same can be overcome as part of realization of the constitutionally guaranteed socioeconomic rights in Kenya.

2. Right to Water as a Socioeconomic Right: International legal framework

It has been observed that international recognition of socio-economic rights dates from the early-20th century, and after the World War II, international treaties and conventions increasingly began to incorporate socio-economic rights, including, the Universal Declaration of Human Rights, 1948, the International Covenant on Economic, Social and Cultural Rights, 1966, International Convention on the Elimination of All Forms of Racial

⁸ UN-Water, 'UN World Water Development Report 2020 "Water and Climate Change"' (*UN-Water*, 21 March 2020) <<https://www.unwater.org/world-water-development-report-2020-water-and-climate-change/>> accessed 28 October 2020.

⁹ Alan Nicol, 'The Pandemic Is Laying Bare a Global Water Crisis' (*Foreign Policy*) <<https://foreignpolicy.com/2020/05/12/coronavirus-pandemic-global-water-crisis/>> accessed 28 October 2020; The Lancet Global Health, 'Water and Sanitation in a Post-COVID World' (2020) 8 *The Lancet Global Health* e1101; Ling San Lau and others, 'COVID-19 in Humanitarian Settings and Lessons Learned from Past Epidemics' (2020) 26 *Nature Medicine* 647; World Health Organization. *Water, sanitation, hygiene, and waste management for the COVID-19 virus: interim guidance*, 23 April 2020. No. WHO/2019-nCoV/IPC_WASH/2020.3. World Health Organization, 2020.

¹⁰ World Health Organization. *Water, sanitation, hygiene, and waste management for the COVID-19 virus: interim guidance*, 23 April 2020. No. WHO/2019-nCoV/IPC_WASH/2020.3. World Health Organization, 2020.

Discrimination, 1965 and the Convention on the Rights of the Child (1989), among others.¹¹

Economic, social, and cultural rights are defined to include the human right to work, the right to an adequate standard of living, including food, clothing, and housing, the right to physical and mental health, the right to social security, the right to a healthy environment, and the right to education.¹²

While water is not explicitly mentioned as a human right under the 1948 Universal Declaration of Human Rights, the 1966 International Covenant on Economic, Social and Cultural Rights, and the 1966 International Covenant on Civil and Political Rights, it was, however, implied through other human rights, such as the right to life, right to an adequate standard of living, and the right to health.¹³ The realization of these rights is highly dependent on access to safe and adequate water.¹⁴

The first efforts to officially recognize water as a human right were crystallized under the *Dublin Statement on Water and Sustainable Development*¹⁵ which came as a result of the International Conference on

¹¹ Dawood Ahmed and Elliot Bulmer, 'Social and Economic Rights,' *International IDEA Constitution-Building Primer 9*, International Institute for Democracy and Electoral Assistance (International IDEA), Second edition, 2017. <<https://www.idea.int/sites/default/files/publications/social-and-economic-rights-primer.pdf>> accessed 20 October, 2020.

¹² 'What Are Economic, Social and Cultural Rights?' (CESR, 3 December 2008) <<https://www.cesr.org/what-are-economic-social-and-cultural-rights>> accessed 29 October 2020.

¹³ 'Human Rights' (Safe Drinking Water Foundation) <<https://www.safewater.org/fact-sheets-1/2017/1/23/human-rights>> accessed 28 October 2020.

¹⁴ United Nations, *CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12)*, Adopted at the Twenty-second Session of the Committee on Economic, Social and Cultural Rights, on 11 August 2000 (Contained in Document E/C.12/2000/4); Centre on Housing Rights and Evictions and others (eds), *Manual on the Right to Water and Sanitation: A Tool to Assist Policy Makers and Practitioners Develop Strategies for Implementing the Human Right to Water and Sanitation* (Centre on Housing Rights and Evictions 2007);

¹⁵ 'The Dublin Statement on Water and Sustainable Development' (1992) 10 *Waterlines* 4.

Water and the Environment (ICWE) in Dublin, Ireland, on 26 to 31 January 1992. The Statement acknowledges that ‘scarcity and misuse of fresh water pose a serious and growing threat to sustainable development and protection of the environment. Human health and welfare, food security, industrial development and the ecosystems on which they depend, are all at risk, unless water and land resources are managed more effectively in the present decade and beyond than they have been in the past.’¹⁶ The Conference participants called for “fundamental new approaches to the assessment, development and management of freshwater resources, which can only be brought about through political commitment and involvement from the highest levels of government to the smallest communities.” They also observed that commitment will need to be backed by substantial and immediate investments, public awareness campaigns, legislative and institutional changes, technology development, and capacity building programmes as well as a greater recognition of the interdependence of all peoples, and of their place in the natural world.¹⁷ The *Dublin Statement* thus called for concerted action to reverse the present trends of overconsumption, pollution, and rising threats from drought and floods.¹⁸

In 2002, the United Nations officially adopted water as a human right through the *General Comment 15*, of the International Covenant on Economic, Social and Cultural Rights which states as follows: “The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.”¹⁹ *General Comment 15* was meant to interpret the 1966 Convention on Economic, Social and Cultural Rights confirming the right to water in international law.²⁰

¹⁶ Ibid, Introduction.

¹⁷ Dublin Statement on Water and Sustainable Development’ (1992), Introduction.

¹⁸ Ibid.

¹⁹ ‘Human Rights’ (*Safe Drinking Water Foundation*)

<<https://www.safewater.org/fact-sheets-1/2017/1/23/human-rights>> accessed 28 October 2020.

²⁰ General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), *Adopted at the Twenty-ninth Session of the Committee on Economic, Social and Cultural Rights, on 20 January 2003 (Contained in Document E/C.12/2002/11)*

On 28 July 2010, through *Resolution 64/292*²¹, the United Nations General Assembly recognized the human right to clean drinking water and as essential to the realization of all human rights.²²

The right to water is thus now internationally considered to be a human right with obligations to States to ensure that their subjects have access to clean and safe drinking water and sanitation.²³ The prominence of this right to water received a boosting under Goal 6 of the United Nations *2030 Agenda for Sustainable Development Goals*²⁴ which is dedicated to ensuring availability and sustainable management of water and sanitation for all. It requires all States to ensure that by 2030, they achieve universal and equitable access to safe and affordable drinking water for all.²⁵

3. National Legal and Institutional Framework on Access to Water

The Constitution of Kenya 2010 guarantees under Article 43 the right of every person to access clean and safe water in adequate amounts.²⁶ The Water Act 2016²⁷ provides that every person has the right to access water resources, whose administration is the function of the national government as stipulated in the Fourth Schedule to the Constitution.²⁸

Section 63 thereof also provides that every person in Kenya has the right to clean and safe water in adequate quantities and to reasonable standards of sanitation as stipulated in Article 43 of the Constitution. Section 37(1) provides that a permit is not required- for the abstraction or use of water, without the employment of works, from any water resource for domestic

²¹ UN General Assembly, *The human right to water and sanitation: resolution / adopted by the General Assembly*, 3 August 2010, A/RES/64/292.

²² ‘International Decade for Action “Water for Life” 2005-2015. Focus Areas: The Human Right to Water and Sanitation’ <https://www.un.org/waterforlifedecade/human_right_to_water.shtml> accessed 21 October 2020.

²³ Ibid.

²⁴ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, 21 October 2015, A/RES/70/1.

²⁵ Goal 6.1, *Transforming our world: the 2030 Agenda for Sustainable Development*.

²⁶ Article 43 (1)(d), Constitution of Kenya 2010.

²⁷ Water Act, No. 43 of 2016, Laws of Kenya.

²⁸ S. 9, No.43 of 2016, Laws of Kenya.

purposes by any person having lawful access to the water resource; for the abstraction of water in a spring which is situated wholly within the boundaries of the land owned by any one landholder and does not naturally discharge into a watercourse abutting on or extending beyond the boundaries of that land; or for the storage of water in, or the abstraction of water from a reservoir constructed for the purpose of such storage and which does not constitute a water course for the purposes of this Act.

All water resources in Kenya are vested in the State where the Ministry of Water and Irrigation is responsible for overseeing the institutions created to manage water resources and provide water services.²⁹ The Water Act 2016 provides that every water resource is vested in and held by the national government in trust for the people of Kenya.³⁰

The Water Resources Authority established in Section 11(1) of the Water Act 2016 is to serve as an agent of the national government and regulate the management and use of water resources.³¹

Section 64(1) of the Water Act 2016 provides that the Cabinet Secretary should, within one year of the commencement of this Act and every five years thereafter, following public participation, formulate a Water Services Strategy. The object of the Water Strategy shall be to provide the Government's plans and programs for the progressive realization of the right of every person in Kenya to water.³²

4. Challenges Hindering Access to Water in Kenya

The provision of water services for all Kenyans still remains a challenge despite the recognition of the right to clean, safe and adequate amounts of water for all Kenyans. This may be attributed to a number of factors which are discussed below but are in no way exhaustive.

²⁹ Water Act, 2016, Part II.

³⁰ Ibid, s.5.

³¹ Ibid, s.6.

³² Ibid, S. 64(2).

4.1. Climate Change and Access to Clean, Safe and Adequate Water

Climate change is expected to continually and negatively affect the quality of water. This is because increasing water temperatures, higher or lower groundwater levels, floods and droughts raise the threat of heightened micro-organisms, chemical substances and radiological hazards in drinking water.³³ Thus, as far as climate change is concerned, it generally affects water supply through some of the following ways: damage to infrastructure from flooding, loss of water sources due to declining rainfall and increasing demand, and changes in the water quality of water sources and within distribution of water.³⁴

4.2. Legal and Institutional Challenges

It has been argued that while the related pressures of anthropogenic climate change and population growth will continue to make essential natural resources scarce globally, domestic and international policy has been slow to adapt to this threat.³⁵ The water sector is mainly governed by the Water Act, 2016³⁶, which was enacted to provide for the regulation, management and development of *water* resources, *water* and sewerage services; and for other connected purposes. The Act was also meant to align the water sector with the Constitution's primary objective of devolution where the Act acknowledges that water related functions are a shared responsibility between the national government and the county government. One of the characteristics of privatization and commercialization of water resources is the need for operational permits for various uses of water. Section 36 of the Water Act 2016 provides that a permit is required for any of the following purposes- any use of water from a water resource, except as provided by section 37; the drainage of any swamp or other land; the discharge of a

³³ Albuquerque, Catarina de. "Climate Change and the Human Rights to Water and Sanitation." (2010).

³⁴ Guy Howard and others, 'Climate Change and Water and Sanitation: Likely Impacts and Emerging Trends for Action' (2016) 41 Annual Review of Environment and Resources 253.

³⁵ 'Water Provision in Kenya: Problems and Challenges in Managing Finite Resources | Navarra Center for International Development'

<<http://ncid.unav.edu/en/news/water-provision-kenya-problems-and-challenges-managing-finite-resources>> accessed 28 October 2020.

³⁶ Water Act, No. 43 of 2016, Laws of Kenya.

pollutant into any water resource; and any other purpose, to be carried out in or in relation to a water resource, which is prescribed by Regulations made under this Act to be a purpose for which a permit is required.

While the 2016 Water Act introduced the shared water management system as per the Constitution between the national and county governments, the main management structure and decision making powers were mostly left with the national government's organs.³⁷ This has often created tension between the two levels of government, each seeking to control the sector. This may have at times affected provision of water services. This is especially so where the national Government institutions such as the Water Resources Management Authority and the Water Services Regulation Authority may claim power to license and issue permits relating to water use and access while at the same time county governments may seek to control water bodies within their territories, resulting in conflicts.

4.3. Poverty

Poverty levels among the Kenyan communities and especially among the urban informal settlements play a huge role in hindering access to water services considering that private water vendors who are the main suppliers of water in such areas are in business. Lack of purchasing power thus drive the households to use unsafe, dirty and inadequate amounts of water for their domestic needs.³⁸

4.4. Population Growth and Rural-Urban Migration

While the Government's efforts have always been to ensure that both the urban and the rural areas of the country all have access to clean and adequate water, past studies have showed that the rampant population growth coupled with high rates of rural-urban migration has always left the Government

³⁷ See Muigua, Kariuki. "Streamlining Water Governance in Kenya for Sustainable Development." (2017).

³⁸ 'The Water Crisis: Poverty and Water Scarcity in Africa' (*The Water Project*) <<https://thewaterproject.org/why-water/poverty>> accessed 1 November 2020; Anindita Sarkar, 'Informal Water Vendors and the Urban Poor: Evidence from a Nairobi Slum' (2020) 45 *Water International* 443.

struggling to meet the resultant high water demands in the urban areas due to water shortage and the pressure on the infrastructure.³⁹

4.5. Gender Inequality and Realization of Right to Water

Gender is used to refer to the different roles, rights, and responsibilities of men and women and the relations between them, that is to say, gender does not simply refer to women or men, but to the way their qualities, behaviours, and identities are determined through the process of socialization.⁴⁰

It has rightly been argued that women and girls are disproportionately affected by the lack of access to basic water, sanitation and hygiene facilities, due to their needs during periods of increased vulnerability to infection around menstruation and reproduction as well as the fact that women and girls also have a larger role relative to men in water, sanitation and hygiene activities, including in agriculture and domestic labour.⁴¹ Specifically, it has been noted that women and girls are responsible for fetching water in most households, a practice that has implications for women's health in the form of spinal injury, neck pain, spontaneous abortion from heavy and awkward workloads, and caloric expenditure.⁴² In addition, it has rightly been argued that water-fetching responsibilities by women and girls also add to the burden of unpaid domestic work, decrease time towards other income-

³⁹ Chemeril Chepyegon and Daisuke Kamiya, 'Challenges Faced by the Kenya Water Sector Management in Improving Water Supply Coverage' (2018) 10 *Journal of Water Resource and Protection* 85; 'Nairobi Water: What's behind Severe Shortages?' *BBC News* (2 November 2019) <<https://www.bbc.com/news/world-africa-50253189>> accessed 1 November 2020; 'Kenya – Water & Sanitation for the Urban Poor' <<https://www.wsup.com/where-we-work/kenya/>> accessed 1 November 2020.

⁴⁰ 'International Decade for Action "Water for Life" 2005-2015. Focus Areas: Gender and Water' <<https://www.un.org/waterforlifedecade/gender.shtml>> accessed 31 October 2020.

⁴¹ 'WHO | Water, Sanitation and Hygiene: Measuring Gender Equality and Empowerment' (WHO) <<http://www.who.int/bulletin/volumes/97/6/18-223305/en/>> accessed 31 October 2020; 'International Decade for Action "Water for Life" 2005-2015. Focus Areas: Gender and Water' <<https://www.un.org/waterforlifedecade/gender.shtml>> accessed 1 November 2020.

⁴² *Ibid.*

generating activities and affect the time for leisure and nonessential activities.⁴³

5. Fulfilling the Right to Water as a Socioeconomic Right for the People of Kenya

5.1. Public Participation and Consultation in Decision-Making

Principle No. 2 of the *Dublin Statement on Water and Sustainable Development* (1992) recommends that water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.⁴⁴ It goes on to state that ‘the participatory approach involves raising awareness of the importance of water among policy-makers and the general public. It means that decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects.’⁴⁵

There is a need for the Government and other stakeholders to involve communities in decision-making processes relating to water management not only as a way of ensuring that the constitutional thresholds are met but also as a way of ensuring that they appreciate the challenges that face the sector and use the available water efficiently.

5.2. Addressing Poverty for Fulfilling the Right to Water

In a Resolution on the Right to Development adopted on 19 December 2016, the United Nations General Assembly expressed their concern that the majority of indigenous peoples in the world live in conditions of poverty, and recognized the critical need to address the negative impact of poverty and inequity on indigenous peoples by ensuring their full and effective inclusion in development and poverty eradication programmes.⁴⁶

⁴³ Ibid.

⁴⁴ Principle 2, H Tessenorff, *Dublin Statement on Water and Sustainable Development: Aqua AQUAAA*, Vol. 41, No. 3, p 129-135, June 1992.

⁴⁵ Ibid.

⁴⁶ Preamble, UN General Assembly, *The Right to Development: Resolution adopted by the General Assembly*, 19 December 2016[on the report of the Third Committee (A/71/484/Add.2)] 71/192. This was a follow up to the *Declaration on the Right to Development*, adopted by the General Assembly in its resolution 41/128 of 4

Considering that there is continued privatization and commercialization of provision of water services in the country, there is a need to address poverty levels in the country in order to ensure that people are economically empowered to afford safe, clean and adequate amounts of water for their own use.⁴⁷

5.3. Addressing Gender Inequality in Water Services

It has rightly been argued that since women have an increased need for water for hydration, sanitation and hygiene during menstruation, pregnancy, the postnatal period and while caring for sick family members or young children, when these basic needs are not met, women and girls are unable to participate equally in society.⁴⁸ This is especially more pronounced in Kenya and Africa where gender roles in society are still greatly affected by cultural beliefs.⁴⁹ As modernity and campaigns towards promotion of gender equality continue to address these cultural notions, there is a need for the government and water providers to ensure that women and girls have access to adequate and safe

December 1986, which confirmed that the right to development is an inalienable human right and that equality of opportunity for development is a prerogative both of nations and of individuals who make up nations, and that the individual is the central subject and beneficiary of development.

⁴⁷ 'Water Has More to Do with Poverty than You Think' (*ONE*, 20 March 2020) <<https://www.one.org/international/blog/water-access-poverty-health/>> accessed 1 November 2020.

⁴⁸ 'WHO | Water, Sanitation and Hygiene: Measuring Gender Equality and Empowerment' (*WHO*) <<http://www.who.int/bulletin/volumes/97/6/18-223305/en/>> accessed 31 October 2020.

⁴⁹ Ngubane, Siegfried Johan. "Gender roles in the African culture: implications for the spread of HIV/AIDS." PhD diss., Stellenbosch: University of Stellenbosch, 2010; Burgess, Norma J. "Gender roles revisited: The development of the "woman's place" among African American women in the United States." *Journal of Black Studies* 24, no. 4 (1994): 391-401; Okrah, Kwadwo. "The dynamics of gender roles and cultural determinants of African women's desire to participate in modern politics." *Global Engagement and Transformation* 2, no. 1 (2017); Fingleton-Smith, Edwina. "The lights are on but no (men) are home. The effect of traditional gender roles on perceptions of energy in Kenya." *Energy research & social science* 40 (2018): 211-219; Ng'umbi, Yunusy Castory. "Re-imagining family and gender roles in Aminatta Forna's *Ancestor Stones*." *Tydskrif vir letterkunde* 54, no. 2 (2017): 86-99; Tshweneyagae, Duduetsang. "Balancing the Roles: Societal/Cultural Gender Expectations and Roles Conflict Among African Working Women."

water for domestic and agricultural use for as long as they still bear the burden of being caregivers and nurturing families.⁵⁰ While the 2010 Constitution of Kenya acknowledges access to clean and safe water as a basic human right falling under social economic rights and assigns the responsibility for water supply and sanitation service provision to county governments⁵¹, for a huge population of the Kenyan people, this remains a mirage.⁵² As things currently stand, water was commercialized as evidenced under the current water laws in Kenya and water has continually become expensive and women and girls' access to the same is further hindered by their reduced purchasing power, especially in the urban informal settlements.

It is estimated that only about 20% of the population in Kenya's urban informal settlements have access to safe drinking water.⁵³ While in the major restructuring of Kenya's urban water delivery system towards commercialization and privatization where private vendors are being regularized for better service delivery in terms of regulation of prices and quality of water,⁵⁴ women and the urban poor continue to be disadvantaged. There is thus a need for continued empowerment of women and girls as a way of ensuring that they are economically, socially and politically empowered in order for them to have not only a say in water management decisions but also have the economic means to access the same.⁵⁵

⁵⁰ 'WHO | Water, Sanitation and Hygiene: Measuring Gender Equality and Empowerment' (*WHO*)
<<http://www.who.int/bulletin/volumes/97/6/18-223305/en/>> accessed 1 November 2020.

⁵¹ Fourth Schedule, Constitution of Kenya 2010.

⁵² 'OHCHR | Kenyans Have Rights to Safe Water and Sanitation on Paper – Now It's Time to Make Them a Reality'
<<https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=14913&LangID=E>> accessed 1 November 2020.

⁵³ Anindita Sarkar, 'Informal Water Vendors and the Urban Poor: Evidence from a Nairobi Slum' (2020) 45 *Water International* 443; See also 'Nairobi Water: What's behind Severe Shortages?' *BBC News* (2 November 2019)
<<https://www.bbc.com/news/world-africa-50253189>> accessed 1 November 2020.

⁵⁴ *Ibid.*

⁵⁵ Jabeen, Farhat, and Musarat Jabeen. "Women empowerment and socio-economic development: a case study of Pakistan." *European Journal of Business and Social Sciences* 1, no. 10 (2013): 113-116; Liliane, Uwantege Kayumba, and Peter Mbabazi. "The impact of women economic empowerment projects on their socio-

5.4. Combating Climate Change for Safeguarding Water Resources

Considering that climate change poses a great threat to water sources and supply, there is a need for the stakeholders in water sector to work closely with other stakeholders in order to combat climate change through such means as sound management policies for water, using climate resilient technologies, among other means.⁵⁶ Some authors have also argued that since water and sanitation services contribute to greenhouse gas emissions, choice of wastewater treatment technologies, improved pumping efficiency, use of renewable sources of energy, and within-system generation of energy also offer potential for reducing emissions.⁵⁷

5.5. Financing of Water Projects

Under the Water Act 2016, there is also established a water sector financing institution to be known as the Water Sector Trust Fund.⁵⁸ The object of the Fund is to provide conditional and unconditional grants to counties, in addition to the Equalisation Fund and to assist in financing the development and management of water services in marginalized areas or any area which is considered by the Board of Trustees to be underserved including-community level initiatives for the sustainable management of water resources; development of water services in rural areas considered not to be commercially viable for provision of water services by licensees; development of water services in the under-served poor urban areas; and research activities in the area of water resources management and water services, sewerage and sanitation.⁵⁹

economic development in Rwanda: The case of Agaseke project." *European Journal of Business and Social Sciences* 4, no. 6 (2015): 59-87; Meraj, Muhammad, and Mahpara Begum Sadaqat. "Gender equality and socio-economic development through women's empowerment in Pakistan." *Ritsumeikan Journal of Asia Pacific Studies*= *Ritsumeikan Journal of Asia Pacific Studies* 34 (2016): 124-140.

⁵⁶ Burman, RR, RN Padaria, JP Sharma, Eldho Varghese, Bidisha Chakrabarti, and Sreenath Dixit. "Impact of climate resilient technologies in rainfed agro-ecosystem." *Indian Journal of Agricultural Sciences* 87, no. 6 (2017): 816-24.

⁵⁷ Guy Howard and others, 'Climate Change and Water and Sanitation: Likely Impacts and Emerging Trends for Action' (2016) 41 Annual Review of Environment and Resources 253.

⁵⁸ Water Act 2016, S. 113(1).

⁵⁹ Water Act 2016, S. 114.

This fund should be utilized towards ensuring that all persons get to enjoy the right to clean, safe and adequate amounts of water as a socio-economic right. The fund should be used to improve water supply for both urban and rural populations.

5.6. A Human Rights Approach to Water Services Provision

It has been argued that the human right to water implies that water supply must be accessible within, or in the immediate vicinity of, each household, educational institution, workplace and public place.⁶⁰

The right to water is now seen as an implicit component of the right to an adequate standard of living and the right to health.⁶¹ Indeed, in the Kenya case of *Isaac Kipyego Cherop v State Ministry of Water & 142 others [2017] eKLR*, the Court went further and affirmed that the right to clean water is intertwined with the right to clean and healthy environment.

It has rightly been pointed out that even though the right to water and sanitation is now anchored in international human rights law, there are still serious lags in implementation at the regional and national level. States, policymakers, international development partners and civil society groups working in the water and sanitation sector have often proved slow to act when it comes to making the right to drinking water and sanitation a reality.⁶²

While commercialization and privatization of water sector may have its own benefits as far as efficiency is concerned, there is a need for the government to continue implementing pro-poor strategies aimed at ensuring that the poor and marginalized groups in society also have access to clean and safe water for use. This would be treated as part of human rights-based approach to water and sanitation for all. This is the only way that the progressive realization of socio-economic rights in Kenya would be realized for all. In

⁶⁰ Levin, Thomas, M. Nierenköther, and N. Odenwälder. "The human right to water and sanitation: Translating theory into practice." *Eschenborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH* (2009).

⁶¹ United Nations, General Comment No. 15.

⁶² Levin, Thomas, M. Nierenköther, and N. Odenwälder. "The human right to water and sanitation: Translating theory into practice." *Eschenborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH* (2009).

Mitubell Welfare Society vs. The Attorney General & 2 Others Petition No. 164 of 2011, Mumbi Ngugi, J held that;

"The argument that socio-economic rights cannot be claimed at this point two years after the promulgation of the Constitution ignores the fact that no provisions of the Constitution is intended to wait until the state feels it is ready to meet its constitutional obligations. Article 21 and 43 require that there should be "progressive realization" of socio-economic rights, implying that the state must be seen to be taking steps, and I must add be seen to take steps towards realization of these rights.....Granted also that these rights are progressive in nature, but there is a constitutional obligation on the state, when confronted with a matter such as this, to go beyond the standard objection....Its obligation requires that it assists the court by showing if, and how, it is addressing or intends to address the rights of citizens to the attainment of the socio-economic rights, and what policies, if any it has put in place to ensure that the rights are realized progressively and how the Petitioners in this case fit into its policies and plans."

The progressive realization of the right to clean water by the State was also affirmed in the case of *Isaac Kipyego Cherop v State Ministry of Water & 142 others* [2017] eKLR where the Court stated as follows:

I do find that though the Petitioner has right to clean and safe water in adequate quantities which the State is to endeavor to render progressively. I do agree with the 2nd respondent that the realization of the right to clean and safe water in adequate quantities require huge financial commitments and therefore, the same can be achieved progressively.

.....

I do find that the right to clean and safe water in adequate quantities under Article 43 of the Constitution is subject to progressive realization. Rights under Article 43 of the Constitution can only be realized progressively. The State cannot realize this right for every Kenyan in one investment. The right to clean and safe water in

adequate quantities is not a final product for direct dispensation but is aspirational.

The Government is thus expected to take tangible steps towards ensuring that these rights are fulfilled for all persons. The Constitution also gives every person to pursue their human rights before courts of law where the same are violated or are at the risk of being violated.⁶³ To this end, courts have also held that the Environment and land court has the jurisdiction to hear and determine a dispute under Article 43 (d) thus touching on the right to clean and safe water in adequate quantities, as was decided in *Isaac Kipyego Cherop v State Ministry of Water & 142 others [2017] eKLR*.

It is not until the Government fully treats the provision of water services to its people as a critical human right that they will strive to ensure that all its citizens have access to clean, safe and adequate amounts of water. In cases of extreme poverty, the Government may provide water for basic needs for free while ensuring that for the bigger populace, the water is affordable by reigning in on unscrupulous water dealers while also ensuring that service provision complies with the human rights standards.⁶⁴

6. Conclusion

Seeing that water is now considered to be a human right issue, and as the global population grows, there is an increasing need to balance all of the competing commercial demands on water resources so that communities have enough for their needs.⁶⁵

The State obligation *to fulfil* its human rights obligations includes the obligations to facilitate and promote. The obligation to facilitate requires the State to take specific measures within its available resources to assist individuals and communities to enjoy the right. The obligation to promote

⁶³ Article 70, Constitution of Kenya 2010.

⁶⁴ Levin, Thomas, M. Nierenköther, and N. Odenwälder. "The human right to water and sanitation: Translating theory into practice." *Eschenborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH* (2009).

⁶⁵ 'Water' (21 December 2015) <<https://www.un.org/en/sections/issues-depth/water/>> accessed 28 October 2020.

requests the State to take targeted steps. To this end, the State should adopt a national water strategy and a plan of action, as well as appropriate financing and pricing policies.⁶⁶

While it is acknowledged that the fulfilment of the right to water as a socio-economic right is progressive, the Government should continually work with non-state actors, private investors, NGOs and other stakeholders to ensure that the same is fulfilled for Kenyan citizens and especially the most vulnerable and marginalized groups.⁶⁷ The Government should continually work towards coming up with ways of ensuring that water is affordable for all. However, considering that water is a scarce commodity, there is also need for public education and creating awareness on the need to use water efficiently in order to minimize wastage of the same. Water is an integral part of the socio-economic rights and the Government cannot ably fulfill its obligations on Article 43 of the Constitution of Kenya without working towards fulfilling its obligations on provision of water for all citizens. Fulfilling the right to water as a prerequisite for realization of other socio-economic rights for the people of Kenya is indeed necessary and possible.

⁶⁶ Levin, Thomas, M. Nierenköther, and N. Odenwälder. "The human right to water and sanitation: Translating theory into practice." *Eschenborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH* (2009); CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12).

⁶⁷ 'Providing Sustainable Sanitation and Water Services to Low-Income Communities in Nairobi' (*World Bank*)

<<https://www.worldbank.org/en/news/feature/2020/02/19/providing-sustainable-sanitation-and-water-services-to-low-income-communities-in-nairobi>> accessed 1 November 2020; 'Review of Drivers and Barriers of Water and Sanitation Policies for Urban Informal Settlements in Low-Income and Middle-Income Countries' (2019) 60 Utilities Policy 100957.

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**Unequal Pay for Education of Equal Value: A Subtle Discrimination
Against Non-SADC International Undergraduate Students - Lessons
from *Larbi-Odam V MEC For Education (North-West Province) 1998 1
SA 745 (CC), South Africa***

By: Johana Kambo Gathongo*

Abstract

Inequality and unfair discrimination remain among the complex social problems that have taken different forms over the years. This has been confirmed through case law and statutes. While these statutes are complex, they exist to serve a clear intention; the need to accommodate difference, diversity and to break down practices of systemic group disadvantage. South Africa is one of the leading exporters of higher education in the African continent. In the recent past, South African universities have witnessed an increase of international undergraduate student admission both from Southern African Development Community (SADC) and Non-SADC countries. While it must be acknowledged that these universities play a significant role in social and economic development, the same is perhaps riddled with a subtle discriminative practice that singles out only Non-SADC international undergraduate students for different treatment. The practice is that only Non-SADC students are obliged to pay an additional amount classified as 'international levy'. This happens yet both Non-SADC and SADC international undergraduate students enrol for the same courses or programs, attend an equal number of lecture times, receive equal number of study materials, etc. but pay unequal tuition fees. The article reveals that the practice of demanding the payment of the 'international levy' is purely based on the fact that these students are citizens of Non-SADC countries. This

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article criticises this stringent practice with a view to prevent the perpetuation of unfair discrimination. The article draws fundamental legal analogies from the above cited Constitutional Court judgement as well as employment law 'equal pay for work of equal value'. Pursuant to Larbi-Odam v MEC for Education (North-West Province) 1998 1 SA 745 (CC) (the Larbi-Odam case), the continuation of the said practice unfairly discriminates against Non-SADC international undergraduate students based on analogous grounds of citizenship or nationality. It is a practice subject to abuse by universities since it is not regulated by law or government Policy or any Protocol. Currently, universities across the country are at liberty to determine the 'international levy' amount as they deem fit.

This is evident from the conspicuous disparities in the payment of the said fee across all universities in the country. Randomly selected universities have been used to highlight the practice and disparity in terms of the payment of the 'international levy'. As the Constitutional Court held in Larbi-Odam case, "Non-citizens are a group lacking in political power and as such vulnerable to having their interests overlooked and their rights to equal concern and respect violated. As a result, they should be protected in terms of the equality clause." The article proposes remedial and other less severe, non-discriminatory practices through which universities may adopt to generate funds.

Keywords

Inequality, unfair discrimination, equal pay, education of equal value, Non-SADC and SADC international undergraduate students, International Tuition Fee.

I. Introduction

South Africa is not only one of the economic powerhouses in the African continent, but it also remains one of the largest exporters of higher education as well. The export forms part and parcel of the pursuit for internationalisation of higher education and global economic integration. Over the last decade, exporting higher education has progressively become

an essential economic activity in most countries around the globe¹ and South Africa has not been left behind.² Whitehead and Sing observe that South African higher education has witnessed an increase in international student enrolment from the rest of the African countries.³ A walk across most universities around the country brings awareness of the presence of international students. The impetus for this is ascribed to the need for the acquisition of internationally recognised educational qualifications along with the mission to promote foreign collaborations amongst universities. Another main reason is the need for universities to improve their financial position for sustainability. In view of that, the enrolment of international students contributes to the South African revenue.⁴ Data from the Department of Higher Education and Training (DHET) shows that the total number of international undergraduate students who enrolled in public higher institutions stood at 42 267 as of 2018.⁵ The table below highlights

¹ E. Du Plessis and J. Fourie, Higher education exports in South Africa: A case study of Stellenbosch University 25 (3) *South African Journal of Higher Education* (2011) 460–475. See also L. Zhang, The use of panel data models in higher education policy studies. Higher Education: (2010) *Handbook of Theory and Research* 307-349 and Guruz *Higher education and international student mobility in the global knowledge economy* 5.

² Since the dawn of democracy, South Africa's higher education has grown by more than 70%. In the past two years alone, the enrolment at public and private stood at about 1.1 million, with public higher institutions enrolling 975 837 students. The National Development Plan aim is to reach 1.6 million enrolments by 2030. See the Department of Higher Education and Training: Statistics on Post-School Education and Training in South Africa, 2016 2.

³ Y. Dominguez-Whitehead and N. Sing, International students in the South African higher education system: a review of pressing challenges 29 (4) *South African Journal of Higher Education* 2015 77-95 points out that "many universities, including the University of the Witwatersrand, the University of Cape Town, the University of the Western Cape, and the University of Pretoria, to name just a few, have embarked on strategic plans to increase the number of international students."

⁴ E. Du Plessis and J. Fourie supra note 1.

⁵ <https://www.statista.com/statistics/1262516/number-of-foreign-students-by-region-in-south-africa/>. See also the Department of Higher Education and Training 2020. Available at <http://www.dhet.gov.za/SiteAssets/Statistics%20on%20Post-School%20Education%20and%20Training%20in%20South%20Africa%20%202017.pdf>

the number of international undergraduate students who enrolled in South African public higher institutions by country and attendance mode as per the

Country	Contact				Distant learning				Total Contact and Distance
	Occasional students	Undergraduates certificates and Diplomas	Undergraduate Degree	Total	Occasional students	Undergraduates certificates and Diplomas	Undergraduate Degree	Total	
Zimbabwe	49	555	5044	5648	476	2266	9401	12143	17791
Namibia	27	218	1106	1351	39	863	621	1523	2874
Nigeria	28	230	339	576	53	116	429	593	1169
Democratic Republic of the Congo	21	1728	731	2480	55	240	302	597	3077
Lesotho	19	495	1200	1714	39	170	400	609	2323
Swaziland	14	416	910	1340	45	196	985	1226	2566
Zambia	10	73	332	415	15	65	384	464	879
Botswana	11	33	360	404	14	86	478	578	982
Kenya	10	20	291	321	12	6	108	126	447
Congo	7	285	196	488	17	81	128	226	714
Other foreign nationalities	1884	1343	2949	6176	136	441	1519	2096	8272
Total	2080	5396	13458	20934	901	4530	14755	20186	41120

HEMIS database.⁶ The total number including post-graduate international students stood at 67 434.⁷

⁶ *Ibid.*

⁷ *Ibid.*

The majority of international undergraduate students who enrol at public universities in South Africa come from the SADC.⁸ According to the Protocol on Cooperation in Higher Education and Training signed in 1997⁹, Member States agreed to reserve five percent of all study places for SADC international students.¹⁰ Contrary to the previous tradition, the Protocol specifies that international students from SADC countries would be treated the same as local students. Universities were given 10 years from the time of signing the Protocol within which to implement the provisions of the Protocol.¹¹ Although most Universities have since then implemented the said provisions, some are yet to implement as below.

Although the majority of international students come to South Africa from SADC countries, a significant number of international students also descend to South African universities from other African countries. Universities have categorised this cohort of students as Non-SADC international students.¹² But, whether or not their enrolment to these universities is purely based on the mission to acquire quality education is questionable. What most universities would agree, is that Non-SADC international students form an integral source of funding or revenue for universities. Besides that, they are valuable to South Africa's economy by way of expenditure on and off campuses.¹³ Also, they not only contribute towards creating diverse institutional culture crucial for the educational experience of all students but also, building the country's long road to transformation and embracing diversity. According to Badat "diversity and difference, whether social,

⁸ SADC countries include: Lesotho, Namibia, Botswana, Swaziland, Tanzania, Angola Zimbabwe and Malawi.

⁹ SADC Protocol 2006. Available at https://www.sadc.int/files/3813/5292/8362/Protocol_on_Education__Training1997.pdf (Accessed 17 December 2021).

¹⁰ Art. 7 of the Protocol on cooperation in Higher Education and Training 1997.

¹¹ Art. 7 (5) of the Protocol on cooperation in Higher Education and Training. As per the 2016 report, a proportion of students were from Kenya representing 2.0% or 1 365.

¹² Department of Higher Education and Training 2019 supra note 5.

¹³ P. Vickers and B. Bekhradnia, *The Economic Costs and Benefits of International Students (2007) United Kingdom Higher Education Policy Institute* 1-27.

geographic, national, cultural or linguistic in nature, are powerful well-springs of institutional vitality and personal, intellectual and institutional development."¹⁴ Above all, the presence of international students contributes towards internationalisation of the academic environment and university life. All these factors prepare all students without distinction for careers within South Africa and beyond.

2. Three Tier Fee Structure

Like any two passengers on a flight who pay different prices for the flight, the amount paid by two international students sitting in the same lecture room pursuing the same course or program is significantly different. Currently, most public universities in South Africa have three tiers of fee structures for undergraduate students as shown below. The consequence of this practice is that students pay different amounts even though the fact that they have all enrolled for the same course or program. This article opines that little is known about this subtle 'discriminatory' practice that derives from the three tiers practice. Firstly, it is common and understandable practice for universities to charge local students lower school fees than international students. For that reason, there exist rates for local South African students who pay lower tuition fees. Secondly, there exist rates for SADC international students who pay (depending on the university enrolled) either the same or sometimes slightly higher than South African students (possibly in contravention to the provisions of the Protocol stated above).

A third higher tier also exists specifically reserved for only Non-SADC international undergraduate students. The main contributing factor that makes this tier extremely high is the practice in most universities that singles out Non-SADC international students and demands that only they must pay an additional amount commonly characterised as 'international levy'. It is this stringent practice that forms the basis for this article. The article notes that the selective requirement for the payment of the additional 'international

¹⁴ S. Badat, *Free Higher Education in South Africa: Why Not?* (63) *International Higher Education* (2011) 1-17. S. Badat *Insight Higher Education South Africa* (2011) p4.

'levy' is not regulated by any law or policy or protocol. Based on the Constitutional Court judgment in *Larbi-Odam case* as will be analysed below, the practice can amount to unfair discrimination on analogous grounds of citizenship or nationality that deserve protection. The article proceeds to argue that the questioned practice has been left at the discretion of universities across the country to the detriment of one category of international students. As discussed below, all randomly selected universities appear at liberty to determine the 'levy' amount as they deem fit. This remains a concern considering our constitutional dispensation. The questioned practice is open to possible abuse and therefore universities currently perpetuating the practice subject themselves to constitutional scrutiny and possible claims of discrimination that may be viewed as unfair, unreasonable, and unjustifiable.

In view of that, this article critiques the above stated institutional practice in the lenses of unfair discrimination. It is anchored by a commitment to shed some light on the need for equal pay for education of equal value for all international students irrespective of their citizenship or nationality. Due to limited research on the topic, the article adopts a qualitative approach, particularly the information available on university websites. It draws fundamental legal analogies from the Constitutional Court judgement in *Larbi-Odam case*. A further legal analogy is drawn from employment law of 'equal pay for work of equal value' in South Africa and international jurisprudence. The article evaluates some of the perceived arguments and justifications and presents reasons why Non-SADC international students should not be treated less favourable than their fellow SADC international students as far as the payment of 'international levy' is concerned. Important is to note that this article does not aim to create any kind of division among the three categories of students, instead, it argues that education knows no nationality, citizenship or boundary restrictions.

3. Legal Framework

This article refers to international, regional and national legal frameworks as underpinned by the notion of equality and prohibition of unfair

discrimination. Noteworthy is that South Africa is a sovereign state founded on the principles entrenched in the Constitution.¹⁵ Accordingly, when considering the scope of the concept of equality and discrimination, the Constitution remains the first point of reference. The Constitution speaks unashamedly of the realization of the right to equality and the development of human rights and freedoms.¹⁶ As the supreme law¹⁷ of the country, it prohibits unfair discrimination by the state¹⁸ and private persons.¹⁹ As far as the right to education is concerned, the Constitution underscores that the State must take progressive steps to ensure that education is available and accessible to all.²⁰ The word '*discrimination*' is widely used. For instance, the term has found application in the employment law in the context of equal pay for work of equal value. It also finds appeal in the institutions of higher learning for the purpose of this article.

International law plays a key role in the development of the South African legal system. In view of that, the country is a party to several international instruments that are concerned with the right to equality and the prohibition of discrimination. Consequently, an obligation emanates from these instruments for South Africa to comply with international rules. Equally, courts must consider these instruments when making a decision.²¹ Examples

¹⁵ The Constitution of the Republic of South Africa, 1996 (Hereinafter referred to as the Constitution). See also B. Hepple, *Equality: The Legal Framework*, Bob Hart Publishing Ltd (2014) 2nd ed and D. Meyerson *Jurisprudence*, OUP Higher Education Division (2011) 303-310.

¹⁶ Section 1(a) of the Constitution.

¹⁷ Section 2 of the Constitution.

¹⁸ The grounds prohibited in terms of section 9 (3) of the Constitution include race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth.

¹⁹ Section 9 (4) of the Constitution. See also para 7 of General Comment 18 of the UN Human Rights Committee (HRC) and CCPR General Comment No. 18: Non-discrimination of 1989 define the term "discrimination" to mean "any distinction, exclusion, restriction or preference on any ground "which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise by all persons, on an equal footing, of all rights and freedoms."

²⁰ Section 29(1)(b) and section 29 (1)(a) of the Constitution.

²¹ Section 232 and section 233 of the Constitution.

of the international instruments advocating for the right to equality and prohibition of unfair discrimination include:

- i. Articles 1 and 7 of the Universal Declaration of Human Rights, 1948
- ii. Article 3 of the International Covenant on Economic, Social and Cultural Rights, 1966 (ICESCR)
- iii. Article 3 of the International Covenant on Civil and Political Rights, 1966
- iv. Articles 2 and 3 of the International Convention on the Elimination of all forms of Racial Discrimination, 1966.
- v. Articles 2, 5 and 10 of the International Convention on the Elimination of all Forms of Discrimination against Women, 1979 and;
- vi. Articles 2 and 3 of the African Charter on Human and Peoples' Rights, 1981

The values entrenched in the above instruments have gained the status of *ius cogen*²² in international law.²³ The ICESCR for instance states that "education shall enable all persons to participate effectively in a free society, promote understanding, tolerance and friendship among all nations" and be "made equally accessible to all".²⁴

4. Payment of 'International Levy' at selected Public Universities

This section picks some examples from selected public universities to highlight the practice regarding the payment of 'international levy'. All the amounts are in South African Rand and are recorded as reflected in the respective university websites in 2019.

²² *Jus cogen* (or *ius cogen*) is a latin phrase that literally means "compelling law." It designates norms from which no derogation is permitted by way of particular agreements. It stems from the idea already known in Roman law that certain legal rules cannot be contracted out, given the fundamental values they uphold. Most states and authors agree that *jus cogen* exists in international law.

²³ UN Human Rights Committee (HRC), CCPR General Comment No. 18: Non-discrimination, 10 November (1989).

²⁴ Art. 13(2)(c) of the ICESCR.

4.1 University of Cape Town (UCT)

At UCT, the 'international levy' is classified as "international term fee". UCT opines that "For the purposes of fees payment, citizens and permanent resident permit holders of the SADC countries are treated the same as South African residents."²⁵ Noteworthy is that UCT explicitly uses the term 'citizens' to differentiate. Be that as it may, SADC international students' fees at this institution is calculated for each year of registration²⁶ per course/s selected. Currently, this is about R 57 278. SADC international students pay zero (R0) International Term Fee ('international levy'). However, fees for Non-SADC international students are calculated by adding the "fee per course/s selected (R 57 278) and an additional 'international term fee' of about R44 320 totalling to about R 101 598."²⁷ As a result, SADC international students pay a total of R 57 278, while fellow Non-SADC international students pay about R 101 598 to receive the same education in the first year of an LLB programme. According to the university, the levy plus course-based fees must be paid in full before registration.²⁸

4.2 Nelson Mandela University

At Nelson Mandela University, the position is similar to that of the UCT. At Nelson Mandela University, the 'international levy' is labelled as "Foreign Student Tuition Fee." Only Non-SADC international students are obliged to pay this additional 'international levy' which is currently about R 20 600.²⁹

²⁵ University of Cape Town Student Fees 2022 Available at: http://www.students.uct.ac.za/sites/default/files/image_tool/images/434/fees_funding/fees/downloads/2022_fees_payment_dates.pdf. Accessed 27 January 2022.

²⁶ Available at: <http://www.international.uct.ac.za/international-fees>. See also http://www.students.uct.ac.za/sites/default/files/image_tool/images/434/study/handbooks/2022/UCT_Handbook_12_2022_StudentFees.pdf. Accessed 29 January 2022.

²⁷ International Academic Programmes Office
<http://www.iapo.uct.ac.za/iapo/app/fees>

²⁸ University of Cape Town Student Fees 2022 Available at: http://www.students.uct.ac.za/sites/default/files/image_tool/images/434/fees_funding/fees/downloads/2022_fees_payment_dates.pdf Accessed 27 January 2022.

²⁹ Available at:

So, while SADC students pay about R 59 420 for an LLB programme for example, Non-SADC international students must pay R 59,420 plus an additional R 20 600 'international levy'. Consequently, a SADC international student pays a total of about R 59 520 while a fellow student from a Non-SADC country must pay a total of about R 77 320 to enrol and receive the same education. This is on top of a non-refundable R 6 100 foreign student administrative fee and R 1480 enrolment fee. Important is to note that at Nelson Mandela University, international students are required to pay 100% upfront before registration.³⁰

4.3 University of Stellenbosch

The University of Stellenbosch is one of the leading exporters of higher education in the country.³¹ At this University, all students are required to pay about R 60 000 as tuition fees in first year of undergraduate programme.³² The 'international levy' at the University of Stellenbosch is categorised as ITF (International Tuition Fee). According to the university, the ITF represents an additional amount charged per annum and payable in full at or before registration.³³ Notably, students from the SADC countries at this institution, pay an amount of R 30 025 as 'international levy'. But their

file:///C:/Users/Ann/Downloads/STUDENT-ACCOUNT-GUIDE.pdf. Accessed on 17 January 2022.

³⁰ Available at:

file:///C:/Users/Ann/Downloads/STUDENT-ACCOUNT-GUIDE.pdf. Accessed on 17 January 2022.

³¹ Aloyo 2010 *What is the economic impact of international students on South Africa?* 48. See also Du Plessis and Fourie 2011 *South African Journal of Higher Education* 466.

³² Available at:

<http://www.sun.ac.za/english/SUInternational/Documents/Student%20fees/2022%20Fees%20Information-Degree-Seeking-STELLENBOSCH%20Campus%20as%20on%2015%20Dec%202021.pdf>. Accessed on 17 January 2022.

³³ Available at:

<http://www.sun.ac.za/english/SUInternational/Documents/Student%20fees/2022%20Fees%20Information-Degree-Seeking-STELLENBOSCH%20Campus%20as%20on%2015%20Dec%202021.pdf>. Accessed on 17 January 2022.

classmates from Non-SADC countries are required to pay an additional R 60 050 as an 'international levy'.³⁴ Consequently, while SADC students pay a total of R 90 025 while Non-SADC students are obliged to pay a total of about R 120 050 to enrol for the same programme. Interestingly, a case study conducted by Du Plessis and Fourie found that the total amount collected from the 2 941 international students for the first semester of 2009 amounted to R127.348 million, or R43 300 per student.³⁵

4.4 Rhodes University

At Rhodes University, the 'international levy' is categorised as a "Surcharge for International students (compulsory additional charge for all International students)."³⁶ As per the 2022 undergraduate fee booklet, both SADC and Non-SADC international students pay between R37 577 to R67 923 tuition fee in their first year at undergraduate.³⁷ In addition to the tuition fees, SADC and Non-SADC international students are required to pay an 'international levy' of R11 434 and R14 603 respectively.³⁸ Although this may appear favourable, Non-SADC international students are still required to pay R 3169 more compared to what their fellow classmates from SADC are required to pay.

4.5 University of Pretoria

The position is slightly different at the University of Pretoria. Both SADC and Non-SADC international students are required to pay the same amount

³⁴ Available at:

<http://www.sun.ac.za/english/SUInternational/Documents/Student%20fees/2022%20Fees%20Information-Degree-Seeking-STELLENBOSCH%20Campus%20as%20on%2015%20Dec%202021.pdf>
Accessed on 17 January 2022.

³⁵ Du Plessis and Fourie 2011 *South African Journal of Higher Education* 460 - 475.

³⁶ Available at:

https://www.ru.ac.za/media/rhodesuniversity/content/finance/documents/2022_FEES_BOOKLET.pdf Accessed on 17 January 2022.

³⁷ Student Fees Booklet 2019 <https://www.ru.ac.za/studentfeesandfinancialaid/>.
Available at:

https://www.ru.ac.za/media/rhodesuniversity/content/finance/documents/2022_FEES_BOOKLET.pdf Accessed on 17 January 2022.

of an additional 'international levy' of R3 295 annually. But insofar as tuition fee is concerned, SADC international students at the University of Pretoria "pay the same tuition fee as South African citizens which is currently about R 43 000".³⁹ What is worrying though is that Non-SADC international students are required to pay "double the tuition fee of South African students and indeed that of SADC international students."⁴⁰ This adds up to a total of about R86 000. Therefore, while a SADC international student typically pay a total fee of about (R 43 000 + R 3295) R 46 295 annually, a Non-SADC international student is compelled to pay a total fee of about (R 86 000 + R 3295) R 89 295 annually to receive the same education as a SADC international student. This means a Non-SADC international student at this University must pay an additional R43 000 to attend and receive the same education as a fellow international classmate from a SADC country which perhaps indirectly covers the questioned 'international levy'.

4.6 University of Witwatersrand

The University of Witwatersrand makes it clear that students from the SADC countries are required to pay annual local tuition fees. However, like at the University of Pretoria, Non-SADC students must pay double local tuition. This applies across all faculties in the university.⁴¹

5. Analysis

Evident from the above examples is the fact that universities have adopted a practice of charging Non-SADC international students an additional amount known as 'international levy'. The practice treats two students, SADC and Non-SADC international students differently. Remarkably, the amount paid as 'levy' differs significantly across all universities in the country. For the most part, Non-SADC international students are obliged to pay the additional

³⁹ International Student fees - University of Pretoria 2020 <https://www.up.ac.za/student-fees/article/2746297/international-student-fees>. Accessed 24 November 2021.

⁴⁰ International Student fees - University of Pretoria <https://www.up.ac.za/fees-and-funding/article/2739193/international-students>.

⁴¹ Financial Information: Wits University <https://www.wits.ac.za/internationalstudents/financial-information/>.

'international levy' ranging between R 3000 to almost R 50 000 depending on the institution. SADC international students are exempted purely on the basis that they are citizens or nationals of SADC countries. As noted above, no government policy or law or Protocol exist currently that requires institutions to charge this 'levy'. The consequence is that Universities are at liberty to determine the amount 'international levy' as they wish. In the absence of law or policy regulation, this article questions whether it is constitutionally fair to treat or charge students differently yet they are both temporary residents in the country,⁴² attend the same number of lectures, receive the same number of study materials, receive an equal amount of lecture time and so forth. Besides, is it constitutionally fair or justifiable to treat two international students differently based on their citizenship or nationality?

5.1 *Larbi-Odam v MEC for Education (North-West Province) 1998 1 SA 745 (CC)*

The Constitutional Court judgement in *Larbi-Odam case* remains one of the most important in the development of laws relating to migration in South Africa. *In casu*, the Constitutional Court expanded the rights of equal protection to Non-South African citizens. Amongst other issues, the Court had to evaluate the constitutionality of Regulation 2(2) of Proclamation 138 of 1994 which contained the terms and conditions of employment of teachers.⁴³ Regulation 2(2) stated that subject to certain exceptions, only South African citizens were to be appointed to permanent teaching posts in state schools.

Briefly, eight teachers, citizens of Ghana, Swaziland, Zimbabwe and Uganda were employed in a school in the North-West Province on a temporary basis.

⁴² In *Khosa v Minister of Social Development* (2004) 6 SA 505 (CC), the Constitutional Court was concerned that the exclusion of non-citizens from social welfare grants would stigmatize non-citizens and condemn them to poverty and dependence particularly those who had acquired permanent residence status in the country.

⁴³ GN R1743 of 13 November 1995.

They were given notices of termination of employment in terms of the Educators Act.⁴⁴ The teachers challenged Regulation 2(2) in the Bophuthatswana Provincial Division of the Supreme Court.⁴⁵ They sought for an order declaring Regulation 2(2) invalid because it violated sections 8 (1) and 8(2) of the Interim Constitution which respectively guarantees equality and equal protection of the law and unfair discrimination.⁴⁶ On the one hand, the MEC for Education argument was that Non-citizens generally had a reduced commitment to South Africa because there was another country to which they could go. In view of that, the MEC argued that the Regulation should be upheld. The teachers on the other hand argued that the Regulation was discriminatory and inconsistent with the principles enshrined in the Constitution. After an unsuccessful appeal to the Supreme Court, the teachers approached the Constitutional Court.

The Constitutional Court reiterated the importance of the constitutional right not to be subjected to unfair discrimination in terms of section 8(2) of the Interim Constitution. The Court referred to some of its previous judgments in *President of the Republic of South Africa and Another v Hugo*⁴⁷, *Prinsloo v Van der Linde and Another*⁴⁸ and *Harksen v Lane NO and Others*.⁴⁹ Thus, it is imperative to evaluate the questioned university practice in light of these judgments. The purpose is to test whether the practice unfairly discriminates

⁴⁴ The Employment of Educators Act 76 of 1998.

⁴⁵ *Larbi-Odam case* para 29.

⁴⁶ Interim Constitution of the Republic of South Africa Act 200 of 1993. Hereinafter referred to as the Interim Constitution.

⁴⁷ 1997 (4) SA 1 (CC).

⁴⁸ 1997 (3) SA 1012 (CC).

⁴⁹ 1998 (1) SA 300 (CC). In *Prinsloo v Van der Linde and Harksen v Lane* the Court explained the test for section 9(1) as follows: "A law may differentiate between classes of persons if the differentiation is rationally linked to the achievement of a legitimate government purpose. The question is not whether the government could have achieved its purpose in a manner the court feels is better or more effective or more closely connected to that purpose. The question is whether the means the government chose are rationally connected to the purpose, as opposed to being arbitrary or capricious."

against Non-SADC international students on the grounds of citizenship or nationality.

5.2 Harksen v Lane NO and Others

In this case, the Constitutional Court laid down the test for equality analysis. The court adopted a two stage-inquiry when challenging the fairness or unfairness of a practice such as the one in question. The first enquiry is to determine whether the questioned practice differentiates between two students or categories of students.⁵⁰ If the practice does differentiate, the next enquiry is to determine whether the differentiation is on a listed or unlisted/ arbitrary ground.⁵¹ If it is on a listed ground, then discrimination would be presumed unfair. However, if the ground is unlisted, then whether or not it amounts to discrimination would depend, objectively,⁵² on whether the ground is based on attributes and characteristics which have the potential when manipulated, to impair the inherent fundamental human dignity of persons as human beings or to affect them adversely in a comparably serious manner.⁵³ And in contrast to discrimination based on listed grounds, there would be no presumption of unfairness.⁵⁴ The court has highlighted that intention to discriminate is irrelevant.⁵⁵ The impact of discriminatory practice is decisive.⁵⁶ The Constitutional Court elaborated further that once

⁵⁰ Important is to distinguish between differentiation in the pejorative on the one hand which means a differentiation made on a based on a ground that is hurtful, bad, arbitrary, unfair or objectionable and in the non-pejorative sense which means differentiation made on a ground that is fair, justifiable, reasonable or non-objectionable.

⁵¹ *Harksen v Lane NO and others* para 54. See also Kruger 2011 SALJ 479.

⁵² *City Council of Pretoria v Walker* (1998) 3 BCLR 257 (CC) at 278.

⁵³ *IMATU v City of Cape Town*. An analogous ground has been defined as one which is "based on attributes or characteristics which have the potential to impair the fundamental dignity of persons as human beings or to affect them seriously in a comparably serious manner". See also Van Der Walt *Labour Law in Context* 67.

⁵⁴ Van Der Walt *Labour Law in Context* 67.

⁵⁵ Van Der Walt *Labour Law in Context* at 73. See also *Louw v Golden Arrow Bus Services (Pty) Ltd* (2000) 3 BLLR 311 (LC) para 19.

⁵⁶ *Association of Teachers and Another v MEC* (1995) 16 ILJ 1048 (IC) 1089-90.

discrimination has been established, the next step is to determine whether the discrimination is fair or unfair.⁵⁷

The court held that if the discrimination is found to be unfair, then a determination would have to be made to find out whether it could be justified in terms of section 33 (1) of the interim Constitution.⁵⁸ In other words, whether the differentiation bears a rational connection to a legitimate governmental purpose. Importantly, the court added that even if a rational connection does exist, it could still amount to discrimination.

After considering the principles laid down in *Harksen's case*, the Constitutional Court examined Regulation 2(2) and concluded that the Regulation differentiated between citizens and non-citizens to the disadvantage of the latter group. The court noted that citizenship was not a ground of discrimination listed under section 8(2) of the Interim Constitution. Hence, the Court had to examine whether the differentiation on the ground of citizenship amounted to unfair discrimination. As it was held in *Harksen's case*, this involved an enquiry as to whether objectively, differentiation on the ground of citizenship was based on attributes and characteristics which potentially impair the fundamental human dignity of persons as human beings or to affect them adversely in a comparably serious manner. On this basis, the Constitutional Court found that indeed the ground of citizenship did discriminate unfairly against foreign citizens because they constitute a minority group in all countries with little political influence. Within the spirit of section 39 (1) of the Constitution⁵⁹, the Constitutional

⁵⁷ De Visser 1999 *Local Government Law Bulletin* 1-5. In *Hugo case* at para 43, the court held that "to determine whether that impact was unfair it is necessary to look not only at the group who has been disadvantaged but at the nature of the power in terms of which the discrimination was effected and, also at the nature of the interests which have been affected by the discrimination." See also the unfairness enquiry is concerned with the impact of the impugned measures on the complainants.

⁵⁸ *S v Makwanyane and Another* 1995 (3) SA 391 (CC).

⁵⁹ The Constitution of the Republic of South Africa, 1996 (hereinafter the Constitution). Section 39(1), which stipulates that "when interpreting the Bill of Rights, a court, tribunal or forum-(a) must promote the values that underlie an open

Court made reference to the Canadian Supreme Court decision where the court held in *Andrews v Law Society of British Columbia* that

*"Relative to citizens, Non-citizens are a group lacking in political power and as such vulnerable to having their interests overlooked and their rights to equal concern and respect violated. They are among those groups in society to whose needs and wishes elected officials have no apparent interest in attending."*⁶⁰

Further, the court emphasised that citizenship is a personal attribute that is difficult to change. The court held that the

*"characteristic of citizenship is one typically not within the control of the individual and, in this sense, is immutable. Citizenship is, at least temporarily, a characteristic of personhood not alterable by conscious action and in some cases not alterable except on the basis of unacceptable costs."*⁶¹

Also, the court noted that there were specific threats and intimidations that the Non-citizens faced. On the whole, the court observed all reasons above made Non-citizens a vulnerable group who should be protected in terms of the equality clause.⁶² Cho supports this view by emphasising that "since

and democratic society based on human dignity, equality and freedom, (b) must consider international law and may consider foreign law. Binding international law will be international law ratified and acceded to in terms of section 231 of the interim *Constitution*, which is similar to section 231 in the final *Constitution*. Also see section 232 regarding the position of customary international law and section 233, which obliges courts to give preference to international law when alternative interpretation outcomes exist.

⁶⁰ (1989) 56 DLR (4th) 1 para 32."

⁶¹ *Larbi-Odam and others v MEC for Education* quoting from *Andrews v Law Society of British Columbia* (1989) 56 DLR (4th) Id at page 39.

According to Lee and Rice 2007 *Higher Education* 381-409, international students report prejudicial comments and a lack of empathy from professors and fellow

international students by definition come from a country other than the [local students], and the total population of international students will always be significantly less than the population of [local students], international students can be viewed as a minority population."⁶³ For that reason, the Constitutional Court rejected the argument advanced by MEC that Non-citizens had a reduced commitment to South Africa because there was another country to which they could go. The Court held that that argument applied with equal force to thousands of South African citizens who have dual nationality, yet the Regulation did not impose any bar to their eligibility for permanent employment. The court found that the overall attribution appeared to be wholly linked to the fact that the teachers were not citizens of South Africa and that it was on that basis alone that the MEC found them not appointed to fill up the permanent posts. In the end, the Constitutional Court was satisfied that differentiating applicants on the ground of citizenship under Regulation 2(2) was based on attributes and characteristics which have the potential to impair the fundamental human dignity of Non-citizens.

The *Larbi-Odam* judgement is an important application of the Court's equality jurisprudence which has been developed over the years and which draws upon the underlying value of dignity. The judgement shows that the Constitution applies equally to citizens and Non-citizens. Further, the judgment is ground-breaking as it shows that Courts will protect the rights of Non-Citizens against generalised justifications that violate human rights.

6. Equal Pay for Education of Equal Value: Legal analogy from *Larbi-Odam* case to the case of the university practice in question

The Constitutional Court judgement in *Larbi-Odam* also finds application in the case of the university practice under study. Consistent with *Harksen's case*, the practice differentiates between two categories of international students being SADC and Non-SADC international students exclusively for

students, as well as from community members who they encounter in public spaces and the broader host community.

⁶³ Cho *Welcome to America? The Perceptions of Discrimination Experienced by International Students* 918. (Own emphasis added).

the purposes of payment of 'international levy'. The differentiation is on the unlisted ground of citizenship or nationality. Therefore, the question is whether the differentiation is rationally linked to a legitimate government purpose. This article found that there is no such link because the government does not set or determine how much universities should charge as an 'international levy'. It is a practice completely adopted and left at the discretion of each particular university across the country. Besides, there exists no law, policy or even Protocol that requires universities to differentiate between SADC and Non-SADC international students for the purposes of payment of 'international levy'.

The consequence is that the practice singles out only Non-SADC international students and subjects them to differential treatment on grounds linked to their citizenship or nationality yet this is a characteristic not within their control.⁶⁴ Both categories of students are temporary residents in the country, receive the same education and should therefore pay the same. Otherwise such differentiation besides being discriminatory, harms these students' experience by creating unfair divides between them. Possibly, this is the very reason that has led to wild protests by international students studying at overseas universities, who raised banners that read, "We are not cash cows" and "Increase our voice, not our fees."⁶⁵ A few months ago, for instance, international students enrolled at the Free University of Brussels and the Catholic University of Leuven strongly protested and successfully opposed tuition fee increment. Must be remembered that the desire of a student to go to a university in another country is not determined by the wealth of his or her parents. The majority of these students come from different backgrounds with different monetary resources.

Notably, most Non-SADC international students maintain that they depend on their personal or family savings to fund their tuition and living expenses.⁶⁶ Many of them take huge bank loans and also mortgage their parents' homes.

⁶⁴ *Larbi-Odam case* para 23.

⁶⁵ MBA *Cristal Ball* 2017 Why international students pay more tuition.

⁶⁶ Du Plessis and Fourie 2011 *South African Journal of Higher Education* 469.

Marginson observes that international students struggle to make ends meet while some have decided to refrain from asking family and relatives for financial support in fear of burdening them.⁶⁷ Consequently, they have resorted to juggling their full-time studies with part-time jobs, a situation that is further hardened by their visa conditions which restricts them to work for no more than 20 hours per week.⁶⁸ Some university faculties and lecturers have reported awareness of the financial difficulties experienced by some international students.⁶⁹ This article emphasises that education should not be commodified. It is a public good, essential to any civilised society. Otherwise commodifying higher education at the expense of Non-SADC international students only arguably defeats the purpose of internationalisation, cross-cultural, multi-national and social experiences which are key factors for academic excellence.⁷⁰

At present, universities around the country are advocating for internationalisation and therefore, discrimination on the grounds of citizenship or nationality should be discouraged. In fact, it should not have a place in an open democratic society founded on constitutional principles and international law. Or else this would be equivalent to taking universal out of university. Demanding that only one category of international students must pay the 'levy' purely because they come from certain African countries gives an impression that the country is not equal.

7. Unreasonable justification?

Generally, discrimination is not unfair by itself. It is only unfair where it is unjustified. Within the spirit of *Larbi-Odam case*, it appears difficult to make out a justification or persuasive argument in support of the fairness of the

⁶⁷ Marginson, Nyland, Sawir and Forbes-Mewett 2010 *International student security* 135-137.

⁶⁸ Section 13 of the South African Immigration Act 13 of 2002 (as amended) Hereinafter referred to as Immigration Act.

⁶⁹ Bartram 2013 *Journal of Studies in International Education* 5–18.

⁷⁰ Dominguez-Whitehead and Sing 2015 *South African Journal of Higher Education* 82. See also Lee and Rice 2007 *Higher Education* 381-409.

questioned institutional practice. This practice is imposed on Non-SADC international students only purely because of their citizenship or nationality.

The justification advanced by some institutions is that the 'international levy' is earmarked to pay for special academic programs or services that these students use exclusively than others. To provide some insight into the foresaid, a discussion with seven Non-SADC international students drawn from seven different Non-SADC countries was conducted. Common to almost all of the students was the perception that they receive no special services as institutions assert. In fact, six of the interviewees were of the view that the utilisation of resources is distributed equally across the institution without distinction. They felt that the 'international levy' collected goes into the university's general pool of funds for the sake of balancing a budget. Some remarked that this new pot of money is perhaps used to fund a variety of initiatives and positions across campus.

Unquestionably, universities that register international students have monitoring and reporting requirements to the Department of Home Affairs.⁷¹ In some instances, this may impose an additional financial burden. Be that as it may, one would question whether all the 'international levy' collected from these students is directed towards fulfilling this reporting requirement. Actually, in some Universities, these students are expected to pay an additional "foreign student administration fee" which is arguably reserved for such monitoring and reporting purposes. Besides, it must be noted that the onus is always on an individual international student to ensure their stay in the country is legal all the time.

A further argument frequently advanced in favour of charging an additional 'international levy' from Non-SADC international students is that most of them return to their home countries after studies. It is argued that they take what they have acquired in South Africa to develop the economy of their respective countries. Besides the Constitutional Court rebutting this

⁷¹ Section 13 (1)(b)(i - vi) of the Immigration Act.

argument in *Larbi Ordam case*, this article adds that international students pay taxes upon entry into South Africa and on every purchase they make. In fact, this article observes that a significant number of SADC students also return to their respective home countries after completing studies in South Africa. Additionally, some universities advance the argument that it is because of the brand-name and reputation that attract international students to their institution. In view of that, they believe the institution represents an outstanding value and return on investment for international students. But this article argues that an institution's brand name cannot be a rational or reasonable justification to apply unequal pay for equal education?

8. Conclusion

This article has highlighted the need to prevent the perpetuation of discrimination through institutional practice. The broad purpose was to understand the constitutional implication of the practice adopted by some universities demanding that only Non-SADC international students must pay 'international levy'. The article has shown that, even though a majority of Non-SADC international undergraduate students have been successful in their pursuit of higher education in South Africa, the common belief is that they have been singled out for inequitable treatment and practice as far as 'equal pay for the education of equal value is concerned.' This article opines that the overall attribution and persistent practice of imposing an 'international levy' to Non-SADC international students are exclusively linked to the fact that Non-SADC international students are not residents or citizens or nationals of SADC countries. It is on this basis alone that Universities decide to demand the so-called 'international levy'. Like in *Larbi-Odam case*, this article does not rule out the possibility that if challenged in a court of law, the questioned practice may be found wanting.

This article concurs with the Constitutional Court reasoning in *Larbi-Odam case* that foreign citizens, who *in casu* include Non-SADC international students constitute a minority group in all countries with little political muscle. Relative to local citizens, Non-SADC international students are a

group lacking in political power and as such vulnerable to having their interests overlooked and their rights to equal concern and respect violated.

The lack of access to recourse by Non-SADC international students affected by the application of the questioned university practice serves to emphasise their vulnerability. As a result, they should be protected in terms of the equality clause.⁷² The practice affects them in a comparably serious manner and therefore may amount to discrimination.⁷³ As the court emphasised in *Stojce v UKZN and another*,⁷⁴ foreign nationals are a group deemed worthy of protection. As the court highlighted in *Larbi case*, citizenship is a personal attribute that is difficult to change. It is one typically not within the control of an individual and therefore immutable.⁷⁵ In effect, the more immutable a characteristic is the more likely it is to be regarded as an analogous ground.⁷⁶

The article stresses that commercialising university education at the expense of Non-SADC international students only through unregulated practice

⁷² Their vulnerability must also be viewed in the context of widespread and xenophobia stereotyping. Just recently, on 23-2-2019, a Tanzanian PhD international student at University of Johannesburg was killed in violent xenophobic attack. In fact, research reveals that African students in South Africa routinely face xenophobic sentiment. See Laura Freeman & Jenny Lee Daily Maverick 1. See also *Stojce v UKZN* (2007) 3 BLLR 246 (LC) para 27 where the court observed that a person who relies on an unlisted ground as being discriminatory must establish the difference [SADC and Non-SADC international students], show that it defines a group or class of persons and that the difference is worthy of protection. To warrant protection, the aggrieved person must show that the conduct [practice in this case] complained of impact on them as a class or group of venerable person such as foreign citizenship or nationality.

⁷³ In *Pioneer Foods (Pty) Ltd v Workers Against Regression and Others* (2016) 37 ILJ 2872 (LC) para 22, the court made reference to the above mentioned *Harksen* test when discussing dignity. See also *President of the Republic of South Africa and Another v Hugo* 1997 (4) SA 1 (CC) para 41, *Ndlela and Others and Philani Mega Spar* (2016) 37 ILJ 277 (CCMA) at para 21 and *Govender and Umgungundlovu District Municipality* (2016) 37 ILJ 724 (CCMA) at para 36).

⁷⁴ (2006) 27 ILJ 2696 (LC).

⁷⁵ *Larbi-Odam case*.

⁷⁶ McConnachie Human Dignity 'Unfair Discrimination' and Guidance 2014 *Oxford Journal of Legal Studies* 34 613.

should be revisited and be brought in line with the principles of equality and fairness embedded in our Constitution. In *Woolworths (Pty) Ltd v Whitehead*,⁷⁷ the court rejected the notion that commercial rationale could justify discrimination. In fact, in *Kadiaka v Amalgamated Beverage Industries*⁷⁸ the court held that if profitability was to dictate whether or not discrimination is unfair, then that would negate the very essence of the need for a Bill of Rights. The article contends that universities should not be seen to protect their interests and that of one category of international students only through what is arguably a 'punitive' discriminatory practice connected to grounds of citizenship or nationality. This article maintains that that interest may be protected effectively without applying discriminative practices. There exist less severe, fairer, all-inclusive non-discriminatory means through which universities may effectively achieve their purpose of generating funds. For instance, a more promising means would be to charge international students on an income-based rather than exclusively on citizenship or nationality.

The article hopes that the analysis provided will shed some insight necessary in developing the South African unfair discrimination jurisprudence particularly with regards to equal pay for the education of equal value. It also provides a good starting point for researchers and scholars to debate about possible subtle discrimination practices that exist in our academic institutions. The analysis makes an admirable research project for further studies at postgraduate level. Such research would complement this article. Particularly, the study would examine the level of 'transparency' at the 'information sharing sessions' conducted by international marketing teams deployed in various Non-SADC countries. Clarity as far as the payment of additional 'international levy' is concerned, who pays and who does not pay and reasons associated would certainly assist a Non-SADC international undergraduate student in making an informed decision as to whether or not to apply for studies in the country.

⁷⁷ [2000] LAC para 28.

⁷⁸ (1999) 20 *ILJ* 373 (LC).

Although the market for Non-SADC international students remains a lucrative one, Universities policymakers and relevant representatives from international offices should approach cautiously the efforts of enrolling these students 'solely' as a means of generating money. Universities must take positive measures to eradicate the differences in terms and conditions for the payment of 'international levies' which appear rooted in political, social and economic cleavages. Universities should not be seen to contribute towards the erroneous perception that international students, in particular Non-SADC international students, are well-equipped to fund their studies. Both SADC and Non-SADC international students enrol for the same course or programme, attend and receive the same education and must therefore pay equally. A similar principle has found appeal in the employment law under 'equal pay for work of equal value.' Besides, the principle of fairness, justice, equity and logic dictates that education of equal value should receive equal pay. Education is for all and as far as everyone is concerned, it knows no citizenship or nationality. The Constitution is clear that "everyone" is equal before the law and has a right to equal protection and benefit of the law. Nelson Mandela once said that "Education is the most powerful weapon which you can use to change the world."⁷⁹ He did not say to change South Africa and members of the SADC region only.

On the whole, within the spirit of the Constitutional Court judgement in *Larbi-Odam case*, universities practice of cashing in the so-called 'international levy' only from Non-SADC international undergraduate students, unfairly discriminate against them on the grounds of their citizenship or nationality. Reforms to combat this unregulated practice are urgently required. It is recommended that universities must develop policies designed to address the unfair discrimination practice and to promote equal pay for the education of equal value. This would bring back a sense of

⁷⁹ Available at:

http://teachwithafrica.org/wordpress/wp-content/uploads/2012/12/57306m_TWA_Invite_2.pdf Accessed 23-01-2022. See also http://resdac.net/documentation/pdf/voice_rising_mandela.pdf Accessed 23-01-2022.

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community, a feel of belonging and inclusion that is arguably lower for Non-SADC students if compared to their peers from SADC countries. Perhaps the recent international development in tuition fee reforms could inspire South Africa. The OECD countries for instance have recently implemented reforms in this area and have substantially modified the tuition fees charged by public universities to their international students. It is an opportune time for South African universities to benchmark and perhaps follow suit.

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List of Abbreviations

DHET Department of Higher Education and Training

HEMIS Higher Education Management Information System

ICESCR International Covenant on Economic, Social and Cultural Rights

ITF International Tuition Fee

LLB Legum Baccalaureus

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MEC Member of the Executive Council

OECD Organisation for Economic Cooperation and Development.

SADC Southern African Development Community

SAJHE South African Journal of Higher Education

UNHRC UN Human Rights Committee

Decarbonising Africa's Agriculture and Forestry: Synergies and Trade-offs for Sub-Saharan Africa

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Abstract

Decarbonisation as a climate mitigation strategy is gaining much traction lately due to the heightening climate variabilities and risks. While decarbonisation is essential across all sectors to have a meaningful transition towards net-zero emissions by the mid-twenty-first century, agriculture and forestry are critical areas in Sub-Saharan Africa (SSA).

Noting that over 70 percent of forest loss in SSA is linked to agricultural expansion, the two sectors are examined jointly because an activity in one sector implicates the other. The journey towards decarbonising Africa's agriculture and forestry faces several challenges; it also presents opportunities to exploit natural resources and conserve and develop green projects that promote sustainable development. On the contrary, the climate adaptation component has been given more emphasis in most of the development and policy frameworks in SSA than the attention the mitigation component receives. Thus, this paper analyses the greenhouse gas emission sources in the agriculture and forestry sectors while interrogating some of the challenges barring their decarbonisation and considers potential trade-offs in SSA. Policy integration, more robust governance and multi-sectoral collaboration are discussed throughout the paper as some enablers of decarbonisation.

1.0 Introduction

The race towards net-zero emissions by 2050 is picking momentum across the globe. The IPCC's 2018 special report on Global Warming of 1.5°C indicates that urgent and comprehensive actions need to be adopted in order

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to limit warming to 1.5°C.¹ In particular, transformation in the land, energy, transportation, buildings, and industrial operations is a fundamental vehicle towards reducing emissions escaping into the atmosphere. Accordingly, reaching the net-zero emission mark by the mid-21st century mandates that the net human-induced emissions worldwide must reduce by 45 percent by 2030 from the 2010 levels.² This means efforts to decarbonise by all sectors and persons in all the geographical locations are deemed necessary even though some countries and regions contribute an insignificant amount of emissions. Africa, for instance, is estimated to contribute less than four percent of the total global greenhouse gas (GHG) emissions compared to China at 23 percent and the United States of America at 19 percent.³ In the context of this paper, decarbonising refers to removal or reduction (mitigation) of all GHG emissions.

Of interest in this paper is exploring opportunities and challenges in decarbonising the agriculture and forestry sectors in Sub-Saharan Africa (SSA). These two crucial areas influence the region's social, economic, political, and ecological standings. The agriculture sector in SSA is estimated to contribute an average of about 15 percent of the gross domestic product; however, it varies per country, ranging from 3 to 50 percent.⁴ Agriculture serves a direct and indirect need in the region, to both rural and urban populations. It is a source of employment, income, and food to the majority of the residents; for example, to 70 percent of the people in Southern Africa.⁵

1 IPCC. 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. *World Meteorological Organization, Geneva, Switzerland, 32 pp.* <https://www.ipcc.ch/sr15/>

2 Ibid

3 Czechowski, Aditi, Surie. 2020. CDP Africa Report Benchmarking Progress Towards Climate Safe Cities, States, And Regions. CDP. Retrieved on 9th feb <https://www.cdp.net/en/research/global-reports/africa-report>

4 OECD. 2016. OECD-FAO Agricultural Outlook 2016-2025: Agriculture in Sub-Saharan Africa: Prospects and challenges for the next decade. *OECD/FAO.* https://doi.org/10.1787/agr_outlook-2016-5-en

5 SADC. 2021. Agriculture and Food Security. *Southern African Development Community.*

Agriculture is the cornerstone of food security, a matter that many countries in SSA are struggling to meet. Population increase, intensifying climate variability and impacts, changing lifestyles, economic constraints and policy inadequacies has stretched the agriculture sector to the point of not meeting the immediate urgent needs of the population. In response, agricultural expansion has been activated, most of which has led to clearing the forests to create more room for farming and livestock rearing. The repercussion of this reflex action is deforestation and forest degradation, destruction of vital carbon sinks resulting in increased accumulation of carbon emissions in the atmosphere.⁶ Notably, agriculture is not the only agent of forest destruction; logging, commercial wood harvesting, timber harvesting, urbanisation, need for settlement and infrastructural space are other drivers.

Similarly, despite the integral social and economic functions of agricultural operations, they contribute to GHGs responsible for global warming. In most cases, the latter is overlooked, yet, climate change which is a consequence of increased emissions, devastates the agriculture sector due to uncertain occurrences such as droughts, floods, pest invasions, livestock and crop diseases, water scarcity, and erratic rainfall. Notably, adaptation to climate change in SSA has been emphasised and prioritised in most policies, institutional and programmatic frameworks giving mitigation a low priority.⁷ In that regard, this paper analyses some of the synergies and trade-offs in decarbonising agriculture and forestry sectors in SSA as an avenue to climate change mitigation.

<https://www.sadc.int/themes/agriculture-food-security/#:~:text=The%20agriculture%20sector%20is%20of,for%20food%2C%20income%20and%20employment.>

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7 Ciptet, David, J. Timmons Roberts, and Mizan Khan. 2013. The Politics of International Climate Adaptation Funding: Justice and Divisions in the Greenhouse. *Global Environmental Politics* 13, 1: 49–68. https://doi.org/10.1162/GLEP_a_00153

2.0 Emission Perspective from the Agriculture and Forestry in SSA

2.1 Agriculture sector

Agriculture is responsible for carbon dioxide and non-carbon emissions.⁸ Non-carbon emissions include methane and nitrous oxide from crop farming and livestock keeping. On the other hand, carbon emissions are associated with the conversion of the natural lands into crop and livestock production zones. Forests are the majority of the natural ecosystems affected. On a global scale, FAOSTAT's 2018 estimations of methane and nitrous oxide from crop and livestock farming were about 5.3 gigatons of carbon equivalent.⁹ Out of the estimations, only a third were from crop production and the rest from livestock farming. This high proportion of emissions from livestock production is linked to enteric fermentation that produces methane gas. Similarly, animal manure, either secreted by the livestock or applied in farmlands, is responsible for nitrous oxide. In principle, when the livestock increase in a given area, it is expected that the amounts of manure and enteric fermentation will be higher, translating to increased GHGs in the atmosphere. SSA's emission trend for specific GHGs has been upward, mirroring the total continental emissions presented by different sources.

For example, from 2000 to 2018, Africa's emissions rose by six percent of the total global agricultural emissions.¹⁰ Also, agricultural methane emissions for SSA rose from 1969 to 2018 with a steady increase during the 1990-2018 period, as shown in figure 1. It should be noted that while the total methane contribution is showing an upward trajectory, the contrary is the case for some countries like Mauritius, Seychelles, Sao Tome and Principe, and Equatorial Guinea, whose curves have been stagnating or dropping.¹¹ A similar trend (see figure 2) is manifested in SSA's agricultural

8 FAO. 2020. Emissions due to agriculture. Global, regional and country trends 2000–2018. *FAOSTAT Analytical Brief 18*.

<https://www.fao.org/3/cb3808en/cb3808en.pdf>

9 Ibid

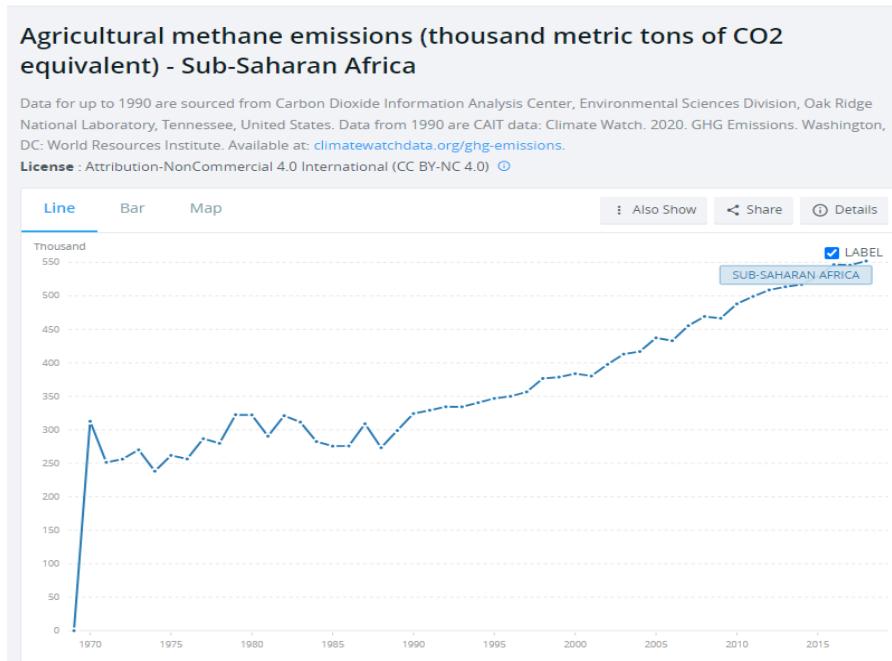
10 Ibid

11 World Bank. 2022. Agricultural nitrous oxide emissions (thousand metric tons of CO2 equivalent) - Sub-Saharan Africa.

<https://data.worldbank.org/indicator/EN.ATM.NOXE.AG.KT.CE?end=2018&locations=ZG&start=1969&view=chart>

nitrous oxide emissions with some countries such as Lesotho and Cabo Verde showing a declining trend.

Figure 1: Agricultural methane emissions (thousand metric tons of CO2 equivalent) - Sub-Saharan Africa



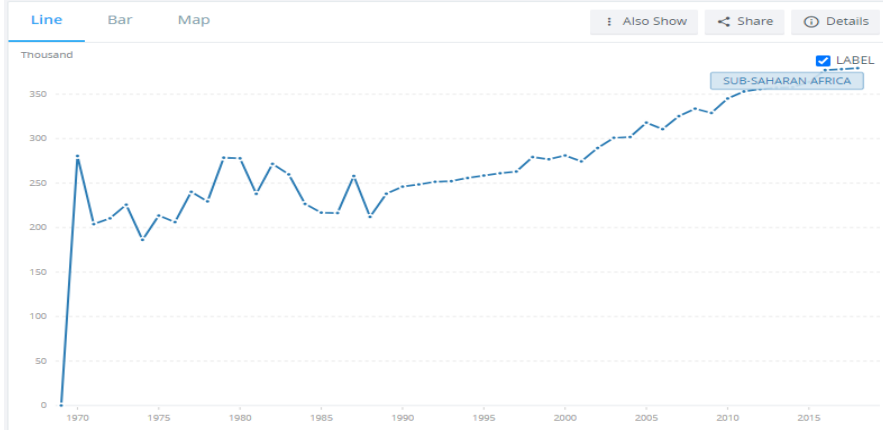
Source: [World Bank](#); generated on 11/02/2022

Figure 2: Agricultural nitrous oxide emissions (thousand metric tons of CO2 equivalent) - Sub-Saharan Africa

Agricultural nitrous oxide emissions (thousand metric tons of CO₂ equivalent) - Sub-Saharan Africa

Data for up to 1990 are sourced from Carbon Dioxide Information Analysis Center, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, United States. Data from 1990 are CAIT data: Climate Watch. 2020. GHG Emissions. Washington, DC: World Resources Institute. Available at: climatewatchdata.org/ghg-emissions.

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Source: [World Bank](#); generated on 11/02/2022

While SSA countries have almost similar agricultural practices, country-specific socio-economic and ecological systems influence the quantity of GHG emissions produced. Technological usage in crop farming and livestock production, population size, fertiliser use and type, crop variety, and livestock breeds are a few of the variables that influence the upward, downward, or flattening trends of emissions curves.¹² Essentially, the use of synthetic fertiliser which is a common practice in most African communities is one of the drivers of greenhouse gases. Because of land degradation and poor soil fertility, the majority of the farmers, whether smallholder or large scale, tend to use large amounts of artificial fertilisers to increase crop yields to meet the needs of the growing population.¹³ With climate variability intensifying, it is expected that adaptation and risk mitigation measures in the agriculture sector will be adopted.

12 Tongwane, Mphethe, Thandile Mdlambuzi, Mokhele Moeletsi, Mitsuru Tsubo, Vuyo Mliswa, and Lunga Grootboom. 2016. Greenhouse gas emissions from different crop production and management practices in South Africa. *Environmental Development*, 19, 23–35. <https://doi.org/10.1016/j.envdev.2016.06.004>

13 Ibid

Conversion of land into agricultural zones is an important driver of emission upsurge, although the actual amount of GHGs associated with land-use change cannot be ascertained.¹⁴

2.2 Emission perspective from forestry

Forests play a fundamental role in carbon sequestration while at the same time it can be a carbon source. Accordingly, forests are considered a carbon source when the amount of carbon it releases into the atmosphere is higher than the amount it sequesters.¹⁵ That is, when the net balance of carbon emissions linked to forests is positive, it is considered a carbon source, however, when the net balance is negative, it is carbon sequestration.¹⁶ Several questions and debates have been floated as to whether forests are actually a carbon sink or carbon source. This question will remain active unless proper carbon quantifications are done to establish a net value on a contextual basis. Nonetheless, deforestation, agricultural expansion, fires, and development activities are some land-use changes that reduce forests' size, limiting their ability to perform the crucial functions of absorbing carbon. For instance, forests and other land uses are approximated to inject 11 percent of carbon dioxide into the atmosphere based on a 2010 global emission estimate.¹⁷ Deforestation accounts for the highest amount of carbon emissions linked to forests. World Resources Institute, using granular information, estimated the global carbon emitted into the atmosphere by forests as a result of deforestation to be about 8.1 million metric tons

14 African Development Bank. 2020. Drivers of Greenhouse Gas emissions in Africa: Focus on agriculture, forestry and other land use. *AfDB*. <https://blogs.afdb.org/climate-change-africa/drivers-greenhouse-gas-emissions-africa-focus-agriculture-forestry-and-other>

15 NASA. 2021. NASA Study Finds Tropical Forests' Ability to Absorb Carbon Dioxide Is Waning. *NASA's Jet Propulsion Laboratory*. <https://www.jpl.nasa.gov/news/nasa-study-finds-tropical-forests-ability-to-absorb-carbon-dioxide-is-waning>

16 UNECA. N.d. Carbon Sinks and Sequestration. *United Nations Economic Commission for Europe*. <https://unece.org/forests/carbon-sinks-and-sequestration>

17 IPCC. 2014. AR5 Climate Change 2014: Mitigation of Climate Change. The Working Group III contribution to the IPCC's Fifth Assessment Report (AR5). <https://www.ipcc.ch/report/ar5/wg3/>

annually.¹⁸ More studies show that deforestation and peatland degradation are responsible for 12 percent of the global greenhouse gas emissions.¹⁹

Zooming in to the African continent, it is argued, Africa hosts 17 percent of the world's forests with Congo basin hosting over 50 percent of Africa's biodiversity.²⁰ In the SSA region, forests have been decreasing at an alarming rate from the late-20th century to the present day. The total forest land area in SSA is estimated to have reduced from 33 percent in 1990 to 26.3 percent in 2020.²¹ It can be concluded that the decline in the forested land translates to increased GHGs accumulating in the atmosphere when all other factors are held constant. Forest loss in SSA is driven not only by demand for forest products but also by fundamental activities such as farming, which injects greenhouse gases into the atmosphere and realistically cannot be avoided. For example, cocoa farming which is a valuable export crop in West Africa, has left a huge deforestation footprint in Ghana and Cote d'Ivoire with a relatively minimal impact in Cameroon.²² The fact that forests are two-edged in regional and global emissions control, high impact synergies are necessary.

18 Harris Nancy and Gibbs David. 2021. Forests Absorb Twice As Much Carbon As They Emit Each Year. *World Resources Institute*.

<https://www.wri.org/insights/forests-absorb-twice-much-carbon-they-emit-each-year>

19 Ox-fam. 2021. Tightening the Net: Net zero climate targets – implications for land and food equity. OXFAM Briefing Paper.

<https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621205/bp-net-zero-land-food-equity-030821-en.pdf>

20 AWF. 2015. Get the Scoop on Deforestation in Africa. African Wildlife Foundation. <https://www.awf.org/blog/get-scoop-deforestation-africa>

21 World Bank. 2022b. Forest area (% of land area) - Sub-Saharan Africa. <https://data.worldbank.org/indicator/AG.LND.FRST.ZS?locations=ZG>

22 Hoare Alison, King Richard & Airey Sam. 2017. Cocoa trade, climate change and deforestation. Resource Trade Earth.

<https://resourcetrade.earth/publications/cocoa-trade-climate-change-and-deforestation#Forests>

2.3 Framing the implications of greenhouse gas emissions on agriculture and forestry

Climate change is consequential of increased greenhouse gases in the atmosphere. As outlined above, the agriculture and forestry sectors in SSA contribute to the global share of emissions in varying proportions. At the same time, carbon emissions destabilise the normal functioning of the two industries leading to cross-cutting implications whose magnitude is significantly high in Africa. Uncertainties occasioned by intensifying climate events in SSA is creating a complex environment for the agriculture sector to meet its supposed primary function of curbing food insecurity, exterminating hunger, and improving livelihoods.²³

Rainfall variability- temporal and areal- is a result of climate change, an event that is already jeopardising farming activities in SSA given that over 95 percent of agriculture is rain-fed.²⁴ This implies that food security will not be assured. Although some individuals have resorted to irrigating farms and practicing greenhouse farming as well as integrating the climate-smart agriculture concept, water scarcity and inconsistent humidity patterns is another challenge.²⁵ Equally, increased atmospheric temperature is likely to complicate the germination and performance of crops and reproduction and growth of livestock. In the recent past, prolonged droughts, higher frequency of floods and famine have been registered in many parts of SSA Africa, a phenomenon that directly impacts fishing, crop, and livestock production.²⁶ The implications are felt far and wide, although communities in marginalised

23 OECD. 2016. OECD-FAO Agricultural Outlook 2016-2025: Agriculture in Sub-Saharan Africa: Prospects and challenges for the next decade. OECD/FAO. https://doi.org/10.1787/agr_outlook-2016-5-en

24 Abrams, Len, et al. 2018. Unlocking the potential of enhanced rainfed agriculture. *Stockholm Resilience Centre, Report no. 39*. Stockholm University. <https://siwi.org/wp-content/uploads/2018/12/Unlocking-the-potential-of-rainfed-agriculture-2018-FINAL.pdf>

25 Abou Zaki, et al. 2018. "An Index-Based Approach to Assess the Water Availability for Irrigated Agriculture in Sub-Saharan Africa" *Water* 10, no. 7: 896. <https://doi.org/10.3390/w10070896>

26 IMF. 2020. Chapter 2: Adapting to Climate Change in Sub-Saharan Africa. *International Monetary Cooperation*. <https://www.imf.org/media/Files/Publications/REO/AFR/2020/April/English/ch2.a.shx>

areas mostly in drier areas and climate-dependent are more susceptible. The Sahelian region, for instance, has experienced pronounced climate change effects in terms of droughts, water shortage, and erratic rainfall.²⁷ The expected outcome is food shortage and shrinkage of natural resources affecting the swelling population estimated at a 2.8 percent growth rate annually.²⁸ Similarly, countries like Kenya and Ethiopia have lost livestock, pasture lands and crops due to climate-induced episodes like famine, floods, and prolonged-droughts.

When looking at the climate effects in forests and forestry, often, the focus is on the functional attributes of the forests. Climate change increases the risks of droughts and wildfires that may destroy a forest entirely, leading to carbon storage reduction, animal habitats destruction, and biodiversity loss.²⁹ Forests are water catchment areas; once ruined, the effects trickle down to all entities in an ecosystem loop. Rainfall variability and prolonged drought limit the growth of new trees and vegetation, leaving the soil bare and potentially loose. Bare soils are prone to erosion and floods; such an ecosystem loses its role as a flood shed.

Also, Africa's forests are home to several plant and animal species, modification of their habitats combined with heat stress due to rising temperatures could trigger migration or deaths of some animals.³⁰ In some instances, the animals will be forced to adapt to the changes. In communities

27 Schraven Benjamin et al. 2020. Climate change impacts on human (im-) mobility in Sub-Saharan Africa: Recent trends and options for policy responses. *GIZ*. https://www.adaptationcommunity.net/wp-content/uploads/2020/07/GIZ_Climate-impacts-on-human-mobility-Africa.pdf

28 Shepard Dan. 2019. Global warming: severe consequences for Africa. *United Nations Africa Renewal, 2018-2019*. <https://www.un.org/africarenewal/magazine/december-2018-march-2019/global-warming-severe-consequences-africa>

29 Nunes Leonel, et al. 2021. The Impact of Climate Change on Forest Development: A Sustainable Approach to Management Models Applied to Mediterranean-Type Climate Regions. *Plants*, 11(1), 69; <https://doi.org/10.3390/plants11010069>

30 Sonwa Denis. 2018. Forest and Climate Change Response in Africa. Proceedings of the ASC – TUFUS ‘Kickoff’ Symposium, Tokyo University of Foreign Studies. <https://www.cifor.org/knowledge/publication/6903/>

that rely on forests for spiritual intervention and herbal medication, their socio-cultural and economic activities may be threatened. In Kenya, for instance, the supply of some medicinal plants is thought to have declined due to changing environmental conditions such as rainfall and temperature variability.³¹ Researchers worry some plants may go extinct. It is important to note that human activities such as logging, fuelwood harvesting, and agricultural expansion are exacerbating the decline.

3.0 Challenges in decarbonising agriculture and forestry in Sub Saharan Africa

Decarbonising the agriculture and forestry sectors in SSA is an uphill task due to financial, governance, attitudes, forest dependence, and technological advancement. This section will explore some of the challenges evident across different countries and economic regions in SSA.

3.1 Dependence on forests, forest products and deforestation

Forests serve the needs of Sub-Saharan Africa's people in varying degrees. While it is not possible to give an exact account on the degree of dependence, World Bank approximates about 1.6 billion people dependent on forests globally, where 350 million living close to or within dense forests derive their livelihood from it.³² However, the figures are not specific to persons falling under indigenous community category. In Central Africa alone, forest people are estimated to be between 33-60 million.³³ The Ogiek of Kenya and the pygmies of Uganda and Cameroon are some of the many forest people still existing in SSA whose livelihoods are almost entirely defined by the richness of forests. According to a high-level report from a panel of experts on sustainable forestry for food security and nutrition, the contribution of

31 Gafna Jeff Dikko, et al. 2021. Medicinal service supply by wild plants in Samburu, Kenya: Comparisons among medicinal plant assemblages. *Global Ecology and Conservation*, 30, e01749.

<https://doi.org/10.1016/j.gecco.2021.e01749>

32 World bank. 2021. Forests and Terrestrial Ecosystems (Landscapes). <https://www.worldbank.org/en/topic/forests#1>

33 Chao Sophie. 2021. Forest Peoples: Numbers across the world. *Forest Peoples Programme*.

https://www.forestpeoples.org/sites/fpp/files/publication/2012/05/forest-peoples-numbers-across-world-final_0.pdf

forests and trees is summed up into; provision of bio-energy for cooking, direct source of food, economic and livelihood source, and supply of ecosystem services such as for agriculture.³⁴ The close dependence on forests for income and subsistence is not only an African problem but a global matter challenging the possibility of decarbonising the forestry sector. It is particularly hard given that about 59 percent of the SSA population reside in rural areas.³⁵

As Sub-Saharan Africa's population continues to balloon with a projection of 2.1 billion by 2050, agriculture which averagely accounts for 15 percent of the region's GDP, will inevitably have to expand.³⁶ This expansion puts a lot of pressure on forests and trees, leading to deforestations. This scenario presents a state of dilemma for many communities and governments in SSA at a time when climate variability is intensifying, and food insecurity is persistent. The scenario raises the following questions: - will SSA countries limit agricultural expansion to safeguard forests as carbon sinks? Will decarbonisation be prioritised at the expense of economic development and food security?

Wood is an essential commodity in SSA where 90 percent of it is utilised as an energy source in the form of charcoal and firewood, constituting 70 percent of heating and cooking energy needs.³⁷ As stated above, SSA's population is rising, indicating that energy demands will go up, putting a strain on the remaining forests, potentially posing a severe ecological challenge. Demand for charcoal, in particular, has been going up, although the consumption and production vary per country based on the population

34 FAO. 2017. Sustainable Forestry for Food Security and Nutrition. A Report by the High-Level Panel of Experts on Food Security and Nutrition. *HLPE Report 11*. <http://www.fao.org/cfs/cfs-hlpe>

35 World bank. 2022. Rural population (% of total population) - Sub-Saharan Africa. <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=ZG>

36 OECD. 2016. OECD-FAO Agricultural Outlook 2016-2025: Agriculture in Sub-Saharan Africa: Prospects and challenges for the next decade. OECD/FAO. https://doi.org/10.1787/agr_outlook-2016-5-en

37 FAO 2021. Conference: Sustainable Woodfuel Value Chains in Africa: Governance, Social, Economic and Ecological Dimensions. *FAO Africa*. <https://www.fao.org/africa/events/detail-events/es/c/1445092/>

sizes, connection to the national grid, and availability of alternative cooking methods. In the Congo forest basin, deforestation trends demonstrate an upward trend, same as charcoal production.³⁸ Arguably, the rising trend is not surprising as the population in the Congo basin region is growing. For example, the Democratic Republic of Congo (DRC) was the largest charcoal producer in the region, estimated at 71 percent in 2007 compared to Cameroon at 21 percent.³⁹ Nonetheless, the figures were directly proportional to each country's population, an indication that population increase is a threat to forests and forestry products. Only 9 percent of DRC's population can access electricity, leaving the rest to source fuel for domestic and small-scale businesses from firewood and charcoal.⁴⁰ This trend is worrisome to the sustainability of the Congo forest and its ability to satisfy the ecosystem services and carbon mitigation functions. Thus, solving the problem calls for energy transition, primarily cooking and heating. The choice of cooking and heating energy sources depend on availability, accessibility, cost-effectiveness, and sustainability where wood fuel happens to fulfil most of these factors in many households in developing nations.⁴¹

3.2 Financial Investment and constraint

Decarbonising agriculture and forestry sectors take different angles; the most important aspect is energy transition. Transitioning to renewable energy sources in agriculture is fundamental, although the developing nations, including the SSA region, are financially challenged due to competing

38 Behrendt Hannah, Megevand Carole & Sander Klas. 2013. Deforestation Trends in the Congo Basin Reconciling Economic Growth and Forest Protection. *Working Paper 5 | Wood-based Biomass Energy, World Bank*. <https://documents1.worldbank.org/curated/en/642861468005138886/pdf/779400NWP0P1160ort0FINAL0web00may13.pdf>

39 Ibid

40 Cibemba Angel. 2021. How the Charcoal Industry Threatens DRC's Forests. World Resources Institute. <https://www.wri.org/insights/how-charcoal-industry-threatens-drcs-forests>

41 Malla Sunil and Timilsina R Govinda. 2014. Household Cooking Fuel Choice and Adoption of Improved Cookstoves in Developing Countries: A review. *World Bank, Policy Research Working Paper 6903*. <https://cleancooking.org/binary-data/RESOURCE/file/000/000/376-1.pdf>

priorities to meet, in particular, social and economic needs.⁴² Given that about 600 million people in SSA have no access to electricity, it is likely that energy demands for agriculture will primarily come from carbonised sources.⁴³ Nonetheless, efforts have been made to introduce off-grid solar energy sources to support farming operations in different countries although cost constraints seem to impede the progress. For instance, a 2019 report by the World Bank, International Finance Corporation and Lighting Global assessed the possibility of leveraging solar energy use in SSA and demonstrated the viability of uptake in different agricultural departments; however, the cost estimates are high for an ordinary smallholder farmer.⁴⁴

The report underscores that the scale of uptake of solar-powered machineries is not the same in all countries, defined by the agricultural value and market chains of each country. Comparing uptake of solar-powered irrigation pumps in three countries, uptake is advancing in Kenya; uptake is limited, although the solar pumps are available in Zimbabwe and Cote d'Ivoire has a low uptake.⁴⁵

Lack of tailored funds towards the adoption of renewable energy sources in agri-food systems is also a challenge that inhibits the possibility of decarbonising the agriculture sector in Africa.⁴⁶ Even with external funds, the socio-economic status of SSA countries influence the local and country-level transitional capacity. Decarbonising the forestry sector, for instance,

42 IFAD. 2020. Renewable Energy for Smallholder Agriculture (RESA). *International Fund for Agricultural Development*. <https://www.ifad.org/documents/38714170/41937394/resa.pdf/715e1a75-35df-bafc-f491-7effde867517>

43 World Bank. 2019. (Em)powering Farmers in Africa: Small-scale Solar Lights a Path for Agricultural and Economic Impact. <https://www.worldbank.org/en/news/feature/2019/12/05/small-scale-solar-for-agricultural-and-economic-impact>

44 IFC. 2019. The Market Opportunity for Productive Use Leveraging Solar Energy (PULSE) in Sub-Saharan Africa. *International Finance Corporation*. <https://www.lightingglobal.org/wp-content/uploads/2019/09/PULSE-Report.pdf>

45 Ibid

46 IRENA and FAO. 2021. Renewable energy for agri-food systems – Towards the Sustainable Development Goals and the Paris agreement. *IRENA and FAO, Abu Dhabi and Rome*. <https://doi.org/10.4060/cb7433en>

lies within the financial investment in improving the cooking energy sources at the household, commercial and industrial scopes, including ensuring accessibility, reliability, and cost-effectiveness.⁴⁷ As expensive as it may be to transition, operating at a business as usual scenario, harvesting and exploitation of forest products exacerbate deforestation. The cost of reversing deforestation is hefty, knowing that trees take longer to mature, tending and managing them needs money and expertise; cleaning the air of carbon accumulated due to deforestation is expectedly higher, and the ripple effect is cross-cutting.

Other financial constraints are associated with the acquisition of organic fertilisers. Generally, access to and use of fertilisers in most African countries is low because of high prices.⁴⁸ A working paper by the Food and Agriculture Organisation of the United Nations specifies financial challenges as one of the main inhibitors to fertiliser use in SSA by citing high administrative and transportation cost and lack of favourable credit facilities.⁴⁹ In addition, a report on fertiliser production and consumption in Africa notes the monetary constraint in fertiliser access and usage in Africa, arguing that the fertiliser industry is capital intensive. Still, many financial institutions have a low presence in the grassroots areas.⁵⁰ Even with rural presence, the report says, most banking and credit financing systems have high-interest rates and that market information is often lacking. Although some countries have introduced fertiliser subsidies to ease access and

47 NewClimate Institute. 2021. The Kenyan Cooking Sector - Opportunities for Climate Action and Sustainable Development: GHG mitigation potential, health benefits and wider sustainable development impacts. *International Climate Initiative*. <http://www.ambitiontoaction.net/outputs>

48 Bationo Andre, et al. 2012. *Lessons learned from Long-term Soil Fertility Management Experiments in Africa*. Springer Science & Business Media

49 Druilhe Zoé and Barreiro-Hurlé, Jesús. 2012. Fertilizer subsidies in sub-Saharan Africa. ESA Working paper No. 12-04. Rome, FAO. <https://www.fao.org/3/ap077e/ap077e.pdf>

50 UNECA, AFDB and African Union. 2018. Promotion of Fertilizer Production, Cross-Border Trade and Consumption in Africa. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Study_sponsored_by_UNECA_AFFM_on_promotion_of_fertilizer_production_cross-border_trade_and_consumption_in_Africa.pdf

affordability by all farmers, it is unsustainable and season-based.⁵¹ It is crucial to note that organic fertiliser alone cannot counter Africa's fertiliser shortage to the extent of satisfying increasing agricultural intensification in a climate insecure region with already degraded soils. Thus, organic and inorganic fertilisers are considered not as substitutes but complementary of each, presenting an opportunity for integrated soil fertility management.⁵² This reality opens a window for decarbonising the fertiliser industry in itself; however, it poses several issues around sustainability, cost, and technological capacity. Are countries within SSA ready to commit? Does SSA have the financial muscle?

3.3 Limited Awareness and inadequate technical capacity

With the knowledge that decarbonising agriculture and forestry stem across different socio-economic sectors, building the capacities of all stakeholders from bottom-up and top-down in equal measures should not be overlooked. However, awareness among the small-scale farmers on the existence of renewable energy technologies intended to ease agricultural operations and the merits of adopting these technologies in improving overall production and addressing food security is still low in SSA.⁵³ Accordingly, the use of solar-powered irrigation systems is likely to increase farmer's revenues by more than 15 percent per hectare and reduce operational costs by about 50 percent per hectare in Senegal compared to using diesel-powered systems.⁵⁴

While the cost of installing or acquiring such as solar-powered farm inputs may be relatively high for many smallholder farmers, in the long-term, it is cost-efficient and generates tremendous benefits in agriculture, health, water and education.⁵⁵ With about 40 percent of Africa's population residing in

51 Druilhe Zoé and Barreiro-Hurlé, Jesús. 2012. Fertilizer subsidies in sub-Saharan Africa. ESA Working paper No. 12-04. Rome, FAO.

<https://www.fao.org/3/ap077e/ap077e.pdf>

52 Ibid

53 IRENA and FAO. 2021. Renewable energy for agri-food systems – Towards the Sustainable Development Goals and the Paris agreement. *IRENA and FAO, Abu Dhabi and Rome*. <https://doi.org/10.4060/cb7433en>

54 Ibid

55 IRENA. 2015. Africa 2030: Roadmap for a Renewable Energy Future. *IRENA, Abu Dhabi*. www.irena.org/remap

the rural areas where most of the agricultural production and forests area and the potential for off-grid energy sources is high, enhancing awareness should be a priority to improve the possibility of reducing emissions. This is possible with the presence of local or intermediate personnel with technical knowhow to operate, maintain and repair, for instance, the solar-powered irrigation pumps or milking systems.⁵⁶ In cases where the renewable energy materials are imported and the instructional manual is in a different language; individuals and retailers tend to shy away, where spare parts and repair services are not locally available.⁵⁷ Awareness also means knowing what is good and bad and which technology to invest in so as to break even economically and reduce chances of producing more emissions.

Awareness creation goes beyond availing information to providing different options for citizens to make energy choices and decisions on a need-basis and economic situation, case in point being the cooking and heating options. While more emphasis is on electrification, instituting forest policies and regulations, and demonstrating adverse implications of deforestation, often, adequate information and services on feasible alternative cooking energy options are not emphasised enough in SSA.⁵⁸ Yet, this is an area that could help reduce over-reliance on wood fuel, eventually saving forests and increasing carbon sinks. Biogas production, which could fulfil the lighting and cooking energy needs of many SSA rural households, has not been fully exploited, yet most rural households own at least a cow. The lack of information and technical skills to exploit the biogas potential could be a reason for low uptake. Nonetheless, debates have emerged around the 'greenness' of biogas production; despite this, studies show that it is possible to achieve a negative carbon footprint with proper implementation of combined pathway.⁵⁹ This necessitates increased information dissemination

56 IRENA and FAO. 2021. Renewable energy for agri-food systems – Towards the Sustainable Development Goals and the Paris agreement. *IRENA and FAO, Abu Dhabi and Rome*. <https://doi.org/10.4060/cb7433en>

57 Ibid

58 IRENA. 2015. Africa 2030: Roadmap for a Renewable Energy Future. *IRENA, Abu Dhabi*. www.irena.org/remap

59 EBA. 2020. The contribution of the biogas and biomethane industries to medium-term greenhouse gas reduction targets and climate neutrality by 2050. *European Biogas Association*.

at the rural areas to capacitate the residents exploit biogas in ways that are environmentally friendly and sustainable. Ideally, most biogas installations in Africa are family-sized meant for domestic needs; the bulk of firewood harvesting and charcoal production is in the rural areas.⁶⁰

3.4 Inadequacies in Policies and Institutional frameworks (policy prioritisation)

Policies are integral given the high dependence on forests and farming to meet livelihood needs. Weak and fragmented policies potentially hinder the possibility of achieving net-zero emissions targets by each country. The East African Community recognises that policy constraints such as; weak institutional frameworks, poor governance, inadequate legal procedures; limited access to resources and lower public participation are the forces behind poor performance in the agriculture sector.⁶¹ Countries within SSA are at different stages of economic development. The policies and legal frameworks designed are more often a reflection of the socio-political and economic positions at a given time. One commonality is that agriculture and forest policies are not mainstreamed into the entire development spectrum.

The fact that each country has several overlapping ministries and departments representing interlinking areas such as environment, climate, agriculture, wildlife, energy and forestry is the genesis of policy fragmentation that can hamper decarbonisation processes. The problem of competing policies and institutional tools is evident at the sub-regional level. For example, the Economic Community of West Africa Agricultural Policy (ECOWAP) which was instituted in 2005 to address food security, nutrition and agricultural development, including trade regime in West Africa, faced facing a myriad of challenges that include competing priorities from other frameworks and fragmented coordination weakening the implementation of

https://www.europeanbiogas.eu/wp-content/uploads/2020/04/20200419-Background-paper_final.pdf

60 Kemausuor Francis, Adaramola Muyiwa S and Morken John. 2018. A Review of Commercial Biogas Systems and Lessons for Africa. *Energies*, 11, 2984. <http://dx.doi.org/10.3390/en11112984>

61 EAC. N.d. Constraints and challenges of the EAC Agriculture sector. <https://www.eac.int/agriculture/constraints-and-challenges>

regulatory and sectoral strategies.⁶² Without seamless coordination and agreeing policies across the sub-regional countries, collaborative decarbonising strategies will be nearly impossible.

Following the Paris Climate Agreement, several African countries have submitted their first and updated Nationally Determined Contributions (NDCs); however, their emission targets, mitigation and adaptation strategies vary. For example, Kenya's updated NDC, submitted in December 2020, a framework outlining the climate adaptation and mitigation priorities for the period 2020-2030, gives more emphasis on adaptation strategies than mitigation in the agriculture sector.⁶³ Although the document (Kenya's Updated NDC) mentions several mitigation activities that could ultimately lower greenhouse gases from the agriculture sector, such as efficient livestock management system through the climate-smart agriculture strategy, specific actions and estimates are not indicated. Nonetheless, Kenya's Climate Smart Agriculture strategy 2017-2026 frames practical approaches for emission mitigation in crop production and livestock farming.⁶⁴ On the other hand, Nigeria's updated NDC, submitted in July 2021, presents agriculture, forestry and land use as emission mitigation priority areas and outlines the specific actions and targets for each area.⁶⁵ In principle, the mitigation priorities of Nigeria and Kenya differ because of reasons such as demographic, social and economic standings, which in turn influence the policy angle and proposed national emission abatement targets.

By virtue of the NDCs, it seems that despite working towards a common goal of emissions mitigation, the implementation of regional-binding policies is still at an infancy stage. Besides the fragmentation is the existence of several

62 Crola, Jean Denis. 2015. *Ecowap: A Fragmented Policy*. *Oxfam International*. <https://policy-practice.oxfam.org/resources/ecowap-a-fragmented-policy-development-partners-and-regional-institutions-shoul-582075/>

63 Kenya's Updated nationally Determined Contribution (NDC). 2020. <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>

64 Kenya Climate Smart Agriculture Strategy 2017-2026. https://www.adaptation-undp.org/sites/default/files/resources/kenya_climate_smart_agriculture_strategy.pdf

65 Nigeria's Updated Nationally Determined Contribution (NDC). 2021. <https://www4.unfccc.int/sites/NDCStaging/pages/Party.aspx?party=NGA>

poorly formulated policies and regulations characterised by missing links with policies in other relevant sectors such as land, energy, trade and commerce.⁶⁶ Transforming the agriculture or forestry sector, which includes decarbonisation require consistent policies and regulations with constancy in implementation, an aspect that could be impeded by factors mentioned above.⁶⁷

3.5 Knowledge-Attitude-behaviour gap in low-carbon emissions

The knowledge-attitude-behaviour gap in understanding human perceptions and actions in fostering sustainability and low-carbon emissions is gaining much attention in recent decades. Putting knowledge-attitude-behaviour gap into the emission context, individuals, governments, policy-makers and private sector actors with the data, information, knowledge and capability to shift towards carbon-neutral activities; they manifest positive attitudes towards reducing GHG emissions, but they do not act accordingly.⁶⁸

Looking at the climate-agriculture-forestry-policy nexus in SSA, it is known that climate change occasioned by increasing greenhouse gases released into the atmosphere has adverse impacts on food security and cause desertification, which has led to the formulation of policies and response strategies. Despite this knowledge, techniques and guidelines, little effort is put into action.⁶⁹

66 Hollinger Frank and Staatz John. 2015. Agricultural Growth in West Africa: Market and policy drivers. *African Development Bank and UNFAO*. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Agricultural_Growth_in_West_Africa_-_Market_and_policy_drivers_-_OSAN.pdf

67 Ibid

68 Wyss, Annika M., Daria Knoch, and Sebastian Berger. 2022. When and How Pro-Environmental Attitudes Turn into Behavior: The Role of Costs, Benefits, and Self-Control. *Journal of Environmental Psychology* 79:101748. <https://doi.org/10.1016/j.jenvp.2021.101748>.

69 Averchenkova Alina, Gannon Kate and Patrick Curran. 2019. Governance of climate change policy: A case study of South Africa. Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy. https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2019/06/GRI_Governance-of-climate-change-policy_SA-case-study_policy-report_40pp.pdf

Similarly, exploitation and consumption patterns of forest products indicate knowledge-attitude-behaviour gap. It is common knowledge that over-exploitation of forests and harvesting of trees for wood fuel or timber will result in deforestation and loss of vital carbon sinks, and that controlled exploitation is fundamental, but, often, the latter is ignored.⁷⁰ Also, the value of traditional knowledge systems in forest protection and governance go unnoticed and policing, legal and institutional frameworks are not implemented accordingly. This is despite the understanding that they limit consumption and unnecessary development and infrastructural projects that otherwise undermine the functionality of an ecosystem in most of Africa's forests. In this regard, it is argued that the developmental and environmental budding of forests in Africa is responsible for a significant part of the carbon emissions.⁷¹ The same applies to the intensive use of artificial fertilisers to supplement soil fertility loss and increase crop yields among smallholder and large-scale farmers. To a large extent, it is known to many in SSA that synthetic fertilisers are a source of greenhouse gases; if not well applied, they can pump massive emissions into the atmosphere. Research shows the use of organic fertilisers improves soil fertility by reducing nutrient leaching and increasing crop production.⁷² Even with existing data and knowledge on the significance of traditional farming practices, limited use of organic manure is apparent. Thus, the knowledge-attitude-behaviour gap should be narrowed as quickly as possible as operating on a business-as-usual scenario provides an enabling environment for more emissions from agriculture and forestry sectors, hence, undermining SSA's decarbonisation prospects.⁷³

4.0 Trade-offs

Marching towards low emission comes with requisites that compel individuals, policy-makers, and government leaders to make tough choices.

70 UNEP. 2015. Growing a green economy in Africa: why forests matter. *UN-REDD Programme*. <http://www.unep.org/publications>

71 UNEP. 2015. Growing a green economy in Africa: why forests matter. *UN-REDD Programme*. <http://www.unep.org/publications>

72 Martey, Edward. 2018. Welfare effect of organic fertilizer use in Ghana. *Heliyon* vol. 4,10 e00844. 9

<https://dx.doi.org/10.1016%2Fj.heliyon.2018.e00844>

73 UNEP. 2015. Growing a green economy in Africa: why forests matter. *UN-REDD Programme*. <http://www.unep.org/publications>

Trade-offs are inevitable in decarbonising forestry and agriculture if countries and the world at large are motivated to attain net-zero emissions or keep warming below 1.5 degrees Celsius. Thus, decarbonising the two sectors presents opportunities in SSA. This paper supplies various scenarios such as: transformation in livestock production, crop production strategies and interventions, forest establishment, protection and management, shift to renewable energy technologies and multi-sectoral collaboration as some areas to explore in a quest to reduce greenhouse gas emissions associated with forests and agriculture. The policy, legal frameworks and guidelines elements are introduced at different stages of the discussion.

4.1 Forest Establishment, Protection and Management

Forests as a climate mitigation strategy have been adopted widely in SSA through initiatives at the grassroots and national level led by individuals, civil society organisations, private companies, non-governmental and governmental organisations. Ethiopia, through its generational green legacy initiative, planted over 350 million tree seedlings in 2019 on a single day in the pursuit to increase the country's forest cover and mitigate climate change impacts.⁷⁴ Similarly, in 2019, Kenya launched a tree planting initiative targeting two billion trees by 2022 to meet the national tree cover target of 10 percent as per the 2010 constitution.⁷⁵ Kenya's approach takes different shapes and sizes at ministerial and county government levels. While tree planting has been lauded as an easier way of mitigating emissions, debates have emerged, not only on the sidelines but on mainstreams. For instance, a study that estimated the potential for global tree restoration in carbon sequestration concluded that it was indeed an efficient roadmap to reducing emissions.⁷⁶ The study, however, warns that urgent action is needed lest the globe loses about 223 million hectares of the potential canopy by the mid-

74 UNEP. 2019. Ethiopia plants over 350 million trees in a day, setting new world record. <https://www.unep.org/news-and-stories/story/ethiopia-plants-over-350-million-trees-day-setting-new-world-record>

75 KNA. 2019. Government Plans to Plant 2 Billion Seedlings By 2022. <https://www.kenyanews.go.ke/government-plans-to-plant-2-billion-seedlings-by-2022/>

76 Bastin, Jean-Francois, et al. 2019. The Global Tree Restoration Potential. *Science*, vol. 365, no. 6448, pp. 76–79. DOI.org (Crossref), <https://doi.org/10.1126/science.aax0848>.

twenty-first century. On the other hand, NASA's scientists at Jet propulsion laboratory, while agreeing that forest restoration is significant in mitigating climate change, they hold that tree planting by itself cannot be a subsidiary for lowering fossil-driven emissions.⁷⁷ NASA's Jet Propulsion Laboratory proposes the need to reduce human-induced emissions.⁷⁸

As discussed earlier, the forest area in SSA has been steadily declining from 1990 to 2020 from 33 to 20 percent; hence, planting trees suffices as a much-needed solution to increase the forest cover to the levels stipulated under each country's constitution.⁷⁹ Viability and efficiency of reforestation linger around the following four pointers: how it is done, after-care plans, where they are planted, and the tree type. Therefore, intentional reforestation and afforestation are necessary, keeping in mind that forests are double-edged; trees emit carbon at the same time sequesters.⁸⁰ Africa's landscapes are diverse, from savannah grasslands, woodlands, rainforest to tropical forests; hence, there is no one-fits-all strategy on forest establishment and management.

Ensuring the existing forests satisfy the natural and human needs, working regulatory and management procedures are essential. With the majority of the population in the region depending on forests either directly or indirectly, it is vital to institute and streamline forest policies and synchronising with the agriculture and energy policies and frameworks.⁸¹ Agricultural expansion and wood fuel harvesting are primary drivers of deforestation and forest degradation, where, farming extension is blamed for about 70 percent

77 Buis Alan. 2019. Examining the Viability of Planting Trees to Help Mitigate Climate Change. NASA's Jet Propulsion Laboratory.

<https://climate.nasa.gov/news/2927/examining-the-viability-of-planting-trees-to-help-mitigate-climate-change/>

78 *Ibid*

79 World Bank. 2022b. Forest area (% of land area) - Sub-Saharan Africa. <https://data.worldbank.org/indicator/AG.LND.FRST.ZS?locations=ZG>

80 UNECA. N.d. Carbon Sinks and Sequestration. *United Nations Economic Commission for Europe*. <https://unece.org/forests/carbon-sinks-and-sequestration>

81 Hogarth James, et al. 2015. Report: Low-carbon development in sub-Saharan Africa: 20 cross-sector transitions. *Overseas Development Institute*. ISSN: 2052-7209. <https://cdn.odi.org/media/documents/9878.pdf>

of forest loss in SSA.⁸² Therefore, stringent measures are necessary to caution against illegal activities, ration tree harvesting, and limit agriculture expansion to allow forests perform their duties, without which pose adverse implications on human, biodiversity, and ecosystems. It is a reality that humans cannot survive without trees and forests, but humanity can co-exist with nature in sustainable ways, even better when conditions are drawn.

Forests are at the centre of growing a green economy in Africa, not only for the carbon capture but it is the source of many resources and that it defines the socio-economic livelihoods of the larger population.⁸³ Thus, increasing and safeguarding forests comes at the expense of energy transition, limiting agricultural expansion, channelling more funds for conservation and prohibiting new developments and settlements in forest lands. It also means governments have to provide enabling environments for diversified income sources for the forest-depend individuals such as charcoal businesses, logging, and timber harvesting. As a starting point, enhancing resource efficiency is an avenue to reduce pressure on forests.⁸⁴

4.2 Improving Livestock Production

Looking at the updated NDCs, not all SSA countries have outlined the greenhouse gas mitigation potential from the livestock production sector, yet, it is an area that offers several opportunities to bring down the overall continental emission contribution. Notwithstanding, countries like Nigeria, Rwanda, South Sudan, and Kenya have outlined in their updated NDCs their intention and planned actions to lessen emissions from livestock production through a number of measures such as improved feeding and breeding under short, medium, or long-term scenarios.⁸⁵ Kenya has emphasised efficient livestock production systems. At the same time, South Sudan recognises poor quality animal feeds as the source of emissions. The underlying issue is reducing methane emissions from enteric fermentation. It is important to

82 Ibid

83 UNEP. 2015. Growing a green economy in Africa: why forests matter. *UN-REDD Programme*. <https://wedocs.unep.org/handle/20.500.11822/9775>

84 Ibid

85 UNFCCC. 2022. NDC registry.

<https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>

realise that it is unclear whether traditional, crossbreeds or hybrid livestock breeds emit more methane than the others; however, it is clear that behavioural, physiological and feeding characteristics influence the methane gas produced.⁸⁶ While it might be a hurdle developing common livestock improvement interventions across the SSA, individual countries have the opportunity to develop workable strategies in close consultation with the farmers and research institutions while referring to success cases from neighbouring countries. Because livestock husbandry is a cultural identity to some communities, such as the Maasai of Kenya and Tanzania and Karamoja of Uganda, it might take several interventions to adjust their long-standing livelihood sources. However, government ministries will have to introduce an integrated climate-smart livestock production system that incorporates the traditional livestock practices in part intending to modify and valorise gradually.⁸⁷ This approach needs financial investment, technical expertise, training, research, and applicable policies and governance structures.

4.3 Improving Crop Production Techniques

Crop production is at the core of SSA's development beyond food security. This means it is an area where decarbonisation needs to be explored at length but with caution. What is evident is the low prioritisation of emission mitigation from crop production as compared to the adaptation strategies, as seen in, for instance, the updated NDCs from most of the SSA countries.⁸⁸

Emissions from crop production come from different sources, from land preparation to post-harvest processing, transportation and distribution. While there seems to be a wide window for decarbonisation, there will be a no one-size-fits-all approach due to the cultural, socio-economic, political, and ecological dynamics surrounding food systems in SSA countries. As

86 Fraser, Mariecia, et al. 2014. Traditional vs modern: role of breed type in determining enteric methane emissions from cattle grazing as part of contrasting grassland-based systems. *PloS one* vol. 9,9 e107861. <https://dx.doi.org/10.1371/journal.pone.0107861>

87 Hogarth James, et al. 2015. Report: Low-carbon development in sub-Saharan Africa: 20 cross-sector transitions. *Overseas Development Institute*. ISSN: 2052-7209. <https://cdn.odi.org/media/documents/9878.pdf>

88 UNFCCC. 2022. NDC registry.

<https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>

discussed earlier, agricultural expansion (includes other forms of agriculture) is attributed to about 70 percent of forests lost in SSA.⁸⁹ What this means is the urgent need to minimise agricultural activities in existing forests and designated forest lands. This proposition cannot happen without effectively enforced stringent forest policies, consultative and integrated land-use planning, and trained personnel to safeguard the forests.⁹⁰

Increasing crop yield per hectare is preferable instead of opening up new areas. However, this raises concerns as it could motivate the use of artificial fertilisers intensively to compensate for the already degraded soils causing more deleterious effects.⁹¹ A 2-year experimental research to establish the effects of substituting chemical fertilisers with organic manure concluded that with the right quantity, organic manure did enrich not only the soils but also increased crop yields and reduced leaching of nitrogen.⁹² Drawing from this research, there is a potential for promoting a low-emission crop production through the promotion of organic fertilisers. This means investing in research and ensuring farmers, especially smallholders that form the majority in SSA, can easily access and afford organic fertilisers. It also means supplying improved crop seeds that are drought resistant and designing policies that cap fertiliser prices, lowering the cost of organic fertiliser at the expense of chemical fertilisers. Similarly, directing resources towards training and improving the capacities of farmers, in particular those in the rural areas, on composting and on the proportions of animal manure per seed and variety in relation to climate variability and humidity. Other opportunities in reducing emissions from crop production is the implementation of climate-smart agricultural technologies such as

89 Hogarth James, et al. 2015. Report: Low-carbon development in sub-Saharan Africa: 20 cross-sector transitions. *Overseas Development Institute*. ISSN: 2052-7209. <https://cdn.odi.org/media/documents/9878.pdf>

90 Ibid.

91 Geng Yuhui, et al. 2019. Effects of equal chemical fertilizer substitutions with organic manure on yield, dry matter, and nitrogen uptake of spring maize and soil nitrogen distribution. *PLoS one* vol. 14,7 e0219512.

<https://dx.doi.org/10.1371/journal.pone.0219512>

92 Ibid

agroforestry and conservation farming.⁹³ By conservation farming, I refer to reduced or no-tillage, intercropping, contour farming and terracing and halting shifting cultivation and slash and burn methods.⁹⁴

4.4 Expand of Agroforestry Systems Over Conventional Farming

It is argued that agroforestry has a higher potential to sequester carbon compared to conventional farming systems.⁹⁵ Agroforestry, which is the art of growing trees and crops in the same piece of land, is common in SSA and many other developing countries, allowing smallholder farmers to produce food crops while nurturing trees in their small lands. Research estimates that East African smallholder agroforestry farming systems can sequester carbon of about 66 megagrams per hectare over 20 years.⁹⁶ More studies show that there is a significant increase in carbon sequestration in the conversion of agriculture to agroforestry and that it induces a positive effect on soil organic matter.⁹⁷ The essence of agroforestry is offsetting carbon that could otherwise accumulate in the atmosphere when conventional agriculture is being practiced. Due to the land tenure systems and increasing land fragmentation in many SSA countries, agroforestry suffices as an agricultural system that motivates tree growing without pressuring farmers to abandon or reduce their farming activities. Practicing agroforestry is not only a conservation measure but influences a change in land tenure systems

93 Hogarth James, et al. 2015. Report: Low-carbon development in sub-Saharan Africa: 20 cross-sector transitions. *Overseas Development Institute*. ISSN: 2052-7209. <https://cdn.odi.org/media/documents/9878.pdf>

94 FAO. 2022. Conservation Agriculture. <https://www.fao.org/3/cb8350en/cb8350en.pdf>

95 Cole Stephani. 2018. Importance of agroforestry systems in carbon sequestration. *CABI, Forest and Science database*

96 Thangata, P. H., and P. E. Hildebrand. 2012. Carbon Stock and Sequestration Potential of Agroforestry Systems in Smallholder Agroecosystems of Sub-Saharan Africa: Mechanisms for 'Reducing Emissions from Deforestation and Forest Degradation' (REDD+). *Agriculture, Ecosystems & Environment*, vol. 158, Sept. 2012, pp. 172–83. *DOI.org (Crossref)*, <https://doi.org/10.1016/j.agee.2012.06.007>

97 De Stefano, Andrea, and Michael G. Jacobson. 2017. Soil Carbon Sequestration in Agroforestry Systems: A Meta-Analysis." *Agroforestry Systems*. <https://doi.org/10.1007/s10457-017-0147-9>.

to promote land ownership and reduce gender disparities in owning land across SSA.⁹⁸

4.5 Contextualise and Implement REDD+

REDD+ (Reducing emissions from deforestation and forest degradation), which was first introduced in 2005 during the 11th Conference of Parties in Montreal through to the conclusion of negotiations in Bonn in 2015, is an approach SSA countries should capitalise on to safeguard their forests while mitigating carbon emissions.⁹⁹ So far, more than twenty African countries, most of which are in SSA have submitted their REDD+ strategies.¹⁰⁰

REDD+ works based on national strategies or action plans to reduce deforestation and forest destruction; hence, countries estimate the value of their forests in terms of ecosystem services and carbon sequestration potential. Ideally, REDD+ is a whole-rounded emission mitigation strategy that promotes gender considerations, stakeholder consultation and participation, forest governance and land tenure matters during the development and implementation of national strategy.¹⁰¹ Therefore, in SSA, where a significant portion of the population depends on forests directly or indirectly to meet their most basic needs, REDD+, if well implemented, allows local communities and indigenous people to make decisions that promote sustainable exploitation of forests and provide a level grounds for offsetting carbon emissions. Given that REDD+ operates on a voluntary carbon markets basis, it motivates eco-friendly forestry activities that enhance human livelihoods and incentivises habitual changes that could

98 Benjamin Emmanuel, et al. 2021. Interaction between Agroforestry and Women's Land Tenure Security in Sub-Saharan Africa: A Matrilineal Perspective. *Forest Policy and Economics* 133: 102617. <https://doi.org/10.1016/j.forpol.2021.102617>.

99 AFDB and CIF. 2016. REDD+ in Africa: Context, challenges and next steps of REDD+ mechanisms in the continent. *AfDB Knowledge Series*. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/REDD_in_Africa_Context_challenges_and_next_steps_of_REDD_mechanisms_in_the_continent.pdf

100 UNFCCC. 2022. REDD+. <https://redd.unfccc.int/>

101 Ibid

otherwise degrade forests and increase carbon emissions.¹⁰² The diverse and unique benefits generated from sustainable use and management of forests such as cultural heritage preservation, conservation of biodiversity and animal habitats will be enhanced through the carbon finance which supports carbon offsetting activities consequently augmenting social and economic conditions of a given community.

Despite the promising positive indicators of REDD+, it is facing political, legal, technical and socio-economic challenges in Africa.¹⁰³ Limited consultation with local and indigenous communities whose livelihoods entirely depend on forests and inadequate provision of information to facilitate sound decision making are some evident challenges in countries like Kenya.¹⁰⁴ Fragmented forest laws and policies and weak enforcement is also another obstacle likely to thwart the successful implementation of REDD+.¹⁰⁵

4.6 Renewable Energy Technologies and Improved Energy Mix

Energy consumption is at the centre of decarbonising the forestry and agriculture sectors in SSA. Over two-thirds of households in Africa depend on wood fuel for cooking and heating; wood fuel constitutes half of the total

102 IFC. 2016. REDD Market Overview. *International Finance Corporation*. <https://www.ifc.org/wps/wcm/connect/50d40b6d-d088-4c75-87775c3761835f8a/FINAL+REDD+Market+Factsheet+10-17.pdf?MOD=AJPERES&CVID=lxS1-4R>

103 AFDB and CIF. 2016. REDD+ in Africa: Context, challenges and next steps of REDD+ mechanisms in the continent. *AfDB Knowledge Series*. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/REDD_in_Africa__Context__challenges_and_next_steps_of_REDD__mechanisms_in_the_continent.pdf

104 IUCN. 2016. Widening Informed Stakeholder Engagement In REDD+ Engaging Indigenous Peoples in Kenya's National REDD+ Strategy. *IUCN/EAWLS WISE REDD+*. https://www.iucn.org/sites/dev/files/content/documents/8-policy_brief_indigenous_people_and_redd_in_kenya.pdf

105 Korwin Sebastien. 2016. REDD+ and Corruption Risks for Africa's Forests: Case Studies from Cameroon, Ghana, Zambia and Zimbabwe. *Transparency International*. ISBN: 978-3-96076-030-6. https://transparency.eu/wp-content/uploads/2016/10/REDD-CRA-Synthesis-Report_FINAL-TI-EU.pdf

energy consumption in more than twenty countries in SSA.¹⁰⁶ This trend is expected to increase to cater to the growing population and the 9 out of 10 Africans that have no access to electricity but rely on biomass leading to the destruction of more carbon sinks.¹⁰⁷ In addition, burning biomass emits black carbon, which is not only a greenhouse gas but has detrimental implications on human health.¹⁰⁸ Similarly, as discussed in the previous sections, the agricultural sector consumes a lot of energy at different stages of its operations. Therefore, decarbonisation efforts present an opportunity for SSA countries to consider transitioning from fossil fuels to renewable energies. Energy transition is quite cumbersome and expensive to many countries in SSA that lack the technology and expertise to harness wind, solar or geothermal power.

To ensure sustainable agricultural production and increase carbon sinks, African countries will have no choice but to shift their current energy sources and dynamize the energy mix. This means pumping resources to purchase and install renewable energy technologies such as wind and solar power plants and to develop the skills and capacities as well as boost the projects of early-stage innovators.¹⁰⁹ On the other hand, effective energy-agriculture-forest policies that are mainstreamed and complementary of each are

106 Bailis Rob, et al. 2017. Incentivizing sustainable wood energy in sub-Saharan Africa a way forward for policy-makers. FAO.

<https://www.fao.org/documents/card/en/c/39ec4bfa-e593-4a0e-8db5-cddd13c86a47/>

107 Sulaiman, Chindo, et al. 2017. Wood Fuel Consumption, Institutional Quality, and Forest Degradation in Sub-Saharan Africa: Evidence from a Dynamic Panel Framework. *Ecological Indicators*, vol. 74, pp. 414–19. DOI.org (Crossref), <https://doi.org/10.1016/j.ecolind.2016.11.045>.

108 World Bank. 2011. Wood-Based Biomass Energy Development for Sub-Saharan Africa: Issues and Approaches. Energy Sector Management Assistance Program (ESMAP). *World Bank*.

<https://openknowledge.worldbank.org/handle/10986/26149> License: CC BY 3.0 IGO

109 IFC. 2019. The Market Opportunity for Productive Use Leveraging Solar Energy (PULSE) in Sub-Saharan Africa. *International Finance Corporation*. <https://www.lightingglobal.org/wp-content/uploads/2019/09/PULSE-Report.pdf>

necessary, given that it is a challenge that has already been identified in SSA as promoting continued reliance on wood fuel and destruction of forests.¹¹⁰

Thus, it is an apt moment for African governments and policy-makers to intentionally realign the policies to accommodate the decarbonisation component in their short, medium and long-term energy transition and diversification strategies. Crucial to note is that decarbonisation and energy transition bear cost implications that individual countries have to foot.

4.7 Multi-Sectoral Partnerships and Policy Integration

The urgency of climate action cannot be addressed from a siloed angle; multi-sectoral collaboration at local, national, and regional levels is integral to achieving long-term, and sustainable solutions.¹¹¹ Decarbonising agriculture and forestry require huge investments, monetary and non-monetary capital, where co-financing is prudent to ensure effectiveness and swift action.¹¹² This is possible by mainstreaming climate change interventions into different development sectors in each country. In fact, the regional economic communities should be an entry point into establishing and strengthening multi-sectoral and stakeholder collaboration in instituting GHG mitigation approaches. So far, all regional economic communities within SSA have agricultural policies, strategies and frameworks towards food security and climate adaptation and mitigation. More emphasis should go towards national and sub-national multisector collaboration so as to easily mainstream climate policies and contextualise decarbonisation while

110 Bailis Rob, et al. 2017. Incentivizing sustainable wood energy in sub-Saharan Africa a way forward for policy-makers. FAO.

<https://www.fao.org/documents/card/en/c/39ec4bfa-e593-4a0e-8db5-ccdd13c86a47/>

111 World Bank. 2018. Accelerating Climate Resilient and Low Carbon Development: The Africa Climate Business Plan – Third Implementation Progress Report and Forward Look. World Bank, Washington DC. https://openknowledge.worldbank.org/bitstream/handle/10986/30932/WBG_Africa_Low_Carbon.pdf?sequence=4

112 IPCC. 2014. *Agriculture, Forestry and Other Land Use (AFOLU)*. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.

https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter11.pdf

enhancing resilience capacity in as much as the regional partnerships are significant.¹¹³

Through multi-sectoral collaboration, it is straightforward (although paradoxical sometimes) to integrate policies considering that agriculture and forest policies are strongly interrelated.¹¹⁴ IPCC contends that policy interactions can be synergistic or conflicting and proposes a need for adequate forestry and agriculture policies to promote innovativeness and strengthen carbon mitigation actions at national and international levels.¹¹⁵ The World Bank, on the other hand, identifies knowledge gaps and recommends profound systemic shifts that entrench mitigation measures into sectoral and multi-sectoral frameworks.¹¹⁶ Thus, SSA countries can tap into private-public partnerships in mainstreaming agriculture-forestry climate policies to enable decarbonisation investments from grassroots levels to the national and regional arenas.

5.0 Conclusion

In light of this paper's analysis, decarbonising Africa's agriculture and forestry is fundamental and critical towards mitigating climate impacts and ensuring sustainable development in SSA. Decarbonising the two sectors is not the only solution to reach a net-zero emission target. Trade-offs are inevitable; for example, low-emission agriculture comes with cost liabilities

113 World Bank. 2018. Accelerating Climate Resilient and Low Carbon Development: The Africa Climate Business Plan – Third Implementation Progress Report and Forward Look. *World Bank, Washington DC.* https://openknowledge.worldbank.org/bitstream/handle/10986/30932/WBG_Africa_Low_Carbon.pdf?sequence=4

114 IPCC. 2014. *Agriculture, Forestry and Other Land Use (AFOLU)*. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.

https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter11.pdf

115 Ibid

116 World Bank. 2018. Accelerating Climate Resilient and Low Carbon Development: The Africa Climate Business Plan – Third Implementation Progress Report and Forward Look. *World Bank, Washington DC.* https://openknowledge.worldbank.org/bitstream/handle/10986/30932/WBG_Africa_Low_Carbon.pdf?sequence=4

that individual countries have to foot. Increasing forest cover and composition for carbon sequestration also involves limiting developmental activities. However, the resultant effect is positive change with a long-term implication on biological, human livelihood, global temperatures, and landscapes. Arriving at the positive outcome requires a dynamic mix of interventions; integrated policies and regulations, energy transition, expertise, science, data, multi-sectoral collaboration, and integrated land-use planning. Deducing from EAC's acknowledgement that policy constraint is a huge problem in agricultural performance, mainstreaming forestry-agriculture-energy climate policies is essential, without which decarbonisation may be a challenge.

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Neg- Med Model; A Special Tool for Resolving Boko Haram Insurgency in Nigeria

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Abstract

Terrorism is a deadly act that spreads like hurricane if not curtailed. The inception of and the persistent criminal activity of the dreaded group known as Boko Haram has become a concern to the Nigerian government and its citizenry. This article examined the incessant evolution of the dreaded sect, its activities, and the techniques used by the Nigerian government to totally annihilate this canker worm. More so, it revealed that the approaches adopted by Government to tackle this issue have brought little or no success because crucial elements like conflict resolution have not been given optimum attention. This article recommends that the government of Nigeria should, in the quest to mitigate and finally resolve the Boko Haram insurgency, initiate a conflict resolution mechanism other than the use of the military which signifies the application of force against the sect. Negotiation and Mediation will serve as ample solutions to the crisis.

Keywords: *Terrorism, Insurgency, Conflict, Conflict Resolution, Mediation, Negotiation, Boko Haram.*

Introduction

The world of today has become branded with the incessant rise in violent activities which has caused several hazards to different countries and its citizenry.¹ A form of such violent activity is terrorism, which has been known over the years to take a center-stage in global unrests. In certain

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situations, violent crimes such as terrorism can take a domestic or international form, however, in some other situation, this violent crime transit. That is, it develops as a domestic violence, and later evolves into an international concern.

Nigeria has become more famous all over the world for the dreaded activities of a terrorist sect known as the Boko Haram. Terrorism has become a global menace, wherein no country whatsoever is completely absolved from its effect, however unfortunate, terrorism events in one part of the globe has direct or an indirect effect on others. Kydd and Walter² have defined terrorism as actions focusing on harming some people in order to create fear in others by targeting civilians and facilities or system on which civilians rely. Certainly, this definition gives a little insight on the scope of the sect's operation. However, the scope of the operation of the Boko-Haram sect has gone beyond civilian targets including Police and Military establishments.

Boko-Haram sect as a domestic terrorist organization. The challenges posed by Boko-Haram sect on the security of lives and property in Nigeria and the implications on corporate existence of Nigeria as well as its image internationally motivate this study. Nonetheless, what is more important is to seek ways to resolve this conflict between the Nigerian government cum its citizenry as against this terrorist sect. hence, a scheme for conflict resolution that will take into cognizance the interest of both parties and the amicable resolution of disputes.

Conflict resolution can be defined as the informal or formal process that two or more parties use to find a peaceful solution to their dispute.³

² Kydd A.H., and Walter B.F., "The Strategies of Terrorism", *International Security* (2006) , Vol. 31, No. 1. Pp. 49-80. <http://www.jstor.org/stable/4137539>. Accessed October 18, 2020.

³Katie Shonk, 'What is Conflict Resolution, and How Does It Work? How to manage conflict at work through conflict resolution' (DECEMBER 28TH, 2021) <<https://www.pon.harvard.edu/daily/conflict-resolution/what-is-conflict-resolution-and-how-does-it-work/>> Accessed October 20, 2020.

Oftentimes, conflict resolution aim at finding the win-win solution, or mutually satisfying standpoint for everyone involved⁴. Nonetheless, achieving such compromise can be very difficult. According to Prof. Ngozi *et all*⁵, there are a series of strategies of conflict resolution which are arbitration, adjudication, mediation, negotiation, conflict suppression, conflict management, traditional approach, realism, and their importance cum effectiveness cannot be overemphasized. In this light, Hayes⁶ contended that those who oppose terrorism should endeavor to engage in a broader set of dispute resolution strategies to ascertain the one workable and thus use it.

Hence, as an objective, this paper examines the use of Neg-Med, a hybrid ADR mechanism which signifies Negotiation and Mediation, and how both mechanisms can be instrumental in the resolution of Boko Haram insurgency.⁷

Concept of Negotiation

The concept of negotiation is a well-known phenomenon, the oldest and possibly the most common of diverse methods of dispute resolution. Often, in any relationship, when it is noticed that deterioration becomes obvious, as long as the parties are still communicating, the circumstance can be mitigated to avoid a full-blown dispute between the parties. However, it should be noted that even in the course of the dispute, often serious efforts can be made

⁴ Ury, F. & Rodger F., “Getting a yes: Negotiating agreement without giving in”, (New York: Penguin Group.1981). Accessed October 18, 2020.

⁵ Prof Ngozi .G. E., Nwankwo, I.U., & Alichie, B.O., “Curbing Boko Haram Terrorist Insurgency in Nigeria:Imperatives of Quadruple Action Package of Limited Military Response, Improved Social Services, Conflict Resolution Initiatives and Modified Pacifism”, *British Journal of Arts and Social Sciences* (2015) Vol.20 No.I. <http://www.bjournal.co.uk/BJASS.aspx>. Accessed October 18, 2020.

⁶ Ben Hayes, ‘Counter-terrorism, ‘policy laundering’ and the FATF: legalising surveillance, regulating civil society’
<<https://www.statewatch.org/media/documents/analyses/no-171-fafp-report.pdf>>
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⁷ Hayes, R.E., Kaminski, S.R., and Beres, S.M., ‘Negotiating the non-negotiable: Dealing with absolute terrorists’, *International Negotiation* (2003), 8, 9-74. <https://books.google.com.ng/books?isbn=1446206599>. Accessed October 24, 2020.

to resolve such disputes. This effort that's the form of negotiation, which involves talking to each other.

Negotiation is an instrumental tool for structural commercial agreement, resolving conflicts, managing operational problems as well as social relationships. In the words of John Fitzgerald Kennedy, the former President of the United State of America once stated that:⁸

“let us negotiate out of fear, but let us never fear to negotiate”⁹

More so, according to Fisher in his broad definition of Negotiation, the term is defined:

“as including all cases in which two or more parties are communicating, each for the purpose of influencing the other's decision. Nothing seems to be gained by limiting the concept to formal negotiation taking place at a table, and much to be gained by defining the subject broadly”¹⁰

More so, Black's Law Dictionary¹¹ defines the term as:

“A consensual bargaining process in which the parties attempt to reach agreement on a disputed or potentially disputed matter”

⁸ USA President from 1961-1963

⁹ Fitzgerald Kennedy's inaugural address January 20, 1961, <http://www.bartleby.com/124/pres56.html>.

¹⁰ Roger F., 'Negotiating power: Getting and using influence' in J.W. Breslin J.Z Rubin (Eds.) *Negotiation theory and practice*, the program on negotiation at Harvard Law school, Cambridge, Massachusetts at pp. 127 – 128.

¹¹ Garner, B. *Black's Law Dictionary*, 5th edition, USA: West Publishing (1979).

It is very expedient that one understands that every day of our lives are lived in negotiation, yet, this is hardly realized without conscious attention being paid thereto. However, at a more formal level, the concept of Negotiation as an Alternative Dispute Resolution mechanism is more stringent as it is well regulated and formalized.

Furthermore, Negotiation is also described as a voluntary unstructured and usually private process by which parties to a dispute can reach a mutual courteous agreement for the resolution of their divergence. However, it is a non-formal dispute resolution mechanism wherein disputants have firm and total control of the entire arrangement. The success or failure of this process, more often, is dependent entirely on the disputants themselves since the process offers an opportunity for them to talk one on one basis. Under Negotiation, the absence of a third-party facilitator is a common feature.

Disputants personally present their case, marshal arguments and lead evidence. The entirety of the foregoing attributes of this procedure of dispute resolution can be summed up in regarding Negotiation as the fastest, least expensive, most private, least complicated and most party-control oriented process¹² negotiation takes a problem-solving approach rather than an adversarial one. Negotiation typically takes place during the early stages of conflict when communication between parties is cordial and good or at the de-escalation point when communication has been restored¹³

Under negotiation, there are several theories that have evolved over the years for the utilization and adoption of the process of negotiation. To start with, every negotiation need familiarize himself/herself with two major strategies that come to play in all negotiation sessions. They are:

¹² Ibid. at p.19

¹³ Chikwe, 2011 in *Sacha Journal of policy and strategic studies* , volume 1 no 2 (2011). Pp. 64-73. <http://www.sachajournals.com/user/image/kennedy002.pdf>.

- Integrative or Problem-solving Approach:

This approach is one applied when disputing parties have a tendency to engage in future dealings. Precisely, this approach is also referred to as the problem-solving approach or problem-solving orientated. Under this approach, a dispute resolution mechanism in which both sides seek a solution that best meets and suits their interests from the outset¹⁴. Furthermore, this approach takes into consideration the interests of all the parties to a dispute. It is also the believe that regardless of the fact that the interests of the disputants may be divergent, yet they are reconcilable, and in so doing, necessary expansions can be made where necessary to accommodate the interests of both parties.¹⁵ According to Dele Peters:

“to achieve this goal, all parties to a dispute see themselves as collaborative problem-solvers. They separate themselves from the problem to which they are seeking solution and thus endeavor to create many options as possible for their mutual gains and benefits. This is achieved by focusing on their interests rather than their positions.”

With this approach, the goal is at making the interests of disputants maximized, hence, setting aside their individual–self from the contentious issue, thus exploring various options to achieve their mutual benefits. This has been described as a *win-win* approach because upon the resolution of the conflict, the parties thereto would not have lost anything, rather both parties will be at the benefiting side, hence, putting the interest of disputants first¹⁶. On the other hand, the Distributive or competitive Approach is a direct opposite.

¹⁴ Dele P., ‘Alternative Dispute Resolution (ADR) in Nigeria; Principles and Practice’, (Lagos; Dee-Sage Nigeria Ltd 2004). Pp. 69-96.

¹⁵ Ibid.

¹⁶ Roger F., Wiliam U., and Paton B., ‘Getting to Yes: Negotiating Agreement without giving in’, 2nd Ed. New York: Penguin Books 1991.

- Distributive or positional approach:

This approach has been known as the distributive model by which the parties distribute, between themselves, the substances over which they are bargaining. This approach encourages hard bargaining between opponents. In this light, instigating a form of contest in which there will be a winner and a loser. In order to win, a bargainer is inclined to be skilled, powerful, and tough in maximizing his self-interest.¹⁷ In addition, this approach has also been referred to as Positional¹⁸ and contending bargaining¹⁹. The competitive approach is not a particularly worthy approach as the approach possess a hostile and confrontational approach and response.²⁰ Herein, the application of this approach results in a win-lose result wherein both parties take diverse positions and through negotiating attempt to get the opposing party to agree to such position. This leads to hard bargaining, and even damage to relationships.

Concept of Mediation

Mediation is that process which employs an impartial person(s) to facilitate negotiation between the parties to a dispute in an effort to reach a mutually accepted resolution. In an event wherein parties to a dispute are incapable of resolving their difference through self-effort, hence, there is a need to explore other means for resolution of such a dispute. One of such other means of dispute settlement where negotiation fails is mediation.

If in the course of a dispute either of the parties or even both of them seek the assistance of a third party to guide them towards reaching an amicable resolution of the dispute. In this regard, the third party is not to make any decision for the parties, rather, the third party is to serve as a facilitator and

¹⁷ Dele P., 'Alternative Dispute Resolution (ADR) in Nigeria; Principles and Practice', (Lagos; Dee-Sage Nigeria Ltd 2004). Pp. 77.

¹⁸ Dean P., "Strategic Choice in Negotiation," in *Negotiation Theory and Practice*, eds. J. William Breslin and Jeffery Z. Rubin, (Cambridge: The Program on Negotiation at Harvard Law School, 1991), pp.27-46.

¹⁹ Roger F. and Ury. W., 'Getting to Yes: Negotiating agreement without giving in', (Boston: Houghton-Mifflin, 1981).

²⁰ Dele P., 'Alternative Dispute Resolution (ADR) in Nigeria; Principles and Practice', (Lagos; Dee-Sage Nigeria Ltd 2004). Pp. 78.

an intermediary between the disputants, this is known as Mediation²¹. Hence, what is mediation?

Mediation has been referred to as negotiation carried out with the assistance of a neutral third-party at the instance of the parties.²² More so, it is a voluntary process that offers disputants meaningful and creative solution at a fraction of the cost of litigation.²³ In addition, mediation has been described as a structured process in which a third-party neutral called *mediator* assists disputants to reach a negotiated settlement of their difference²⁴. Dele Peter has endeavored to expatiate on the concept of mediation. He posited that:

“Apart from being a structured process, Mediation is as well as a facilitative process that attempts to overcome all barriers to successful negotiation. Thus, when disputants are unsuccessful in the process of utilizing negotiation as a method to resolve the dispute and are not too disposed to any of the adversarial procedures, the proper step to take is to call in the intervention of a neutral third party to guide them to a mediated settlement. We must stress that the role of the neutral third party in Mediation is neither akin to that of a Judge in Judicial proceedings nor to that of an Arbitrator in arbitration. A mediator is impartial, trained and experienced in the mediation process and by definition has no decision-making authority. A mediator is neither a Judge nor an Arbitrator, both of which render formal binding decisions for disputants instead of the disputants deciding matters for themselves. Rather a mediator essentially facilitates continuation of negotiations by the parties, guides and assists them towards a successful negotiation and hence, resolution of all impasse encountered in the course of negotiation. The

²¹ Ibid.97.

²² Ibid

²³ Ibid

²⁴ Kanowitz, L., “Cases and materials on alternative dispute resolution”, (St. Paul, MN: West Publishing Co). P. 29.

absence of decision power by a mediator has often made a mediator to be referred to as being without 'teeth' ”²⁵

Mediation has a special merit when parties have ongoing relations that must continue after the dispute is managed, since the agreement is by consent and none of the parties should have reasons to feel they are losers. However, mediation creates a foundation for resuming the relation after the particular issue has been resolved. While mediation cannot guarantee specific results, there are trends that are characteristics of mediation. Some of such benefits of mediation are:

“flexibility, informality, confidentiality, non-binding nature, savings on resources, maintenance of parties’ relationship”

Boko Haram Insurgency in Nigeria

Boko Haram insurgency has continued to pose a serious threat to Nigeria’s security system and corporate political entity²⁶. The Origin of the terrorist sect known as Boko Haram and the subsequent outbreak of terrorism in Nigeria can be traced to Boko Haram as it is a dreaded Islamic sect known as “Jama’atul Alhul Sunnah Lidda’ Wat, Wal Jihad” which means a group committed to the propagation of Prophet Muhammed’s teachings and Jihad²⁷. Be that as it may, it should be noted that the literal meaning or interpretation of the term Boko Haram is “*Western education is forbidden*”, and this sect has sponsored this belief for a long period of time as the reasons for its violent act. Although the origin of this sect is filled with uncertainty,

²⁵ Dele P., ‘Alternative Dispute Resolution (ADR) in Nigeria; Principles and Practice’, (Lagos; Dee-Sage Nigeria Ltd 2004). Pp. 98

²⁶ Salisu S.S., Mohd A.S., and Abdullahi Y. S., “The Impact of Boko Haram Insurgency on Nigerian National Security”, *International Journal of Academic Research in Business and Social Sciences* (2015) Vol. 5, No. 6. <http://dx.doi.org/10.6007/IJARBS/v5-i6/1676>. Accessed October 18, 2020.

²⁷ Muraina M. B., Uyanga U.D., and Muraina K. O., “Historical Antecedents of Boko Haram Insurgency and Its Implications for Sustainable and Educational Development in North Central Nigeria”, *Journal of Education and Practice* (2014) Vol.5, No.22. www.iiste.org ISSN 2222-1735. Accessed October 18, 2020.

yet some authors have tried to trace this origin to 1995 with Lawan Abubakar as its founder. On the other hand, others traced the founder of this sect to Shehu Sanni, a civil right activist in the Northern Nigeria. Be that as it may, the Boko Haram Movement founded by Ustadh Muhammed Yusuf in the North- Eastern part of Nigeria is officially recognized by its members as Jama'at Ahlis-sunnah Lid-Da'wat wal Jihad, which means 'people committed to the propagation of the Prophet's teachings and Jihad', meanwhile, the Hausa appellation Boko Haram suggests the ideology that forbids western education and any culture that is western in nature, hence, the advocacy for the abolition of democratic governance and any man-made laws.

This seemingly harmless ideology of the sect went rouge, i.e. had a terrorist outlook, in 2009 when the leader of the sect was later found dead having been taken by security forces. From that time till date, Nigeria has continuously felt the devilish impact of this deadly group which has enveloped the Nigerian community with acute and unquantifiable fears for the sect and the uncertainty of their next line of action. In pursuit of their ideology, the sect have taken into arson, bombing, shooting, stabbing with disdain and liberty while targeting important national events, public institutions, markets and sometimes Christian places of worship and Christian festivals and most recently the mosques.²⁸ More so, the sect have become more indulged in the indiscriminate killing of people regardless of Economic statutes, age grade, sex, race or locality. It is incontrovertible to assert that the Boko Haram insurgency is a war against the Nigerian nation. Since 2009, Boko Haram has constituted a grave security threat in the Northern part of Nigeria. Its terror crusade took a very disturbing dimension since 2010 and has persisted through till date. However, until June 16, 2011, the onslaught was restricted to the North - East geo-political zone. The first attack outside the zone was the bombing of the Nigeria Police Headquarters in Abuja. This attack was prompted by the statement altered by Hafiz Ringim, who threatened to smoke Boko Haram out in a press statement on his duty tour to Maiduguri where the sect launched an attack, while he was

²⁸ Ibid

the Inspector General of Police. A subsequent attack was orchestrated by the sect wherein they bombed the United Nation House, also in Abuja on August 26, 2011²⁹. Some other ugly attacks of this sect includes:

The Yobe State Attack on Potiskum, Yobe State Divisional Police Headquarters, where three Policemen and one fire service officer died on July 2009; the May 30 2011 incident in Borno State, where bombs exploded early morning on Baga road in Maiduguri, Borno State, 13 dead and 40 injured; June 16 2011 in Borno State, four children killed in a bomb blast at Damboa town, Maiduguri, Borno State; The sect also engages in kidnapping of foreigners, and the recent tactics of kidnapping women. The group kidnapped more than 250 school girls in Chibok town of Borno state, although recently a couple of the girls were released³⁰. These and many other attacks have been perpetrated by this terrorist sect for no justified or justifiable reasons.

Table showing the trend of Boko Haram attacks in Nigeria.³¹

S/N	Date	Incident	Effect
1	July 26–29, 2009	2009 Boko Haram Uprising marking the Beginning of the insurgency in northern Nigeria.	Nearly 1,000 people were killed in clashes between Boko Haram Militant and Nigerian Soldier
2	July 30,2009	Execution Of Muhammed Yusuf, Spiritual	Abubakar Shekau takes control of the group

²⁹ Ibid

³⁰Chibok girls recount ordeal as they reunite with parents.

<<http://punchng.com/chibok-girls-recount-ordeal-reunite-parents/>>. Accessed October 18, 2020

³¹Solomon Elusoji , ‘Twelve Years of Terror: A Timeline Of The Boko Haram Insurgency’ (July 24, 2021) <<https://www.channelstv.com/2021/07/24/twelve-years-of-terror-a-timeline-of-the-boko-haram-insurgency/>> Accessed 10 March 2022.

		Leader of Boko Haram by Nigerian soldiers following the recent uprising	
3	September7,2010	Bauchi prison break	5 people were killed and 721 inmates freed from Bauchi prison
4	October 11,2010	Bomb Attack on Maiduguri Police Station	The police station was destroyed and three person injured
5	December31,2010	Attack at Mammy Market at Army Mogadishu Barracks, Abuja	11 people died
6	May 29,2011	Bomb explosion in Abuja and Bauchi (during Goodluck Jonathan's swearing in as new President	15 people killed
7	June 16,2011	Failed Abuja police Headquarters Bombing (Nigeria's first instance of suicide Bombing)	2 people died (the suicide Bomber and a traffic policemen
8	August 4,2011	Damaturu Attacks	Between 100 to 150 people were killed
9	December2223,2011	Boko Haram and Nigerian Army	68 people, of whom are 50 militants, at least 7

		clashes in Maiduguri and Damaturu	soldiers and 4 civilians were killed
10	December25,2011	Bombing of St. Theresa’s Catholic church, Madalla	46 people killed
11	January 21,2012	Kano multiple bombs blast	185 people feared dead
12	April 29,2012	Attack Bayero University, Kano	13 Christian worshipers, 1nonteaching staff and 2 Professors were killed
13	June 17,2012	Kaduna church Bombings	19 people were killed
14	August 7,2012	Deeper Life church shooting	19 church members killed
15	December25,2012	Maiduguri and Potiskum church shootings	27 Christians were killed
16	January1,2013	Nigerian Army Raid on Boko Haram	13 militants were killed
17	March 18,2013	Kano Bus Bombing	Between 22 and 65 people were killed.
18	April 16,2013	Baga Massacre (Borno state)	187 people were killed
19	July 6,2013	Yobe state school shooting	Over 42 persons were killed
20	August 12,2013	Attacks on Maiduguri Mosque	56 people killed
21	September12,2013	Ambush by Boko Haram	40 soldiers died.

22	September 12-18, 2013	Nigeria Army offensive against Boko Haram sect	150 militants and 16 soldiers died
23	September 19, 2013	Benisheik Attacks by Boko Haram	16 people were killed
24	September 29, 2013	Guiba College Massacre (Yobe state)	Over 50 students were killed
25	October 2013	Government force Raid on rebel	101 Boko Haram fighters were killed
26	October 29, 2013	Raids on Damaturu	At least 128 people were killed (95 militants, 23 soldiers, 8 policemen and 2 civilians)
27	January 26, 2014	Northern Nigeria Attacks by Boko Haram	138 killed in total
28	February 14, 2014	Borno massacre in konduga	121 Christian villagers were killed
29	February 15, 2014	Izghe attack by Boko Haram	106 persons killed
30	February 25, 2014	Federal Government College Attack by Boko Haram in Yobe state	students were killed some through throat slitting by militants
31	March 14, 2014	Attack on Giwa Military Barracks in Maiduguri	Boko Haram Detainees were freed from a detention facility and recaptured detainees were

			executed by the military
32	April 14,2014	Abuja twin Bombing Attack	Over 88 people were killed
33	April 15,2014	Chibok School Girls kidnapping (Borno state)	276 female students were kidnapped by Boko Haram
34	May 1,2014	Abuja Car bombing	19 people killed
35	May 5,2014	Gamboru Ngala Attack (Borno State)	(Borno State) At least 300 people were killed
36	May 20,2014	Jos Car Bombings	At least 118 Villagers were killed
37	May 27,2014	Buni Yadi Attack (Yobe State)	49 security personnel and 9 civilians were killed
38	June 1,2014	Mubi Bombing (Adamawa State)	40 people were killed
39	June 2,2014	Gwoza Massacre	At least 200, mostly Christians were killed in several villages in Borno State.
40	June 20-23,2014	Borno State Attacks	70 people were killed and 91 women and children kidnapped by militants
41	June 23-25,2014	Central Nigeria (Middle Belt) Attack	About 171 people were killed in series of attacks in the middle Belt of Nigeria
42	July 26,2014	Nigerian Military Raid on	Over 100 Militant were killed

		Boko Haram camps	
43	November28,2014	Kano Bombing and Gun Attacks	At Least 120 Muslim followers of the Emir of Kano, Muhammed Sanusi II were killed during a Suicide bombing and gun attack by Boko Haram. The Four gunmen were subsequently killed By an angry mob
44	December13,2014	Gumsuri Kidnappings (Borno State)	About 35persons were killed, while about 185 persons were kidnapped
45	December 28-29, 2014	Failed Boko Haram offensive into Cameroon’s far North Region	85 civilians, 94 militants and 2 Cameroonian soldiers were killed
46	January3-7, 2015	Baga massacre and Raze	Militants razed the entire town of Baga in North-East? Nigeria. At least 2,000 were killed. Boko Haram then controlled 70% of Borno State. The worst affected by the insurgency.
47	January 9, 2015	Refugees flight from Baga, Borno State	7,300 Refugees flee to neighbouring Chad, while over 1,000 were trapped in the land of Kangala in lake Chad

			(following the Boko Haram Massacre in Baga)
48	January 12, 2015	Failed Kolofata Raid in Cameroon	The Cameroonian Military claimed the army lost one officer, while the Boko Haram group lost between 143300 rebels
49	January 18, 2015	Attacks on Villages in North Cameroon by Boko Haram	80 people kidnapped and 3 others killed by Boko Haram
50	January 25, 2015	Offensive against Nigerian Forces in Maiduguri	8 civilians, about 53 Militants and unknown numbers of Soldiers died Rebels captured the nearby strategic town of Monguno
51	January 29, 2015	Recapture of Border town of Michika by Nigerian Military in collaboration with Chadian Soldiers	Michika recaptured from the Rebels
52	January 31st, 2015	African Union Pledged to send 7,500 International Soldiers to Nigerian and Fighting in	Chadian Forces Claimed to have killed 120 Boko Haram fighters while they lost 3 Soldier

53	February 6, 2015	North of Cameroon Niger Raid by Boko Haram on Bosso and Diffa towns	It marked the first time the Boko Haram attacked the country. The Chadian Military assisted the Nigerien Armed Forces to repel the attack. 5 Nigerien were killed while the government claimed to kill 109 militants
54	February 12, 2015	Invasion of Sambisa Forest, Borno State (Boko Haram Stronghold) by West African Allied Forces of Nigeria, Cameroon, Chad and Niger	Undisclosed number of scores of insurgents were killed
55	February 13, 2015	Ngouboua, Chad Attack (after 30 insurgents crossed lake Chad in 4 Motor Boats)	The first attack on Chad by Boko Haram
56	February 21, 2015	Recapture of Baga by Nigerien Army	Baga which had fallen to Boko Haram on January 3rd was recaptured by Nigerien Army
57	February 24, 2015	Chadian Boko Haram Rebels	Over 200 Boko Haram Fighters were killed,

		clash near Garambu	one Chadian Soldier lost and nine others wounded
58	March 9 & 18, 2015	Recapture of Malam Fatouri and Damasak (North East Nigeria) by Chadian and Nigerien Forces	Insurgents dislodged from Fatouri and Damasak while Chadian and Nigerien Forces retook the towns
59	April 24, 2015	Sambisa Forest last area controlled in Nigeria by Boko Haram Forces	Intensive efforts are still mounted to dislodge the militants and take over the area.
60	June 16, 2015	Twin Suicide Bomb Attacks in Chad Capital targeted at Police Headquarters and Police Academy	24 people killed and more than 100 wounded in N’Djamena blamed on Boko Haram Jihadists
61	June 22, 2015	Maiduguri Mosque Bombing by 2 female suicide bombers	30 killed at crowded mosque as Boko Haram marked the start of Ramadan by targeting a mosque that they saw as falling short in following ‘the Prophet

62	July 1-2, 2015	Multiple Mosque Massacres	48 persons killed on the 1st at one mosque in Kakawa and 17 wounded in the attacks. 97 others mostly men were killed in numerous mosques on the 2nd July 2015 with a number of women and young girls killed in their homes, while unknown numbers were wounded
63	July 5, 2015	A suicide bomber attacks a church in the Potiskum area of Nigeria's Yobe State	killing five
64	July 6, 2015	Jos Bomb attack	At least 44 persons were killed
65	November 17, 2015	A blast in the northeastern Nigerian city of Yola on Tuesday night tore through a marketplace	killing 32 people and wounding 80 others
66	January 27/28, 2016	Weekend rampage with a total death toll of at least 65	Residents say the death toll was even higher, with as many as 100 dead

		people and twice that number injured. Affected areas were various villages in Dalori and outskirts of Maiduguri, the capital of Borno Province.	
67	February, 2016	Joint operation carried out by Cameroon's army and Nigerian Army	At least 92 militants were killed and over 850 villagers were freed in the Nigerian village of Kumshe which is close the border with Cameroon
68	March 16, 2016	Three female suicide bombers	killed 22 people and injured 18 in Umarari Village, on the outskirts of Maiduguri , Borno State
69	June 26, 2016	The Nigerian army claimed they had rescued 5,000 people, mostly women and children, from four remote villages in north east Borno state (Zangebe, Maiwa, Algaiti and Mainar) and killed six Boko	

- 70 August 19, 2016 Haram fighters. A civilian JTF member was also killed. The army also claimed to have killed two more Boko Haram fighters in operations at 11 other villages. The Nigerian military claimed Abubakar Shekau (leader of Boko Haram) was fatally wounded and about 300 militants including three senior Boko Haram commanders (Abubakar Mubi, Malam Nuhu and Malam Hamman) killed in an air raid on the village of Taya in Borno State.
- 71 August 21, 2016 A Boko Haram attack on a Women were raped and 11 people dead

		village called Kuburvwa (between Chibok and Damboa , Borno State)	
72	September 14, 2016	clashes near the village of Toumour in Niger's southeast Diffa Region	At least 30 Boko Haram militants and 5 Niger Armed Forces soldiers are killed
73	September 17	Chad and Nigeria soldiers killed at least 38 insurgents from terrorist group Boko Haram in Niger. 2 soldiers were also injured in the operation	
74	October 13, 2016	Release of 21 Chibok girls	
75	October 24, 2016	Suicide bombing in Cameroon	2 Suicide bombers killed three people in Cameroon
76	October 29, 2016	Suicide Bombing	2 Suicide bombers killed at least eight people in Maiduguri
77	November 1, 2016	Car bomb	Nine civilians killed when a car bomb exploded near a military checkpoint in Gubio, Northern Nigeria

78	November 8, 2016	Bomb Explosion	4 deaths and 6 injured persons were recorded after 2 suicide bombers exploded an improvised explosive in Maiduguri.
79	November 8, 2016	Communal attacks	Two civilians were killed, three soldiers injured and 100 houses set on fire by Boko Haram fighters on their raid on a village in Far North Cameroon
80	November 18, 2016	Multiple bomb blasts	Death of 6 persons and many injured in multiple bomb blasts
81	December 9, 2016	Madagali Suicide Bombings	2 explosions in Madagali town left 57 person killed and 177 injured.
82	January 23, 2017	Village invasion	Insurgents invade a village, killed eight people and abducted an unknown number of women and children
83	January 30, 2017	Killings by insurgents	Fifteen people were killed by Boko Haram militants in Maiduguri. One dead and three others injured in Boko Haram attack in Fotokol

84	February 11, 2017	Insurgents ambush and invasion	7 soldiers were killed, 19 injured and a village invaded and set ablaze by Boko Haram insurgents in Borno State.
85	March 30, 2017	Kidnap and abduction	Insurgents abducts 22 girls and women in separate raids in North East Nigeria
86	May 5, 2017	Attack on Military	Nine Chadian soldiers killed in a Boko Haram attack on an army post in the Lake Chad region. Some 40 Boko Haram militants were also killed as the army responded to the attack on the Kaiga post, sources said. Five people are dead in northeast Nigeria in Maiduguri in an attack by two female suicide bombers
87	May 20, 2017	Insurgents attack	At least 7 people dead and more than 40 injured from gunshots in separate attacks by Boko haram militant group rampaging within recently liberated Borno communities

88	June 8, 2017	Insurgents stage multiple attacks	At least fourteen persons killed and 24 injured as Boko Haram suicide bombers staged multiple attacks targeting mosques where Muslim worshippers were praying. The attack occurred while soldiers were trying to repel another group of Boko Haram fighters, who were trying to invade the city
89	July 11, 2017	Public execution and village attacks	Boko Haram have publicly executed eight villagers in northeast Nigeria who opposed the enforcement of its hardline form of Islam. Four Boko Haram suicide bombers killed 19 people and injured 23 in the northeast Nigerian city of Maiduguri
90	July 29, 2017	Suicide Bombing	14 people were killed and 15 others were injured when two suicide bombers blew up themselves in Dikwa, Nigeria

91	August 7, 2017	Insurgents raid fishing community	At least 31 fishermen were killed by Boko Haram jihadists in two separate attacks on islands in Lake Chad in northeastern Nigeria.
92	August 15, 2017	Suicide Bombing	A woman bomber blew herself up and killed 27 others at a market in the village of Konduga near Maiduguri.
93	August 23, 2017	Fresh Boko Haram attacks in Borno State	A least four people died and eight others were injured when two terrorists attacked Maiduguri. Boko Haram extremists killed at least 27 people by shooting them and slitting their throats as they attacked several villages in northern Nigeria's Borno state
94	September 3, 2017	Attack on IDP camp	Boko Haram insurgents attacked an IDP camp in Borno State, killing eleven people and injuring three persons while also kidnapping four before fleeing. The attackers used swords

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| | | | and sharp knives to carry out the acts. |
| 95 | September 18, 2017 | Attack on village in Borno State | At least 15 people have been killed and 43 others injured in a suicide attack on Mashimari village in Borno state. |
| 96 | October 22, 2017 | Suicide Bomber | A suicide bomber kills 13 people and injures five others in the northeast Nigerian city of Maiduguri. According to the police, 13 more civilians were injured in separate attacks |
| 97 | October 30, 2017 | Separate Insurgents attacks and suicide bombing | 11 civilians were killed by Boko Haram terrorists in Kolofata, Cameroon. Five civilians were killed and several other were Boko Haram terrorist blew himself up in a mosque in Maiduguri, Nigeria. Four people, including a mother and her two children, were killed and nine others were injured when a vehicle hit a mine planted by Boko Haram terrorists in Banki, Nigeria. |

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| 98 | November 21, 2017 | 2017 Mubi Bombing | 50 people were killed in a suicide attack in the north of Nigeria caused by Boko Haram militants. |
| 99 | December 2, 2017 | Twin Suicide Bombing | Fifteen persons were killed and 53 others injured in twin suicide bomb attacks in a market in Borno State . |
| 100 | December 30, 2017 | Insurgents raids village | Boko Haram fighters opened fire on a group of loggers in a remote village in northeast Nigeria, killing 25 people. The gunmen also burned three vehicles laden with firewood heading to Maiduguri. |
| 101 | January 8, 2018 | Insurgents Open Fire on Civilians | At least one civilian was killed in an attack by members of the terror group Boko Haram in Cameroon's Far North region. Gunmen on motorbikes opened fire on a group of loggers collecting firewood at Kaje village, near the Borno state capital, Maiduguri. 20 People were killed in the attack and 15 others |

			are missing and presumed kidnapped by the attackers.
102	January 17, 2020	Insurgents attack in North and South eastern region of Nigeria	Two suspected Boko Haram suicide bombers killed 12 people and injured 65 others in an attack in the north eastern Nigerian city of Maiduguri. Suspected Boko Haram fighters killed at least seven soldiers in an attack on a military post in Niger's south eastern Diffa Region. Ten others were injured in the attack.
103	January 31, 2018	Multiple suicide bomb attacks	Four people were killed and 44 others sustained injuries in multiple suicide bomb attacks at a Konduga community and the Dalori Internally Displaced Persons camp.
104	February 4, 2018	Multiple attacks	Boko Haram fighters stormed a village in northeast Nigeria and killed three people. Seven others were injured in the attack. One person has been

- reported dead after Boko Haram terrorists attacked Kala village, opposite the Internally Displaced Persons (IDPs) camp in Dalori, Borno State. The attackers also injured another man during the attack and burnt down some houses. Six people were killed and two others injured in the Cameroonian town of Hitawa (Far North), following an attack by Boko Haram.
- 105 February 19, 2018 Dapchi Schoolgirls Kidnapping About 110 girls were abducted by Boko Haram from their school in Dapchi, Nigeria.
- 106 March 1, 2018 Killings and abduction Boko Haram threatens to harm Leah Sharibu, Presidency; Condemns Killing of Red Cross staff. Boko Haram insurgents abducted three people from Madagali Local Government Area of Adamawa state. Boko Haram militants killed at least 11 people including three aid

107	April 22, 2018	Killing of Forest workers by insurgents	workers in an attack on a military barracks in the town of Rann in Borno state. Another three aid workers were wounded and one more kidnapped. Boko Haram jihadists shot dead 18 forest workers who had been collecting firewood in Borno State, near the town of Gamboru, on the border with Cameroon. In another incident, a vehicle carrying civilians travelling in a nearby army convoy hit a mine placed by insurgents, killing three people and wounding eleven others near the village of Wumbi.
108	May 1, 2018	2018 Mubi Suicide bombings	At least 86 people were killed in two suicide attacks at a mosque and a market in Mubi, a town in the state of Adamawa in northeastern Nigeria. 58 others were injured in the bombings.

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| 109 | June 16, 2018 | Multiple insurgents attacks in Cameroon and Nigeria. | Two suicide bombers were killed when one of them prematurely activated her explosive device in the town of Limani in the Far North region of Cameroon. A young boy was also killed in the explosion. Two people were killed by terrorists in the village of Tchika in the commune of Hile-Alifa in northern Cameroon. At least 43 people were killed and 84 others injured when six female suicide bombers detonated their explosives in the Damboa local government area in the Nigerian state of Borno. |
| 110 | October 8, 2018 | Attacks in Niger and Chad | Boko Haram attack leaves 15 soldiers dead in attacks near the Niger Border and around the Lake Chad. |
| 111 | November 22, 2018 | Attack on Nigerian military | Insurgents overran a Nigerian army battalion at Metele Village in Guzamala Local government in |

112	June 17, 2019	2019 Konduga bombings	Borno State killing 70 soldiers. Three suicide bombers detonated near a group of people watching a football game, killing 30 and wounding over 40.
113	July 27, 2019	2019 Nganzai funeral attack	Militants opened fire on a group of people walking home from a funeral in Nganzai District , Borno State. At least 65 people were killed in the attack. A local government chairmen said the attack happened because a civilian defense group had killed 11 of the militants during an ambush last week.
114	December 26, 2019	Insurgents executes christians	ISWAP militants executed 11 Christians, who were kidnapped from Maiduguri and Damaturu, in a video released one day after Christmas. The militants said the execution was in response to the death of Islamic State

115	January 6, 2020	2020 Gamboru bombing	leader Abu Bakr al-Baghdadi At least 32 people were killed and over 35 injured when an IED explode on a crowded bridge in Gamboru , Borno State, Nigeria.
116	February 9, 2020	Auno attack	At least 30 civilians were killed and many more abducted by militants in Auno, Borno State, Nigeria. Four soldiers were killed and seven more wounded in an attack on the same village in January 2020.
117	March 23, 2020	March 2020 Chad and Nigeria Massacres	at least 50 Nigerian soldiers were killed by Boko Haram militants in an ambush near a village in Yobe State , Nigeria. Other sources stated as many as 75 soldiers were killed.
118	June 9, 2020	Gubio massacre	An attack by ISWAP on the herding village of Gubio in Borno State, Nigeria, left at least 81 people dead, seven people and over 1,200 cattle abducted,

119	June 13, 2020	2020 Monguno and Nganzai massacres	and the village destroyed. ISWAP conducted two attacks in the Monguno and Nganzai areas of Nigeria's Borno State, killing at least 20 soldiers in the first location and at least 40 civilians in the second location. Hundreds of civilians were wounded and many buildings were torched in the violence, according to local sources.
120	August 2, 2020	Nguetchewe attack	Boko Haram militants attacked an IDP camp in Far North, Cameroon, killing 16 people and wounding at least seven more.
121	August 9, 2020	Koure shooting	ISWAP killed six French aid workers and two Nigerien civilians in Kouré, Tillabéri Region , Niger.
122	November 28, 2020	Koshebe massacre	About 110 civilians, mostly farm workers, were massacred by Boko Haram in Koshebe, Borno.

123 January 8, 2021

Nothern
Cameroon

A dozen people from a
village in northern
Cameroon killed in
attack blamed on Boko
Haram.

However, the evaluation or reassessment of the evolution of Boko Haram as a terrorist sect is not the crux of this work. The essence of this paper is geared towards the examination of the hybrid alternative dispute resolution mechanism; Neg-Med. In this light, the subsequent part of this work will cater for this discuss.

Negotiation and Mediation As Tools in Resolving Boko Haram Insuregency in Nigeria

Conflict, as has been earlier established is inevitable, nonetheless, shall conflict perpetually exist because of its inevitability? Hence, the need for Conflict resolution. Conflict management and resolution are in diverse forms ranging from amicable to coercive measures. Be that as it may, conflict maybe discussed, avoided, negotiated, adjudicated, resolved, arbitrated or by violent force.³² Of course, conflict constructively handled can spur a progressive relationship between disputants.

Conflict resolution was defined by John Burton as:

*“terminating conflict by methods that are analytical and that get to the root of the problem. Conflict resolution as opposed to mere management or settlement, points to an outcome that, in the view of the parties involved, is a permanent solution to the problem.”*³³

³² Christopher M., *“The Mediation Process: Practical Strategies for Resolving Conflict”*, (San Francisco: Jossey-Bass Publishers, 1996). <http://www.colorado.edu/conflict/peace/moor7538.htm>. Accessed October 18, 2020.

³³John W. B., ‘Conflict resolution as a political system’, scar.gmu.edu/wp_1_burton.pdf. Accessed October 24, 2020.

As an advantage, John Burton, made known that conflict resolution is merit based in that it helps the parties to identify the root cause of the problem, aims not merely at resolving the immediate social conflict, family or ethnic dispute, but also to provide insights into the generic nature of the problem and thus to contribute to the elimination of tis sources and the prevention of other instances³⁴ Nonetheless, a point to be noted is the fact that there exists a distinction between Disputes and Conflict. Disputes entails negotiable interests, meanwhile disputes are concerned with non-negotiable issues that relate to ontological human needs that cannot be compromised.³⁵ This germane distinction has been made based on the realization that the precise and clear use of the appropriate term is very instrumental in the course to apply the most appropriate mechanism. For instance, the term settlement implies the negotiated or arbitrated outcomes of disputes, on the other hand, resolution is concerned with the outcomes of a conflict situation that must satisfy the inherent needs of all parties.³⁶

Acknowledging the existence and application of an innovative adjudicatory system of dispute resolution, John Burton stated:

“Recently there have been developed, as an alternative to the traditional processes of courts and arbitrators, what are termed "alternative dispute resolution" processes, and other forms of interaction in which parties to a dispute are helped to communicate, to make choices and to arrive at some outcome agreed by all concerned... While there are different styles, the role of the intervenor or 'third party' is, in these cases, mainly directed toward the accommodation of conflicting interests as defined by the parties. The assumption is that the parties themselves have sufficient insights into the

³⁴ Ibid

³⁵John, W.B., ‘In conflict resolution as a political philosophy’, www.tandfonline.com/doi/pdf/10.1080/14781159108412733. Accessed October 24, 2016.

³⁶ John W. B., ‘Conflict resolution as a political system’, scar.gmu.edu/wp_1_burton.pdf. Accessed October 24, 2020.

nature of their conflict, and of most possible options, to find an agreed outcome that will be lasting. What is required and provided is a process which helps them communicate, and which suggests options they may not have considered.”³⁷

Conflict resolution is applied in disputes as a method employed in the settlement of disputes matters a lot because in most cases what is focused at in the resolution of conflict is the interests of disputing parties. However, where parties to a dispute however decide to peacefully put aside their differences, assuredly, they can reach an amicable settlement with the application of Negotiation and Mediation processes where such objectives are offered.³⁸ Negotiation and mediation are both mechanisms under the Alternative Dispute Resolution for the resolution of conflict in a non-confrontational way.

In as much as conflict is hazardous it does not in any way refute the obvious truth that a win-win solution can be achieved if conflict is amicably resolved. Hence, in order to achieve this, disputing parties must jointly take up the status of problem solvers, seeking to resolve the dispute, and to try and ‘enlarge the pie’ rather than acting as adversaries and aggravating the situation³⁹.

Regardless of the advantages attached to Negotiation and mediation, it need be noted that Negotiation is a step that will definitely be initiated before mediation is later carried out. However, an exception to this is in situations where such conflict, having being studied, will require mediation as a

³⁷ Ibid.

³⁸ National Open University Nigeria: “PCR 371 third party intervention in conflict resolution”, nou.edu.ng/uploads/NOUN_OCL/pdf/pcr%20371.pdf. Accessed October 18, 2020.

³⁹ Yona S., “Alternative dispute resolution approaches and their application”. http://www.unesco.org/water/wwap/pccp/disciplinary_studies.shtml. Accessed October 18, 2020.

resolution mechanism. Accordingly, Goldberg, Sander, and Rogers⁴⁰ have defined negotiation as:

“Communication for the purpose of persuasion⁴¹”.

Negotiation usually involves the discussion between disputing parties discuss possible outcomes directly with each other in a bid to resolve issues. Herein, the parties exchange proposals and demands, make arguments, and continue the discussion until a solution is reached, or an impasse declared. More so, in negotiation, three germane approaches applied in the course of dispute resolution, with each of such approaches having different objectives and focus. They are: interest-based, right-based and power-based. It should be noted that the application of these approaches will give different result in conflict resolution.⁴²

Be that as it may, where it happens that parties cannot negotiate together effectively, hence the need for a mediator who will facilitate the negotiation process. Mediation is defined as

“the intervention in a standard negotiation or conflict of an acceptable third party who has limited or no authoritative decision-making power but who assists the involved parties in voluntarily reaching a mutually acceptable settlement of issues in dispute”⁴³

⁴⁰ Goldberg. S B., Sander. F.E.A, Rogers. N.H., and Cole. S.R., “Dispute Resolution: Negotiation, Mediation, and Other Processes”, (New York: Aspen Publishers, 1992). <https://www.amazon.com/Dispute-Resolution-Negotiation-Mediation-Processes/dp/0735507104>. Accessed October 18, 2016.

⁴¹ Ibid

⁴² Yona S., “Alternative dispute resolution approaches and their application”. http://www.unesco.org/water/wwap/pccp/disciplinary_studies.shtml. Accessed [October 18, 2020](#).

⁴³ Christopher M., “*The Mediation Process: Practical Strategies for Resolving Conflict*”, (San Francisco: Jossey-Bass Publishers, 1996). <http://www.colorado.edu/conflict/peace/moor7538.htm>. Accessed October 18, 2020

Negotiation and mediation are two mechanism or templates in conflict resolution with different steps. In most cases, Negotiation has never been known to settle terrorism, nonetheless, the Act of Mediation has a positive impact on the resolution of terrorism. The inclusion of a third party and its functional role in conflict is that it helps two or more disputing parties to reach a resolution, more so, the third party has to take the initiative to calculate the willingness on the part of the disputants and bring them to the resolution table⁴⁴. Nonetheless, it is noteworthy that the decision reached at the end of a resolution are not usually binding on parties to the conflict, however, the third-party mediation process remains exciting because the decisions or compromise reached are normally designed to favor both parties evenly.⁴⁵

A large majority of Nigerians are of the opinion that there is a need to negotiate with Boko Haram possibly because they are fed up with the menace that comes with the activities of this sect.⁴⁶ Mediation and Negotiation are expert mechanisms requiring a set of skills and practices which can be learnt and well mastered. Such skill include: diagnosing the causes of conflict, identifying opportunities to build parties' confidence in negotiations, pursuing shuttle diplomacy when the adversaries refuse to talk directly to each other, designing and convening mediation processes, preparing agendas and conducting meetings, identifying common ground between parties, generating options for resolving deadlocks, and facilitating dialogue, cooperative problem-solving and the drafting of agreements. Advocates have sort to give reasons why there is a prospect in the aspect of dialogue with the insurgent sect most likely because of the persistent persuasion on the Nigerian government to dialogue with the sect. Mr. Obasanjo on March 17, 2015,⁴⁷ advised that in handling terrorist organizations the Nigerian

⁴⁴ National Open University Nigeria: "PCR 371 third party intervention in conflict resolution", nou.edu.ng/uploads/NOUN_OCL/pdf/pcr%20371.pdf. Accessed October 18, 2020

⁴⁵ Ibid.

⁴⁶ Prof. James B. K., "Boko Haram, the Government and Peace Negotiation", <http://www.cddwestafrica.org/itstime/?mdocs-file=75039&mdocs-url=false>. Accessed October 18, 2020.

⁴⁷ In an interview with the Business Times in Dubia

government should not rule out dialogue if the group is willing to talk, and this should happen after sustained military operations against the sect.⁴⁸

However, this expressed opinion has been objected to with a view that negotiation with terrorists will only encourage them to repeat their tactics. Be that as it may, it should be clarified that negotiation per se does not in any way encourage any form of terrorism, rather, the demands of the terrorists are made known through negotiation.

Considering Boko Haram terrorist sect, the necessary question to be considered is whether or not either negotiation or mediation or both will be an effective mechanism in resolving this age-longed conflict. Respect has been attributed as the basic condition of any negotiation. The one-down approaches which seeks to impart a sense of inferiority are unproductive. However, it is noteworthy that effective negotiations can kick off when parties perceive themselves to be in a mutually hurting stalemate and find a way out which may either be a win-win situation or a win-lose one. On the other hand, mediation becomes necessary where neither party trusts the other, but trust the mediator to help them reach a constructive conclusion.⁴⁹ In order to achieve a peaceful conflict resolution with Boko Haram sect, negotiation and mediation are two very necessary mechanisms that will facilitate the conflicts orchestrated by this sect as against the government and the citizenry of the Federal Republic of Nigeria.

Just recently, specifically on October 13, 2016⁵⁰, a total of 21 Chibok girls who were abducted on April 14, 2014 in Chibok, were released by the Boko

⁴⁸ 'Again, Obasanjo seeks dialogue with Boko Haram; says sect has legitimate grievances'. <http://www.premiumtimesng.com/news/headlines/178601-again-obasanjo-seeks-dialogue-with-boko-haram-says-sect-has-legitimate-grievances.html>. Accessed October 18, 2020.

⁴⁹ Guy Oliver Faure and I William Zartman (united states institute of peace, forthcoming). 'the mediator's toolkit: negotiating with terrorists'. <http://www.iiasa.ac.at/web/home/resources/publications/IIASAPolicyBriefs/pb06-web.pdf>. Accessed October 18, 2020

⁵⁰ Return of 21 chibok girls. <http://www.vanguardngr.com/2016/10/return-of-21-chibok-girls/>. Accessed October 24, 2020.

Haram sect. however, President Muhammadu Buhari commended the International Committee of the Red Cross (ICRC) for the active role they had played in the release of the 21 abducted Chibok school girls, urging it to sustain humanitarian interest in Nigeria⁵¹. He further stated that his administration was open to continue talks with the Boko Haram sect “as long as they agree to involve international agencies like ICRC”. According to him, the results of recent talks have become obvious as 21 of the Chibok girls are back. This reemphasizes the importance of international agencies like ICRC as an important stakeholder in the resolution of Boko Haram conflict.⁵²

Be that as it may, Negotiation is a one of the major approaches applied in making decisions and manage disputes that may occur between different categories of persons or institutions such as spouses, parents and children, managers and staff, employers and employees, professionals and clients, within and between organizations, between agencies and the public, and between governments and groups. As has already been established, Negotiation is a problem solving mechanism wherein two or more people voluntarily discuss their differences and attempt to reach a joint decision on common concerns. In this light, the disputants are required to identify issues upon which they differ on, educate each other about their needs and interests, generate possible settlement options, and bargain over the terms of the final agreement.⁵³

To this extent, it is explicit that the issue of Boko Haram can only be mitigated only by the employment of the Alternative Dispute Resolution –

⁵¹ President Buhari commends Red Cross for release of Chibok girls. <http://www.nigerianeye.com/2016/10/president-buhari-commends-red-cross-for.html>. Accessed October 24, 2020.

⁵² Chibok Girls: Buhari gives condition for continued negotiation with Boko Haram. <http://abbeylist.com/chibok-girls-buhari-gives-condition-for-continued-negotiation-with-boko-haram/>. Accessed October 24, 2020.

⁵³ Agbgbaku, P. E., Odion, William E.; and Edokpa, M. F., "Tackling Nigeria's Security Challenges: Negotiation or What with Boko Haram?", *Journal of Global Initiatives: Policy, Pedagogy, Perspective* (2014): Vol. 9: No. 2, digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=1174&context=jgi. Accessed October 24, 2020.

Negotiation. However, the benefits of utilizing Negotiation in resolving this Boko Haram insurgency includes the following: restoration of peace in the region and country; increase in dispute visibility; confidence in the state's ability to restore and ensure safety of lives and properties; encourage investments/investors; removal/reduction in arms proliferation and heavy militarization of the region reduce defense expenditure which has since skyrocketed; lifting of emergency rule in affected states with the attendant benefits; and reintegration of dislocated families as well as providing the citizens in the region a sense of belonging in a federation⁵⁴.

Of a truth, with the application of Neg-Med, there is bound to be a swifter resolution of the Boko Haram conflict. It is very evident, as has been established above, that the establishment of Dialogue or Negotiation between the Federal Government and Boko haram sect resulted in the release of the 21 Chibok Girls. However, it is the submission of the writer that there is more to be achieved by the use of Alternative Dispute Mechanisms. Hence, it is the projection of the writer that with these mechanisms more peaceful settlements can be reached which will allow for the return of the remaining Chibok Girls, restoration of destroyed Properties and infrastructure, as well as peaceful existence. This will consequently result in a gradual but steady eradication of the insurgent group.

Conclusion

There is no country that can make significant progress in any aspect of its socio-economic and political life when it steadily fighting terrorism in her territory, as this will result in no developmental project or investment. Hence, there is a need to put a total halt to the menace constituted by Boko Haram terrorist insurgency in Nigerian which has done too much harm in the past couple of years of its violent activities.

It is for this reason that the hybrid mechanism in the Alternative Dispute Resolution has been recommended for the resolution of this menace. Negotiation and mediation have been regarded as necessary mechanisms for the resolution of Boko Haram insurgency. The book haram sect is a very

⁵⁴ Ibid

dangerous and powerful sect with extreme capacity to persistently inflict havoc on the entire Nigerian community. However, Negotiation and Mediation has a lot of prospect for the settlement of conflict, and it has been advised that if sufficient attention is given to it by the government then there will be a positive impact on the issue of terrorism. According to Lai Mohammed⁵⁵, in his interview with Vanguard News⁵⁶, he was asked if he is of the opinion that the current intervention of the international community can held squash the sect, he stated:

“If they do, good for us, because these European countries have lots of experience in fighting insurgency. But we believe that the matter wouldn’t have gotten this far, if government from the beginning had focus on the matter rather than alleging the opposition as the cause of it”⁵⁷

Furthermore, Lai Mohammed made known the fact that sensitive issues such as this could warrant the utilization of individuals the sect has confidence in to negotiate. However, he opined that Shekau won’t come out at the beginning of negotiation. Yet, he has people he trusts who he would send. Therefore, he advocated for negotiated settlement if there are intermediaries between government and the sect. There have been two instances where volunteers have indicated to mediate between the Federal Government and the Sect. For instance, Shehu Sani volunteered to be a middleman between the Federal Government and the sect. When negotiations were going on, government broke the agreement. Another instance is that of a journalist who was negotiating on behalf of the sect in Kano⁵⁸.

⁵⁵ Minister of Information and Culture.

⁵⁶ May 18, 2014.

⁵⁷ “Boko Haram: The negotiated settlement, resolution we need, by Lai Mohammed“ <http://www.daargroup.com/daar-group/latest-news/vanguardngr-boko-haram-negotiated-settlement-resolution-need-lai-mohammed>. Accessed October 18, 2020.

⁵⁸ Ibid

An analysis of conflict necessitates the meticulous study of the entirety of human relationships, be it conflictual or otherwise, for it is human motivations and values that are involved conditioned by the totality of the environment --economic, political, social and ecological --in which these relationships are enacted.⁵⁹

Conclusively, in the words of John W. Burton:

*“The practice of problem-solving conflict resolution is deduced from the theory of conflict as a universal response to frustrated needs. Hence, the practice involves providing opportunities for the parties: first, to analyze relationships so as to generate an accurate definition of the problem in terms of motivations and human needs; second, to cost their goals and policies once they are fully informed of all aspects of the dispute, including the motivations and values of the opposing side; and third, to discover the possible options that may be available once there has been a full analysis of the conflict in all its elements”.*⁶⁰

Recommendations

The Boko Haram insurgency can no longer be a tolerated issue in Nigeria. Hence, the need to device means to put the activities of the sect to a total halt. In this light however, the following recommendations are made.

- Firstly, the Nigerian government should address the high rate of poverty and unemployment. It has been submitted that Poverty and unemployment have made crime and criminal activities very appealing, attractive and irresistible to mostly youths who have got nothing doing.

⁵⁹ John W. B., ‘Conflict resolution as a political system’,
scar.gmu.edu/wp_1_burton.pdf. Accessed October 24, 2020.

⁶⁰ Ibid.

- Secondly, the government of Nigeria need a re-orientation in the act of handling political or other related crises as peace approach is more successful than security or military approach. This is however not to say that the use of military approach may not be useful in some situations, rather more of peaceful resolution should be used.
- Thirdly, this article recommends a change in the mind-set of those in government as they often read ethnic, religious or political sentiment to any conflict. With the plethora of crisis that have occurred in Nigeria, it has become very obvious that the Nigerian government are quick to labeling issues as politically or ethnically driven, thereby putting them aside.
- Finally, the Nigerian government must take seriously its fundamental responsibility, that is, the general welfare of its citizenry and the protection of its territory.

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Corruption and Sustainable Development: Tracing the Root Causes and Radical Proposals for Way Forward

By: *Henry K. Murigi**

Introduction

This is an attempt to illustrate how the state of nature that was advanced by Thomas Hobbes presents itself in modern day corruption. The idea of corruption is not a new phenomenon, but it has generated debate as to what exactly is its source and solution. Corruption has several meanings most of which have been contested to an extent that there is no unanimous definition. This paper focuses on the use of power either by a government official or corporate official for personal gain. Thomas Hobbes central thesis is that the state of nature is a state of war and man will do the things that are necessary to ensure their self-preservation, safety, and success at the expense of others. The state of nature reveals human experience and interactions. Human interactions display the motives, intentions, behaviours of men. Corruption being one of the prevalent behaviours of men in modern day it is important to check it against the state of nature. This paper seeks to explore whether the idea of the state of nature can be located in the modern-day corruption. The paper will first deliberate on the context of Thomas Hobbes then consider the modern-day corruption.

Thereafter the paper will seek to show the overlaps between state of nature and corruption. This paper will focus on a conceptualization of the most notorious words of Thomas Hobbes which have generated numerous literary debates and thinking.

“... there is no place of industry; because the fruit thereof is uncertain; and consequently no culture of the earth no navigation, nor use of the commodities that may be imported by Sea; no

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commodious building, no instruments of moving and removing such thing as require much force, no knowledge of the face of the earth, no account of time no arts no letters no society and which is worse of all continual fear and danger of violent death and the life of man solitary poor nasty brutish and short”¹

Background information on Thomas Hobbes

Thomas Hobbes was born in April 1588 at the time of events of the Spanish Amanda and to understand the works of him it is critical to understand the context within which his ideas were being developed². To do this it is important to underscore the regime of the Kings in England at the time when Hobbes was writing. At that time there was a perception that the monarchy was the representative of God on earth. This is derived from the idea of divine right of Kings which was a critical response to the situation that plagued the aftermath of the reformation³. In defense of the theory on divine right of Kings Burgess argues that a response to the reformation was needed since there was a rejection of the jurisdiction of the Pope over secular authority of rulers. The answer to the reformation were compounded by the conflict introduced by Catholic and Calvinist hence the theory of divine right of Kings. In my view the divine right of Kings was based on the support of absolutist who viewed power as being top bottom approach. The King wielded more power than ordinary men. With the likes of King Henry VII and James VI of Scotland it was apparent that the Kings as the monarch were first among equals and were not subject to control by any earthly authority instead, they received power and instructions from God.

Hobbes rejected the idea of absolutism that is based on the deity of as the source of power and government. He rejected the idea of divine right of kings and proposed the idea of a philosophical absolutism. Instead, he suggested that a social contract should be premised on the idea that man is unable to find for

¹ Michael Cohen, *Political Philosophy; From Plato to Mao*, Pluto Press, London (2001) pp 47-63

² Baumgold, Deborah. “Hobbesian Absolutism and the Paradox of Modern Contractarianism.” *European Journal of Political Theory* 8, no. 2 (April 2009): 207–28. <https://doi.org/10.1177/1474885108100853>.

³ Burgess, Glenn. “The Divine Right of Kings Reconsidered.” *The English Historical Review* 107, no. 425 (1992): 837–61. <http://www.jstor.org/stable/574219>.

himself the solution to his problems. In fact, suggest that left unchecked men will destroy one another in the state of nature.

Thomas Hobbes Ideas of State of Nature

On the part of Hobbes, scholars have raised several difficulties with his main work the Leviathan. Stauffer, raises questions on the effect that Hobbes was hoping to have on religion by subordinating it to civil authority⁴. After a detailed analysis Stauffer argues that new evidence suggest that Hobbes was a doubting criticizer of religion which further provides the platform for explaining the state of nature. The state of nature according to Hobbes is in the form of (*bellum omnium contra omnes*) a war of all against all. Life is solitary, poor, nasty, brutish, and short. Hobbes believes that in the absence of an invincible absolute ruler men would all kill each other. He advocates for a very strong ruler who is beyond challenge by mere mortal. The Leviathan makes a larger-than-life acclaim that in state of nature the absolute monarch would keep men from killing each other. In my view Hobbes' argument is similar John Calvin's suggestion that man is totally depraved and incapable of doing any good unless his heart is quickened by the God. This appears to be a pessimistic view of human nature which is in their state of nature. The counter argument to the state of nature according to Hobbes is that man is good and has virtue. However, there is a problem since the available evidence suggest on how man operates in the idea of government is that human beings are untrusting of each other and would go to lengths to protect their rights. Hobbes writes against the backdrop of civil war which led to the king being beheaded so he could not in any way see how people could not live without doing harm to each other.

Comparison between Locke and Hobbes on State of Nature

John Locke presents several ideas on the state of nature chief among them is that man in the state of nature have a guarantee to life, property, and liberty⁵. There is an issue on the ideal state of nature with some scholars arguing that it is a historical state that would be found in the Garden of Eden where Adam was

⁴ Stauffer, Devin. "'Of Religion' in Hobbes's Leviathan." *The Journal of Politics* 72, no. 3 (2010): 868–79. <https://doi.org/10.1017/s0022381610000228>

⁵ John Locke, *The Second Treatise of Government and a Letter Concerning Toleration* (New York: Dover, 2002).

placed by God according to the book of Genesis. Others argue that the state of nature is a fictional state which exist in the ideas of society. These two arguments have not been resolved.

Ashcraft argues that there was an assumption that man resided in a tranquil community of friends, living together under the "law of reason."⁶ In the state of nature according to Locke, the state of nature is appealing, but one can discover no satisfactory reason for man's abandonment of that state for political society. Ashcraft suggests that the "natural liberty of man," according to Locke, "is to be free from any superior power on earth" and "to have only the law of nature for his rule." It is "a liberty to follow my own will in all things where the rule prescribes not"⁷. Locke defines freedom in such a way as to deny that Hobbesian man is "free." Men cannot be free in the state of war, Locke argues, because the relations between them are governed by force, not by law. In sum the state of nature is the cornerstone of Lockean political thought it is important for its political implications; and it was a focal point of intellectual controversy in the seventeenth century.

Locke on the other hand argues in the *Two Treatises of Government*⁸. He argues that natural rights were given to Adam in the garden of Eden according to the Bible. Human beings have right to life, property and liberty that cannot be given to them by the state. They are not available in the state of nature and hence people engage in a social contract which is a government that is limited by law. He argues that the work of government is to protect the rights of property liberty and life and will revolve against the government when it fails to do so and will recreate the government. Locke was writing in the context of the bloodless revolution of William III. Thomas Lloyd argues that the state of nature according to Locke all persons are free equal and independent which is a freedom based on morality in the natural law⁹. According to Waldorn there are three reasons

⁶ Richard Ashcraft, *Locke's State of Nature: Historical Fact or Moral Fiction?* *The American Political Science Review*, Vol. 62, No. 3 pp. 898-915, 1968.

⁷ Ibid

⁸ Ibid

⁹ D. A. Lloyd Thomas *Routledge Philosophical Guide to Locke on Government*, Routledge. New York, 1988.

for war in the state of nature¹⁰, the first touches on structural rather than psychological in that there is coercive authority that ensures that all must behave in an aggressive manner in order to defend themselves. Secondly, the cause of conflict is the competition for the same goods and thirdly, war is purely about egoism where everyman thinks of himself and hating to see the same in others. This is related to the notion that there is some form of competition in the group. Hobbes considers society as a mixture of selfishness, violence and fear topped with a healthy dollop of deceit, the last there to make

State of Nature and Social Contract – the dynamic duo (Hobbes and Locke)

There are several similarities between what Hobbes argues and Locke who came after him. First, they agree on the idea of social contract. There is a view by both that human beings are equal in the state of nature and will act and react in a similar way in that state. Hence, they come together and bestow power over their affairs to another. In sum, Hobbes and Locke correctly diagnose the state of man and the need for a social contract. Secondly in the state of nature is for the original state of mankind. Lloyd argues that Locke agrees with Hobbes that moral rules have application to those who are in the state of nature they are often not followed and the state of nature which is exactly Hobbes view on the state of war¹¹. There appears to be a contradiction within the body of what Locke is suggesting qualifying his work from that of Hobbes. Locke fails to take the pessimistic view of man yet arrives at the state of nature where the law is not observed. Also, the idea that when government fails to act appropriately there is a right to revolt seems to me to suggest that the system has the potential of being broken and in my view is always broken. These premises bring the two to agreement on the dominant feature of human nature that they either are broken or will be broken.

Power and Politics in the State of Nature

First, the main difference is on the idea of government which Hobbes argues exists to protect us from ourselves. The absolute monarch exists to ensure that

¹⁰ Jeremy Waldron, Hobbes Ed by David Boucher & Paul Kelly in *Political Thinkers; From Socrates to present*, Oxford University Press. New York. pp 185-198, 2009.

¹¹ Ibid

we are protected from our state of nature which is brutish and inclined to do evil¹². Locke argues that government exist to protect natural rights to life, property and liberty. The success of government is based on how it protects the life liberty and property of the populace which has donated power to the individuals. Secondly the locale of the sovereignty or power or put differently the source of ultimate power by the people over the government was not agreed upon in the works of Locke and Hobbes. Government is an agent of the people or a ruler. Hobbes automatically argues that the government whose power is resident in the absolute monarch as an absolute ruler. This power cannot be taken away once it has been donated to the absolute monarch. Locke on the other hand argues that power resides in the people and that the government is an agent and should the government fail in its mandate i.e. to protect rights liberty and property then a revolution will erupt and the government will be replaced.

Forsyth argues that for Hobbes political order was granted full autonomy and is best exercised by the utility of war¹³. Locke on the other hand argues that the power of government can be limited which makes him a constitutionalist. He insists that Hobbes was a relentless secularist who refuted the source of power being deity since human nature can exist apart from theism. He argues that Locke's structure of government is supplement to Kingdom of God as portrayed in his state of nature. Lastly, on the question of the right to rebellion Hobbes doesn't see how to overthrow government because it is an absolute monarch who is powerful. Locke on the other hand sees nothing impossible with a revolution when the government fails to cater for the natural rights to life, property and liberty.

Thomas Hobbes on Corruption

Starting from a pragmatic assessment of human nature, Hobbes strengthens the case for a powerful political and social apparatus organizing the society. He brought a new style of argument to political theorizing that is both persuasive

¹² Baumgold, Deborah. "Hobbesian Absolutism and the Paradox of Modern Contractarianism." *European Journal of Political Theory* 8, no. 2 (April 2009): 207–28. <https://doi.org/10.1177/1474885108100853>

¹³ Murray Forsyth, *Hobbes's Contractarianism; A Comparative Analysis*. In *The Social Contract from Hobbes to Rawls*. Ed David Boucher and Paul Kelly, Routledge, New York. (1997) pp 39-50.

and effective. His main idea is that social organization however committed to fairness and equality may be motivated by a struggle between its members and it would be both authoritarian and in egalitarian¹⁴. Two main principles can be derived from the works of Hobbes. First people are motivated by selfishness meaning that when left to their own devices they always come into conflict. Secondly, self-preservation is the highest law and even the state cannot overstep this mark. Initially Augustine's pessimism about corruption was colored by the problem of original sin—the 'corrupt root' of human nature¹⁵

An even narrower conception of political corruption can be seen in Harrington's view that of Thomas Hobbes was less concerned with the conditions for popular government and, indeed, considered it an anathema¹⁶. By conceptualizing political legitimacy in terms of a contractual bargain between self-interested individuals seeking protection of life and property, Hobbes's thought played a pivotal role in the post-medieval rejection of the Aristotelian framework in Western political thought. Nonetheless, Hobbes's 'modernity' was still colored by a striking use of the analogy of the body politic in his analysis of the various 'infirmities' and 'diseases' to which a commonwealth may be exposed. He did not, however, refer to the corruption of the body politic itself, and thus tended to use the term corruption in ways much closer to modern usage¹⁷.

This is exemplified for instance in his frequent denunciation of the use of bribes to 'buy' judicial opinion or the corruption of 'counsellors' who have been 'bribed by their own interest'. Hence, in Chapter 26 of *Leviathan* he discusses the role and characteristics needed of judges and speaks of the necessity that their judgments are not corrupted by reward (p. 195). For Hobbes, '*all Laws (laws) dependeth (depends) on the Authority Sovereign (sovereign) and the 'interpreters' (judges) appointed by the sovereign to*

¹⁴Michael Cohen, *Political Philosophy; From Plato to Mao*, Pluto Press, London (2001) pp 47-63

¹⁵ Saint Augustine, 1998 [413-26 AD], p. 556.

¹⁶Cotton, James. "James Harrington and Thomas Hobbes." *Journal of the History of Ideas* 42, no. 3 (1981): 407–21. <https://doi.org/10.2307/2709184>.

¹⁷ Cotton, James. "James Harrington and Thomas Hobbes." *Journal of the History of Ideas* 42, no. 3 (1981): 407–21. <https://doi.org/10.2307/2709184>.

apply them honestly and in line with their '[i]ntendment or meaning' (p. 190). Consequently, he warned of the danger of '[f]alse judgement' procured by 'corruption' of judges or witnesses (pp. 192, 212). For Hobbes, then, corruption in cases of judicial application of the law was tantamount to the vicious subversion of sovereign power but could also refer to what Harrington calls 'cognitive corruption' or the distortion of judgment by money, affection or misconstrued self-interest, all of which also subvert sovereign authority¹⁸.

Corruption and Economic Crimes

Corruption is to be found everywhere and manifests itself in different formats. However, this paper concedes that there is a difficulty in defining corruption. This definitional difficulty is located in all spheres of social studies and is also found in attempting to define corruption. There are several perspectives that can help define corruption. First, moralist tend to view corruption as a scourge on society¹⁹. Revisionists argue that corruption is inevitable and a necessary form of adjustment process²⁰. However, later scholars have defined corruption as an individual decision that seeks the maximization goods for personal benefit at the cost of society²¹ Holmes (2016). Secondly there is no universal definition of what corruption is in the legal spheres²². In Kenya today the law defines corruption as to include offences such as bribery, fraud, embezzlement or misappropriation of public funds, abuse of office, breach of trust, dishonesty in taxes among other offences that relate to public office²³. This definition is limited to the context of public officials and generally to those dealing with public office affairs. This cannot be a universally applicable definition for corruption.

¹⁸ Ibid

¹⁹ Miller, Seumas. "Defining Corruption." Chapter. In *Institutional Corruption: A Study in Applied Philosophy*, 64–88. Cambridge: Cambridge University Press, 2017. doi:10.1017/9781139025249.004.

²⁰ Ibid

²¹ Holmberg, S., & Rothstein, B. Dying of corruption. *Health Economics, Policy and Law*, 6(4), 529–547, 2011. <http://doi.org/10.1017/S174413311000023X>

²² Corruption is not defined in the United Nation Convention against Corruption (UNCAC) and other regimes.

²³ Section 2 of Anti-Corruption and Economic Crimes Act, 2003

The third challenge that arises is determining whether to look at the wider scope within which corruption occurs or to confine it to the person. Miller argues that there are two forms of corruption that is institutional corruption and personal corruption²⁴. The later deals with the moral character of persons and consist of the despoiling of their moral character. The person's moral character is affected and can thus not be said to be virtuous. Institutional corruption on the other hand is in the realm of the processes that are put in place in society to systematically deal with violations of rights of the individual as explained below. The problem with these categorizations is that it places difficulty to fit the idea of the anarchic system of society envisaged by Thomas Hobbes of the state of nature. In that regard therefore, the definition of corruption that adopted in this paper the betrayal, abuse or misuse of entrusted power for personal gain and at the expense of the greater society as defined by Dobel²⁵. Schmitz defines corruption as a principal agent problem where a person is entrusted with power for a purpose of carrying out a particular fiduciary responsibility when using the measure of discretion in service of personal agenda²⁶. He argues that corruption should not be viewed only in the lenses of something rotten instead it is abuse of power. Indeed, he extend the definition of corruption to the question of discretionary power where he suggests that pretending to lack discretionary power is a way of exercising discretionary power which at some point becomes abuse and can be defined as corruption.

Theory of Corruption

Dobel attempted to introduce a theory of corruption by locating the works of Plato, Aristotle, Thucydides, Machiavelli and Rousseau²⁷. The theory of corruption according to Dobel involves five propositions. Firstly, a corrupt state is to be accompanied by a breakdown in attributes of civic loyalty and

²⁴ Miller, Seumas. In *Institutional Corruption: A Study in Applied Philosophy*, iii-iii. Cambridge: Cambridge University Press, 2017.

²⁵ Dobel, J. Patrick. "The Corruption of a State." *The American Political Science Review* 72, no. 3 (1978): 958–73. <https://doi.org/10.2307/1955114>.

²⁶ Schmitz, David. / *An anatomy of corruption*. In: *Social Philosophy and Policy*. 2018 ; Vol. 35, No. 2. pp. 1-11.

²⁷ These are realist theorist who view the world system as being anarchic full of competition for survival. The selection of these four historical figures is not to be viewed as negating the influence of other scholars.

virtue. Moral loyalty and civic virtue are necessary to maintain a stable political order. The breakdown of loyalty and order begins the downward spiral of social relations. Secondly, the breakdown introduces competition between the classes in society based on inequalities that are driven by human capacity for pride and selfishness which accompanied by an extensive inequality in wealth, power and status. This is rooted in the need for survival of the individual of the classes. Thirdly, the moral quality of life based on the inequalities created by class generate factions which become the objective centers of wealth, power, police, and policy. These factions become the tool for encouraging selfishness or limited loyalty to membership of community. Fourth, these factions are then spread across the entire citizenry and the police, law enforcement, and public offices become the tools of factions and class. This disenfranchise the populace who are more polarized therefore seek reform which if not attained lead to violence and institutional anarchy. Lastly, the final corruption of the state involves the failure of the citizenry to voluntarily support the primary structures i.e., education, family, life, religion, and military. There are several defining features of corruption²⁸.

Miller²⁹ on the other hand locates five main pillars under which corruption thrives which in my view adequately explained the theory advanced by Dobel³⁰. First, he considers the personal character of corruption where the corrupt actions involve a person who is a corruptor and/or a person who is corrupted. There can never be corruption without two or more players. Second, he argues that an action is corrupt only if it undermines or is of a kind that tends to undermine an institutional purpose, process, or person. Here he argues that the causal character of corruption goes beyond the individual. Mostly the individual is not interested in the collapse of the

²⁸ Moral corruption is used to mean the loss of capacity for loyalty, where the progressive privatization and self interests becomes the normal motive for most actions

²⁹ Miller, Seumas. "Defining Corruption." Chapter. In *Institutional Corruption: A Study in Applied Philosophy*, 64–88. Cambridge: Cambridge University Press, 2017. doi:10.1017/9781139025249.004.

³⁰ Dobel, J. Patrick. "The Corruption of a State." *The American Political Science Review* 72, no. 3 (1978): 958–73. <https://doi.org/10.2307/1955114>.

institution or framework under which he operates. Instead the concern is to ensure that there is continued existence of the institution for future benefit. A good example is that where votes cast in an election are manipulated to favour a candidate who had an overwhelming win even without the manipulation of the votes.

Third, persons who perform corrupt actions are morally responsible for so doing (the moral responsibility of corruptors), notwithstanding they are not essentially blameworthy if, for example, they were coerced. Fourthly unlike persons who corrupt, persons who are corrupted are not necessarily morally responsible for being corrupted when they exist in a condition that is corrupt and are trying to survive out of a difficult corrupt society. Lastly, acts of corruption necessarily involve a corruptor who performs the corrupt action through an occupant of an institutional role and, therefore, uses the opportunities afforded by his or her position and/or a person who is corrupted qua occupant of an institutional role. These five pillars explain the intricate relations between and individual within an institution but do not clearly demonstrate the behavior of society generally.

Corruption a Higher Level of Competition

In general, premeditated crime is worse than that arising from a sudden passion and crimes undermining the law are worse than those of no effect. Punishment must be sufficient to deter a rational criminal, whilst being essentially positive in its aim, a notion which includes for example the deterring of others. The punishment inflicted must be greater than the benefit of the crime and any ill effects that by chance strike the wrongdoer are not to offset against the eventual sentence for these are not inflicted by the authority of man.

It is often a temptation to dismiss corruption as a fact of life rooted in flaws of human nature and analyses the acts of corruption as isolated individual acts. However, there is unanimous agreement among theorists that the source of systematic corruption lies in patterns of inequality. Granted most corrupt activities rely on the individual moral choice and depend on the human capacity for avarice and evil. Under the inequality certain groups of individuals have a de facto or legally sanctioned priority of access to wealth,

power and status. In India economic offences constitute a class apart type of offences and need to be visited with a different approach in the matter of fundamental rights. The economic offence having deep rooted conspiracies and involving huge loss of public funds needs to be viewed seriously and considered as grave offences affecting the economy of the country as a whole and thereby posing serious threat to the financial health of the country³¹. In 2003 the justice minister Honorable Kiraitu Murungi while addressing the 11th International Anti-Corruption Conference on Sunday 25th May 2003 in Seoul, South Korea, on 25th May 2003³², he stated as follows;

“Where I come from we don’t wait to read about corruption in newspapers or magazines. In my country one does not have to wait until the effects of corruption are relayed by images on television. Where I come from corruption is part of our lives. Before our own eyes we have seen it fill our roads with potholes; deny medicines to our hospitals; literally remove desks from our classrooms. Corruption has undermined our agricultural sector and thereby our attempts to feed ourselves as a nation; corruption has denied fresh water to parched sections of the nation; corruption has systematically eaten away at the very fabric of our society. You will allow us, therefore, to assert before this distinguished gathering that for us corruption is not merely a crime, it is a crime against humanity.”

Source of Corruption - Distributive Injustice

Practical inequality in the ownership and control of wealth can be justified on two grounds first the limited but legitimate claim to distributive justice and the need to generate surplus wealth to finance the government and the

³¹ Supreme Court of India Nimmagadda Prasad vs C.B.I., Hyderabad on 9 May, 2013 a decision by a Bench consisting of Justice P. Sathasivam, M.Y. Eqbal

³² This speech may be found at http://iacconference.org.s3-website.eu-central.amazonaws.com/documents/11th_iacc_plenary_When_Corruption_Is_A_Crime_Against_Humanity.doc and is also carried in “Justice and Economic Violence in Transition” (Springer Science & Business Media 2013) at page 161. It has been argued that this was one of the instances where Kenya had shown the greatest potential on the fight against corruption.

common good. John Rawls theory of justice speaks to this idea succinctly. The idea of distribute justice focuses on the second part of the theory of justice. The idea that distribution of what is gathered must be for public good.

Distributive justice seeks to address the allocation of resources in the context of the past present and future generations. It is an economic theory that considers both the concept of justice in the political economy and economic systems. It seeks to resolve the problem of choice in the social system. The idea is to regulate the conduct of institutions so that public good is produced as a consequence. In advancing the argument, Rawls makes several assumptions. One that the basic structure is regulated by a just constitution that secures liberty of citizens. Secondly that there is fair as opposed to formal equality of opportunity. Thirdly, the government guarantees that certain minimums are met in the society.

With these assumptions John Rawls argues that the government may be divided into four branches that preserve certain social and economic conditions³³. First, the allocating branch is required to ensure that the price system is working in a competitive manner to prevent unreasonable creation and domination by market powers. This branch ensures that taxes are minimal and rights to property are defined correctly to enhance equality. Secondly, the subsidisation branch deals with creation of employment that those who desire to work have a free choice to make on their occupation of choice. The two aspects deal with efficiency and effectiveness of markets.

Thirdly, the transfer branch considers that a competitive price may not be sufficient to offer opportunity for adequate distribution of good. It offers a balance on the wage and earnings in the context of the claims and needs of the society. Different institutions meet different needs. Moreover, the principles of justice regulate the whole structure. The idea here is to ensure that the wage earned is equivalent to the claims and needs of the individual. Lastly, the distribution branch ensures that there is approximate justice to ensure that there is adequate taxation in adjusting the right to property. This

³³ John, Rawls. *Theory of Justice* Cambridge, Massachusetts, Harvard University Press, 1971.

is more so in terms of the inheritance attained. The goal here is to raise revenue that the course of justice requires. The idea is to check that there is balance in society by imposing necessary adjustments to ensure ends of justice. The issue that emerges is whether the additional taxes on the wealthy can be said to be just as two wrongs cannot make right.

Lastly, he argues that on duty in the theory of justice it is important to note that natural duty exist to support and further just institutions. The first duty is to comply with and perform ones share in the just institution and secondly to assist in the establishment of just arrangement when they do not exist. To this end he argues that just disobedience. He begins by explaining how to deal with unjust laws. He argues that unjust laws to not all stand at par. As such each situation calls for an examination on the cause of the unjust arrangement and whether non-compliance is justified. Civil disobedience is defined as “a public nonviolent conscientious yet political act contrary to law usually done with the aim of bringing about change in the law policies of the government”. The conscientious refusal is the noncompliance with a more or least direct injunction or administrative order based on a shared concept of justice or other ground. Civil disobedience is justified when (1) the normal appeals to political majority made in good faith have failed and (2) the legal means for redress have proven of no avail, (3) appeals to have the law repealed have been ignored and no success on legal protests. In other words, all legal avenues have been exhausted.

Anti-dote for Corruption

The Basis for Equality is not premised on morality of man or his ability to exhibit attributes that endear him to societal norms. Instead, equality is applicable to all and in all cases. It is not lost to Rawls that this may be an impractical idea since all human beings are innately different and cannot be similar in composition. However, equality can only be assured in the content of the principles of justices discussed above. Schmidtz argues that the virtue of social institutions is to establish a rule of law that holds a community together not by virtue of imposing a vision of justice but by virtue of enabling people to know what to expect from each other and to invent even better

ways of being of service to each other³⁴. Equality does not presuppose that one must assess the intrinsic attributes of one's worth. Equality is an attribute of nature and not merely a procedural matter that requires compliance. Equality is not pegged on one's morality instead it is a natural attribute that operates in the concept of justice and not a matter of procedural compliance. Chang (2008) argues that whether a country is corrupt or not depends on two things. First the stage of economic development and its political landscape. Chang argues the earliest stages of a country's development find it easier to be corrupt e.g., underpaid civil servants are unable to resist the taking. The other idea especially for dictators is that no leader is monolithic personality. They need foot soldiers who will fight for them. The dictators need the essentials or what is referred to as the winning coalitions or agency. Secondly, they need the influential who are in the middle class and play a key role in selecting the leaders and interchangeable.

Conclusion

In the final analysis it is clear in my mind that Hobbes (who makes more sense to me) and Locke both agree on the state of nature and social contract. They agree that God, as argued by divine right of kings, is not the source of the idea of government. They however differ on how to move from their common agreement in their conceptualization of Government and how to power is exercised. To this end I find that they have made the correct diagnosis of the problem of nature of man in the state of nature but their different diagnosis for Hobbes absolute monarch and Locke constitutionalism both have difficulties.

³⁴ Schmidt, David. An anatomy of corruption. In: Social Philosophy and Policy. 2018; Vol. 35, No. 2. pp. 1-11.

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Utilising Science and Technology for Environmental Management in Kenya

By: **Kariuki Muigua***

Abstract

The paper advocates for the use of science and technology for environmental management in Kenya. It critically discusses environmental management tools in Kenya which include the law, ethics, Environmental Impact Assessment, market forces and institutions such as national courts and tribunals and the public while pointing out their shortcomings. The paper argues that environmental management tools in Kenya have not been fully effective in environmental protection and conservation as evidenced by several environmental concerns such as pollution and degradation. It presents a case for the enhancement of science and technology as an environmental management tool in Kenya in order to effectively achieve the right to a clean and healthy environment and promote sustainable development.

1. Introduction

The importance of the right to a clean and healthy environment cannot be overemphasized. It is an essential human right that has been equated to the right to life in Kenya.¹ Since it contains virtually all the ingredients necessary for human survival, the natural environment is often susceptible to human action such as the use and exploitation of natural resources including water, minerals and energy. Some of these activities have resulted in environmental degradation threatening the right to a clean and healthy environment.

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¹ See the case of *Peter K. Waweru v Republic*, Misc. Civil Application No. 118 of 2004, (2006) eKLR

Environmental management is essential towards attainment of the right to a clean and healthy environment in Kenya. It regulates human interaction with the environment. Environmental management combines science, policy, and socioeconomic application in finding solutions to practical problems that people face in cohabitation with the environment, resource exploitation and waste production.² The Environmental Management and Co-Ordination Act (EMCA) defines environmental management to include the protection, conservation and sustainable use of the various elements or components of the environment.³

However, in Kenya, environmental management has often taken a human approach with little emphasis on the role of science and technology towards achieving this goal. The paper analyses environmental management tools in Kenya and points out the shortcomings in the human approach towards environmental management. It proposes an integrated approach towards environmental management in Kenya that fully recognises and incorporates the use of science and technology.

2. Environmental Management Tools in Kenya

a. Role of Law in Environmental Management

The Constitution of Kenya, 2010 enshrines the right to a clean and healthy environment.⁴ It further sets out certain obligations in respect of the environment.⁵ These include the requirement of the state to ensure sustainable exploitation, utilisation, management and conservation of the

² National Environment Commission, 'Environmental Management Tools and Techniques' available at https://www.undp.org/content/dam/bhutan/docs/Energy_environment/Env-publications/2011-NEC-Env%20Mgt%20Tools.pdf (accessed on 17/03/2020)

³ Environmental Management and Co-Ordination Act (EMCA), No. 8 of 1999, S 2, Government Printer, Nairobi

⁴ Constitution of Kenya, 2010, Article 42: 'Every person has the right to a clean and healthy environment, which includes the right 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 to have obligations relating to the environment fulfilled under Article 70.

⁵ Ibid, Article 69 (1)

environment and natural resources; and to encourage public participation in the management, protection and conservation of the environment.⁶

In addition to the Constitution, environmental management in Kenya is also governed by various sectoral legislations.⁷ The *Environmental Management and Coordination Act* is the principal legal instrument for the management of the environment in Kenya.⁸ The Act also establishes an institutional framework for management of the environment in Kenya.⁹ It further sets out several measures aimed at protection and conservation of the environment and several environmental management tools such as Strategic Environmental Assessment, Environmental Impact Assessment, Environmental Audit and Monitoring and Environmental Quality Standards.¹⁰

Environmental management is also governed by a number of systems and standards. The ISO 14000 entails a number of standards developed by the International Organization for Standardization to help organizations take a proactive approach to managing environmental issues.¹¹ The ISO standards provide a framework through which governments and regulatory bodies can structure their environmental management tools to ensure alignment and

⁶ Ibid

⁷ Environmental sectoral legislations in Kenya include the Environmental Management and Co-Ordinations Act, No. 8 of 1999, Wildlife Conservation and Management Act, No. 47 of 201, Forest Conservation and Management Act, No. 34 of 2016, Climate Change Act, No. 11 of 2016, Mining Act, No. 12 of 2016 and Water Act No. 43 of 2016. They govern various environmental sub sectors including water, forests and minerals.

⁸ Environmental Management and Co-Ordination Act (EMCA), No. 8 of 1999, Government Printer, Nairobi

⁹ Section 7 of the Act establishes the National Environment Management Authority whose object and purpose is to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment.

¹⁰ EMCA, Parts V, VI, VII and VIII.

¹¹ Environmental Management: The ISO 14000 family of International Standards, available at https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/theiso14000family_2009.pdf (Accessed on 03/04/2020).

consistency both nationally and internationally.¹² EMCA also establishes environmental quality standards aimed at protecting various sectors of the environment through placing limits on discharge and emissions. These include water quality standards, air quality standards, standards for waste and standards for noise.¹³

Despite law being an essential tool for environmental management in Kenya, it is clouded by certain weaknesses that hinder its efficacy towards this course. These weaknesses include complex institutional set ups, differing and overlapping mandates of state agencies tasked with environmental management and conflicting management and enforcement methods over similar resources.¹⁴ Further, there exist enforceability challenges as can be witnessed in aspects such as solid waste management.¹⁵

b. Role of National Courts and Tribunals in Environmental Management

Courts play an important role in environmental management in Kenya through the promotion and protection of environmental rights.¹⁶ The Constitution provides the framework for enforcement of environmental rights through an application to court.¹⁷ On such an application, a court may grant appropriate remedies including an order to prevent, stop or discontinue

¹² Ibid

¹³ EMCA, Part VIII

¹⁴ Muigua, K., Wamukoya, D., & Kariuki, F., 'Natural Resources and Environmental Justice in Kenya' Glenwood Publishers Limited, 2015

¹⁵ Haregu Nigatu, T., An assessment of the evolution of Kenya's solid waste management policies and their implementation in Nairobi and Mombasa: analysis of policies and practices, *Environment and Urbanization*, Vol. 29, Issue 2, 2017

¹⁶ 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 19/03/2020)

¹⁷ Constitution of Kenya, 2010, Article 70 provides that if a person alleges that the 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 a court for redress in addition to any other legal remedies that are available in respect to the same matter.

an act or omission that is harmful to the environment or provide compensation to a victim of violation of the right to a clean and healthy environment.¹⁸

Courts and tribunals including the Environment and Land Court¹⁹ and the National Environment Tribunal²⁰ have facilitated this role through developing environmental jurisprudence and promoting the principles of sustainable development. In *Peter K. Waweru v Republic*²¹, the court while upholding the principles of sustainable development equated the right to a clean and healthy environment with the right to life and held that:

'We have added the dictionary meaning of life which gives life a wider meaning including its attachment to the environment. Thus a development that threatens life is not sustainable and ought to be halted. In environmental law life must have this expanded meaning as a matter of necessity.'

In *Save Lamu & 5 others v National Environmental Management Authority (NEMA) & Another*, the National Environment Tribunal while setting aside the decision by the National Environment Management Authority (NEMA) to issue an EIA Licence held as follows:

'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

¹⁸ Ibid, Article 70 (2)

¹⁹ The Environment and Land Court is established under section 4 of the Environment and Land Court Act, No. 19 of 2011. In the context of environment management, the Court hears and determines disputes relating to environmental planning and protection, climate issues, mining, minerals and natural resources.

²⁰ The National Environment Tribunal is established under section 125 of the Environmental Management and Co-Ordination Act, No. 8 of 1999. Its jurisdiction entails hearing appeals in relation to inter alia grant of a licence or permit or refusal to grant a licence or permit.

²¹ *Peter K. Waweru v Republic*, Misc. Civil Application No. 118 of 2004, (2006) eKLR

that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. (emphasis added)²²

This demonstrates that national courts and tribunals are essential in environmental management in Kenya through development of environmental jurisprudence and promoting the principles of sustainable development.²³ However, this role can be hindered by factors such as case load, costs of litigation, delays and procedural technicalities which continue to affect the judicial system in Kenya.²⁴

c. Role of the Public in Environmental Management

The Rio Declaration provides that environmental issues are best handled with the participation of all concerned citizens, at the relevant level.²⁵ In Kenya, public participation is a key aspect of environmental and natural resources management.²⁶ It allows persons who are likely to be affected by environmental laws, policies and projects within their localities to express their views for consideration in implementation of such laws, policies and projects.²⁷ Public participation has been enshrined as one of the national values and principles under the Constitution.²⁸ The Constitution further obligates the state to encourage public participation in the management, protection and conservation of the environment.²⁹ The role of public participation environmental management was succinctly captured in *Patrick Musimba v National Land Commission & 4 others*, where it was held that:

²² *Save Lamu & 5 others v National Environmental Management Authority (NEMA) & Another, Tribunal Appeal No. NET 196 of 2016, (2019) eKLR*

²³ Muigua, K., 'The Role of Courts in Safeguarding Environmental Rights in Kenya: A Critical Appraisal' Op Cit

²⁴ Ibid

²⁵ Rio Declaration on Environment and Development, 1992, A/CONF.151/26 (Vol. I), Principle 10

²⁶ Muigua, K., Wamukoya, D., & Kariuki, F., 'Natural Resources and Environmental Justice in Kenya' Glenwood Publishers Limited, 2015.

²⁷ Ibid

²⁸ Constitution of Kenya, 2010, Article 10 (2) (a)

²⁹ Ibid, Article 69 (1) (d)

'We have no doubt that the State under Article 69 of the Constitution is enjoined to ensure sustainable development: see also the Preamble to the Constitution. The State is also to ensure that every person has a right to a clean and healthy environment. However physical development must also be allowed to foster to ensure that the other guaranteed rights and freedoms are also achieved. Such physical development must however be undertaken within a constitutional and statutory framework to ensure that the environment thrives and survives. It is for such reason that the Constitution provides for public participation in the management, protection and conservation of the environment (emphasis added).'

Public participation is an essential tool of environmental management in Kenya which ensures that the views of the public are taken into account in environmental decision making. However, public participation in environmental decision making raises certain concerns such as the quality and extent of participation and the need to ensure that it is not enough for people to participate but there is need for them to be able to appreciate the real implications of any decision being made.³⁰ Without this, public participation is reduced to a matter of formality without any real benefit or achieving the desired end.³¹

d. Fiscal Incentives

Incentives are forms of rewards extended to business players as a way of encouraging them to adopt measures that help in preserving the environment while discarding or avoiding those that contribute to the degradation of the environment.³² They take several forms including tax/fiscal measures.³³ EMCA provides for tax and other fiscal incentives, disincentives or fees as may be proposed by the government to induce or promote the proper

³⁰ 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 01/04/2020)

³¹ Ibid

³² Muigua. K., Wamukoya. D., & Kariuki.F., Natural Resources and Environmental Justice in Kenya, Glenwood Publishers, 2015

³³ Ibid

management of the environment and natural resources or the prevention or abatement of environmental degradation.³⁴ Under the Act, such tax and fiscal incentives, disincentives or fees may include customs and excise waiver in respect of imported capital goods which prevent or substantially reduce environmental degradation caused by an undertaking and tax rebates to industries or other establishments that invest in plants, equipment and machinery for pollution control, re-cycling of wastes, water harvesting and conservation, prevention of floods and for using other energy resources as substitutes for hydrocarbons.³⁵

However, one of the shortcomings of incentive based mechanisms is that they do not fit every problem hence not widely used in environmental protection.³⁶ Further, there may be bureaucratic obstacles to the successful use of incentives such as difficulties of the economic calculations involved.³⁷

e. Environmental Ethics

It has been asserted that economic and judicial methods cannot solve environmental challenges on their own with a call of appeal to human beings' limitless internal ethical resources in the quest for environmental conservation.³⁸ Environmental ethics is aimed at providing ethical justification and moral motivation for the cause of global environmental protection.³⁹ This calls for adoption of an appropriate attitude towards nature and establishment of an ethical relationship between human beings and nature in order to foster environmental conservation. However, environmental ethics is yet to be fully embraced in Kenya as evidenced by numerous cases of environmental pollution perpetrated by human beings.

³⁴ EMCA, S 57 (1)

³⁵ Ibid, S 57 (2) (b)

³⁶ Andre. F., *Firms and the Environment: Ethics or Incentives? Corporate Social Responsibility Series*, (Ashgate Publishing Ltd., 2005)

³⁷ Ibid

³⁸ Yang, T., *Towards an Egalitarian Global Environmental Ethics, Environmental Ethics and International Policy*, available at <http://publishing.unesco.org/chapters/978-92-3-104039-9.pdf> (accessed on 03/04/2020)

³⁹ Ibid

f. Environmental Education

Environmental degradation has been attributed to among other factors, poverty and low levels of education.⁴⁰ Provision of education is therefore a crucial step towards elimination of bad environmental practices.⁴¹ Education has the ability to empower people and give them alternative means of making a living as opposed to relying on the environment for their sustainability.⁴² Further education has the ability to enhance sustainable development by improving the capacity of citizens to address environmental and developmental issues.⁴³ If empowered through education, citizens are able to make environmentally sound decisions in matters relating to exploitation of natural resources, Environmental Impact Assessment (EIA) and those having a bearing on the environment.⁴⁴

3. Role of Science and Technology in Environmental Management in Kenya

It has been argued that science and technology can provide effective solutions to most, if not all, environmental problems facing the world.⁴⁵ In the context of environmental management, environmental science studies the mechanisms and processes underlying our interactions with the natural environment whereas environmental technology allows application of such knowledge through actions geared towards environmental protection and conservation.⁴⁶ Technology not only refers to machines and equipment, but also includes the knowledge, abilities, skills, processes and systems

⁴⁰ See UNESCO, 'Educating for a Sustainable Future: A Transdisciplinary Vision for Concerted Action' available at <https://unesdoc.unesco.org/ark:/48223/pf0000110686> (accessed on 03/04/2020)

⁴¹ Ibid

⁴² Muigua. K., *Nurturing Our Environment for Sustainable Development*, Glenwood Publishers Limited, 2016

⁴³ Ibid

⁴⁴ Ibid

⁴⁵ 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, pg 271-287

⁴⁶ Voulvoulis.N., & Burgman.M.A., *The Contrasting Roles of Science and Technology in Environmental Challenges*, *Critical Reviews in Environmental Science and Technology*, Volume 49, 2019, issue 12

necessary to facilitate environmental conservation and protection.⁴⁷ To this extent, technology has been classified as *soft technology* which entails information, training, research and capacity building and *hard technology* comprising of equipment.⁴⁸

Science and technology have resulted in many environmental problems but can also be key to addressing environmental concerns such climate change, waste management and environmental degradation.⁴⁹ It has been described as a double edged sword capable of both doing and undoing environmental damage.⁵⁰ 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 vehicles.⁵¹ Addressing these environmental concerns requires the input of science and technology through measures such as reducing greenhouse gases, conserving biological diversity, providing clean energy and expanding the adoption of green technologies for climate change mitigation⁵² Environmental management and decision making in Kenya is governed by laws, regulations, and policies. Due to the shortcomings of such laws, regulations and policies, there is need for these processes to be informed by

⁴⁷ Srinivas. H., 'Introduction: Technology and Environment' available at <http://www.gdrc.org/techtran/introduction.html> (accessed on 18/03/2020)

⁴⁸ Ibid

⁴⁹ Nichols. M.R., 'How Technology Can Save the Environment' available at <https://born2invest.com/articles/technology-save-environment/> (accessed on 03/04/2020)

⁵⁰ Hsiang Kung. W., The Role of Science in Environmental Protection: Is the Development of Environmental Law Toward More Protective and Productive Way, or Distorted to Inequality, Through the Involvement of Science?, available at <https://poseidon01.ssrn.com/delivery.php?ID=893002127097024114071115075119005086117078019060066055110020095103024092069022098068013121004003017116060026103006068079097117116082071048061020026097093088117111003050062091116092001083026120014098122100070091110000102071109121123123124101104081026&EXT=pdf> (accessed on 01/04/2020)

⁵¹ Ibid

⁵² Juma. C., 'Exponential Innovation and Human Rights: Implications for Science and Technology Diplomacy', *Science, Technology and Globalization*, February, 2018

scientific evidence.⁵³ Indeed, science has the ability to remedy the shortcomings of laws and regulations through effective solutions tailor made to specific problems. The outbreak and spread of the Covid-19 pandemic is a clear example. Whereas countries have applied laws such as lock downs, curfews, quarantine and travel restrictions, spread of the virus still continues and the most effective solution to the pandemic would be through scientific knowledge and research to discover a cure and a viable vaccine.⁵⁴ In the context of environmental management, there is need to link law and science in order to ensure effective environmental management.⁵⁵

In Kenya, the Constitution obligates the state to recognize the role of science and indigenous technologies in the development of the nation.⁵⁶ To this effect, strides have been made towards the use of science and technology in environmental management. The ban on the manufacture, importation, supply, distribution and use of plastic bags and the subsequent adoption of woven bags has helped to curb environmental pollution.⁵⁷ However, more needs to be done to integrate the use of science and technology in environmental management in Kenya. Adoption of cleaner technologies in such areas as transport, energy production and food production can be an effective preventive measure.⁵⁸ Scientific knowledge is also useful in helping the citizenry adopt healthy lifestyles for a better, cleaner and healthier environment.⁵⁹ Some of the measures that can be adopted towards

⁵³ Moore. J.W et al, Towards Linking Environmental Law and Science, available at <https://www.facetsjournal.com/doi/pdf/10.1139/facets-2017-0106> (accessed on 01/04/2020)

⁵⁴ Human Rights Dimension of Covid-19 Response, available at <https://www.hrw.org/news/2020/03/19/human-rights-dimensions-covid-19-response> (accessed on 03/04/2020)

⁵⁵ Ibid

⁵⁶ Constitution of Kenya, 2010, Article 11 (2) (b)

⁵⁷ National Environment Management Authority, 2 years on: Say no to plastic bags, available at http://www.nema.go.ke/index.php?option=com_content&view=article&id=296&catid=2&Itemid=451 (Accessed on 20/03/2020)

⁵⁸ Muigua.K., Reconceptualising the Right to a Clean and Healthy Environment in Kenya, available at <http://kmco.co.ke/wp-content/uploads/2018/08/Right-To-Clean-And-Healthy-Environment-In-Kenya.docx-7th-september-2015.pdf> (accessed on 04/04/2020)

⁵⁹ Ibid

integrating the use of science and technology in environmental management in Kenya include:

a. Industrial Waste Treatment

In Kenya, most of the waste discharged from industries is not treated before recycling or disposal.⁶⁰ This poses health risks and causes damage to the environment since such waste is often discharged into water sources.⁶¹ Consequently, the industries involved in pollution have found themselves at war with environment entities including the National Environment Management Authority.⁶² Some of the measures that have taken by NEMA include closure of industries allegedly engaged in these acts.⁶³ However, with recent reports of industrial pollution of river sources such as the Nairobi River, questions still linger on the effectiveness of measures adopted in dealing with this challenge.⁶⁴

Industrial pollution is a global problem which is not alien to Kenya. Scientific measures that have been adopted to deal with industrial waste include use of materials such as zeolites, geopolymers, activated carbons and nanomaterials due to their characteristics such as ion exchange capacity, adsorption and photocatalytic action.⁶⁵ However, use of science and

⁶⁰ National Environment Management Authority, 'The National Solid Waste Management Strategy', available at <http://www.nema.go.ke/images/Docs/Media%20centre/Publication/National%20Solid%20Waste%20Management%20Strategy%20.pdf>, accessed on 28/03/2020.

⁶¹ Ibid

⁶² The National Assembly Departmental Committee on Environment and Natural Resources, Report on an Inquiry Into Complaints of Environmental Pollution, available at

http://www.parliament.go.ke/sites/default/files/2019-09/LDK%20REPORT_compressed.pdf, accessed on 28/03/2020

⁶³ National Environment Management Authority (NEMA), Factories Closed, Owners Arrested for Polluting Environment, available at http://www.nema.go.ke/index.php?option=com_content&view=article&id=298:factories-closed-owners-arrested-for-polluting-environment&catid=10:news-and-events&Itemid=454 (accessed on 06/04/2020)

⁶⁴ Kamau. J., How Nairobi River Lost Pollution Battle, *Daily Nation*, Monday, August 19, 2019

⁶⁵ De Luca. P et al, Industrial Waste Treatment by ETS-10 Ion Exchanger Material, available at <https://www.mdpi.com/1996-1944/11/11/2316> (accessed on 28/03/2020)

technology in industrial waste treatment has not been fully appreciated in Kenya. NEMA acknowledges that waste treatment technologies have not been fully embraced in the country which can be attributed to a number of factors such as lack of awareness and knowledge of such technologies; inadequate funding; limited technical competence and slow adoption of modern technological options.⁶⁶

There is need for the use of science and technology in industrial waste management in order to enhance environmental management and protection.

b. Adoption of Green and Clean Technologies

Green technology is an umbrella term that refers to the use of science and technology to create products and processes that are environmentally friendly for sustainable development.⁶⁷ Clean technology refers to products or services that improve operational performance while reducing costs, energy consumption, waste or negative effects on the environment.⁶⁸ These technologies can be used to protect the environment and in some instances repair damage done in the past. They provide the best eco-friendly option to ensure future sustainability.⁶⁹ Such technologies include recycling of waste and use of renewable sources of energy solar, wind and geothermal energy.⁷⁰ Kenya has made some significant strides towards the adoption of green and clean technologies especially in the area of renewable energy. The country has been ranked as the largest producer of renewable energy in Africa with

⁶⁶ National Environment Management Authority, ‘The National Solid Waste Management Strategy’ Op Cit

⁶⁷ Ali.M., Model of Green Technology Adaptation in Small and Medium –Sized Tannery Industry, *Journal of Engineering and Applied Sciences*, 12 (4), 2017

⁶⁸ Kenton. W., Green Tech, available at

https://www.investopedia.com/terms/g/green_tech.asp (accessed on 29/03/2020)

⁶⁹ National Environment Management Authority (NEMA), Green Initiatives in Kenya, available at

<http://nema.go.ke/images/Docs/Media%20centre/Brochures/Green%20Economy%20Booklet.pdf> (accessed on 29/03/2020)

⁷⁰ Ibid

70% of its electricity generation coming from renewable sources such as geothermal, hydropower, wind and solar sources.⁷¹

The government through the National Environment Management Authority imposed a ban on plastic carrier bags which has led to the use of eco-friendly non-woven bags.⁷² Such measures are to be lauded since they offer significant promise in the country's endeavour towards green and clean technologies. There is however need for more measures towards this endeavour such as the adoption of agricultural methods and technologies that are eco-friendly as opposed to the polluting and dangerous chemicals.⁷³

c. Climate Change Mitigation

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as change of climate which is attributed directly or indirectly to human activities which alter the composition of the global atmosphere and which are in addition to natural climate variability observed over comparable time periods.⁷⁴ Climate change has become a global concern in the 21st century and has been a dominant subject in political and scientific discussions.⁷⁵ It is majorly caused by human activities that lead to atmospheric concentration of green-house gases such as burning of fossil fuels, deforestation and increase in carbon dioxide levels. In order to curb this problem, nations under the Paris Agreement have come together under a common cause to undertake ambitious measures aimed at aimed at

⁷¹ Kenya News Agency, New Push on Green Technologies, available at <https://www.kenyanews.go.ke/new-push-on-green-technologies/>, accessed on 29/03/2020

⁷² National Environment Management Authority, Ban on Manufacture, Importation, Supply, Distribution and use of Plastic Carrier Bags in Kenya, available at http://www.nema.go.ke/index.php?option=com_content&view=article&id=296&catid=2&Itemid=451 (accessed on 29/03/2020)

⁷³ Muigua. K., Nurturing Our Environment for Sustainable Development, Glenwood Publishers Limited, 2016

⁷⁴ United Nations Framework Convention on Climate Change (UNFCCC), United Nations, 1992, available at <https://unfccc.int/resource/docs/convkp/conveng.pdf> (accessed on 30/03/2020)

⁷⁵ Owusu. P.A., & Asumadu-Sarkodie. S, A Review of Renewable Energy Sources, Sustainability Issues and Climate Change Mitigation, available at <https://www.tandfonline.com/doi/pdf/10.1080/23311916.2016.1167990?needAccess=true> (accessed on 30/03/2020)

combating climate change and adapting to its effects.⁷⁶ The Agreement is aimed at 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 in recognition that this would significantly reduce the risks and impacts of climate change.⁷⁷ The Agreement recognises the role of science in climate change mitigation and calls upon states to adopt a country-driven, gender-responsive, participatory and fully transparent approach guided by the *best available science* and, as appropriate, *traditional knowledge, knowledge of indigenous peoples and local knowledge systems* (emphasis added).⁷⁸

Kenya like the rest of the world is faced with the threat of climate change. The Kenya National Adaptation Plan acknowledges the role of science, technology and innovations matched to local needs and risks towards climate change mitigation.⁷⁹ It proposes thoughtful prioritisation of research funding and policy to encourage innovation that will grow Kenya's knowledge-based economy, building resilience through climate-compatible development whilst also encouraging the expansion of technology and expertise exports.⁸⁰ The country should be more proactive in adoption of technological and scientific measures aimed at curbing climate change such as the use of clean energy sources.

4. Conclusion

The right to a clean and healthy environment is a salient human right that has been equated to the right to life in Kenya. However, environmental challenges that continue to be witnessed in the country such as pollution, environmental degradation, deforestation and the threat of climate change

⁷⁶ United Nations Framework Convention on Climate Change, Paris Agreement, 2015, available at http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf (accessed on 30/03/2020)

⁷⁷ Ibid, Article 2 (1) (a)

⁷⁸ Ibid, Article 7 (5)

⁷⁹ Ministry of Environment and Forestry, National Climate Change Action Plan 2018-2022, available at <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/10/8737.pdf> (accessed on 31/03/2020)

⁸⁰ Ibid

necessitate the need for a more collaborated approach towards environmental protection and conservation in Kenya. The role of science and technology in environmental protection and conservation in Kenya has often been neglected with more emphasis being placed on legal and other approaches.

With environmental concerns still being witnessed in Kenya, the shortcomings of these measures is evident. There is need for enhancement of the use of science and technology in environmental protection and conservation in Kenya in order to secure the right to a clean and healthy environment which equates to the right to life.⁸¹ Utilising science and technology in environmental conservation and protection in Kenya is vital. It cannot be ignored.

⁸¹ See the case of *Peter K. Waweru v Republic*, Misc. Civil Application No. 118 of 2004, (2006) eKLR

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Realising Sustainable Use of Biomass Energy in Kenya: Appraising the Regulatory and Institutional Framework

By: **Oseko Louis D Obure ***

Abstract

Increasingly the world has been shifting toward cleaner and sustainable energy to ensure sustainable development in the energy industry. This calls on every country to ensure affordable, secure, and clean energy for its citizens. Achieving this is resource heavy and requires technical skills that most developing and third-world countries do not have. As developed countries rely on alternative energy sources such as electricity to power cars, cook, and for heating, developing countries rely on traditional bioenergy for cooking and heating, and Kenya is no exception. Kenya has experienced an exponential increase in the demand for biomass energy. This has been particularly so in light of the increasing human population, urbanization, and the high cost of alternative energy sources. In Kenya, most households rely on charcoal conversion kilns, charcoal stoves, and woodlots. It is worth noting that this demand has led to inefficient production and utilization mechanisms that pose a threat to the environment and the health of many. It is expected that with the increase in fuel prices by the introduction of the value-added tax of 8% on petroleum products, the cost of living and price of alternative sources of energy will equally soar; therefore, the demand for biomass will continue to increase. Ergo, ensuring safe and sustainable use of biomass is therefore important. This calls for an efficient regulatory and institutional framework over biomass. The object of this essay is to examine and appraise Kenya's regulatory and institutional

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framework over biomass and proffer recommendations for the better and sustainable use of biomass.

1.0 Introduction

Energy sources can largely be grouped into renewables and non-renewables. Non-renewable sources of energy refer to energy sources that deplete when used and are not self-replenish. Examples include fossil fuels like coal, petroleum, and natural gas.¹ On the other hand, renewable energy comprises energy sources that cannot be depleted; that is, it is a source of energy that is self-replenishing.² Most renewable sources of energy come from natural sources. For example, solar and wind energy is derived from natural resources such as the sun and wind. Also, the sun and wind are the perfect examples of how renewable energy resources cannot be depleted because the sun will always shine just as the wind will always blow regardless of the weather of the day.³ It is often argued that renewable and clean energy are terms that can be used interchangeably and are like Siamese twins.⁴ This argument falls apart at its seams because other sources of renewable energy contribute to the global carbon footprint, like biomass.

Biomass is a renewable organic material containing chemical energy from the sun.⁵ This chemical energy is heated or converted to a usable state like

¹ National Geographic Society, 'Non-Renewable Energy', *National Geographic Society* (2013) <<http://www.nationalgeographic.org/encyclopedia/non-renewable-energy/>> accessed 9 March 2022.

² Phebe Asantewaa Owusu and Samuel Asumadu-Sarkodie, 'A Review of Renewable Energy Sources, Sustainability Issues and Climate Change Mitigation' (2016) 3 *Cogent Engineering* 1167990 <<https://doi.org/10.1080/23311916.2016.1167990>> accessed 9 March 2022.

³ G Wu and others, 'Renewable Energy Zones for the Africa Clean Energy Corridor' <<https://escholarship.org/uc/item/74m5n78n>> accessed 10 February 2022.

⁴ Muhammad Amer and Tugrul U Daim, 'Selection of Renewable Energy Technologies for a Developing County: A Case of Pakistan' (2011) 15 *Energy for Sustainable Development* 420 <<https://www.sciencedirect.com/science/article/pii/S0973082611000767>> accessed 10 February 2022.

⁵ 'Biomass Explained - U.S. Energy Information Administration (EIA)' <<https://www.eia.gov/energyexplained/biomass/>> accessed 9 March 2022.

gas.⁶ Biomass can be derived from plants and animals. Plants are the leading source of firewood, wood pellets, sawdust and agricultural crops and waste materials like maize cobs that are used for heating and cooking in Kenya's rural homes. Animals are also considered as a source of biomass because their waste can be fermented to produce gases and liquids such as methane and biodiesel, which is combustible. This is commonly referred to as biogas and can be used for cooking, heating, and lighting.⁷

The Energy Act also defines biomass. According to this act, biomass is "*non-fossilized and biodegradable organic material originating from plants, animals and micro-organisms and includes bio-ethanol, bio-diesel, biogas, charcoal, fuel-wood and agro-waste.*"⁸ It is worth noting that this definition appears to have adopted the widely used biomass definition.

Arguably, biomass serves as the only source of energy for most people in developing countries. This is premised on the fact that to this class of persons, it is the only source of energy that they have access to and can afford. Unfortunately, this class makes up the largest percentage of the population. Consequently, the government must ensure sufficient and effective regulatory and institutional frameworks to ensure sustainable use of biomass energy.

In critiquing the regulatory and institutional framework for biomass energy use in Kenya, this paper shall adopt a quadruple approach. First, this paper will briefly assess the status of biomass energy use in Kenya. Secondly, this paper will examine the existing regulatory approach for the management of biomass energy. Thirdly, the discussion will focus on evaluating and critiquing the institutional framework. Lastly, this essay will give

⁶ 'Biomass Explained - U.S. Energy Information Administration (EIA)' <<https://www.eia.gov/energyexplained/biomass/>> accessed 10 February 2022.

⁷ S Abanades and others, 'A Critical Review of Biogas Production and Usage with Legislations Framework Across the Globe' [2021] *International Journal of Environmental Science and Technology* 1 <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8124099/>> accessed 10 February 2022.

⁸ Energy Act 2019, Section 2.

recommendations for better management and promotion of sustainable use of biomass energy in Kenya.

2.0 The Status of Biomass Energy Use in Kenya

Kenya's energy mix is diverse. It comprises bioenergy, oil products, and clean renewables such as solar and wind energy. Studies have shown that the leading and primary energy supply in Kenya is bioenergy which comprises about 64.6% of the total energy supply.⁹ Oil products such as petroleum rank second, followed by solar, wind, and other sources such as coal and hydroelectric power.¹⁰

Bioenergy in Kenya is primarily derived from what is considered as 'traditional biomass.' This includes sources such as charcoal and firewood. Currently, about 80% of Kenyan households rely on firewood for cooking and heating.¹¹ This exerts pressure on forest resources and contributes to land degradation. Additionally, Kenya has been experiencing unsustainable biomass extraction in the recent past because of the weak policies and regulatory frameworks that are in place.¹²

It is noteworthy that the renewability of biomass cannot be compared to that of wind and solar. This is because, unlike wind and solar that will always blow and shine, uncontrolled extraction of biomass and inefficient utilization runs the risk of making biomass a non-renewable source of energy.¹³ This is why the enactment of regulations to ensure conservation and sustainability

⁹ 'Data Overview' (*International Energy Agency*) <<https://www.iea.org/data-and-statistics>> accessed 10 February 2022.

¹⁰ Dr Andrew Welfle, Salome Chingaira and Alisher Kassenov, 'Decarbonising Kenya's Domestic & Industry Sectors through Bioenergy: An Assessment of Biomass Resource Potential & GHG Performances' (2020) 142 *Biomass and Bioenergy* 105757 <<https://www.sciencedirect.com/science/article/pii/S0961953420302919>> accessed 10 February 2022.

¹¹ *Ibid.*

¹² F Mugo and T Gathui, 'Biomass Energy Use in Kenya' <<http://erepository.uonbi.ac.ke/handle/11295/54948>> accessed 10 February 2022.

¹³ *Ibid.*

is imperative in any jurisdiction, whose population relies heavily on the use of biomass as a source of energy.

It is without a doubt that Kenya has made significant strides in formulating energy policies and regulations, that are necessary for the proper regulation of biomass energy in Kenya, and this will be discussed in this essay; however, there still remain some gaps and overlaps with these regulations and institutions.

3.0 Critiquing Kenya's Regulatory and Institutional Framework

3.1 Kenya's Regulatory Framework

The regulatory framework for the management of biomass comprises international, regional, and national instruments. These include treaties, legislations, and policies on the use of biomass energy.

3.1.1 International and Regional Regulatory Framework

Kenya has ratified a number of international instruments that regulate the use of biomass per the Constitution of Kenya, 2010.¹⁴ To begin with, Kenya is a party to the United Nations Framework Convention on Climate Change (UNFCCC). One of the UNFCCC objects is to promote sustainability in the management of biomass and forests.¹⁵ The need for effective, sustainable development is to ensure the conservation of forest resources which are a leading source of biomass. Secondly, there is the Convention on Biological Diversity which has among its core mandates, ensuring sustainable use of biomass through adaptive management, bearing in mind the continued increase of dry areas.¹⁶ Importantly, there are World Trade Organization Framework on the trade in bioenergy products.¹⁷ This WTO framework is important in controlling the demand for biomass energy because this source of energy, although grouped as renewable, can be depleted when there are uncontrolled extractions and trade rules.

¹⁴ Constitution of Kenya 2010, Article 2(4) & 2(5).

¹⁵ United Nations Framework Convention on Climate Change 1999, Article 4.

¹⁶ Convention sur la diversité biologique and others, *Handbook of the Convention on Biological Diversity* (Earthscan 2001).

¹⁷ Bioenergy Strategy 2020-2027 2020.

Although the international framework provides for an adequate framework for the sustainable use of bioenergy in the Member States, they have often been seen as aspirational and utopic. This is because, in most developing African countries, bioenergy is the most accessible and affordable source of energy; besides, most households even trade in biomass through the sales of firewood and charcoal in order to sustain themselves.¹⁸ Therefore, the efficacy of these instruments can only be realized if they were alive to the realities of life in developing and third world countries.

At the regional level, The Africa Bioenergy Policy Framework and Guidelines strive to inform the National Bioenergy Policy formulation. There are two main purposes of this framework.¹⁹ First, this framework was enacted to build consensus on the shared framework that provides guidance to individual countries and regions in developing bioenergy policies and regulations. Secondly, the policy bolsters awareness creation among African policymakers and civil society about the need for environmentally friendly and socially acceptable bioenergy development policies.²⁰

This is a positive step towards achieving sustainable use of biomass energy in Africa. This policy wishes to achieve this through the harmonization of policies in the management of bioenergy. This is essential because the production, trade, and use of bioenergy transcend national boundaries, and so do the effects of its ineffective extraction and utilization. Additionally, this policy buttresses existing national policies because policies often become ineffective when they are not widely supported at the regional level. A harmonized approach sets the stage for a shared standard, code, and behaviour for an efficient and sustainable bioenergy market in African countries.

¹⁸ Leo C Zulu and Robert B Richardson, 'Charcoal, Livelihoods, and Poverty Reduction: Evidence from Sub-Saharan Africa' (2013) 17 *Energy for Sustainable Development* 127 <<https://www.sciencedirect.com/science/article/pii/S0973082612000506>> accessed 11 February 2022.

¹⁹ Aubin Nzaou, '11. African Union' (2019) 30 *Yearbook of International Environmental Law* 530 <<https://doi.org/10.1093/yiel/yvaa051>> accessed 11 February 2022.

²⁰ *n 14.*

3.1.2 National Level Regulatory Framework

Kenya is alive to the important role that biomass or bioenergy plays in driving the economy as well as a source of energy for those who cannot afford alternative sources of energy. Consequently, Kenya has put in place a myriad of policy and legal instruments in an attempt to promote sustainable use and realize the great depths of untapped potential in the effective and sustainable use of biomass energy.

The leading instrument is the Constitution which begins by devolving the planning and development in energy regulation to the county governments.²¹ This devolved system of government prompted the enactment of the Energy Act,²² seeing as there was the need to streamline the statutory framework with the provisions of the constitution of Kenya.

3.1.2.1 The Energy Act, 2019

The primary role of this act in the management of biomass in energy is that it lays the foundation for the implementation of a framework for energy regulation. To begin with, this act empowers the Cabinet Secretary to develop, publish, and review energy plans relating to different forms of renewable energy, which includes bioenergy.²³ Additionally, due to the changes in technology and innovation that revolutionize energy sources, the Cabinet Secretary is required to ensure and, in consultation with others, review the existing energy policy plans.²⁴ This is key because technological advances have a broad effect on energy sources like biomass, particularly when it comes to their extraction and sustainable use like the creation of energy-saving stove,²⁵ which Kenya must be aware of and review its policies in a manner that embraces change.

²¹ Constitution of Kenya 2010, Fourth Schedule.

²² No 1 of 2019.

²³ The Energy Act 2019, Section 5(1).

²⁴ The Energy Act 2019, Section 4(1).

²⁵ Manuel Odeny, 'Smokeless Jikos Cut Pollution, Fuel Costs' *The Star* <<https://www.the-star.co.ke/news/big-read/2021-10-15-smokeless-jikos-cut-pollution-fuel-costs/>> accessed 11 February 2022.

Moreover, the Cabinet Secretary is under the duty to publish the Integrated National Energy Plan, which will guide the adoption of clean and affordable energy.²⁶ This means that there is a need to reduce the use of biomass such as firewood and charcoal because these forms of renewable energy are not clean energy sources. In the same breath, the County Government is obligated to develop and submit the County Energy Plan to the Cabinet Secretary.²⁷ Lastly, the CS is required to prepare an energy resource map in respect of the different renewable energy resource areas.²⁸ This section seems aspirational because the biomass rich areas are disintegrated across the country and are ever so often, informal that drawing such a map is quite complex for the office of the Cabinet Secretary for energy.

When the Energy Act 2019 was enacted, its main goal was to reconcile the multiplicity that existed on the regulation of energy as well as to streamline the legal framework of biomass energy under the new era of devolved governance. However, this act has failed to achieve this mandate because there is still duplicity in the provisions for biomass energy. These can still be found in various statutes like the Energy Act 2019 and the Forest Conservation and Management 2016, which provide for licensing and use of bioenergy. Also, there is role duplication in different institutions; for instance, licensing and permits for the use of biomass in Kenya may be granted and revoked by the Energy and Petroleum Regulatory Authority per the Energy Act²⁹ or the Kenya Forest Service³⁰ per the Forest Conservation and Management Act. Therefore, it is evident that the primary objectives of the energy act have not been met; instead, it promotes duplicities, making it a case of *much ado about nothing*.

3.1.2.2 *The National Energy Policy, 2018*

This policy was enacted in October 2018. It recognizes biomass as an organic matter that can be used for heating, fuel, and electricity generation.³¹ This

²⁶ The Energy Act 2019, Section 75(1).

²⁷ The Energy Act 2019, Section 5(3).

²⁸ The Energy Act 2019, Section 74(2).

²⁹ The Energy Act 2019, Section 11.

³⁰ The Forest Conservation and Management Act 2016, Section 7 & 8.

³¹ The National Energy Policy 2018, Section 3.4.1.

policy was enacted to realize the goal of achieving at least 10% forest cover, which is threatened by the continued and uncontrolled extraction of trees to provide charcoal and firewood. This policy mandates the government to take part in a study on the potential of biomass energy and to disseminate information on biomass energy resources.³² Also, in order to promote the use of alternative sources of energy, this policy advocates for the provision of incentives for the participation of the private sector in the conversion of waste to energy initiatives to tame the overreliance on the use of biomass energy.³³ Importantly, the primary object of this policy is to bolster the efficient conversion and cleaner utilization of biomass energy.

The National Energy Policy 2018 has promises for better, cleaner and sustainable biomass energy. The policy not only lays a basis for the realization of this goal, but it is also aware of the popularity of biomass due to the high costs of using alternative sources of energy. The policy even provides for incentives for the shift to cleaner energy by the private sectors because biomass such as firewood and charcoal pose a threat to the environment and the health of its users. Often there have been calls for a shift towards cleaner energy in the realization of Sustainable Development Goals and, in particular, SDG number 7 on affordable and clean energy.³⁴ This paper adopts that the implementation of this policy is essential for the promotion of safe and sustainable use of biomass energy in Kenya.

3.1.2.3 The Environmental Management and Coordination Act 1999

This act came into force in the early 2000s and is one of the oldest acts that deal with the regulation of biomass energy use in Kenya. The core mandate of this act is to promote environmental conservation. This mandate is intertwined with the use of biomass energy because biomass energy sources such as firewood are extracted from plants, including trees which are at the

³² *Ibid* n28.

³³ *Ibid* n28.

³⁴ 'Goal 7: Affordable and Clean Energy | UNDP in Kenya' (UNDP) <<https://www.ke.undp.org/content/kenya/en/home/sustainable-development-goals/goal-7-affordable-and-clean-energy.html>> accessed 11 February 2022.

centre of environmental conservation campaigns. Therefore, this act serves to indirectly regulate the supply of firewood and charcoal.³⁵

Section 49³⁶ of this act speaks on the conservation of energy and planting of trees or woodlots. This section confers power on the authority³⁷ to promote research on appropriate renewable sources of energy, create incentives for the promotion of renewable sources of energy, and adopt measures that encourage afforestation by individual land users, community groups and even institutions.³⁸

EMCA has for a long time represented a progressive legislative agenda when it comes to the management of the environment and promotion of better and clean energy. This is reflected in the provision that incentivizes the growth of trees by farmers and even the community and the use of better alternative renewable energy sources, unlike firewood and charcoal.³⁹ However, despite this act being in force for over 20 years, its enforcement faces a number of challenges because it is both human and financial resource-heavy.⁴⁰ Besides, they have been tremendous innovations that have led to the adoption of alternative sources of energy, and this old act does not reflect these innovations and today's standard practices in the use of renewables.

3.1.2.4 The National Climate Change Action Plan (NCCAP) 2018-2022

Carbon emissions have always been linked to the two main categories of energy sources (renewables and non-renewables). Ergo, the NCCAP was adopted. The primary objective of this policy is to identify the possible actions that can be taken to transform energy and its uses with emphasis on the adoption of renewable energy to bring Kenya closer to achieving a low-

³⁵ F Mugo and T Gathui, 'Biomass Energy Use in Kenya' <<http://erepository.uonbi.ac.ke/handle/11295/54948>> accessed 11 February 2022.

³⁶ The Environmental Management and Coordination Act 1999.

³⁷ National Environmental Management Authority (NEMA).

³⁸ *Ibid* n33, Section 49.

³⁹ The Environmental Management and Coordination Act 1999, Section 49.

⁴⁰ F Mugo and T Gathui, 'Biomass Energy Use in Kenya' <<http://erepository.uonbi.ac.ke/handle/11295/54948>> accessed 11 February 2022.

carbon development pathway.⁴¹ The NCCAP lays emphasis on nine critical areas, including those touching on bioenergy.⁴² NCCAP's role in biomass energy use in Kenya is to promote the use of clean cooking solutions like the use of energy-saving or improved charcoal stoves, reforestation, and agroforestry.

This action plan is representative of the instruments needed to ensure the progressive realization of cleaner and sustainable use of biomass energy. Although the intention of this act is well premised on ensuring low carbon emission through improved stoves, more should be done to ensure everyone has not only access to these stoves but are also able to afford them. Today, the price of an improved stove stands at Kshs 3000, which most households cannot raise.⁴³ Admittedly, the NCCAP has promises; however, costs act as a hindrance to its full realization.

3.1.2.5 Feed-In-Tariffs Policy On Wind, Biomass, Small-Hydro, Geothermal, Biogas and Solar Resource Generated Electricity

A Feed-In-Tariff instruments act as incentives for persons who have the capacity to generate electricity from renewable sources of energy. Through FiT, the generator of electricity from this source is able to earn a living by selling the surplus energy to others at a pre-determined tariff.⁴⁴ This electricity can be derived from different sources, including biomass. FiT plays a crucial role in ensuring sustainability in the production of renewable sources because the private investor will always adopt an effective way of production in order to maximize returns.⁴⁵

There are challenges that face the full implementation of FiT, and this is the low rate that the investors get in terms of returns. Besides, Kenya has smaller

⁴¹ Bioenergy Strategy 2020-2027 2020, Section 3.1.2.

⁴² *Ibid.*

⁴³ Githinji Reuben, 'Smoke Chasing Embu Men from Home' *The Star* <<https://www.the-star.co.ke/counties/eastern/2019-05-16-smoke-chasing-embu-men-from-home/>> accessed 11 February 2022.

⁴⁴ Feed-In-Tariffs Policy for Wind, Biomass, Small Hydros, Geothermal, Biogas and Solar, 2nd Revision, December, 2012, Section 2(7).

⁴⁵ *Ibid.*, Section 2(8).

biogas plants that cannot sustain large scale production in a manner that will attract tangible returns for the producers.⁴⁶ These two challenges have served to greatly discourage private individuals and investors from producing electricity from renewables.

3.1.2.6 Bioenergy Strategy 2020 -2027 (Kenya)

This action plan was drafted and adopted to help achieve a sustainable bioenergy future. This strategy is premised upon international and regional trends in the production of bioenergy and its consumption. Although it mirrors these international strategies, it has been informed by Kenya's bioenergy industry status.⁴⁷ The Bioenergy Strategy seeks to achieve sustainable use of bioenergy by 2028 through the promotion of sustainable production and consumption of bioenergy. Also, this action plan intends to accelerate the adoption and transition to clean cooking since most households cook with open fire, which is unsustainable as it consumes a lot of firewood. Since information is key, the goal of this strategy is to provide the necessary information to investors on the viable opportunities for bioenergy in Kenya.⁴⁸

This is a progressive strategy that will fast track the realization of Vision 2030 as well as the Sustainable Development Goals, particularly the adoption of clean and affordable energy by all countries. This strategy is alive to the fact that a majority of Kenyans use bioenergy,⁴⁹ as such, to reduce the strain on forest resources, improved stoves must be promoted among these households. However, the price of improved stoves continues to be high, which slows down the shift towards sustainable use.⁵⁰

⁴⁶ *Ibid* Section 2(12).

⁴⁷ Bioenergy Strategy 2020-2027 2020, Page 5.

⁴⁸ Bioenergy Strategy 2020-2027 2020, Section 1.0.

⁴⁹ *Ibid* n44.

⁵⁰ Githinji Reuben, 'Smoke Chasing Embu Men from Home' *The Star* <<https://www.the-star.co.ke/counties/eastern/2019-05-16-smoke-chasing-embu-men-from-home/>> accessed 11 February 2022.

3.1.2.7 Other National Regulatory Instruments

There are other instruments that play a valuable role in the management of biomass use in Kenya. These instruments include:

3.1.2.7.1 The Energy Regulations of 2013

There have been innovative ways of utilizing biomass energy for cooking. These innovations include improved biomass stoves. Today, the production of improved biomass cookstoves has increased, calling for better standardization of quality. In order to address these concerns, the Energy Regulations of 2013 were passed.⁵¹ Their main objective was to set the classes and requirements necessary in licensing, maintenance, manufacture, importation, and distribution of cookstoves.

3.1.2.7.2 The Forest Conservation and Management Act 2016

This act establishes the Kenya Forest Services.⁵² The main role of this body is to “*receive and consider applications for licenses or permits in relation to forest resources.*”⁵³ This role makes them critical in biomass energy use management because forests are sources of biomass energy. For example, firewood is a forest produce. Additionally, they body is mandated to formulate rules that govern the trade of forest resources and forest produce.⁵⁴ Most importantly, this act governs the production, transportation, and marketing of forest produce such as charcoal.⁵⁵

The main challenge that comes with this act is that the Energy Act⁵⁶ establishes the Energy and Petroleum Regulatory Authority which has the same roles as the Kenya Forest Service. EPRA has the authority to issue licenses and permits on matters energy, including bioenergy, while KFS also has the same role of issuing licenses and permits for the use of forest produces like firewood and charcoal, which fall under bioenergy.

⁵¹ Bioenergy Strategy 2020 – 2027 2020, Section 3.1.2.

⁵² The Forest Conservation and Management Act 2016, Section 7.

⁵³ *Ibid*, Section 8.

⁵⁴ *Ibid*.

⁵⁵ *Ibid*, Sections 67(1)(e) and 71 (2).

⁵⁶ No 1 of 2019, Section 11.

3.2 Kenya's Institutional Framework

There are a number of institutions that play an essential role in promoting the sustainable use of biomass in Kenya. These institutions are both governmental, statutory, and non-governmental. This part focuses on critically examining the roles these institutions play in the promotion of sustainable use of biomass energy.

3.2.1 Government Ministries

There are a number of ministries that are relevant in promoting sustainability in the use of biomass energy. However, two main ministries stand out; that is, the Ministry of Energy and the Ministry of Environment and Forestry. Although having two or more ministries bring about a multi-institutional approach that strengthens the management of biomass energy, it comes with dangers as well. For instance, having different ministries or entities regulating and overseeing the use of biomass can lead to institutional overlaps that could breed conflicts on who has more powers, as was seen in the case of the National Land Commission and the Ministry of Land.⁵⁷

The leading ministry in the management of biomass is the Ministry of Energy, particularly the office of the Cabinet Secretary, which is tasked with the overall role of spearheading the formulation of energy policy plans on renewable energy after consultation with the relevant stakeholders.⁵⁸ Owing to the innovation that takes place in the energy industry, the act requires that the Cabinet Secretary also spearheads the review of this policy plan.⁵⁹ Additionally, there is the Office of the Cabinet Secretary for Environment and Forestry which has the mandate of formulating National Forest Policies on the sustainable use of forest resources and forest produce.⁶⁰ Biomass energy sources, particularly plant sources, come from forest resources, such as trees, which are under the purview of the Cabinet Secretary for Environment and Forestry. Admittedly, it is clear that this role is an overlap of the role of the office of the Cabinet Secretary under the Energy Act.

⁵⁷ Supreme Court Advisory Opinion Reference 2 of 2014.

⁵⁸ Energy Act 2019, Section 4.

⁵⁹ *Ibid* n51.

⁶⁰ Forest Conservation and Management Act 2016, Section 5(1).

3.2.2 Energy and Petroleum Regulatory Authority (EPRA)

This body was created by the energy act.⁶¹ EPRA's main role in the sustainable use of biomass is that it has the authority to "*regulate the production, conversion, distribution, supply, marketing and use of renewable energy.*"⁶² Regulation of the market, particularly supply, is essential because uncontrolled supply may lead to the depletion of forest resources. This is because plant based biomass like firewood are considered as forest produces. It is prudent to note that how biomass is used may bear a negative environmental impact. This is owing to the fact that the use of charcoal and firewood for heating and cooking contribute to the global carbon footprint, which accelerates global warming.⁶³

The use of biomass should be sustainable, but most people continue to cook with open fires. This has created a market for the sale of improved stoves. However, EPRA does not have the right technical expertise to ensure the standardization of these improved stoves; thus, they work in conjunction with the Kenya Bureau of Standards, which has the capacity to ensure the good quality standards are adhered to in the manufacturing of improved energy-saving stoves.⁶⁴

Although the Energy Act goal was to create a sector specific regulator like EPRA, the National Environmental Authority may also be considered as a regulator of this sector because biomass extraction and utilization are closely related to environmental conservation. This overlap in roles may cause conflicts and impede the realization of the functions and objectives of these bodies.

⁶¹ No 1 of 2019, Section 9.

⁶² Energy Act 2019, Section 10.

⁶³ Abigael Okoko and others, 'The Carbon Footprints of Alternative Value Chains for Biomass Energy for Cooking in Kenya and Tanzania' (2017) 22 *Sustainable Energy Technologies and Assessments* 124 <<https://www.sciencedirect.com/science/article/pii/S2213138817301261>> accessed 12 February 2022.

⁶⁴ 'ISO/TC 285 - Clean Cookstoves and Clean Cooking Solutions' (*ISO*) <<https://www.iso.org/cms/render/live/en/sites/isoorg/contents/data/committee/48/5/7/4857971.html>> accessed 12 February 2022.

3.2.3 Rural Electrification and Renewable Energy Corporation (REREC)

The Rural Electrification and Renewable Energy Corporation were created by the Energy Act.⁶⁵ The roles of this corporation as provided for under section 44 of this act. They include the sourcing of funds to aid in financing renewable energy. Also, REREC is obligated to promote, develop and manage the use of renewable sources of energy, including biomass, solar, and wind.⁶⁶ The promotion can be done through subsidization of prices and offering other incentives. For a long time, the funding of renewable energy sources has come from the Rural Electrification Programme Fund.⁶⁷ However, most of the funds have to be put towards increasing the accessibility and affordability of electrical power in rural areas. This is essential because rural areas make up the largest population that uses biomass. Rural households use biomass for cooking, heating and lighting, and this is mainly because these families cannot afford alternative cleaner sources of energy such as electrical energy. Therefore, by subsidizing the cost of electricity connection fees from Ksh 75,000 to a lesser affordable fee, the overreliance on biomass will reduce, thus reducing the pressure on forest resources such as trees for firewood and charcoal.

However, it is worth noting that this is a double-edged sword. That is to say that by the Cabinet Secretary prescribing a levy,⁶⁸ the cost of electricity to be borne by others will be higher, and thus it could discourage other users. For instance, Devki decided to put up its own electrical plant because of the quotation fee that KPLC had given them. The result is that Kenya Power and Lighting will now be losing 200 million Kenyan shilling that Devki would have paid in terms of power bills.⁶⁹ Also, the government has delayed paying KPLC the amount for the connection of electricity which threatens the

⁶⁵ No 1 of 2019, Section 43.

⁶⁶ Ibid, Section 44.

⁶⁷ Energy Act 2019, Section 143.

⁶⁸ Energy Act 2019, Section 144.

⁶⁹ Kamau John, 'Mystery of Devki Paying Less for Power Bills than Rivals | Nation' <<https://nation.africa/kenya/business/mystery-of-devki-paying-less-for-power-bills-than-rivals-3577988>> accessed 1 February 2022.

continuation of this project.⁷⁰ Granted, although this corporation, through funding, has promises in promoting sustainable use of biomass by encouraging the shift to other alternative renewable sources of energy through price subsidization in electricity connections, it comes with the danger of making KPLC lose huge power consumers because of costs through levies for sourcing funds.

3.2.4 Renewable Energy Resource Advisory Committee (RERAC)

The Renewable Energy Resource Advisory Committee (RERAC) was established by the Energy Act.⁷¹ This is an inter-ministerial committee comprising of a representative from the office of the Attorney General, the managing director of the Kenya Electricity Generating Company Limited, the principal secretary of the National Treasury, and the principal secretary for matters relating to natural resources.⁷²

The main role of the committee is to advise the Cabinet Secretary for Energy on matters relating to the allocation of renewable energy resources, licensing of renewable energy resource areas, and the management and development of renewable energy resources.⁷³ It is worth noting that this advisory committee may advise the County Government but only when honouring a request on matters relating to renewable energy like biomass.⁷⁴

This advisory committee is important because it brings together different stakeholders ensuring decisions and policy initiative taken towards the management of renewables is all-inclusive, thus preventing future conflicts between all these bodies that are charged with the management of renewable energy like biomass. However, there are weaknesses stemming from the very

⁷⁰ ‘Consumers to Pay More as Kenya Power Ends Connection Subsidies’ (*Business Daily*, 12 December 2020) <<https://www.businessdailyafrica.com/bd/corporate/companies/consumers-to-pay-more-as-kenya-power-ends-connection-subsidies--2110944>> accessed 12 February 2022.

⁷¹ Energy Act 2019, Section 76.

⁷² Energy Act 2019, Section 76(2).

⁷³ *Ibid*, Section 76(4).

⁷⁴ *Ibid*, Section 76(5).

fact that advisory opinions are often not binding; therefore, the Cabinet Secretary may choose to ignore the advice of the committee.

3.2.5 National Environmental Management Authority (NEMA)

This paper has established that there is a close relationship between the use of biomass as a source of energy and the environment. Biomass like charcoal and firewood are extracted from forest resources like trees which are the cornerstone of a clean environment because they help with the purification of the air that we breathe. Also, the burning of charcoal and the use of firewood contributes to the world's carbon footprint, which is an environmental hazard.⁷⁵ These effects that the use of biomass has on the environment make its regulation to a certain extent fall under the ambit of the National Environmental Management Authority. This is because NEMA has the power to supervise and coordinate over all matters relating to the environment and to be the principal government instrument in the implementation of all policies relating to the environment.⁷⁶ This means that all the other agencies are playing second fiddle to NEMA.

Moreover, NEMA is tasked with the promotion of the use of renewable sources of energy. They achieve this through promoting research and creating incentives for the promotion of renewable sources of energy. Also, NEMA is under the obligation to take measures to encourage the planting of trees and woodlots by individual land users, institutions and by community groups.⁷⁷ This role makes NEMA a progressive institution that realizes that unlike other renewables like solar, biomass from plants may be depleted if their extraction is not controlled and there are no reforestation initiatives put in place. However, there are overlaps in the regulation of biomass use between NEMA and EPRA. NEMA has an overarching role on environmental matters, which by constructive definition means the regulation of plant based biomass while at the same time the Energy Petroleum and Regulatory Authority has the power to regulate and oversee

⁷⁵ Bioenergy Strategy 2020-2027 2020, Section 3.1.2.

⁷⁶ Environmental Management and Coordination Act 1999, Section 9.

⁷⁷ *Ibid* Section 49.

the use of biomass in Kenya. This is an overlap that must be reconciled in order to curb the breeding of conflict of functions.

4.0 Conclusion

The promotion of sustainable use of biomass energy in Kenya has prompted the establishment of a number of institutions and the enactment of policies and statutes. However, from the foregoing discussion, it is evident that there are gaps, weaknesses, and challenges that hinder the shift towards sustainable use and clean energy. The biomass regulatory and institutional framework in Kenya is characterized by institutional overlaps between NEMA and EPRA. Also, there is a multiplicity of laws which is indicative of the failure of the Energy Act 2019, which was enacted to harmonize and streamline the regulatory framework for Kenya's energy sector. Therefore, initiatives ought to be taken to address these challenges and to ensure an effective regulatory and institutional framework that will spear the sustainable use of biomass energy in Kenya.

5.0 Recommendations

This essay has defined Kenya's biomass status from a statistical, regulatory, and institutional framework perspective. Also, this essay has highlighted the various challenges that riddle and hinder the realization of sustainable use of biomass energy in Kenya. Consequently, this paper will proffer short term and medium term initiatives that must be taken to ensure Kenya achieves sustainability in the bioenergy sector.

5.1 Short-Term Initiatives

5.1.1 Enhancing Policy, Regulatory, and Institutional Frameworks

It is essential to strengthen institutions like the Renewable Energy Resource Advisory Committee, whose advice is not binding to the Cabinet Secretary for Energy. It is noteworthy that RERAC was established to ensure all-inclusive and informed decisions are made on renewable energy resources in Kenya, however by its advice not being binding, it is a weakened institution, and its existence does not add value because the CS may deliberately ignore the advisory.

A Collaboration Charter should be enacted so that it brings together all the stakeholders (both governmental and non-governmental) relevant in the management and promotion of sustainable use of biomass. Today, there are many statutes that create different statutory bodies with the task of managing, regulating, and promoting; however, there is no collaborative charter in place to ensure that these entities work together, leading to duplicity, which is expensive and ineffective.

Lastly, it is necessary that the various associations and alliances such as the Clean Cooking Association of Kenya and Charcoal Producers Associations, which comprise stakeholders who play a role in the promotion of clean cooking solutions that are important in ensuring the sustainability of biomass energy sources like firewood are recognized by statute and included in committees like RERAC as the primary institution in the bioenergy sector.

5.1.2 Promoting Feedstock Production to Enhance Sustainable Bioenergy

Biomass energy from plants runs the risk of depletion without sustainable extraction and use. Therefore, replenishing plant cover is imperative. It is best to encourage the on-farm growing of energy trees and crops not only in rural spaces but in urban and semi-urban places. By so doing, the pressure on the forest will reduce, which is a positive contribution to Kenya's climate change.

5.2 Mid-Term Initiatives

5.2.1 Research Capacity Building

Research is crucial before the formulation of policies touching on the use of biomass. This will ensure that the policies are informed, and the gaps and challenges that exist are remedied. It is also necessary that a database be created where all the information required on biomass use can be easily retrieved to see what the status of biomass energy in Kenya is, where it will be and where it ought to be. Lastly, research also encourages innovation, and the adaptation of technology like improved stoves are the fruits of research and development.

5.2.2 Promoting Transition to Clean Cooking Fuels and Technology Through Financial Incentives

The transition towards clean energy continues to fall on the axe of costs. Improved stoves are still costly, and so are alternative sources of renewable energy such as electrical energy. Ergo, the government should ensure VAT and other fiscal incentives are given to investors. For instance, locally-made improved stoves can be listed as zero-rated, meaning that the input tax in the production will be refunded to the manufacturers, thus lowering the price of these stoves. Also, there could be financing options and solutions to help subsidize the cost of alternative sources of energy and cookstoves.

5.2.3 Promoting and Creating Awareness

Information on sustainable use of biomass is necessary. Many are times that the users do not have sufficient information on bioenergy or even the existence of improved cookstoves that reduce the energy lost when one cooks with an open fire. Also, awareness will help in positively impacting behavioural change within the society to promote sustainable uptake of various sources of bioenergy and not just those produced from forest resources.

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Uti Possidetis, Self-determination and Conflicts in the Horn of Africa: The Case of Eritrea's Secession from and Border Conflict with Ethiopia

By: *Berita Mutinda Musau**

Abstract

This research examines the relationship between the principle of *uti possidetis* and the right to self-determination within the African context. It looks at the interplay between the two in enhancing conflict and challenging peace and stability in Africa particularly in the Horn of Africa. The study is a desk research that uses Ethiopia and Eritrea as a case study to establish the interplay between self-determination and *uti possidetis* in informing Eritrea's secession from Ethiopia and the subsequent bloody border conflict between the two countries. The findings of the research highlighted that the principle of *uti possidetis* and the related commitment of states to territorial integrity has related paradoxically with people's right to self-determination to cause conflicts in Africa and in the Horn of Africa region. A critical analysis highlighted that *uti possidetis* challenges lead to conflicts and challenges achievement of peace through secession and border conflicts. The study concludes that demarcation of borders in peacetime coupled with good, representative and inclusive governments would go a long way in addressing the challenges that *uti possidetis* and self-determination pose to peace and security not only in the Horn of Africa but also in the whole of Africa.

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Introduction

The end of the Second World War was followed by decolonization in Africa and attainment of statehood of several states in the continent. Africa became the continent with the highest number of states in the United Nations. Afraid of the political turmoil that might have ensued in the continent if African leaders were to engage in a process of determining borders, the Organization of the African Unity (OAU) resolved to uphold the borders inherited from the colonial administrations. This was informed by a principle of International Law known as *uti possidetis juris* (or simply *uti possidetis*) (Ratner, 1996). Thus, the inherited borders were transformed into international borders that defined territories of the various states. However, *uti possidetis* did not spare the continent from conflicts. Although inter-state border related violent conflicts were not common, identity-based conflicts in pursuit of secession have threatened peace in the continent.

The Horn of Africa has borne the brunt of these conflicts that depict a challenge to *uti possidetis* manifested in the assertion of the right to self-determination. It is only in the Horn of Africa that successful secessions in Africa have occurred. Another challenge to *uti possidetis* has been inter-state border conflicts and disputes occasioned by inherited colonial borders, resources and even external influence. The Horn of Africa presents the largest number of such conflicts in the continent. Although majority of the inter-state border conflicts are latent, they could serve as warning for the future. Furthermore, they strain the relationships between states and undermine the United Nation's purpose of maintaining peaceful and harmonious relations between states. This study focuses on the interplay between *uti possidetis* and self-determination in challenging peace and stability in Africa in general and the Horn of Africa in general.

It explores the doctrine of *uti possidetis* as a key principle governing territory as a major element of statehood in postcolonial Africa. It also looks at the interplay between *uti possidetis* with the related right of states to territorial integrity and people's right to self-determination in threatening peace and security in Africa in general and the Horn of Africa in particular. The paper discusses the self determination of Eritrea and the subsequent border conflict

between Eritrea and Ethiopia as a good case to elaborate the challenges that the principle of *uti possidetis* has caused to peace and stability.

The paper seeks to answer the following questions:

- i. How did the principle of *uti possidetis* and the right to self-determination evolve in international law?
- ii. What is the relationship between the principle of *uti possidetis* and self-determination in Africa?
- iii. What role does the paradoxical relationship between *uti possidetis* and self-determination play in conflicts in Africa and the Horn of Africa?
- iv. To what extent did the principles of self-determination and *uti possidetis* inform Eritrea's independence from Ethiopia and the subsequent border conflict between the two states?

The conclusion of the paper is that border demarcation and management in peace time coupled with good, representative and inclusive governments would contribute to curb conflicts and contribute to peace and stability not only in the Horn of Africa but in the whole continent.

Uti Possidetis and the African Postcolonial States

Once it was evident that the organization of African politics would be informed the European nation-state, it was inevitable that the leaders would settle on retaining the boundaries as created by colonialists (Herbst, 2000:103). Demography, ethnography, and topography made it difficult for the founding fathers of the Organization of African Unity (OAU) to establish rational borders. On the other hand, returning to pre-colonial borders was also impossible since pre-colonial states were fluid and organized on territorial basis and would therefore not resonate with a world which was organized around territories defined by hard boundaries (Bhandari & Mueller, 2015:5). The leaders feared that the process of redrawing boundaries might result to wars and threaten the stability of the continent and newly independent states (Herbst, 2000:104).

In 1964 the OAU passed a resolution on border problems pledging member states to respect the frontiers existing on their achievement of national independence. The OAU Charter which was the constitutive instrument of the OAU provided in Article III paragraph 3 for the “Respect for the sovereignty and territorial integrity of each state and for its inalienable right to independent existence (Herbst, 2000: 104). The states referred to by the UN Charter were thus the states as mapped by the Europeans during colonialism. As a result, African boundaries have remained almost unaltered since independence.

One of the most significant challenges of the frontiers inherited from the colonial administrations was that the borders were drawn by Europeans in the late 19th Century particularly in the 1885 Berlin Conference without local knowledge and interest in the political, social and regional peculiarities (Weber 2012:3, Kapil, 1966:660). They were drawn for the benefit of the colonialists to aid them in extracting resources and managing their colonial territories and were drawn on the basis of particular longitudes and latitudes (Hasani 2003:3). Therefore, the creation of states separated communities that belonged together thus prompting efforts for self-determination (Kapil 1966:661). It is important to note that self-determination is a right recognized in international law and provided for in the United Nations Charter.

The OAU Charter also provides for self-determination by recognizing “the inalienable right of all people to control their own destiny” (Herbst, 2000:106). At decolonization, the right to self-determination was easily applicable to the colonial states to free themselves from colonialism. After decolonization, the right to self-determination became perceived as unwelcome if it led to secession and thus undermined the principle of *uti possidetis* and territorial integrity. Self-determination in the African context was therefore considered applicable to those countries that were still colonies or were still under white minority control (Herbst 2000:107). It was on the same basis that the right to Eritrean self-determination was never recognized despite the existence of such an international agreement that required Ethiopia to grant Eritrea independence.

The efforts of African leaders to continue with the inherited state system and suppress the right to self-determination that challenged the status quo were also supported by strong powers at the international system. First, the Cold War period provided a favorable environment in which the superpowers acted as patrons to African leaders whenever their boundaries faced internal or external challenge (Herbst, 2000:108). Ethnic rebellions were strongly thwarted with the help of the superpowers. The Biafra war in Nigeria (1967-1970) that called for the secession of Biafra from Nigeria was the first test of African leader's commitment to the respect for the colonial borders and the international support in the course. The war led to the massacre of tens of thousands of people and the employment of international mercenaries by both sides of the conflict. In spite of these the OAU in 1967 reaffirmed its respect for the sovereignty and territorial integrity of Nigeria and other African countries and further claimed that the civil war was an internal affair (Herbst, 2000: 107).

The International community's support for OAU's goal of boundary stability and to effectively prevent the application of the norm of self-determination to a group of people after their country's independence reflects clearly in the border dispute between Mali and Burkina Faso. The International Court of Justice emphasized the application of the principle of *uti possidetis* to Africa and declared that the principle applied generally further indicating that the logic of its application was connected with the phenomenon of independence wherever it occurred in order to protect the independence and stability of new states (Shaw, 2014:381). Thus the court decided that the practice of upholding the colonial borders must be respected in spite of its apparent conflict with the right to self-determination.

While the arbitrarily drawn borders may have minimized potential conflicts between the colonial powers, for Africans, it marked the origin of many present-day conflicts and insoluble problems in the African continent. The tension between the right of people to self-determination and the doctrine of *uti possidetis* and the related right of states to territorial integrity has claimed several lives in Africa (Mnyongani, 2008:463). Border claims ensued in different parts of Africa based on historical and ethnic claims. In West Africa

for instance, Morocco laid territorial claims based on pre-colonial claims to areas under Malian, Algerian and Mauritanian jurisdiction while in the Horn of Africa, Ethiopia laid similar claims to lands in Eritrea and Somaliland that had been under Italian occupation (Kapil 1966:663). Somalia raised ethnic concerns to claim areas in Kenya and Ethiopia leading to the Somalia-Ethiopia and Somalia-Kenya border disputes.

Conceptualizing Statehood

According to Murphy (2017:7) statehood designates the feature of an entity that exists in the international community that respects the Montevideo Criteria. The Montevideo convention signed in 1933 established the basic and widely accepted criteria for statehood and defined the state as an entity that consists of a defined territory, a permanent population, a government and the capacity to enter into relations with other states (Murphy 2017).

Although the Montevideo Convention sets the basic criteria, a contention occurs regarding whether statehood should be anchored on state recognition. There are two competing theories of state recognition in international law: the constitutive theory and the declaratory theory (Worster, 2010:2). The constitutive theory maintains that in addition to the basic criteria of statehood, a state is only a state when it is recognized as such by other states. Recognition is not static but is upon the discretion of the states. The declaratory theory on the other hand the declaratory theory lays emphasis on a state's assertion of sovereignty within the territory it exclusively controls to determine if it can access the international plane (Worster 2010:3). Statehood is based on fact, not by the discretion of other states (Wa Mutua, 1995:1124). The criteria established at the Montevideo Convention are informed by the declaratory theory.

This paper does not seek to focus on the competition between the theories with regard to recognition but rather focuses on their convergence on the importance of defined territory as one of the key elements of statehood and acknowledges borders as key factors establishing the defined territory. It further looks at the principle of *uti possidetis* with regard to borders in Africa

and the challenge of the principle with changing dynamics in the international system. Border conflicts have become common place.

The Concept of Territory and its Significance to States

The essential importance of territory was very well succinctly summed up by Oppenheim who clearly stated that “a State without territory is not possible” (Oppenheim, 1955:451, cited in Knight, 1992:312). Shaw (2008:487) submits that territory is undoubtedly the most basic characteristic of a state and the most widely accepted and understood. Territory provides the basis upon which fundamental concepts of international law such as sovereignty and jurisdiction can be comprehended. The development of principles such as the principle of respect for the territorial integrity of states which protects territorial inviolability is indicative of the central role that territory plays in international law.

The territorial delineation of a state is expressed in its boundaries (Mnyongani, 2008:465). Thus as boundaries evidence the extent of State sovereignty and indicate the limits of the operation of domestic legal system (Shaw, 1997:77). Borders also describe identities, belonging and political affiliation. For that reason, borders also have a direct impact in determining the population of a state as another key element of statehood. In addition, borders also define the extent of a state's resources and also geopolitical advantages or disadvantages. For instance, in the maritime dispute between Kenya and Somalia, a case which is already in the ICJ, Kenya is fighting tooth and nail not to lose the case owing to the ramifications of losing the case which involve loss of resources and becoming sea locked which is geographically disadvantageous.

Uti possidetis juris (uti possidetis) in International Law

Uti possidetis is a concept of international law that defines borders of newly independent states based on the previous administrative frontiers. It is a general principle of law that is closely related to the principle of the intangibility of inherited frontiers and it is destined to address boundary struggles on independence. The principle can be traced to the Roman private law which was used to settle property ownership in which more rights were

given to the person in possession of the property (Hasani, 2003:429). The full expression of the principle then was *uti possidetis, ita possidetis*, meaning “as you possess, so may you possess” and the aim of its application to promote and maintain order in the Roman Empire (Mnyongani, 2008:468).

It was during the dawn of decolonization when *uti possidetis* evolved to be a binding principle of international law protecting territorial borders of states. Malcolm Shaw (1997:76) submits that the principle of *ut possidetis* developed as an attempt to avert territorial disputes by fixing the territorial heritage of new states at independence and converting existing lines into internationally recognized borders. It is closely linked to the principle of stability of boundaries and it draws upon and also informs other principles of international law such as territorial integrity.

Uti possidetis as a principle of international law was first applied during the decolonization of Latin America at the beginning of the nineteenth century (Mnyongani, 2008:469; Hasani, 2003:2). It was used to mark an end to the concept of *terra nullius* (no man's land) by recognizing the decolonized Latin American states as the possessors of all territories that were presumably possessed by their colonial predecessors. This would prevent any renewal of European colonization on the basis that parts of the continent constituted *terrae nullius* and thus were open to acquisition of sovereignty by effective occupation by any state (Shaw, 1997:98). (Mnyongani 2008:469); Hasani, 2003:3). The principle also served to prevent conflict over borders.

From Latin America, *uti possidetis* moved to Africa. On independence, African states decided to respect the frontiers that had been left by the outgoing colonial administrations (Ahmed 2015:47). Thus, the borders that had been established during colonialism became the new international boundaries. Having just attained independence, African leaders were protective of their new gains and were thus keen preoccupied with the integrity of the sovereignty of the new states (Mnyongani, 2008:467). Afraid that the process of redrawing the maps along ethnic lines would destroy stability of the continent the leaders of the OAU invoked the principle of

territorial integrity. This was captured in articles II and III of OAU Charter. Article II calls upon member states to protect their sovereignty, their territorial integrity and their independence, and Article III entails the commitment of leaders to respect the borders existing on their achievement of national independence (OAU Charter 1963). The Constitutive Charter of the African Union reiterates the same principles. Article 3 (b) talks about protection of sovereignty, territorial integrity and independence while the commitment to *uti possidetis* is captured in Article 4(b) (Constitutive Act of the African Union, 2000).

Self-determination: An Elusive Collective Right in Africa

Self-determination is a concept that denotes the collective political right of people or nations to determine their destiny. Its historical path can be traced to the French Revolution and even further in history to the ancient Greece and Rome (Berketeab, 2012: 2). Shortly after the First World War, the Wilsonian doctrine popularized the notion of self-determination in an effort to push for self-determination of peoples in Eastern and central Europe from the Austro-Hungarian and Russian empires (Mnyongani, 2008:472). Following the end of the Second World War, the idea of self-determination was incorporated in Articles 1 and 55 of the UN Charter as the principle of “equal rights and self-determination of peoples (Kirgrig, 1998:304). The Charter however did not define what self-determination was or who the peoples were.

Paradoxically, international law has always asserted the right to self-determination while at the same time affirming the territorial integrity of a sovereign state. Article 1(2) of the UN Charter for instance provides that members shall develop friendly relations based on the principles of equal rights and self-determination of peoples, while Article 2 (3) calls on member states to refrain in their international relations from the use of force against the territorial integrity or political independence of any state (UN Charter, 1945). The United Nations General Assembly in 1952 made recommendations that the United Nations shall uphold the principle of self-determination of all peoples and nations (Mnyongani, 2008:472). The principle is asserted further in the General Assembly’s 1960 Declaration on

the Granting of Independence to colonial countries and peoples (Kirgris, 1998:305). This was the same principle that was applied to push for decolonization in Africa. The African Charter on Human and People's Rights provides for the right to self-determination. At the time, self-determination did not raise problems and even its contradiction with the principle of territorial integrity and *uti possidetis* did not raise an issue because they were all directed towards member states in their interaction with each other.

While African leaders invoked self-determination to fight for independence, they were very apprehensive of groups within independent states that asserted self-determination that would lead to eventual secession. The United Nations though the General Assembly implied that self-determination aimed at supporting colonial people to realize their inalienable right to self-determination ought not to be construed as authorizing or encouraging any action that would dismember or impair, totally or in part the territorial integrity or political unity of sovereign and independent states (Mnyongani, 2008:473). Thus based on these, self-determination that would lead to secession has strongly been thwarted in Africa.

As Mnyongani (2008:475) correctly puts it, Africa's independence was attained through the assertion of the right to self-determination and once this was accomplished, doors were shut to a "people" within a territorial state who wished to assert the same right because leaders wanted to maintain territorial unity. This presents a conflict between *ut possidetis* and the right to self-determination whose practical application has not only undermined the UN's purpose of maintaining friendly and harmonious relations among nations but has also led to the loss of human lives. Claims to self-determination that tended to lead to secession such as the cases of Katanga and Biafra have been very violently suppressed. Moreover, border disputes, although may not have led to full blown war between states have strained their relations. Border disputes have been further exacerbated by struggle for control of resources such as oil, minerals and other natural resources that come along with territory. The Horn of Africa displays this very well.

Territory, Self- determination and Border Disputes in the Horn of Africa.

The Horn of Africa is one region where *ut possidetis* and self-determination have played out very candidly. The only two successful secessions in Africa have taken place in Africa (Eritrea in 1993 and South Sudan in 2011). Furthermore, borders disputes and conflicts abound in the region. It is also in the Horn where a territorial dispute has led to a full blown inter-state war (Ethiopia and Eritrea).

All the states in the Horn of Africa are embroiled in border disputes. Some have involved violent confrontation threatening peace and stability in the region. Examples of these include the Eritrean-Ethiopian border war and the Sudan-South Sudan conflict over Abyei (Weber, 2012:3). Other borders are contested but not violently such as the Ethiopia-Somali border and the Kenya-Somali border. However, in spite of them not being contested they are very insecure particularly due to threat from terrorist groups. The Ilemi triangle is also another border area that is contested by South Sudan, Kenya and Ethiopia while Eritrea and Djibouti have also been engaged in border conflicts. Another more recent border dispute that has attracted a lot of international attention is the Kenya-Somali maritime dispute which is currently over which a court case is ongoing in the International Court of Justice (ICJ). In the greater Horn, Kenya and Uganda have yet to agree over Migingo Island in Lake Victoria. Some of these border disputes that strain relations and are likely to fuel interstate conflicts are due to growing discoveries or rumours of existence of natural resources on borders or in borderlands (Okumu, 2010:279). This is exacerbated by influence of powerful international actors interested in resources.

Majority of borders in the Horn of Africa are located in the peripheries, far from the capital cities. Just like the colonial governments, the post-colonial governments tend to ignore them and thus most of them are characterized by absence of state structures and services. They constitute what some scholars have referred to as “ungoverned spaces”. Such borders become safe havens for illegal trade and also rebel groups and militias (Weber 2012). Examples include the Al Shabaab at the Kenya-Somali border, cattle rustlers at the

Ilemi triangle and Karamoja cluster, and the Lord's Resistance Army at the border between South Sudan, Uganda and the Democratic Republic of Congo (Weber 2012:3).

Eritrea's Secession from and Border Conflict with Ethiopia

Eritrea's Self-determination and Secession

Bereketeab (2012:2) highlights two types of self-determination that are prevalent in the African continent. The first relates to cases of annexation and deferred decolonization which refers to entities created by colonialism and later instead of being decolonized, they were annexed by a neighboring state. Examples of these include Namibia, Eritrea and Western Sahara. The second type of self-determination relates to cases of secession which were not created by colonialism but were triggered by the end of colonialism. Examples of these are the unsuccessful secessions of Biafra in Nigeria and Katanga in the Democratic republic of Congo and the successful secession of South Sudan.

The idea of an Eritrean identity and later statehood can be traced back to 1869 when Italy established a colony that would aid its interests in the Red Sea region (Hoyle 1999:381). The borders that define Eritrean territory were delineated by the Ethiopian emperor and Italian government and Italians gave the territory the name "Eritrea". Following Italy's defeat in the Second World War in 1941, Eritrea was put under British administration until 1950 (Bereketeab, 2012). The ability of Eritrea to become and function as an independent state was doubted since it was a small province with a very small population of 3.5 million compared to Ethiopia's 55 million (Herbst, 2000:144). Following a United Nations General Assembly Resolution, Eritrea was federated to Ethiopia as an autonomous entity under the Ethiopian emperor (Abbay, 2001; Negash & Tronvoll, 2000:9, Hoyle 1999:381). Unwilling to eventually grant Eritrea independence, Ethiopia propagated the view that Eritrea was unable to form a state and further began to dismantle the federal provision in the union and finally ended the federation in 1962 leaving Eritrea to exist only as a simple province in the imperial state. Eritrea therefore existed as an unwilling adjunct of Ethiopia

(Hoyle, 1999:382). With no plans for Ethiopia to grant independence in sight, Eritrea felt compelled to launch an independence struggle in order to achieve their right to self-determination and delayed decolonization and in 1961, they formed the Eritrean People's Liberation Front (RPLF) to fight for this course (Bereketeab, 2012:2, Abbay 200:481). In 1961, they formed the Eritrean People's Liberation Front (EPLF).

In 1991, the EPLF teamed up with the Ethiopian People's Revolutionary Democratic Front (EPRDF), a coalition whose core component was the Tigrayan People's Liberation Front (TPLF), operating in the province of Tigray that borders Eritrea to overthrow a military junta led by Mengistu Haile Mariam that had been in power since 1974 (Healy, 2008). It is important to note that the Tigreans of Ethiopia and the Tigrayans of Eritrea are to a great extent the same communities that are separated by the colonial border between the two countries. One of the key agreements of the alliance between EPLF and the EPRDF was the acceptance of Eritrea's independence. Therefore, after the defeat of the military junta in 1991, the EPLF moved into Asmara signaling the emergence of a de facto Eritrean state. In 1993, a UN-supervised referendum culminated the self-determination of Eritrea and its existence as a de jure state.

Eritrea's secession from Ethiopia was not condemned by the other states in the region. The OAU which had over the years strongly held on the doctrine of *uti possidetis* and territorial integrity did not raise objections to Eritrea's independence since Ethiopia had agreed to the separation (Healy, 2008:12). Indeed, it was Ethiopia that requested the United Nations to supervise the referendum which led to Eritrea's independence. Although some Ethiopians were opposed to the secession of Eritrea, the EPRDF's transitional government, led by Meles Zenawi argued that it was necessary in order to bring an end to the conflict that had bedeviled the country for 30 years (Healy 2008).

Ethiopia-Eritrea Border Conflict (1998-2000)

After a peaceful separation, Ethiopia and Eritrea were believed to have harmonious relations. The border conflict and the subsequent full blown war

between the two states came as a surprise to many. After Eritrea's secession from Ethiopia, the two countries maintained the colonial border that had existed during the period in which Eritrea had been under Italian and subsequently British administration. The border was delimited but not demarcated. The two countries had agreed to cooperate and even signed a Friendship and Cooperation Agreement which spelled out the measures for economic cooperation between which included the use of the Ethiopian Birr as the common currency and Ethiopia's access of Eritrea's ports since Ethiopia became land locked after Eritrea's independence (Negash & Tronvoll, 2000:35; Mesfin, 2012; Bereketiab, 2010:18).

The harmonious relationship did not last long since the two countries began having economic fallout. Eritrea's adoption of a separate currency, the Nafka in 1997, caused serious financial consequences which strained the interdependent relationship between the two countries. The undemarcated border between the two countries which initially had no effect on economic life became a real barrier to economic interaction and Ethiopia's free access to Eritrea's ports ceased leading Ethiopia to boycott the ports in favor of the Djibouti port (Healy, 2008:12). At the local level, disputes over jurisdiction between local authorities along the demarcated border were looming and the Ethiopian side had been launching incursions during security operations (Healy 2008:13). Eritrea's expression of suspicion over inaccuracy of the maps that indicated the border prompted the two countries to establish a boundary commission to demarcate the border but before the commission commenced its work, the border conflict erupted.

In May 1998, a border conflict erupted between the two countries to the surprise of many who had hailed the two countries' peaceful separation (Khadiagala, 1999:39). The mismanagement of a small border incident led to the escalation of the border dispute into war. On May 6 1998, Eritrean forces moved into the village of Badme that was administered by Ethiopia following a shoot out incident between Ethiopian local militia and Ethiopian border patrol forces (Healy 2008:13). Following this incident, Ethiopia declared war on Eritrea. What started small skirmishes escalated into a full blown war that attracted international actors determined to pursue peaceful

settlement of the dispute. Mediation efforts by the United States, Rwanda and the OAU bore little fruit. Badme, the disputed area is a small village which has little strategic interest but high emotional value. Fighting continued for two years and ended in 2000 when Ethiopian forces dislodged Eritrean forces from the positions they had held in Badme and even advanced further inside. The war cost more than 70,000 lives (Weber, 2012:3).

Immediately after the fighting ended, there were further negotiations which led to the signing of a Cessation of Hostilities in June 2000 and the Algiers Agreement in December 2000. The negotiations involved the OAU, the US, the UN and the EU. The Algiers agreement formally ended the war and provided for the deployment of UN peace keepers (United Nations Mission in Ethiopia and Eritrea - UNMEE). In addition, under the Algiers Agreement, a neutral Eritrea-Ethiopia Boundary Commission (EEBC) was established and mandated to delimit and demarcate the colonial treaty border based on the applicable colonial treaties of 1900, 1902, and 1908 and on applicable international law (Healy 2008:11). By signing the Algiers Agreement, Ethiopia and Eritrea agreed that the decision of the commission would be final and binding on them.

In April 2002, the Boundary Commission gave its verdict concerning the border. According to the interpretation of the commission, Badme, the disputed village, which had been under Ethiopia's administration actually belonged to Eritrea. While Eritrea was contented with the decision, Ethiopia contested and appealed arguing that the decision divided communities on each side of the border. Also from Ethiopia's perspective, the ruling required it to give up territory which previously had been under its administration and had been unlawfully seized by Eritrea and had just been won back in a very costly war (Healy 2008:13). Ethiopia's initial appeal to the Boundaries Commission was rejected on the basis that the decision of the commission was final and Ethiopia had agreed to be bound by it. Consequently, Ethiopia appealed to the United Nations Security Council to set up an alternative mechanism to demarcate the contested parts of the boundary in a just and legal manner (ibid). This appeal was also rejected and Ethiopia refused to comply with the boundary ruling and therefore the

Boundary Commission could not proceed with the demarcation phase of its mandate. Ethiopia remained in control of the areas that the EEBC' ruling placed on the Eritrean side of the border, notably, the symbolically important town of Badme (Lyons, 2009:167).

Ethiopia's refusal to comply with the border decision caused a diplomatic quagmire. First, Ethiopia and Eritrea cut their diplomatic and economic ties and a situation of no peace no war reigned. The UN also faced a challenge since the completion of the Boundary Commission's mandate was the prerequisite for the completion of the UNMEE. Eritrea looked up to the UN and the international community to compel Ethiopia to respect the Commission's decision. When this did not work, Eritrea decided to attract international attention by frustrating the functioning of the UNMEE. This resulted in tough threats of economic sanctions from the United Nations to Eritrea and a stern demand on Ethiopia to allow demarcation without further delay (Healy, 2008:15). The United States decided to intervene and initiated a meeting in 2006 with the witnesses of the Algiers Agreement EU, the African Union (AU) and the US, the Boundaries Commission and Ethiopia and Eritrea in order to facilitate demarcation. While both sides of the conflict attended the first two meetings in 2006, Eritrea refused to attend subsequent meetings citing suspicion of the US to be pro-Ethiopian and accusing the US of supporting Ethiopia's defiance of international law.

Eventually, the Boundaries Commission's mandate expired before the demarcation could be accomplished. The UNMEE also exited in 2008. Nevertheless, the boundary conflict was never completely resolved. Ethiopian and Eritrean troops remained face to face along their highly militarized border (Lyons, 1999:167). Although Ethiopia and Eritrea did not confront each other physically, their diplomatic and economic relations greatly deteriorated their war continued by proxy whereby they accused each other of supporting militia to destabilize each other's government. This further had effects on the stability of the entire Horn of Africa region. In a dramatic turn of events, in 2018, after twenty years of hostility between the two countries, a new regime came into power in Ethiopia and the new Prime Minister Abiy Ahmed declared that the Ethiopian government would honor

the Algiers Agreement and cede the Badme to Eritrea as per the verdict of the 2002 verdict of the Boundaries Commission. He further called for reconciliation and peace between the two countries. Eritrea reciprocated and this led to a rapprochement between the two countries which has thus been hailed by the whole world leading to Abiy Ahmed recently winning a Nobel peace prize.

Although the two countries have reconciled after twenty years of hostility, it is important to note the significance of colonial borders that define territories and the potential for conflict that can ensue from the sacrosanctity attached to these borders. The border issue between Ethiopia and Eritrea is not yet fully settled since demarcation did not take place. It would be prudent if the two countries would take the opportunity of their renewed relations to demarcate the border during peace time and thus avoid future disputes and conflicts.

***Uti possidetis* and Self-determination – A Paradox: Conflicts in the Horn of Africa**

Throughout its evolution, the principle of *uti possidetis* has predominantly been geared towards prevention of conflicts and disputes that may arise from distribution of territories. Since the borders drawn by colonialists did not pay attention to the communities in the borders, at independence, communities that are closely related and closely interacted found themselves separated by arbitrary international borders and thus belonging to different jurisdictions.

Moreover, the colonial legacy which artificially imposed European ideas of statehood onto a multitude of communal groups on the principle of divide and rule established states characterized by a disconnection between states and identity groups that formed the citizenry (Ramsbotham, Woodhouse & Miall, and 2016:117). As a result, in many postcolonial societies, the state was dominated by a single group or a group of a few communities that were unresponsive to the needs of other groups in the society. This strains the social fabric and eventually leads to fragmentation and protracted social conflict and further motivates societies to pursue self-determination. The conflict that led to the secession of South Sudan from Sudan and Eritrea from

Ethiopia are good cases in point. The secession of the two states entailed several years of guerilla warfare which confirms Mazrui's submission that "the taboo of officially sanctioned secession is guerrilla warfare" (Mazrui, 1993, cited in Mnyongani 2008:472). Ethiopia and Sudan violently suppressed the self-determination efforts from Eritrea and South-Sudan respectively in due to their right to territorial integrity. Resources could also have played a role here. For instance, Ethiopia feared that the secession of Eritrea would render it (Ethiopia) landlocked without access to Eritrean ports. The examples indicate that *uti possidetis* coupled with self-determination is a recipe for conflicts and instability in a country.

The bloody conflict that ensued from 1998 between Eritrea and Ethiopia over a border that had been defined during colonialism exemplifies the endemic border conflicts in the Horn of Africa as a challenge posed by the principle of *uti possidetis*. Since Badme, the territory of dispute between Ethiopia and Eritrea is just a mere rocky place with little resources, the territory is symbolic in that it represented Eritrea's assertion of sovereignty and defense of territorial integrity. The war was being fought between Addis Ababa and Asmara while the Tigrayans from both countries inhabiting Badme are naturally the same people and are interdependent. This depicts a scenario in the Horn of Africa where border disputes take place to satisfy interests of faraway governments or even external actors.

Conclusion

This paper has discussed the principle of *uti possidetis* and the right to self-determination as two mutually opposing concepts in international law. *Uti possidetis* in Africa is crucial since it defines territory, a very important element of statehood. In line with the principle, African leaders since independence have sought to jealously guard their territorial integrity of their territories defined by colonial borders. Standing sharply in challenge of the principle of *uti possidetis* is the right to self-determination particularly that which leads to secession since it aims at redefining colonial borders and violates a state's right to territorial integrity. Efforts of groups to pursue the right to self-determination in Africa have been strongly condemned and met with highly repressive means by states. Another challenge to the principle of

uti possidetis manifests itself through border disputes and conflicts which abound in Africa. The Horn of Africa is the region in which these two challenges to *uti possidetis*: self-determination and border conflicts have clearly been manifested. A very good case that depicts these two is the successful secession of Eritrea from Ethiopia and the subsequent border conflict between the two. Both processes have entailed huge costs in human lives and have affected the peace and stability of the entire region. While African leaders may not be blamed for adopting *ut possidetis*, the challenge they posed to the continent is that they made little efforts to demarcate the borders most of which were just arbitrary. Proper demarcation during peace time would go a long way in reducing the border conflicts. Moreover, proper representative and inclusive governance would also play a key role in endearing African states to their citizens and prevent motivation for populations to assert their right to self-determination.

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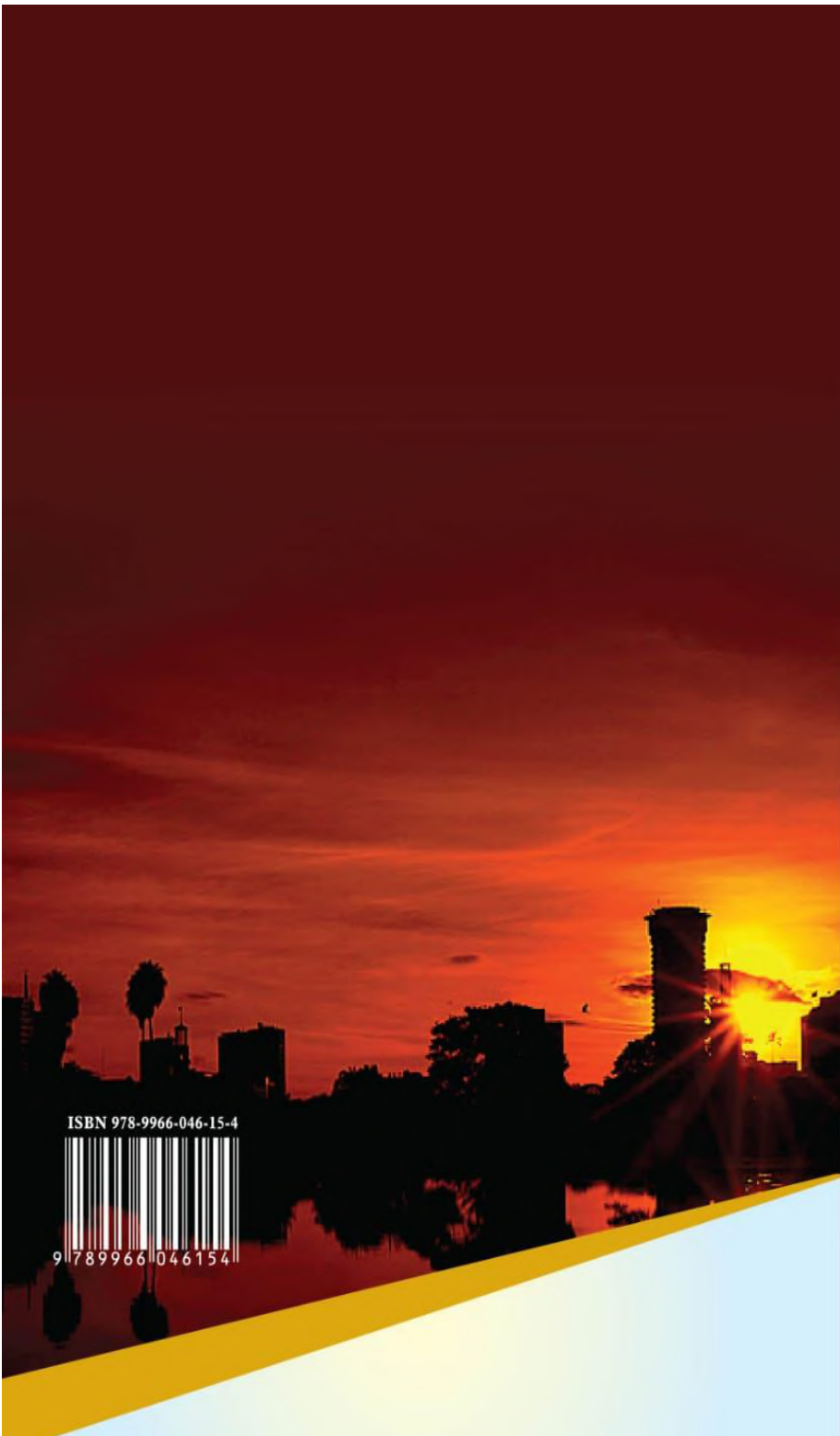
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