FRAMING AN ENABLING LEGAL AND REGULATORY ENVIRONMENT TO ATTRACT PRIVATE CLIMATE FINANCING IN SUB-SAHARAN AFRICA

Sunday Bontur Lugard*

Abstract

This abstract highlights the key challenges faced by African countries in attracting and leveraging private capital for climate projects, including legal uncertainties, lack of efficient regulatory environment, and limited financial incentives. Additionally, issues such as political risk, inadequate infrastructure, and perceived risks further deter private investors from engaging in climate finance initiatives. Despite these challenges, there are promising prospects for enhancing the role of private capital in climate financing across Africa. These include the growing recognition of climate change as a pressing global issue, increasing investor interest in sustainable and impact-driven investments, and the emergence of innovative financing mechanisms and partnerships. By analyzing the complex interplay between private capital, climate financing, and the legal landscape in Africa, this work aims to shed light on potential strategies and pathways to overcome existing barriers and unlock the full potential of private investment for climate resilience and sustainable development on the continent.

INTRODUCTION

The Secretary General of the United Nations, Anthonio Guterres, in his 2023 press conference raised a climate alarm thus: "The era of global warming has ended; the era of global boiling has arrived. The air is unbreathable. The heat is unbearable. And the level of fossil-fuel profits and climate inaction is unacceptable."[1] Climate change and its adverse impacts on the planetary system, the natural environment and human wellbeing are enormous and continuing.

The impacts of climate change include extreme weather events and conditions that result in flooding, change in land use, impeded ability of the ocean to act as a key carbon sink

* Sunday Bontur Lugard, Ph.D., Department of International Law and Jurisprudence, Faculty of Law, University of Jos, Nigeria; lugards@unijos.edu.ng.

1 *United Nations*, Press Conference by Secretary-General António Guterres at United Nations Headquarters, New York (SG/SM/21893, 27 July 2023) <https://press.un.org/en/2023/sgsm21893.doc.htm> accessed 11 July 2024.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

destination, among others.[2] Aside this, the problematic-to-measure and consequential slow onset events, like ocean acidification, glacial retreat, salinization, land and forest degradation, loss of biodiversity, desertification, especially in Africa, are gargantuan and intolerable. Flowing from this, the United Nations, under the auspices of United Nations Framework Convention on Climate Change (UNFCCC) as a purposive multi-level governance soft law, initiated and coordinated global policymaking, law reform and action targeted at addressing this phenomenon, and this initiative culminated in the adoption and ratification of Paris Agreement in 2015.[3] Driven by catastrophic scientific evidence[4], it is still directing global response to achieve its objective of 45 % reduction in carbon emissions by 2030 and reach net zero by 2050 with the aim of keeping the global temperature at 1.5 degrees Celsius above pre-industrial level, or a worst case scenario of 2 degrees Celsius above pre-industrial levels. Currently, the global average surface temperature has risen to about 1.2 °C above pre-industrial levels, resulting in heatwaves and other extreme weather events, even when GHGs have not yet peaked.[5] This certainly places a huge responsibility on humanity as it depends on habitable planetary system and biodiversity for sustenance.

2 *The Intergovernmental Panel on Climate Change* (IPCC) 2022 report presents high risks associated with extreme weather conditions which include:

Long term changes to climate related systems – atmosphere, ocean, and cryosphere.

Socio-economic indicators that reveal sensitivities of societies to weather conditions.

Socio-economic indicators – increase sensitivities of societies to weather conditions.

Ecosystems – mortality of warm water corals, movement of tropical species into temperate species.

Extreme weather events cause substantial direct economic damage, reduce economic growth in the short term, and even in the long-term cause more severe impacts on developing countries or economies.

Climate variabilities is associated with increased conflict prevalence, organized violence – though mainly conditional on high population size, low social economic development, high political marginalization, and agricultural dependence.

Anthropogenic climate forcing has high internal displacement impact – strong contribution of weather extremes on observed displacements.

Extreme temperatures increase human mortality and occurrence of water and vector-borne diseases.

Furthermore, IPCC report indicates that African region faces the following risks from the extreme weather events or conditions caused by the impact of climate change: special extinction and irredeemable loss of ecosystems and their services, risk to food security, risk to marine ecosystem, increased human mortality, reduced economic output and growth, increased risk to water and energy security due to drought and heat. See Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2022) 17 and 2414–15 <https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf> accessed 25 November 2022.

3 *The United Nations*, Paris Agreement 2015 <https://unfccc.int/sites/default/files/english_paris_agreement.pdf> accessed 26 November 2022.

4 *Intergovernmental Panel on Climate Change* (note 2) above.

5 *International Energy Agency,* World Energy Outlook 2023: Executive Summary <https://www.iea.org/reports/world-energy-outlook-2023/executive-summary> accessed 11 July 2024.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

The Intergovernmental Panel on Climate Change (IPCC) special report in 2018 underscored the necessity for "rapid and far-reaching transitions in energy, land and urban infrastructure… and industrial systems" in pursuit of the realization of the objectives and target of the Paris Agreement.[6] Under the Paris Agreement, member States have committed to scale down the use of non-renewable energy resources, especially fossil fuel[7] in the pursuit of the realization of their pre-determined voluntary targets captured in their Nationally Determined Contributions (NDCs) tied to the realization of this global objective.

Implementing Paris Agreement objectives requires mobilizing finance at the required scale[8] as finance (green investment or low-carbon finance or sustainable investment, or by whatever name called) is not just necessary but vital for developing countries, especially Sub-Saharan African (SSA) countries, where the adverse impact of climate change is already being felt the most, notwithstanding their negligible contribution to the climate disaster. This. Is due to pre-existing conditions like poverty, unemployment, and limited capacity to curtail and respond adequately such impact.[9]

The geographical distribution or access to low-carbon finance, i.e. capital flows as low-carbon interventions which have direct greenhouse gas mitigation benefits[10], is highly unequal – developed regions receive the largest chunk of these funds, while developing economies, especially those in Africa, receive only a fraction.[11] The question then is: why is access to climate financing or green investments, especially from private sources, comparatively difficult to access or accessible on unfavourable terms in SSA? Secondly, how can this be addressed to enable its people have access to clean energy resources necessary for their development and to meet their climate commitments under the Paris Agreement? This work examines the intersection of private capital investment and climate financing in some legal frameworks in Africa. As African continent grapple with the urgent need for climate mitigation and adaptation measures, private capital emerges as a critical

6 *IPCC* (2018) 22 <https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf> accessed 2 August 2024.

7 At COP28 in Dubai in 2023, the global climate policy making system agreed for the first time that there should be a transition from fossil fuel to renewable energy resources in the pursuit of the goal of Paris Agreement.

8 *Megan Bowman*, Sustainable Finance and Implementing of the Paris Agreement: The Key Role of Jurisdictional Legal and Regulatory Architecture, in: Rene Smits (ed), Sustainable Finance and Climate Change: Law and Regulation, Cheltenham, UK, 2024.

9 *Phemelo Tamasiga*, et al, Is Africa Left behind in the Global Climate Finance Architecture: Redefining Climate Vulnerability and Revamping the Climate Finance Landscape—A Comprehensive Review 15 (2024), 13036 Sustainability 5 <https://mdpi-res.com/d_attachment/sustainability/sustainability-15-13036/article_deploy/sustainability-15-13036-v2.pdf?version=1694002970> accessed 30 August 2024.

10 *Buchner, B.* et al, Global Landscape of Climate Finance, 32 (2014) Climate Policy Initiative 4 <http://climatepolicyinitiative.org/wp-content/uploads/2015/11/Global-Landscape-of-Climate-Finance-2015.pdf> accessed 9 July 2024.

11 *BloombergNEF*, Clean Energy Investment Trend 2019 (BNEF insights, 2020); see also Ibid.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

source of funding for climate projects. However, various legal, regulatory, and institutional challenges hinder the effective mobilization and utilization of private capital for climate financing on the continent.

AN OVERVIEW OF CLIMATE FINANCING

United Nations Framework Convention on Climate Change (UNFCCC) defines climate finance as "local, national or transnational financing—drawn from public, private and alternative sources of financing—that seeks to support mitigation and adaptation actions that will address climate change."[12] It states further that climate finance is a necessity for mitigation, as large-scale investments are required to meaningfully reduce emissions. It is equally important for adaptation, as enormous financial resources are required to adapt to the adverse effects and lessen the impacts of a changing climate. Climate finance has also been defined as "the financial resources that are allocated towards projects, initiatives, and investments aimed at mitigating and adapting to climate change. This includes funding for activities such as renewable energy projects, energy efficiency improvements, climate resilient infrastructure, carbon capture and storage initiatives, afforestation and reforestation effort, and climate adaptation measures in vulnerable communities."[13]

Its key components include: mitigation finance, adaptation finance, capacity building and technical assistance, technology transfer and innovation finance, financial mechanisms and instruments. The major concern of this research is with the use of private sector driven financial mechanisms and instruments such as venture capital, private equity, impact investing, and innovative financial instruments such as green bonds, carbon markets, climate insurance, which help to leverage added resources by attracting private sector participation and aligning financial flows with climate objectives.[14] These funds are usually accessed from sources other than public sources, including private investments, multilateral development banks, carbon markets, and climate bonds.

Inadequacy of International Public Finance

Since the adoption of the UNFCCC in 1992, there have been several global efforts targeted at providing climate finance to developing countries, flowing mainly from support from developed country parties to the Convention. The Global Environmental Facility (GEF) was the first to be designated in 1994 as the operating institution of the financial mechanism of the UNFCCC. Subsequently, in 2010, the Green Climate Fund was established at COP 16 in Cancun, Mexico, and designated as the second operating entity of the financial

12 *UNFCCC*, What is Climate Finance <https://unfccc.int/topics/introduction-to-climate-finance> accessed 9 July 2024.

13 *Climate Change Professional Group*, Climate Finance: In a Nutshell.

14 Ibid.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

mechanism for the Kyoto Protocol and was similarly adopted for the Paris Agreement in 2015.[15]

The GEF from its inception as an independent international environmental or green finance coordinating institution has received about $25 billion[16] from about 40 donor countries, including SSA countries of Nigeria, South Africa and Cote d'Ivoire,[17] and disbursed mostly as grants, to several benefiting developing countries and those with economies in transition to address mitigation and adaptation projects. This is entirely from public sources. This obviously shows the inability of the Facility to fund climate-related projects at a scale that would engender the realization of climate goals under the key global regimes like the UNFCCC, the Paris Agreement, Convention on Biological Diversity, the United Nations Convention to Combat Desertification, among others. In the same vein, the $25 billion it has administered so far in three decades is a far cry from the projected $150 billion per annum required for funding of clean energy projects on the African continent alone, asides other developing countries, for a five-year period[18] to keep them on the path to realizing their GHG reduction targets under several international regimes, including the Paris Agreement. Furthermore, at COP15 of the UNFCCC held at Copenhagen in 2009, developed countries committed to collectively mobilize $100 billion per annum from 2020 for climate action in developing countries – this goal was formalised at COP16 in Cancun, and at COP21 in Paris, where it was reiterated and extended to 2025.[19] Even this is considered inadequate as funding in the region of $500 billion to $2.5 trillion is projected for developing countries annually in order to meet the climate goal under the Paris Agreement.

The Facility, realizing the inadequacy of its public funding sources has recently begun a process of catalysing private financial investments toward climate mitigation and adaptation in developing countries and countries in economic transition, while advocating for public-private partnership in the form of blended finance (under its Non-Grant Pilot Program).[20]

15 *United Nations Climate Change*, Introduction to Climate Finance <ttps://unfccc.int/topics/introduction-to-climate-finance> accessed 12 July 2024.

16 *GEF*, Three Decades of Investing in the Planet <https://www.thegef.org/newsroom/publications/gef-glance> accessed 13 July 2024.

17 *GEF*, Donor Countries <https://www.thegef.org/projects-operations/donor-countries> accessed 13 July 2024.

18 *International Energy Agency*, Global Energy Outlook 2023" <ttps://iea.blob.core.windows.net/assets/86ede39e-4436–42d7-ba2a-edf61467e070/WorldEnergyOutlook2023.pdf> accessed 11 July 2024.

19 *OECD*, Climate Finance and the USD 100 billion Goal <https://www.oecd.org/en/topics/sub-issues/climate-finance-and-the-usd-100-billion-goal.html> accessed 15 July 2024.

20 *GEF*, Private Sector <https://www.thegef.org/what-we-do/topics/private-sector> accessed 13 July 2024.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

Going forward, the Facility is working out collaboration between investors and receiving States in the following areas:

a. Mid-wiving the reform of policy and regulatory environments in receiving states towards implementing feed-in tariffs for renewable energy and offering incentives that guarantee markets for new approaches, thereby encouraging long-term investments.
b. Deploying innovative financial instruments such as incremental financing for low-emission, climate-resilient investments, to incentivise private sector investments in renewables or green investments.
c. Working out multi-stakeholder partnerships to develop, harmonize, and implement sustainable practices that foster the realization of environmental objectives.
d. Strengthen institutional capacity, regulatory competence and decision-making by enhancing information, participation, and accountability in both public and private sectors.
e. Adopt innovative methods, including the validation of technologies, policy, or methods to redress environmental degradation so as to spur adoption on a wider scale.[21]

These are yet to commence but they present a plausible public-private partnership model in funding mitigation and adaptation projects and initiatives in pursuit of climate goals under the various institutional and policy regimes. For instance, public policy on feed-in tariffs to carter for above-grid renewable energy costs, partnering on the provision of support infrastructure like net-metring system, wind turbines, solar photovoltaic, among others, are essential to incentivise private sector investments in renewables and low-carbon infrastructure in SSA. All of these cannot be adequately funded from grants and other sources of funding from international public sources, except private finance (municipal and international) are exploited.

Furthermore, policymakers need to frame legal and policy systems that derisk such investments, through blended finance model and insurance against political risk in order to further incentivise private investments in renewables as necessary ingredient for realizing two goals:

a. meeting GHG emission targets by SSA countries under Paris Agreement and similar international instruments, and
b. ensuring access to modern energy for about 600 million Africans necessary for their development in realization of SDG 7 (affordable and clean energy).

The Green Climate Fund has trodden on a similar trajectory with low-level impact that has culminated in the call for the setting up of the World Environment Organization to coordinate several financial mechanisms and to govern the funds of climate related regimes in trust."[22] All these show the inadequacy of public sources, at international and municipal

21 Ibid.

22 *Firuz D. Yasamis*, World Environment Organizaton: A Desperate Need For Global Environmental Management 3(4) (2011) Multidisciplinary Research Journal 125. The call for the World

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

layers, for the financing of climate projects at scale in SSA, and the developing countries in general.

BENCHMARKING PERFORMANCE

The World Bank developed a tool called RISE (Regulatory Indicators for Sustainable Energy) to specifically monitor and assess the status of policy frameworks to advance access to modern energy, and renewable energy in particular.[23] It mainstreams the appraisal of the following:

a. Legal framework for renewables (existence of a legal framework for renewables; legality of private sector ownership of generation).
b. Planning for renewable expansion (existence of renewable targets and plans; extent of renewable energy in planning for generation as well as transmission; resource data and siting).
c. Incentives and regulatory support for renewables (existence of financial and regulatory incentives; transparency of legal framework; extent of grid access and dispatch).
d. Attributes of financial and regulatory incentives (predictability, efficiency, and long-term sustainability).
e. Network connection and pricing (connection cost allocation; network usage and pricing; renewable grid integration).
f. Counterparty risk (payment risk mitigation; public financial statements; utility creditworthiness).
g. Carbon pricing and monitoring.[24]

South Africa, Ethiopia and the Democratic Republic of Congo (DRC), and Nigeria are the most populous countries in each of the four sub-regions of SSA or the biggest economies in Southern, Eastern, Central, and West Africa respectively. A review of the state of policy compliance through the lens of RISE is necessary in gauging the state of energy transition, pursuit of climate goals, especially in the context of private climate finance.

South Africa presents a promising outlook on private finance as a viable tool for the realization of climate goals, and its climate commitment under the Paris Agreement, at scale. This has plausible implications on renewable energy transition, access to modern en-

Environment Organization was first conceived by Germany and presented at the Special Session of the United Nations in June 1977 (Stockholm+5). See also *Frank Biermann*, The Case for a World Environment Organization 42(9) (2000) Environment: Science and Policy for Sustainable Development 22–31; *Empire H. Nyekwere*, International Legal Reform Global Environmental Governance Reform: The Emerging Debate on the Need for a World Environment Organisation 6(2) (2018) Groningen Journal of International Law <http://creativecommons.org/licenses/by-nc-nd/4.0/> accessed 13 July 2024.

23 *Manfred Hafner, Simone Tagliapietra and Lucia de Strasser,* Energy in Africa Challenges and Opportunities, Cham – Switzerland, 2018, 68.

24 Ibid at 69.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

ergy and the decarbonization of its coal-dominated electricity system. In the country, between 2019–2021, an average of 86 % climate finance invested in the country was from private actors.[25] Private commercial sources provided 92 % of annual funding flows, with 98 % of all private finance sourced domestically.[26] Annually, approximately R130 billion (USD 7.3 billion) was invested from private sources during the period under review. This represents roughly a quarter of the targeted R334–535 billion (USD 18.7 – 30 billion) needed annually[27] to bring the country closer to meeting its climate commitments under the Paris Agreement by achieving net zero goal by 2050. This scenario exemplifies the success of public policy in facilitating access to climate finance through domestic sources. An added layer of advantage from domestic climate finance is that it is often easier to manage and access, thanks to the reduced risk associated with investors' familiarity with the economic landscape and the risk profiles of their investments. Similarly, this marks a double improvement in funding from about R62 billion in 2017–2018 period.[28]

In South Africa, the dominance of the failing public energy utility, Eskom, in its inability to provide sufficient transmission capacity for some renewable energy generated, had even resulted in the initial failure of the government to implement its policy on feed-in tariff system for renewable energy conceptualized in 2009.[29] This led to the subsequently design of the Renewable Energy Independent Power Producer Pro- curement Programme (REIPPPP) as a competitive bidding system to stimulate private sector investment into grid-connected renewable energy generation.[30] The independent renewable energy producers under this arrangement were required to sell their generated power under a power sale contract with Eskom as the only buyer of electricity.[31] Adopting this approach, seven bidding rounds have been undertaken between 2011 and 2019, giving rise to a total of 6.4 gigawatts of renewable energy capacity from 112 projects.[32]

It has been contended that the South African REIPPPP has effectively mobilised private investment for renewable energy deployment at scale, having a standardised power produc-

25 *Chavi Meattle*, et al, The South African Climate Finance Landscape 2023: A technical report prepared for the Presidential Climate Commission, South African Presidential Climate Commission, 2023, 2 <https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/The-South-African-Climate-Finance-Landscape-2023.pdf> accessed 30 August 2024.

26 Ibid at 2.

27 Ibid at 1.

28 *A Cassim,* et al, South African Climate Finance Landscape 2020, South Africa: Climate Policy Initiative, 2021 <https://www.climatepolicyinitiative.org/wp-content/uploads/2021/01/South-African-Climate- Finance-Landscape-January-2021.pdf>.

29 *Axel Michaelowa*, et al, Mobilising private climate finance for sustainable energy access and climate change mitigation in Sub-Saharan Africa 21(1) (2021) Climate Policy 54.

30 *A Eberhard and R Naude,* The South African Renewable Energy IPP Procurement Programme. Review, Lessons Learned & Proposals to Reduce Transaction Costs (2021) cited Ibid.

31 Ibid.

32 *IPP Office* (2019) Independent Power Producers Procurement Programme (IPPPP), an overview as at 31 March 2019, cited ibid.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

tion agreement between independent renewables producers and the Eskom which is backed by financial guarantees of the government.[33] This has positive impact on rising competition and confidence in the bidding process among private companies and has enabled REIPPPP to rapidly reduce electricity generation costs from renewable energy projects (between 50–75 %) in just four years.[34] Similarly, the flexibility of the power purchase agreement that does not impose penalty on producers for failure to meet agreed power supply under the power production agreement policy is in itself an incentive to such off-grid private renewable energy power producers as it reduces investor risk.[35]

The existence of a robust legal and policy framework, and incentives-backed policies on the decarbonization of fossil fuel-dominant sectors of the South Africa economy, especially in relation to electricity and transportation hold the key to inspiring private investments to complement public sources in mobilizing climate finance in the country. Similarly, the dominant role of private capital from local investors in the country is a model for others to emulate in the pursuit of their climate goals.

Finally, the Just Transition Energy Partnership between South Africa (on one part) and US, UK, France, Germany and European Union to raise about USD 8 billion in the first phase to decarbonize its coal-dominated electricity system to help the country meet its goal under its NDCs is a great initiative that can substantially complement private funding sources in the advancement of energy transition in the country. The financing mechanisms takes the form of grants, concessional loans and investments and risk sharing instruments, including commitment by the donor countries to mobilise the private sector.[36]

Ethiopia has an advantage of almost 100 % power generation from renewable energy sources, though as at 2018, just about 30 % of its population has access to electricity in the country,[37] but with coordinated generation and distribution with funding through several sources including the World bank, it has driven access to modern electricity to 51 % in 2023.[38] About 90 % of Ethiopia's energy comes from hydro sources while wind contributes about 9 % and solid waste, less than 1 %.[39] The wide gap in access to electricity in Ethiopia is being bridged by the government's National Electricity Programme (NEP) introduced in

33 *A Eberhard and R Naude* (note 30) above.

34 Ibid.

35 Ibid.

36 *European Union*, France, Germany, UK, US and EU Launch Ground-Breaking International Just Energy Transition Partnership with South Africa <https://ec.europa.eu/commission/presscorner/detail/cs/ip_21_5768> accessed 31 August 2024.

37 *World Bank*, Ethiopia's Transformational Approach to Universal Electrification <https://www.worldbank.org/en/news/feature/2018/03/08/ethiopias-transformational-approach-to-universal-electrification> accessed 31 August 2024.

38 *FurtherAfrica*, Ethiopia Electric Power is poised for increase its output (Further Africa, 27 November 2023) <https://furtherafrica.com/2023/11/27/ethiopia-electric-power-is-poised-for-increase-its-output/> accessed 31 August 2024.

39 Ibid.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

2017 to drive universal energy access by 2025,[40] underwritten by support and loan from multilateral development banks like the World Bank.

Already, the country is facing challenges with foreign exchange and funding in the pursuit of its universal modern energy access by 2025, especially using off-grid electricity system to connect its predominantly rural population.[41]

On the whole, Ethiopia's policies and regulations favour renewable energy, however, some key hinderances in the area of implementation still serve as a hinderance to the realization of universal energy access in the country.[42] Some of these challenges pertain to the lack of clear regulations and policies which hinder off-grid energy system development, as adequate supportive legal framework is required to spur private sector investment in the sector.[43] Similarly, difficulty in accessing funding from lenders and high interest rates is another set of difficulty with private climate finance in Ethiopia[44], just like it is with most of SSA. On the regulatory environment in Ethiopia as a disincentive for private sector investment in renewables in the country, Bahta and Gebreslassie have argued that: "Barriers to investment in off-grid technologies include a cumbersome process for obtaining business licenses, verifying quality, and paying taxes involving multiple organizations that lead to delays and increased transaction costs. The involvement of inefficient actors such as ministries, banks, and agencies further aggravate these issues. Tariffs have caused a decline in off-grid solar technology adoption and made high-wattage equipment unaffordable for most consumers."[45]

The position in Nigeria and Democratic Republic of Congo are not much different from Ethiopia, in terms of the inadequacy of regulatory environment and lack of effective support infrastructure for renewables development and trading of excess capacity. Nigeria though has a robust legal and policy framework that supports renewable energy development, infrastructural support system for connection to the grid system through an effective feed-in tariff system, and the provision of net-metering (for trading of excess capacity) as practiced in the EU is lacking. The implication is that even where small and medium scale renewable energy "prosumers" generate excess power, they cannot trade the excess capacity to the grid system.

40 *Delphos*, Off-Grid Electrification in Ethiopia <https://delphos.co/off-grid-electrification-in-ethiopia/#:~:text=The%20National%20Electrification%20Plan%20(NEP)%20aims%20to%20provide%20universal%20access,of%20GDP%20across%20six%20sectors.> accessed 31 August 2024.

41 Ibid.

42 *Solomon T Bahta and Mulualem G. Gebreslassie,* The Role of Off-grid Energy Systems for Sustainable Energy Transition in Ethiopia (2023) 5 <https://shura.shu.ac.uk/33293/8/Gebreslassie-TheRoleOfOff-Grid%28AM%29.pdf> accessed 31 August 2024.

43 Ibid.

44 *L Ahmed*, et al, Decentralized low carbon electrification: global regulatory practice and implications for accelerating affordable and clean energy access in Ethiopia, cited ibid at 5.

45 *Solomon T Bahta and Mulualem G. Gebreslassie* (note 42) at 5.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

Overall, it has been shown that SSA countries lag behind in the area of renewable policies, absence of carbon pricing mechanisms, lack of basic requirements like the existence of legal framework for renewable power producers in some jurisdictions, data on renewables.[46] This does not give direction to prospective producers, and the starting point is the redress of some of the basics, such as industry-specific legal and policy framework for renewables, to give positive signal to investors. And where the relevant legal and policy frameworks exist, implementation as noticed in the case of Ethiopia and Nigeria needs to be reinvigorated.

BARRIERS TO PRIVATE CLIMATE INVESTMENTS IN SSA

As shown earlier, to nurse the hope of achieving the ambitious goal of limiting global warming to 'well below' 2°C above pre-industrial levels (preferably 1.5 degrees Celsius), substantial climate finance flows from the private sector need to be pulled together in SSA. The insufficient private financial flows to fund climate action or projects on the continent, and especially in SSA, is exacerbated mainly by the following factors:

High financial risk level. From the investors' perspective, investment decision is driven by forecasted risk-return profile, whether perceived or real – generally, "project sponsors, lenders, and investors want to make a return proportional to the level of risk they undertake."[47]

In 2023, the global investment in renewable energy rose to an all-time high of $1.8 trillion (up 17 % from the preceding year).[48]While private funding for renewable projects accounts for between 10 and 14 % of the energy financing in the continent (ECA, 2019);[49] only about 2 % of global investments on renewable energy goes to Africa.[50] At the two polarities on private climate are US and Canada, on the one hand, and Africa on the other polarity. While private finance is responsible for nearly all climate finance flows in the US and Canada, they only represent 14 % of climate finance flows on the African continent.[51] Most of the private finance that underscored climate action or infrastructure in the US or

46 Ibid at 70.

47 *Remco Fischer, Jenny Lopez and Sunyoung Suh*, Barriers and Drivers to Renewable Energy Investment in Sub-Saharan Africa, 2(1) (2011) 56 <https://www.thejei.com/wp-content/uploads/2015/01/132-463-1-PB.pdf> accessed 22 July 2024.

48 *BloombergNEF*, Energy Transition Investment Trends 2024 <https://assets.bbhub.io/professional/sites/24/Energy-Transition-Investment-Trends-2024.pdf> accessed 9 July 2024.

49 While ECA places it at 10 %, *African Policy Research Institute*, Africa's Climate Finance Challenges: Reflections on Africa Climate Summit and Africa Climate Week 2023 <https://afripoli.org/africas-climate-finance-challenges-reflections-on-africa-climate-summit-and-africa-climate-week-2023> accessed 17 July 2024.

50 *Antony Sguazzin*, Africa Calls for Financing, Debt Relief to Battle Climate Change (Bloomberg, 9 June 2023) <> accessed 27 June 2024.

51 *CPI* (2023), Global Landscape of Climate Finance 2023, Climate Policy Initiative, <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/>.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-ND

Canada was aggregated from domestic sources,[52] just like the case in South Africa. Despite the advantages that Africa's geographical locale places it in the production of renewable energy resources – solar, hydrogen, wind, geothermal and biomass[53] (with the huge potentials for upscaling power generation to about 300 gigawatts, up from the current 56 gigawatts); the continent, especially SSA, receives the least in renewable investments compared to other regions,[54] and one of the major disincentives to such investments on the continent is the high risk factors, coupled with the high cost of finance for private investors.

The risk level in Africa is unsustainably high and therefore constitutes a major disincentive to private capital flow generally, and in relation to climate finance in particular. The implication of this is the prohibitively high cost of finance on the continent, especially when the funding is to be accessed from outside the municipal setting of the borrower or project area, is that projects that should propel the attainment of climate goals of most SSA countries lie fallow despite the huge positive potentials. That is why the aggregation of private climate finance from South Africa is a model for other SSA countries to follow, while still supporting FDIs that fund climate mitigation and adaptation projects' execution.

Due to this high-pitched risk factor in SSA, "while export-oriented oil and gas projects are able to attract commercial financing, there are fewer bankable clean energy projects, and those that are put forward struggle to secure financing."[55] A combination of related challenges deter potential investors who are often concerned by risks stemming from relatively weak regulatory environments or the poor financial health of energy utilities. These risks can reduce the commercial viability of projects, particularly in countries with nascent clean energy sectors. They can also push up the cost of borrowing to at least two- to three-times the level in advanced economies for similar projects.[56]

Weak Regulatory Environment. Public policy and the entire regulatory environment is one of the major factors that drive away or spur private investments. The regulatory environment in most of SSA has been considered inadequate or ineffective. To further buttress this point on weak governance structure, institutional and policy instability, Dr Ajay Mathur

52 Ibid.

53 *Manfred Hafner, Simone Tagliapietra and Lucia de Strasser* (note 23) at 97.

54 Mathur, 'Powering the Net-zero Future' <https://www.worldclimatesummit.org/ondemand2022?mc_cid=ae726ce457&mc_eid=044b44209f> accessed 31 March 2023.

55 *IEA* (2023). Similarly, investment in the EACOP pipeline project in Uganda and Tanzania by TotalEnergies, State Owned oil companies of Uganda and Tanzania and CNOOC will cost a total of $5 billion. See *The Independent*, EACOP Costs Push to $5 Billion due to 'Covid-19, Other Factors (The Independent, Kampala, 24 January 2024) <https://www.independent.co.ug/eacop-costs-push-to-5-billion-due-to-covid-19-other-factors/> accessed 15 July 2024. Similarly, TotalEnergies is investing $5.7 billion in oil exploration and appraisal work in its Namibia oil find, asides other international oil companies' investments. See *The Brief*, TotalEnergies to Spend N$5.7bn on Namibia oil exploration in 2024 (The Brief, Windhoek, 11 February 2024) <https://thebrief.com.na/2024/02/totalenergies-to-spend-n5-7bn-on-namibia-oil-exploration-in-2024/> accessed 15 July 2024.

56 Ibid.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

of the International Solar Alliance stated that of the total $200 billion in the solar PV investment in 2021, only 5 % of it went to Africa, despite its geographical advantage for generation and utilization of renewable energy resources, because of perceived investment risk.[57] The Alliance therefore set out to work out a risk mitigation fund that would underwrite this kind of investment on the continent and in developing countries generally to support foreign investment in renewables.[58] The Alliance also plans to coordinate a partnership between African solar start-ups and foreign investors to smoothen the technological and financial supply chains' interests in deepening renewable energy generation and deployment on the continent.[59] This perceived weak governance system and policy instability shows the investment risk, perceived or real, in developing countries and SSA in particular, that required the devising of Investor-State Dispute Settlement mechanism as an investment-risk mitigating framework, which has culminated to more public debts and intractable disputes with foreign investors. There would be surely no need for guarantees in the form stated above if there was no threat to capital by way of seemingly insurmountable political risk which may extend to unjustifiable expropriation, unfair treatment of investment, discriminatory measures, among others that could frustrate capital exposure of investors.

Another dimension to the challenging regulatory environment is the lack of policy reforms and poorly implemented reforms in improving electrification has raised doubts in implementing renewable energy practices that would lead to the region's achieving the SDGs.[60] In Ethiopia, for instance, the following have been identified as the main challenges to securing private sector funding of climate projects: high dependence on imported equipment, lack of adequate incentives to import, slow custom clearance procedures, lack of foreign currency and frequent reoccurrence of inflation.[61] Similarly, both public and private domestic stakeholders have very limited experience with multilateral climate finance activities.[62] All of these point to a regulatory environment that has not been properly reformed to align with the climate objectives of most SSA countries.

Public subsidies for fossil-fuel-based power generation. Currently, SSA power utilities are not financially sustainable. A seminal study by Trimble et al. revealed regrettably that across SSA only the utilities of Seychelles and Uganda fully cover operational and capital expenditures.[63] The remaining majority SSA utilities run in "quasi-fiscal deficit (i.e. defined as the difference between the actual revenue collected and the revenue required to

57 Mathur (note 54) above.

58 Ibid.

59 Ibid.

60 *Y Mohammed, M Mustafa, N Bashir,* Status of renewable energy consumption and developmental challenges in Sub-Sahara Africa 27 (2013) Renewable Sustainable Energy Review, 453–463.

61 *Axel Michaelowa,* et al, (note 29) above at 53.

62 Ibid.

63 *CP Trimble, M Kojima, Perez Arroyo, F Mohammadzadeh* Financial viability of electricity sectors in Sub-Saharan Africa: quasi-fiscal deficits and hidden costs (The World Bank World Bank Global Tracking Framework—Tracking progress toward sustainable energy goals, 2016), cited in *Manfred*

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

fully recover the operating costs of production and capital depreciation), and thus need to be subsidized by the state."[64] Legal and structural reform would appear to be the only way to scale-down these deficits and make utilities financially viable; they also need to reach "operational efficiency" by shrinking their transmission, distribution and bill collection losses, and overstaffing.[65] This may have adverse implications for affordability and by implication, access, which is the centre-piece of SDG 17, but this can be addressed through grant supported community-operated off or mini-grid generation to local communities at minimal cost, while high power consumers pay more per kilowatts of electricity consumed.

Public subsidies for renewables is low or non-existent compared to heavy-carbon energy. In Nigeria, until 2023, there was a government explicit subsidy (undercharging for the supply cost of fossil fuels) on grid-generated and distributed electricity where a lot of corrupt management process was inevitable, but there was no such specific policy in renewable energy so as to incentivise investment in the sector. Since the removal of the subsidy on electricity and petroleum products in the country, it would be expected that such subsidy would be introduced for renewables so as to encourage private investment until a certain level of competitiveness or maturity in the industry is reached. The G-20 adopted the removal of subsidy on fossil fuel and introduction of same for renewables approach in 2009 when they agreed to phase out inefficient and wasteful subsidies on fossil fuel to encourage private sector investment in renewables at scale.[66] This model of transferring a part of the explicit subsidy from fossil-fuel powered, grid-based system can incentivise private "prosumers" and the large scale investors to invest in renewables.

Generally, variables or factors that alter the risk-return outlook of a renewable energy project can either hinder or encourage investment. Of particular importance are those factors tied to the local jurisdiction where the project is proposed, such as the overall economic climate, the institutional framework and political stability, and the consistency of local regulations.[67] In addition, the following have been identified as other impediments to attracting private finance in funding climate action and projects on the continent:

a. High cost of finance in SSA than elsewhere is mainly due to the small size of the electricity market and so is the resultant lack of economies of scale.[68]
b. Insufficient support infrastructure. High level of loss of energy between generation and distribution is also a major disincentive to investors.
c. Under-performing utility companies.

*Hafner, Simone Tagliapietra and Lucia de Strasse*r, Energy in Africa: Challenges and Prospects (Cham, 2018) 80.

64 *Manfred Hafner, Simone Tagliapietra and Lucia de Strasser,* Energy in Africa: Challenges and Prospects (Cham, 2018) 80.

65 Ibid at 81.

66 *UNEP*, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Geneva, (Switzerland, 2011).

67 *Remco Fischer*, et al, (note 47) at 59.

68 Ibid at 61.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

d. Non-availability of market for renewable energy, despite huge potentials for generation and high level of number of persons without access to modern energy on the continent.
e. political risk – unjustifiable expropriation, unfair treatment of investment, discriminatory measures, among others that could frustrate capital exposure of investors.

ATTRACTING PRIVATE FINANCE FOR CLIMATE ACTION IN SUB-SAHARAN AFRICA

As it has been noted, financing African green development cannot be realized within the inhibiting boundary of public funds, hence partnering with the private sector is indispensable.[69] It is in this light that article 9 of the Paris Agreement requires developed countries to lead the way in "mobilizing" financial resources from wide variety of sources, instruments and channels required for climate change mitigation and adaptation measures or projects and initiatives in developing countries. it is for this reason that developed countries argued that wealthy developing countries like China[70] should contribute towards planetary restoration damaged by the impacts of climate change[71] not just as a result of their financial wellbeing but also as a homage to attribution.

In the context of Africa, meeting its energy needs, through universal energy access to modern energy, would require doubling the investment in energy on the continent, estimated at over $200 billion per annum from 2026 to 2030, two-thirds of which will go to clean energy.[72] To achieve this, the following factors are deserving of reform:

Public policy. Public policy reform is key to spurring private sector investments in renewables at scale. For instance, Remco Fischer, et al. have argued that despite the competitiveness of renewable energy technologies with conventional technologies, their financial performance still lags behind.[73] For renewable energy to be viable, regulations and incentives are needed to create a fair competition between innovative, more costly but cleaner technologies, and established, cheaper but more polluting ones; and such regulations and incentives must ultimately be established by policymakers and regulators and implemented by governments within a legal framework.[74] The critical role of public authorities in enabling private entities to deploy, install, operate, and finance renewable

69 *Gebreysus Abegaz Yimer*, Sustainable Finance in Africa: A Comparative Overview, 18(1) (2024) Mizan Law Review 131.

70 Article 9(2) of the Paris Convention encourage "other parties" in reference to the wealthier developing countries to contribute financial support on a voluntary basis for developing countries to meet their NDC targets under the Agreement.

71 *Philippe Sands,* et al, Principles of International Environmental Law (Cambridge 2018) 327.

72 International Energy Agency, Global Energy Outlook 2023 <ttps://iea.blob.core.windows.net/assets/86ede39e-4436–42d7-ba2a-edf61467e070/WorldEnergyOutlook2023.pdf> accessed 11 July 2024.

73 *Remco Fischer, Jenny Lopez and Sunyoung Suh* (note 47) at 60.

74 Ibid.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

energy technologies highlights the importance of ensuring that these incentives remain stable throughout the lifetime of projects and that public institutions and the legal system are reliable and trustworthy.[75] This should extend to Public policy on feed-in tariffs to carter for above-grid renewable energy costs, partnering on the provision of support infrastructure like net-metring system, wind turbines, solar photovoltaic, among others, are essential to incentivise private sector investments in renewables and low-carbon infrastructure in SSA.

The World Bank developed a tool called RISE (Regulatory Indicators for Sustainable Energy) to monitor specifically the status of policy frameworks to advance access to modern energy, and renewable energy in particular[76] that support sector-specific legal framework for renewables, and setting targets and planning for renewable energy expansion, incentives and regulatory support for renewables. Others are predictability and efficiency of financial and regulatory incentives, network connection and pricing, counterparty risk (payment risk mitigation, public financial statements, utility creditworthiness, and carbon pricing and monitoring[77] as envisaged under the World Bank's RISE model contents of renewables regulatory system.

Prospect of derisking and blended finance. Public actors can resort to risk management instruments such as guarantees and insurance, as tools to tackle the most prevalent market risks for green investments.[78] They are gradually being deployed, in particular by direct foreign investors as the hold the potentials catalysing investment in challenging sectors and environments.[79]

Others include invigorating the emerging carbon market initiatives in Africa, encouraging development banks to support public investment in infrastructure and green initiatives, connecting political ambition (decarbonization and energy access) with private climate funding priorities, among others.

CONCLUSION

A transition from fossil fuel-based economies to renewable-energy-powered growth must adhere to the tenets of just transition as it also presents an opportunity to align investments with climate objectives. To effectively prosecute energy transition in SSA will require a multidisciplinary approach involving policy support, new financial mechanisms (especially from private sector), among others. The Just Energy Transition Partnership (JETP) model involving USD 8.5 billion support from donor countries to South Africa to support its

75 Ibid.

76 *Manfred Hafner, Simone Tagliapietra and Lucia de Strasser* (note 23) at 68.

77 Ibid at 69.

78 *Climate Policy Initiative,* Blended Finance in Clean Energy: Experiences and Opportunities <https://www.climatepolicyinitiative.org/publication/blended-finance-clean-energy-experiences-opportunities/> accessed 2 August 2024.

79 *CPI*, Global Landscape of Climate Finance 2019 17 <https://www.climatepolicyinitiative.org/wp-content/uploads/2019/11/2019-Global-Landscape-of-Climate-Finance.pdf> accessed 16 July 2024.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

power sector decarbonization and just transition interventions is deserving of further study as an example for partnership building by several SSA countries.[80]

Overall, it was found out that SSA countries lag behind in the area of renewable policies, absence of carbon pricing mechanisms, lack of basic requirements like the existence of legal framework for renewable power producers in some jurisdictions, data on renewables.[81] This does not give direction to prospective producers, and the starting point is the redress of some of the basics, such as industry-specific legal and policy framework for renewables, to give positive signal to investors. Therefore, mobilizing private finance to scale up climate projects and initiatives in Sub-Saharan Africa will require a deliberate shift in policy, including the reform of legal and regulatory frameworks. This shift must ensure that the climate objectives of these countries are aligned with the expectations of private investors, particularly in areas such as investment guarantees, political stability, and financial incentives for renewable energy in order to spur private climate financing at scale that is viable and sustainable.

80 *European Union* (note 36) above.

81 Ibid at 70.

https://doi.org/10.5771/2363-6262-2024-4-523 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC