CLIMATE CHANGE IN AFRICA: POLICIES, REGULATIONS AND CONCERNS

By

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1. Introduction

Climate change has resulted in severe weather events across the world such as increased temperatures, rising sea levels, more frequent and intense droughts, storms, heat waves, and melting glaciers up to degrees not previously experienced. Africa, however, is in a precarious position being the continent most vulnerable to the impacts of climate change. At the 26th session of the Conference of Parties (COP26) held in Glasgow, Scotland in 2021, world leaders agreed to reduce greenhouse gas emissions by 2030 to well below 2°C above pre-industrial levels while pursuing efforts to limit it to 1.5°C. Achieving this objective will require governments in all countries to address the impacts of climate change through the enactment of robust policies and legislation. This article examines the progress made by select countries on the continent (Ghana, South Africa, Algeria, Kenya, Nigeria) in respect of climate change policies and legislation with a view to pointing out that the enactment of comprehensive legislations on climate change is the foundation of effective adaptation and mitigation mechanisms.

2. Climate Change Regulations and Policies in Africa

Ghana

Ghana is a country in West Africa with a population of approximately 31 million people. It is regarded as the second largest producer of gold in Africa. In 2019, 34% of the energy generated in Ghana was from renewable energy sources with an estimated 79.3% of the population having access to electricity. In Africa, Ghana is ranked as having one of the highest rates of access to electricity.[2] With respect to carbon emissions, Ghana releases 0.54 metric tons of co2 emissions per capita into the atmosphere and ranks amongst the countries with the lowest carbon emissions in Sub-Saharan Africa.[3]

Ghana, which ratified the United Framework Convention on Climate (UNFCCC) in 1995 and in 2010, published "Ghana Goes for Green Growth: National Engagement on Climate Change" does not have a comprehensive climate change legislation. However, the country has piecemeal laws, regulations and policies across various sectors which reference sustainable development. This document paved the way for the adoption of the National Climate Change

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[2] Sustainable Energy for All. 2022.*Ghana: At a Glance.* Retrieved from https://www.se4all-africa.org/seforall-in-africa/country-data/ghana/

[3] The World Bank Group. 2019. *Co2 Emissions (Metric tons per capita) – Sub-Saharan Africa.* Retrieved from https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=ZG

Policy (NCCP) which was approved by the country's parliament in 2013. The NCCP is regarded as Ghana's integrated response to the challenges of climate change within its socio-economic context.

The NCCP outlines Ghana's vision and objectives with respect to effective adaptation, social development and mitigation with the aim of ensuring "a climate resilient and climate-compatible economy." It also aims to achieve sustainable development and equitable low-carbon economic growth for Ghana while proposing to integrate traditional knowledge with the current and emerging knowledge to tackle climate change in the country. The NCCP outlines five priority areas to improve: agriculture and food security; disaster preparedness and response; natural resource management; equitable social development; and energy, industrial and infrastructural development.

With respect to agriculture, Ghana has the National Climate Smart Agriculture and Food Security Action Plan (2016 – 2020) (also known as the CSA Action Plan) and the Investment Framework for Mobilisation of Resources into Climate Smart Agriculture in Ghana (also known as the CSA Investment Framework). Other legislation and policies provide for sustainability and include the Renewable Energy Act, 2011, Energy Commission Act, 1997, National Climate Change Adaptation Strategy, and the National Energy Policy. While the country envisages an increase in the demand for energy in the coming decade, the country also plans to increase the percentage of renewable energy in its energy mix as well as reduce its use of petroleum products.

South Africa

South Africa is regarded as the southernmost country in Africa with a population of approximately 59 million. With the largest coal reserve on the continent, coal plays an important role in the country's energy mix. In 2018, coal accounted for 74% of the country's primary energy supply, followed by crude oil at 14%, renewables at 6%, nuclear at 2% and natural gas at 3% of the total primary energy supply of the country.[4] In south Africa, an estimated 85% of the population have access to electricity.[5] The country is ranked among the highest emitters of carbon on the continent with an estimated 7.5 metric tons of co2 emissions per capita.[6]

South Africa ratified the United Framework Convention on Climate (UNFCCC) in 1997. Even though the country has other laws and policies concerned with sustainability in the other sectors of the economy, the country does not have a comprehensive climate change legislation. However, the country passed the South African Carbon Tax Act into law in 2019. This law places specific levies on greenhouse gases from fuel combustion and industrial processes and emissions. Shortly before the

[4] International Renewable Energy Policy. 2018. *Energy Profile: South Africa.* Retrieved from https://www.irena.org/IRENADocuments/Statistical_Profiles/Africa/South%20Africa_Africa_RE_SP.pdf

[5] The World Bank Group. 2021. *Access to Electricity (% of population) – South Africa.* Retrieved from https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=ZA

[6] The World Bank Group. 2019. *Co2 Emissions (Metric tons per capita) – Sub-Saharan Africa.* Retrieved from https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=ZG

COP26 in 2021, the country's parliament deliberated on a bill known as the Climate Change Bill. The Bill is still before the Parliament. When passed into law, the Climate Change Bill will become South Africa's first comprehensive legislation on climate change. The Bill has the aim of enabling the development of an effective climate change response and a long-term just transition to a low carbon and climate resilient economy and society for South Africa in the context of sustainable development.

South Africa's Integrated Resource Plan, approved in 2019, marks a major shift in electricity policy away from coal and towards renewable energy. The aim of this is to increase the inclusion of renewable energy in the country's energy mix. Other policies include The Economic Reconstruction and Recovery Plan, National Greenhouse Gas Emissions Reporting Regulations 2016, National Climate Change Adaptation Strategy, National Energy Efficiency Strategy, Green Transport Strategy (2018-2050), National Development Plan 2030, Sectoral Cold Spell Management Plan, National Climate Change Response Policy White Paper (BNCCRP).

Algeria

Algeria, located in the north of Africa, is the world's tenth largest nation by area with an estimated population of 45 million people. The country has the eighth largest gas reserve in the world with an estimated reserve of 161.7 trillion cubic feet. In Algeria, fossil fuels make up approximately 99% of the country's energy mix, wind makes up 0.02%, solar 0.74% and hydro 0.18% of the country's primary energy supply.[7] An estimated 99.5% of the population have access to electricity.[8] The country is also ranked among the highest emitters of carbon on the continent with an estimated 3.59 metric tons of co2 emissions per capita.[9]

Algeria ratified the United Framework Convention on Climate (UNFCCC) in 1993 and in 2003, developed its National Plan of Actions for the Environment and Sustainable Development (PNAE-DD) to set out the country's environmental program for 2001- 2010. The government of Algeria, since ratifying the Paris Agreement in 2016, has underlined the importance of mitigating climate change and developed a National Climate Plan that provides for a 22% reduction in GHG emissions by 2030. Like many other countries on the African continent, Algeria has no comprehensive climate change legislation despite being the more vulnerable to climate change due to its geographical position and climate characteristics. There are however other laws which provide for the protection of the environment and the integration of renewable energies in the energy mix of the country. The policies also provide for the promotion of renewable energy to curb climate change by

[7] GlobalPetrolPrices.com. 2021. *The energy mix of Algeria.* Retrieved from https://www.globalpetrolprices.com/energy_mix.php?countryId=52

[8] Statista. 2021. *Population with access to electricity in Algeria 2000- 2019.* Retrieved from https://www.statista.com/statistics/1229320/share-of-population-with-access-to-electricity-in-algeria/#:~:text=As%20of%202019%2C%2099.5%20percent,population%20had%20access%20to%20electricity

[9] The World Bank Group. 2019. Co2 emissions (metric tons per capita). Received from https://data.worldbank.org/indicator/EN.ATM.CO2E.PC

limiting greenhouse gas emissions and to encourage sustainable development.

Kenya

Kenya is a country located in Eastern Africa with a population of about 53 million people. In 2018, renewables accounted for 78% of the country's primary energy supply, followed by oil which constitutes 20% of the energy mix and coal at 2%. By 2020, the country had successfully increased the percentage of renewables in its energy mix to over 90%.[10] In the country's bid to achieve universal access to electricity by 2030, over 75% of Kenya's population currently have access to electricity. Based on the country's development of its renewable energy sources, the country is among the lowest emitters of carbon on the continent with an estimated 0.36% metric tons of co2 emissions per capita.[11]

Kenya ratified the United Framework Convention on Climate (UNFCCC) in 1994 and since then, has been committed to taking steps to address global warming and climate change. Kenya's commitment to climate change and global warming is reflected in its enactment of the Kenya Climate Act of 2016. The Act provides a framework for enhanced responses to climate change as well as a mechanism and measures to achieve low carbon climate development in Kenya. Kenya's Climate Change Act provides for the enforcement of rights relating to climate change where a person has been alleged to have acted in such a manner that has or is likely to adversely affect efforts towards mitigation and adaptation to the effects of climate change. The Act also mandates the Kenyan Institute of Curriculum Development to integrate climate change into various disciplines and subjects of the national education curricula at all levels.

The Act establishes a National Climate Change Council (NCCC) with the responsibility of providing an overarching national climate change coordination mechanism. The NCCC is responsible for approving and overseeing the implementation of the National Climate Change Action Plan, advising the national and county governments on legislative, policy and other measures necessary for climate change response and attaining low carbon climate change resilient development. The NCCC is also responsible for administering the Climate Change Fund, a financing mechanism for priority climate change actions and interventions and setting target for the regulation of greenhouse gas emissions. The Climate Change Act applies to all aspects of the economy of Kenya with no exception and makes provision for the enforcement of rights relating to climate change.

Nigeria

Nigeria, the most populous country in Africa is located in the western part of Africa with a population of approximately 200 million people. The country is ranked as having the 10th and 9th largest oil and gas reserves in the world respectively. Today, 80% of power generation comes from gas and most of the remainder comes from oil, with Nigeria as the largest user of oil-fired back-up generators on the continent. Although there is a shift towards solar PV as the country starts to exploit its large solar potential,

[10] Reuters. 13 December 2019. *Renewables hit 90% of Kenyan power with 50MW solar plant.* Retrieved from

[11] World Bank Group. 2020. *Kenya.* Retrieved from www.datacatalog.workbank.org

natural gas still remains the main source of power.[12] In Nigeria, 43% of the population lack access to electricity.[13] The country is ranked among the highest emitters of carbon on the continent with an estimated 0.7 metric tons of co2 emissions per capita in Sub-Saharan Africa.[14]

Nigeria ratified the United Framework Convention on Climate (UNFCCC) in 1994 and became a signatory to the Paris Agreement in 2017. The country has displayed commitment to addressing global warming and climate change by creating several policies to encourage the adoption of renewable energy technologies. However, the country enacted its first climate change legislation in 2021 after COP26 thereby providing an all-inclusive and comprehensive regulatory and legal framework for achieving Nigeria's long term climate goals. The Climate Change Act intends to achieve its objectives by ensuring that Nigeria formulates programmes for achieving its long-term goals on climate change mitigation and adaptation, mainstreaming climate change actions in line with national development priorities and setting a target for year 2050 – 2070 for the attainment of a net-zero GHG emission in line with Nigeria's international climate change obligations amongst others.

While Nigeria's Climate Change Act does not provide for the enforcement of rights, it imposes responsibilities on private establishments to put measures in place to achieve the annual carbon reduction targets in line with the country's Climate Change Action. Failure to do so makes such entity liable to a fine to be determined by the NCCC. The Secretariat is mandated to advise the Ministries, Departments and Agencies (MDAs) responsible for regulating the educational curriculum on the integration of climate change into the various disciplines and subjects across all educational levels.

The Climate Change Act also establishes the National Council on Climate Change (NCCC) and vests it with the powers to make policies and decisions on all matters concerning climate change in Nigeria. The NCCC has membership cutting across several MDAs. It also includes representatives of women, youths and persons with disabilities, the Governor of the Central Bank of Nigeria and the National Security Adviser. The NCCC is headed by the President of the Federal Republic of Nigeria as chairman of the Council. The Climate Change Act also establishes the Climate Change Fund to receive payments of funding from international organisations and funds due to Nigeria for meeting the country's nationally determined contribution (NDC), carbon taxes and emissions trading, and fines and charges from private and public entities for flouting their climate change mitigation and adaptation obligations.

3. Concerns

The first step in building a climate change resilient continent is to put comprehensive

[12] International Energy Agency. 2019. *Nigeria Energy Outlook. Analysis from Africa Energy Outlook.* Retrieved from https://www.iea.org/articles/nigeria-energy-outlook

[13] World Bank Group. 2021. *Nigeria to Improve Electricity Access and Services to Citizens.* Retrieved from https://www.worldbank.org/en/news/press-release/2021/02/05/nigeria-to-improve-electricity-access-and-services-to-citizens

[14] The World Bank Group. 2019. *Co2 Emissions (Metric tons per capita) – Sub-Saharan Africa.* Retrieved from https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=ZG

climate change laws in place across the continent. Unfortunately, many African countries have only climate change policies in place and lack comprehensive climate change legislations. Policies and white papers do not give the same level of assurance as enacted legislations. This is because policies and white papers are mere guides to actions and do not have the force of law.

Second, enacted legislations give greater confidence to investors willing to invest in climate adaptation and mitigation technologies. It is also an indication to foreign countries that African countries are prepared to receive climate finance funding. Without a comprehensive climate change legislation in place, it will be difficult not to assume that such countries have ulterior motives to use the climate finance funds for purposes other than climate change mitigation. Third, climate change legislations that were enacted prior to COP26 will need to be updated to keep up with the outcomes of new COP deliberations.

4. Conclusion

Africa remains the most exposed to the adverse effects of climate change and global warming despite contributing the least global carbon emissions. In the context of temperature projections, it has been projected that temperature in Africa will rise faster than what has been projected at the global scale during the 21st century. It is therefore important for the continent to build resilience to the impact of climate by developing and putting in place adequate adaptation and mitigation mechanisms. Successful adaptation not only depends on governments but also on the active and sustained engagement of stakeholders including national, regional, multilateral and international organizations, the public and private sectors, civil society and other relevant stakeholders, as well as effective management of knowledge.