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2015 PARIS AGREEMENT AND ITS IMPLICATION ON AFRICAN INDUSTRIALIZATION

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Abstract

This paper would examine the 2015 Paris Agreement on climate change. it recognizes the specified needs and conditions of developing countries as some of these countries in particular would be more endangered by the gross effects of climate change to the environment. The Agreement centered on charting a new course in the global effort to advance a paradigm shift to low-emission and climate resilient development and to increase developing countries' resilience to the consequences of climate change. However, this study would also be examining the implication of this agreement on African industrialization majorly in the energy sector and agricultural sector. In the later part of this work we would look at some of the contributions of some African countries on the climate target. This research used a qualitative method of data collection and the source of data collection was purely secondary.

Keywords: Paris Agreement, Africa, Climate change, Industrialization

Introduction

Climate change is a worldwide crisis that transcends national boundaries. Over the years, significant climate change has been on the increase, and as a result of these climate-based events, the number of people that have been affected by these events is high. Evidence of long-term projects proposes that climate change must be controlled as it is a global issue that affects every country. Climate changes, such as the influence of hurricanes on communities, are seen to be inevitable instances of naturally caused disasters. Unfortunately, the climate change crisis is a global concern that affects both emerging economies and developed countries (Rahman et al., 2020). To achieve a low-carbon economy, countries need to support one another by providing coordinated solutions at all international levels (United Nations). On December 12, 2015, at COP21 in Paris, 197 countries signed the Paris Agreement to provide possible solutions to address the negative impacts of climate change. The United Nations Framework Convention on Climate Change (UNFCCC) held its historic 21st annual meeting (COP21) in Paris yesterday, allowing the agreement to be more determined than any past climate agreement (Sanni et al., 2016). The deal, which took effect less than a year later, aims to minimise global greenhouse gas emissions and limit the global temperature rise this century to below 2 degrees Celsius, with a target of 1.5 degrees. 189 countries have now ratified the Paris Agreement. The Paris agreement involves commitments from all nations to minimise emissions and work together to mitigate the effects of climate change, as well as a call for countries to increase their commitment over time. The agreement adopts a platform for developed countries to help developing countries with climate mitigation and adaptation efforts, as well as establishes a mechanism for consistent monitoring and reporting of countries' climate targets. The Paris Agreement establishes a long-term basis for global action with the aim of member parties' gradually increasing climate ambitions. To assist with this agreement, the agreement outlines two review mechanisms, each for a five-year term. The Paris Agreement is the start of a transition to a low-carbon environment, but there is still much more work to be done. The Agreement's implementation is critical for achieving the Sustainable Development Goals because it lays out a roadmap for climate change that will minimise greenhouse gas emissions and strengthen climate resilience.

Every African country submitted a national climate plan, known as the National Determined Contributions, detailing strategies and actions to combat climate change and what would be done further if international support and funding were available. The Paris Agreement's adaptation funding plan and comprehensive review process are strong statements of intent, given Africa's relatively low emissions over time and the fact that climate change will impact Africa more than many other continents. The aim is for African countries to take advantage of existing adaptation and mitigation opportunities, resulting in low-to zero-emission industrial growth (Munang and Mgendi, 2016). This paper aims to give a broad understanding of how the Paris agreement seeks to promote low-carbon emissions and identify the constraints that arise from climate change at the industrial level, especially in Africa.

Literature Review

Climate change is a worldwide crisis that transcends national boundaries. As the convention identified the potential threats of climate change on the environment at a global level (UNFCCC, 2009 cited by Brodny, Tutak, and Saki, 2020), the United Nations Climate Change Conference gave more attention to addressing the impacts on developing countries in 2009. Kuklicke and Demeritt (2016) and Carrao et al. (2016) inferred that climate change has increased uncertainties in atmospheric conditions such as extreme droughts, heat, and hurricanes, as a result of the negative impacts of carbon emissions in recent years, leading to global risks for industries to operate (Gasbarro and Pinkse, 2016).

According to Maplecroft (2014), Africa is a continent with so many countries, peoples, and ecosystems that the effect of climate change would be widespread. In a 2014 report, the Intergovernmental Panel on Climate Change (IPCC, 2007 cited by Sahu, Dadich, Tyagi, Vissa, and Singh, 2020) reported the uneven distribution of climate change threats and that by the year 2050, the adverse effects of climate change would grossly hit the continent of Africa. The

Intergovernmental Panel on Climate Change also reported that Africa is on the verge of exceeding 2 degrees Celsius, which is above pre-industrial levels and as at 1901, Africa warmed higher at 1 degree Celsius, experiencing increasing heat waves and extreme hot weather (Serdeczny et al., 2017). However, there may be a reduction towards the end of the century, especially for North and South Africa. Seven of the ten countries most vulnerable to climate change are found in Africa (Nigeria, Chad, Eritrea, Sierra Leone, Ethiopia, South Sudan, and Central African Republic). Moreover, current adaptation mechanisms and tools under the agreement of Kyoto to reduce the effects of climate change on Africa (and other developing regions) have not tackled the vulnerability and lack of resilience in the region against their economies and populations but have focused more on reducing potential carbon emissions (Besada et al., 2009).

Following the intergovernmental panel on climate change (IPCC) report, they warned that Africa was not acting rapidly enough to stop the dire effects of greenhouse gas emissions on the economy and the environment (IPCC, 2007). Therefore, according to a 2016 report, Africa stands a chance to experience intensified climate-related shocks such as droughts, hurricanes, floods, and extreme temperatures. Other effects of increased global temperatures are that agriculture and food security would be affected, as well as human health and political stability (Faye and Braun, 2022).

The Paris agreement also acknowledges that deforestation, alongside the oil industry, is also an existing factor in terms of global greenhouse gas emissions, accounting for almost 20% of overall emissions (Paris Agreement, 2015). The Agreement acknowledges the importance of fostering sustainable forest management and the improvement of forest carbon stocks in less developed countries. Article 5 made mention of (REDD) the United Nations' Reducing Emissions from Deforestation and Forest Degradation program, which is aimed at minimising emissions from the felling of trees (deforestation) and forest degradation in 13 African countries, which include Niger, Sierra Leone, and Togo. Consequently, since the continent contains a large number of carbon sinks, such as the Congo Basin, which serve as a major source of carbon offsets, this initiative is important. (UNFCC, 2015).

The African Union averred that agriculture accounts for 2/3 of the continent's Gross Domestic Product and more than 2/3 of the continent's population's sustenance depends on it. Agriculture is the main operational field that emits the most carbon emissions and is also the most affected by climate change in large parts of Sub-Saharan Africa. Rising temperatures and erratic rains, according to the IPCC, would not enable farmers to plant major crops like wheat, rice, and corn (Ali, Liu, Ishaq, Shah, Ilyas, and Din, 2017). Essentially, the Paris Agreement on climate change is meant to impact Africa's adaptation and mitigation processes. However, the region cannot adapt and respond economically, politically, and geographically, making it the most vulnerable to climate change. Given how much less carbon is emitted by Africa as a whole, there was a priority on adaptation on the continents of NDCs. However, because of what is at stake in the COP21 negotiations, I initiated that African nations joined together should demand a strong agreement on climate change. For this reason, it is crucial for the Paris Convention to be analysed and for the acute problems faced by the African continent to be tackled (Sanni et al., 2016).

Theoretical Framework

Green theory

Dependency on fossil fuels is one major contributor to climate change, which serves as the most pressing environmental problem of our time. The use of fossil fuels has generated more gas emissions and has even become more intense ever since the industrial revolution began (Soeder, 2021). The green theory makes us realise that rather than short-term human interests, in terms of ecological long-term principles, states typically need to invest in technology. However, the technological solution might be almost impossible to solve the man-made causes of climate change. A green climate theory views it as an immediate result of the collective decision choices of human beings. These decisions have resulted in traditionally anthropocentric economic policies by historically arbitrary political groups (states) that have manipulated nature for their short-term gain. Climate change is an injustice to both

present and future humans, who are not to blame for it, as well as the world as a whole. Green theory enables us to delineate issues like climate change in terms of long-term ecological principles rather than short-term political goals (Mohamed et al., 2020).

On a global level, the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 is still working to create the UN Framework Convention on Climate Change (UNFCCC) and other environmental agreements. Consequently, some developing countries blame developed countries for climate change, and no national player is willing to shoulder global costs. The Paris Accords of December 2015 created an outline agreement after a series of unsuccessful attempts to address climate change under the terms of the UNFCCC's Kyoto Protocol. The agreement, on the other hand, attempts to address this issue, but green theory suggests that focusing on human interests and choices in communities is preferable to focusing on state bargaining (Dyer, 2018).

The Aims of the Paris Agreement

The agreement resulted in the following key outcomes:

• The Paris agreement aims to limit the increase of global temperature by 2.0 degrees and even lower than 1.5^0 C.

It also aims at ensuring strong commitments among party members and fostering nationally determined contributions (NDCs), as a measure to achieving these aims.

• Every country undertakes to report regularly on its emissions and progress in the implementation and implementation of its NDC and undergo international reviews.

• Every five years all countries commit themselves to submit new NDCs in the clear expectation of progress beyond the previous ones.

• Under the UNFCCC, developed countries have binding obligations to support developing country efforts and encourage voluntary contributions from developing countries.

• Raise $100 billion in annual international support by 2020-2025, with new, higher targets set for the period after 2025.

• The Agreement establishes a mechanism to address loss and damage caused by climate change, which expressly excludes or limits any liability or compensation.

• Those who participate in international carbon trading must stop "double counting."

African countries' contributions to meeting the climate change target

Adaptation, mitigation, loss, and damage

The agreement seeks to keep global temperature rises to 1.5 degrees Celsius above pre-industrial levels by limiting temperature increases to an average of 2 degrees Celsius and below (Agreement, 2015). Essentially, the Paris Agreement on climate change is meant to impact Africa’s adaptation and mitigation process. However, the region has a low capability to adapt and respond on economical, political, and geographical bases making it most vulnerable to climate change. Given how much less carbon is emitted by Africa as a whole, there was a priority on adaptation on the continents of NDCs. The Agreement on Article 7 sets a global target for adaptation to protect people, and habitats, with a particular emphasis on least developed countries (Fotabo and Ababio, cited in NEPAD Agency, 2017). Adaptive capacity is explicitly stated in the Paris Agreement, as well as how various countries plan to implement measures such as resilience mechanisms, disaster risk management, and technological innovation. In a five-yearly stocktake, every country would have to send and update information on their adaptation efforts. Parties are encouraged to work together by bolstering institutional structures, improving climate science, and assisting developed countries in identifying and improving successful adaptation practices. The language of the Agreements satisfies African nations' desire for funds to be sent towards adaptation, as they are experiencing the effects of climate change. The Green Climate Fund (GCF), which is a financial organization established by the UNFCCC for the contribution to the internal mitigation

and adaptation programs, provides financial support for all of those developing countries which are parties to the agreement. A project in Senegal aims to improve the ecosystem's climate resilience, develop communities, re-establish salinized lands, and invest in appropriate technology as one of the Fund's first beneficiaries (Oyesanya et al, 2016).

Similarly, observers believe that the GCF's total budget is insignificant for its purpose in Africa. According to the current report by UNEP Adaptation Gap, the estimated adaptation costs could rise from 100 to 200 billion dollars every year in 2050 (UNEP, 2013). However, due to the strict conditions imposed by developed countries, African countries are having a hard time accessing funds. Article 6 establishes cooperative cooperation to encourage and incentivize engagement in carbon emission reductions. This allows countries to create their own domestic procedures to reduce greenhouse gas emissions, either independently or collaboratively. This would favour Africa because the Agreement's flexibility allows related countries to obtain assistance in achieving their mitigation goals. The Paris Agreement recognises the need to avert, minimize, and address loss and damage and to also provide recommendations to be facilitated by the Warsaw International Mechanism to achieve possible goals to address climate change issues (WIM, 2013). According to Article 8(2) of the Paris Agreement, WIM for losses and harm also improves and strengthens co-operation and commitment among the conference's party members.

Climate financing

During COP21, African countries requested that developed countries provide firm commitments on additional climate financing. However, a consensus was reached, and article 9 was settled upon, which states that developed country parties must provide financial support to assist the less developed member countries with mitigation and adaptation efforts in addition to their current obligations under the convention (Zhang and Pan, 2016).

The World Bank, on the other hand, announced its USD 16 billion Africa Climate Business Plan in November 2015, which aims to strengthen adaptation initiatives across the continent. Overall, these financial policies would provide the African continent with a larger pool of capital. Financial commitments are critical for Africa's growth. Many believe that the issue of how to increase climate finance in Africa after 2020 is still unresolved because of the lack of clarity, consistency, and transparency. As a result, there is still a disagreement between developed and developing countries about who should bear more responsibility for climate change financing (UNFCCC, 2015).

Deforestation

Deforestation accounts for 20% of global green gas emissions, which is roughly equivalent to the energy sector (UNFCCC, 2015). The Paris Agreement plays an essential role in promoting sustainable management for forest improvement and for forest carbon stocks in less developed countries. Article 5 made mention of the United Nations' Reducing Emissions from Deforestation and Forest Degradation (REDD) program, which promotes activities aimed at reducing emissions from deforestation and forest degradation in thirteen African countries. Several projects have been put in place by COP21 to promote forest protection initiatives initiated by the Paris Agreement. At the Global Landscapes Forum, ten African countries have also been developed to restore 100 million hectares of degraded and deforested land in Africa by 2030. The AFR 100 and the African Resilient Landscapes Initiative for Africa have put in place programmes to boost food security, water quality and quantity, economic development, and climate change (Reij et al., 2020).

Agriculture

The African Union averred that agriculture accounts for 2/3 of the continent's Gross Domestic Product and more than 2/3 of the continent's population's sustenance depends on it. Thus, according to Ike, Okoye, Nnaji, Ayogu, and Enete (2017), they posit that good weather conditions (climate) are a major driver for any country’s food system to perform in terms of the foods produced, the quantity, and income. Unfortunately, many nations in Sub-Saharan Africa suffer disproportionately from climate change (Okoli and Ifeakor, 2014:13). However, one major problem is that agriculture is a major sector

that emits the most carbon emissions and is also mostly affected by climate change in large parts of Sub-Saharan Africa. According to the IPCC, crops like wheat, rice, and maize would be difficult for farmers to plant due to rising temperatures and erratic rainfall (IPCC, 2007). Food security and water sources caused by climate change may be disastrous in a vulnerable country like Congo, where agriculture provides income to 90% of the population. As a result, countries in Africa have formulated strategies to minimise agricultural climate vulnerability. Burundi's NDC, for example, aims to achieve food availability by increasing productivity and sustainable production systems, as well as implementing intelligent and resilient agriculture and improving agriculture sector management. Many Africans are concerned about the lack of attention paid to agriculture, given its critical position as a driver of socio-economic growth.

Transfer of technology and capacity building

The Paris Agreement is heavily reliant on countries' ability to enforce their NDCs and to transfer technology and capacity building, which are vital aspects of the agreement. Article 10 emphasises the importance of technology transfer from developed to developing countries.The Agreement provides a framework to expedite research and development as well as technology export to developing countries to facilitate technology transfer (UNFCCC, 2015). Rwanda's government declared that there would be a greater increase in investment in technology transfer as a means of commitment to finance the agreement on climate change to ensure that development gains are maintained for generations to come.

Article 11 aims, through promoting technical creation, distribution, and execution as well as access to the climate financing of related aspects of education, training, and public knowledge, free, timely, and reliable information exchange, to strengthen the capacity of less developed countries to take effective action against climate change (UNFCCC, 2015). This is a specific goal aimed at meeting the needs of developing countries, such as Africa.

The Paris Agreement and its Implications for African Industrialization

Energy Sector

Africa is the "epicenter of the global energy crisis and energy poverty," according to the International Energy Agency (IEA). More than 620 million people lack access to electricity (International Energy Agency, 2014). According to a new study by McKinsey global management consultancy, Africa has 13% of the world's population but has 48% of the world's population without access to electricity.

As a way of addressing the acute energy problem in Africa, the Paris Agreement promotes sustainable energy by recognising the need to promote universal access to sustainable energy in developing countries, especially in Africa, through the increase in the use of renewables, which is the only relevant reference to Africa in the agreement. The Paris Agreement launched numerous initiatives at COP21, motivating Africa to initiate a productive mode of growth, one in which a decentralised generation would play a central role in renewable energy. African countries must begin by developing policies to encourage investment in renewable energy, off-grid and mini-grid systems, and rural industry to expand energy access to vulnerable poor rural communities, spur rural industry, and build employment without adding to carbon.

Despite a high-profile agreement by G7 countries only months before COP21 to abolish "inefficient fossil fuel subsidies," COP21 negotiations failed to reach a consensus, and the Paris Agreement contains no new commitments in this region. Nevertheless, the issue of phasing out fossil fuel subsidies is likely to come up again on the COP agenda in the near future. Subsidies for fossil fuels control the necessary shift to a low-carbon future and put a strain on the budgets of several African countries. In either case, the Paris Agreement comes at a time when the campaign to divest from and limit debt financing for fossil fuels is gaining importance.

The Paris Agreement on Agriculture

The climate in Sub-Saharan Africa is extremely complex and variable. Moisture is plentiful in Central Africa, from the hyperarid Sahara and Kalahari deserts to the tropical tropics. Long droughts have accompanied prolonged rainy periods in the West African Sahel. The inter-tropical convergence zone, seasonal monsoons in East and West Africa, and the multi-year El Nino/La Nina Southern Oscillation (ENSO) phenomenon, which affects African weather indirectly due to changes in Pacific Ocean temperatures, all affect Africa's climate (Conway, 2009). Temperatures and precipitation are influenced by these mechanisms across the continent, including severe events such as meteorological droughts. Climate data indicates a warming trend across Africa during the twentieth century, which has accelerated at a considerably faster pace during the first decade of the twenty-first century, independent of ENSO impacts. (Collins, 2011; Nicholson et al., 2013). Annual precipitation patterns have become more complex and variable in recent years, with rising and falling trends in various subregions (Maidment et al., 2015).

Following the Paris Agreement's adoption, Africa's next logical step is to quickly transfer the momentum to the agriculture sector, where the action is most required.

Local, national, and landscape-specific strategies will be implemented to address intertwined quality, adaptation, and mitigation challenges while supporting food protection. However, evaluating possible effects has proven difficult, in part because agricultural adaptation tends to be more difficult in Africa. For example, fertilizer usage in Africa has remained low since 1980, while it has increased tenfold in Asia and Latin America (Cooper et al, 2013), and only 4% of agricultural land in Africa is irrigated, compared to 18% globally (You et al, 2010). To resolve concerns related to farming and climate change, Africa must encourage policies aimed at improving adaptation, rising food production, and reducing greenhouse gas emissions from this sector (Fotabo & Ababio, cited in NEPAD Agency, 2017). According to the African Union and the continent's negotiating bodies in global climate change negotiations, adaptation to climate change remains a top priority for Africa. In many parts of Sub-Saharan Africa, expanded irrigation access, especially small-scale irrigation, is one of the most important priorities for rain-fed farming systems. Furthermore, the SBSTA must ensure that uniform standards for comparing and assessing agricultural components of national climate change and agriculture strategies are in place (SBSTA, 2016 cited in NEPAD Agency, 2017). On a continental level, Goal 6 of the Malabo Declaration of 2014 on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods lays out a blueprint for an African-led response to climate changes effects on agriculture.

By 2025, at least 30% of African fisheries and fisher households would be resilient to climate and weather-related risks, according to the Malabo Declaration. As a result, African country partners must align their policies and strategies with Malabo. Climate change considerations must be incorporated into National Agriculture Investment Plans established as part of the Comprehensive Africa Agriculture Development Programme (CAADP). Many initiatives and projects, in particular, are catalysing a catalytic initiative to bring Africa's efforts to resolve the impacts of climate change on its agriculture sector closer together and more coherently. The NEPAD Climate Change and Agriculture Programme, which is directed by the NEPAD Agency 2017 and aims to assist 25 million farming households in practising Climate Smart Agriculture by 2025, as set out by the African Union, is one of these programs. Africa has been unable to take advantage of all major funding opportunities related to climate change due to infrastructure constraints. Africa has a unique opportunity to access climate funds through the Green Climate Fund (GCF), which has designated climate-resilient agriculture as one of its five investment targets. As a result, Africa's project preparation and fund absorption capacities must be greatly improved. (Fotabong & Ababio cited in NEPAD Agency, 2017).

Paris Agreement and the Heavy Cost on Africa's Economy

A fall in the price of commodities especially extracting industries is part of what's affecting Africa's economy e.g South Africa, Angola and Nigeria are experiencing spiral disarray because they are been forced to transition into green industrialization. Although, some African

countries are already implementing and targeting renewable energy which would serve a key role in advancing a transition into global energy. With this, countries would be able to access better financing in regards to energy and environmental security in both emerging and developing countries. With the Paris Agreement to foster green industrialization African countries would have an added advantage that would promote the company's profit which will, in turn, proffer better social and environmental responsibility. Although it is true that for African countries to implement green initiatives they would have to go through series of technological stages which would be costly or burdensome however Africa should expect to have giant developmental progress according to Mr. Lopes (Ighobor, 2016).

Conclusion

In all, the Paris Agreement is a positive move forward for Africa. The value of understanding the need for climate finance for vulnerable countries cannot be over emphasized. However, since the Agreement is not legally binding, there's no assurance that what's put on paper will lead to change or, at the very least, interference. The Agreement, according to most African commentators, is inadequate to protect the continent from the consequences of climate change.

Recommendations

African countries need to pay more attention to their environment. In the area of deforestation, the government needs to ensure that for every felling of trees more trees need to be planted to reduce gas emissions into the environment. Africa also needs to venture into green industrialization, innovation, use of advanced technology that would serve as a model for comprehensive growth and economic development with the use of natural resources that would be optimal and efficient. It would also be best for Africa to generate renewable energy with the use of natural resources such as sun, wind, rain, waves, etc. that would generate power supply instead of relying on generators that consume a large amount of fuel and also pollutes the ozone layer from the gas emissions escaping into the environment. It is also high time that Africa transitions from using fuel cars and diesel trucks to energy vehicles as this would be void of any kind of emissions into the environment. In Africa, the burning of refuse dumb should be minimized as this also contributes to gas emissions.

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