

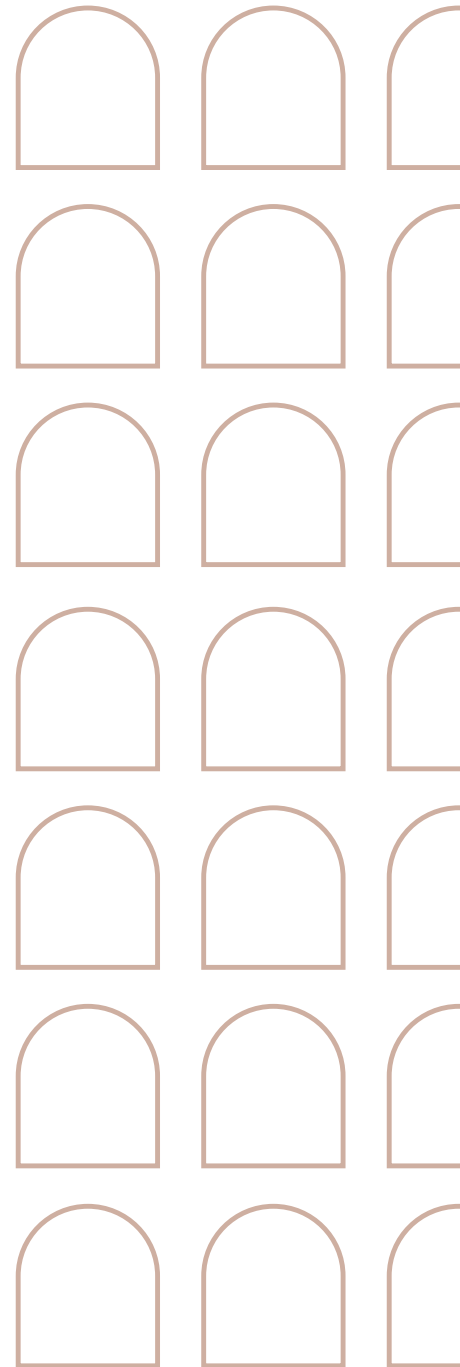
STG Policy Papers

# POLICY BRIEF

**THE CHICKEN OR THE EGG:  
WHICH COMES FIRST, ADDRESSING  
ENERGY POVERTY OR FACILITATING  
ENERGY TRANSITIONS?**

**Authors:**

Nduta Njenga, Temwanani Karen Phiri

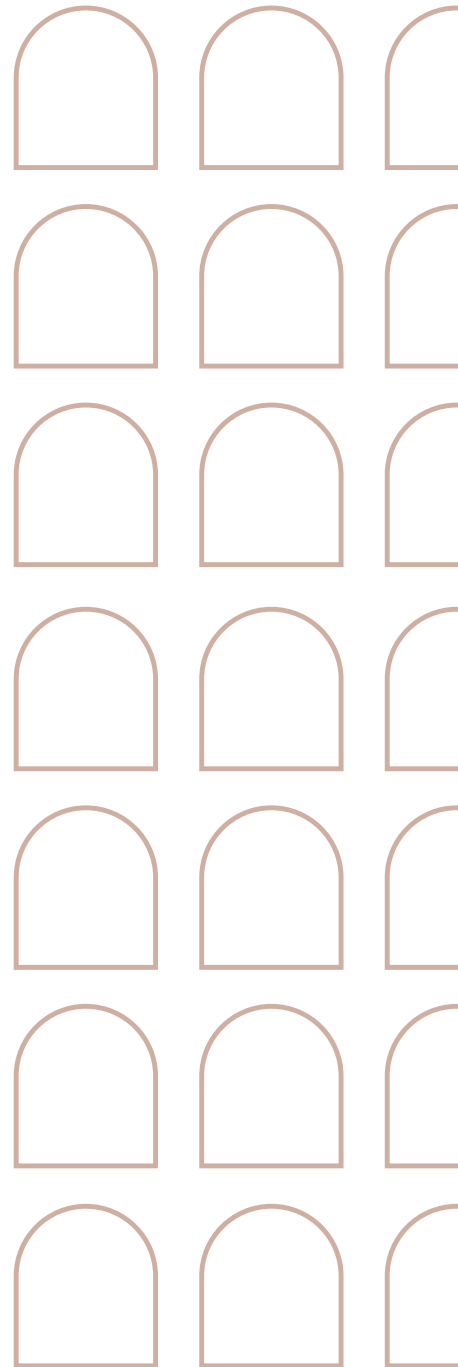


## EXECUTIVE SUMMARY

Nearly 1 billion people across the globe do not have access to electricity in their homes and critically, sub-Saharan Africa accounts for 75% of this number. For this region, there is an urgent need to (a) deal conclusively with the issue of energy poverty which has significant implications on both social and economic development and (b) deal with the severe climate change vulnerabilities which require increased access to modern energy. Globally, Greenhouse gas emission (GHG) levels continue to increase despite experts' warning against the rate at which the climate is changing and the far-reaching impact of these changes. Simultaneously, there is an increasingly apparent tension between the needs of the planet and the goals of individual countries; Countries in the developing world contend that climate change cannot become a hindrance to their development while countries in the developed world appear to want to continue to benefit from and further strengthen their political and economic interests many of which are couched in their (continued) exploitation of fossil fuel resources. This paper (a) examines the concepts of energy poverty and the energy transition; (b) argues for a contextual definition and application of the terms; and (c) tackles the necessity and justification for climate finance in the sub-Sahara Africa (SSA) region. The paper concludes by suggesting that the unequal responses by countries to the current climate condition betray a lack of common understanding regarding the climate state of play, create unjust double-standards and impose objectionable pathways towards energy transitions.

### Authors:

**Nduta Njenga** | Policy Leader Fellow at the EUI School of Transnational Governance  
**Temwanani Karen Phiri** | Legal Consultant



# 1. UNDERSTANDING ENERGY POVERTY

## 1.1 Introduction

Energy poverty affects both developing and developed countries. In both cases, it represents an obstacle to achieving Sustainable Development Goal (SDG) 7 which calls for “affordable, reliable, sustainable and modern energy for all” by 2030. SDG 7 espouses three core targets. These are to: - i) Ensure universal access to affordable, reliable and modern energy services, ii) Substantially increase the share of renewable energy in the global energy mix and iii) Double the global rate of improvement in energy efficiency.<sup>1</sup> Modern energy is perceived as the ‘golden thread’ that ties together global efforts to end poverty, reduce inequalities and cut pollution. It is essential for powering economic activities towards providing a more prosperous future for all because a robust energy system supports all sectors within the society including health, education, agriculture and industry.<sup>2</sup>

## 1.2 Defining energy poverty

### 1.2.1 Global context

As is, there is no universally agreed-upon definition of energy poverty. However, there are notable attempts at definition: - The World Economic Forum has previously defined energy poverty in its simplest form as the lack of access to sustainable modern energy services and products.<sup>3</sup> This is distinguished from fuel poverty which refers to the inability to attain an adequate level of energy services in one’s home and includes but is not limited to the ability to keep one’s household adequately warm, cook

food and have light all at a reasonable cost.<sup>4</sup> Another definition, relevant to energy poverty in the UK, posits that energy poverty occurs where household energy costs are above a certain percentage (usually 10%) of disposable income, transport fuels not included.<sup>5</sup> This definition considers the relationship between the income of the occupants of the household and the cost of energy. According to the EU Directive 2019/ 944 which sets rules for the generation, transmission, distribution, supply and storage of electricity, energy poverty is often understood as a situation where a household cannot meet its domestic energy needs.<sup>6</sup> In France, energy poverty is adopted in the *Grenelle II* Act and describes a situation in which a person has difficulty obtaining the necessary energy in their home to meet their basic needs due to inadequate resources or living conditions.<sup>7</sup> In Canada, energy poverty is referred to as ‘the experience of households or communities that struggle to meet their home energy needs. These needs typically include electricity and home heating fuels access to which is measured by their affordability.’<sup>8</sup> With a view to provide a more comprehensive definition, the G20 countries have proposed a definition where energy poverty “occurs when households or territorial units cannot fulfil all of their domestic energy needs...as a result of lack of access to energy services, an inability to afford them, or their poor quality or unreliability in order to, at minimum, safeguard their health and provide for opportunities to enhance their well-being...Energy poverty... affects every country and requires addressing constantly changing risks...For developing economies energy poverty should also take into consideration energy services needed by public services and productive uses...”<sup>9</sup>

1 Sustainable Energy for All | SEforALL. n.d. Understanding Sustainable Development Goal 7 (SDG7). [online] Available at: <<https://www.seforall.org/data-and-evidence/understanding-sdg7>> [Accessed 17 November 2021].

2 Un.org. n.d. Ensure access to affordable, reliable, sustainable and modern energy. [online] Available at: <[https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/7\\_Why-It-Matters-2020.pdf](https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/7_Why-It-Matters-2020.pdf)> [Accessed 24 November 2021].

3 World Economic Forum. 2015. What progress has been made in tackling energy poverty? [online] Available at: <<https://www.weforum.org/agenda/2015/05/what-progress-has-been-made-in-tackling-energy-poverty/>> [Accessed 22 November 2021].

4 Boardman, B., 2012. Fuel Poverty - International Encyclopedia of Housing and Home | ScienceDirect. [online] Scencedirect.com. Available at: <<https://www.sciencedirect.com/referencework/9780080471716/international-encyclopedia-of-housing-and-home>> [Accessed 22 November 2021].

5 Fabbri, K., 2019. Urban fuel poverty. London, United Kingdom: Academic Press, pp. 259-267.

6 fsr.eu.eu. 2020. The Clean Energy for all Europeans Package. [online] Available at: <<https://fsr.eu.eu/the-clean-energy-for-all-europeans-package/>> [Accessed 16 December 2021].

7 Climate-laws.org. 2010. Grenelle II - France - Climate Change Laws of the World. [online] Available at: <<https://climate-laws.org/geographies/france/laws/grenelle-ii>> [Accessed 16 December 2021].

8 Energy-poverty.ca. 2019. Energy Poverty in Canada: a CUSP Backgrounder. [online] Available at: <<https://energypoverty.ca/backgrounder.pdf>> [Accessed 16 December 2021].

9 g20.org. 2021. Energy Poverty: addressing the intersection of Sustainable Development Goal 7 (SDG7), development and resilience. [online] Available at: <[https://www.g20.org/wp-content/uploads/2021/07/Final-Energy-Poverty-executive-note\\_SE-for-All.pdf](https://www.g20.org/wp-content/uploads/2021/07/Final-Energy-Poverty-executive-note_SE-for-All.pdf)> [Accessed 25 November 2021].

These definitions demonstrate that all countries experience some form of energy poverty and that there are certain shared factors which aggravate energy poverty. These include high energy prices, low income households and poor energy efficiency of buildings and appliances.<sup>10</sup>

However, there are various challenges with these definitions. In the first instance, the distinction between energy and fuel poverty is unclear. Secondly, the definitions may vary broadly from region to region based on such factors as the economic realities of individuals and countries as well as varied climatic conditions with some climates requiring more space heating while others requiring more space cooling. This means that even wealthier more developed countries may experience energy poverty based on factors within those countries with the result that energy poverty will be expressed in different forms across the regions. In developed economies, demand constraints are more prevalent. In such economies where infrastructure coverage is greater and access may be more reliable, energy poverty presents among at-risk households which may be vulnerable to issues of affordability, quality of energy services or the energy efficiency of dwellings. In these wealthier more developed countries, energy poverty may be caused by the tension between lower incomes and high energy costs and the infrastructural challenges pertaining to the energy efficiency of buildings. In this regard, the challenge lies in providing sustained affordability and the resilience of energy services. For example, in the U.K. approximately 2.2 million people already meet the government definition for energy poverty by spending more than 10% of their income on heat and electricity. With the energy Regulator<sup>11</sup> raising the cap on amount that suppliers may

charge customers, the number is estimated to triple to 6.6 million with the effect that 1 in 10 people in the U.K. will struggle to afford access to consistent heat and electricity.<sup>12</sup>

In developing economies, energy poverty may affect entire regions in terms of both supply and demand constraints i.e. neighbourhoods or communities which have no access either due to the lack of infrastructure or challenges (supply) to reliable access for those households in serviced regions (demand). Energy poverty in developing countries which experience economic constraints may be observed in terms of either the total lack of energy infrastructure or the presence of poor energy infrastructure, ineffective institutions and unfavourable investment environments for private sector participation. In this regard, the challenge is in providing basic access and then progressively scaling-up that access as pertinent factors such as the quality, reliability and sustainability of that access are addressed.<sup>13</sup> For example South Sudan is ranked as the least-electrified country in the world in 2019, with only 7% of its population having access to electricity. Chad fared only slightly better, with an access rate of 8%.

### 1.2.2 Sub-Saharan (SSA) context

The preceding section highlights that approaches to tackling energy poverty must essentially adopt a contextual approach if they are to be effective.<sup>14</sup> According to a 2019 World Bank Report, it is estimated that approximately 759 million people globally were at the time living without access to energy in a clean and directly usable form.<sup>15</sup> In the same year, the top 20 least-electrified countries in the world were all located in Africa. And while the number of people without electricity access globally has been in steady decline over the last 2 decades,

10 Bpie.eu. 2020. Overview report on the energy poverty concept. [online] Available at: <[https://www.bpie.eu/wp-content/uploads/2021/05/ComAct-D1.1-Overview-report-on-the-energy-poverty-concept\\_Final-version\\_UPDATED-1.pdf](https://www.bpie.eu/wp-content/uploads/2021/05/ComAct-D1.1-Overview-report-on-the-energy-poverty-concept_Final-version_UPDATED-1.pdf)> [Accessed 16 December 2021].

11 Ofgem. n.d. Welcome to Ofgem - the energy regulator for Great Britain. [online] Available at: <<https://www.ofgem.gov.uk>> [Accessed 1 March 2022].

12 'Britain's Big Gas Squeeze to Drag 10% Into Energy Poverty' (Bloomberg.com, 2022) <<https://www.bloomberg.com/news/articles/2022-02-02/u-k-price-shock-will-pitch-1-in-10-into-energy-poverty>> accessed 20 February 2022

13 g20.org. 2021. Energy Poverty: addressing the intersection of Sustainable Development Goal 7 (SDG7), development and resilience. [online] Available at: <[https://www.g20.org/wp-content/uploads/2021/07/Final-Energy-Poverty-executive-note\\_SE-for-All.pdf](https://www.g20.org/wp-content/uploads/2021/07/Final-Energy-Poverty-executive-note_SE-for-All.pdf)> [Accessed 25 November 2021].

14 g20.org. 2021. Energy Poverty: addressing the intersection of Sustainable Development Goal 7 (SDG7), development and resilience. [online] Available at: <[https://www.g20.org/wp-content/uploads/2021/07/Final-Energy-Poverty-executive-note\\_SE-for-All.pdf](https://www.g20.org/wp-content/uploads/2021/07/Final-Energy-Poverty-executive-note_SE-for-All.pdf)> [Accessed 25 November 2021].

15 worldbank.org. 2021. Report: Universal Access to Sustainable Energy Will Remain Elusive Without Addressing Inequalities. [online] Available at: <<https://www.worldbank.org/en/news/press-release/2021/06/07/report-universal-access-to-sustainable-energy-will-remain-elusive-without-addressing-inequalities>> [Accessed 21 December 2021].

this number without access has remained stable in the period.<sup>16</sup>

Of this, the sub-Saharan African region is distinctively the worst hit by this global energy deprivation. Two countries in this region - South Sudan and Chad – are ranked as the lowest level of electrification in the world in 2019 - with only 7% and 8% access respectively. Further, the region also demonstrates great disparities between rural and urban dwellers – statistics indicate that in 2019 nearly 80% of the urban population in Sub-Saharan Africa had access to electricity as compared to less than 30% of rural dwellers.<sup>17</sup> In the SSA region broadly, only one in every three individuals has access to clean, reliable and affordable energy.<sup>18</sup> Even then, the available access is compromised by extensive power outages over large portions of the population.<sup>19</sup>

This constrained access to modern energy services points to high levels of poverty in individual countries. Energy poverty in this SSA context can be said to be observed in all conditions where there is a lack of access to adequate, affordable, reliable, quality, safe and environmentally sustainable energy services to support development.<sup>20</sup>

In context, this definition highlights two essential features that must be addressed in order to cure energy poverty. First, there are certain *features of access* that need to be present in order for the access to be meaningful. Secondly, that quality access to energy is provided *affordably*. In the first instance, and as with energy poverty, there is no universally agreed

definition of energy access. There are however some attempts: - The International Energy Agency (IEA) defines initial electricity access as 250 kWh per year for rural households and 500 kWh for urban households, projecting that this base level increases to 750 kWh per person by 2030.<sup>21</sup> A more comprehensive definition by the same agency defines energy access as “a household having reliable and affordable access to both clean cooking facilities and to electricity, which is enough to supply a basic bundle of energy services initially, and then an increasing level of electricity over time to reach the regional average”.<sup>22</sup> The World Bank, through its ‘Sustainable Energy for All (SE4All)’ framework provides a definition that accommodates both electricity demand and supply in tiers which consider six key factors in determining the quality of electricity access. These factors include peak available capacity, duration of service per day, duration of evening service, affordability, legality, and quality of voltage regulation.<sup>23</sup>

There are commonalities which exist across the different attempts at defining the term. They include: - i) Minimum level of domestic/household energy access; ii) Residential access to, and primary reliance on safer and more sustainable cooking facilities - those which minimize negative impacts on health and the environment;<sup>24</sup> iii) Access to modern energy at scale i.e. that powers productive economic activity; and iv) Access to modern energy for public services, e.g. electricity for health facilities, schools and street lighting.<sup>25</sup>

The authors of this paper argues that the utility

16 'Countries with the lowest access to electricity | Statista' (Statista, 2021) <<https://www.statista.com/statistics/264631/number-of-people-without-access-to-electricity-by-region/>> accessed 20 February 2022

17 'Countries with the lowest access to electricity | Statista' (Statista, 2021) <<https://www.statista.com/statistics/264631/number-of-people-without-access-to-electricity-by-region/>> accessed 20 February 2022

18 Adewuyi, O., Kiptoo, M., Afolayan, A., Amara, T., Alawode, O. and Senjyu, T., 2020. Challenges and prospects of Nigeria's sustainable energy transition with lessons from other countries' experiences. [online] science direct.com. Available at: <<https://www.sciencedirect.com/science/article/pii/S2352484719308832>> [Accessed 14 December 2021].

19 Onyeji, I., 2010. On the Determinants of Energy Poverty in Sub-Saharan Africa. [online] Media.africaportal.org. Available at: <<https://media.africaportal.org/documents/Researchpaper5.pdf>> [Accessed 14 December 2021].

20 Habitat for Humanity. n.d. Energy poverty. [online] Available at: <<https://www.habitat.org/emea/about/what-we-do/residential-energy-efficiency-households/energy-poverty>> [Accessed 22 November 2021].

21 IEA. 2020. Defining energy access: 2020 methodology – Analysis - IEA. [online] Available at: <<https://www.iea.org/articles/defining-energy-access-2020-methodology>> [Accessed 24 November 2021].

22 IEA. 2020. Defining energy access: 2020 methodology – Analysis - IEA. [online] Available at: <<https://www.iea.org/articles/defining-energy-access-2020-methodology>> [Accessed 24 November 2021].

23 World Economic Forum. 2015. What does energy access mean? [online] Available at: <<https://www.weforum.org/agenda/2015/01/what-does-energy-access-mean/>> [Accessed 24 November 2021].

24 Access to clean cooking facilities refers to access to, and primary use of, modern fuels and technologies, including natural gas, liquefied petroleum gas (LPG), electricity and biogas, or improved biomass cookstoves (ICS) that have considerably lower emissions and higher efficiencies than traditional three-stone fires for cooking - IEA. 2020. Defining energy access: 2020 methodology – Analysis - IEA. [online] Available at: <<https://www.iea.org/articles/defining-energy-access-2020-methodology>> [Accessed 24 November 2021].

25 IEA. 2020. Defining energy access: 2020 methodology – Analysis - IEA. [online] Available at: <<https://www.iea.org/articles/defining-energy-access-2020-methodology>> [Accessed 24 November 2021].

and scale of the access is also critical. In this regard, access should go beyond entry-level domestic connectivity and should be available at scale in order to power the productive centres of any emerging economy.

## 2. WHAT IS THE ENERGY TRANSITION AND WHY DOES IT MATTER?

### 2.1 Defining the energy transition

As observed in the first section of this paper, in order to coherently consider the question of energy poverty and to address it meaningfully, a contextual approach must be adopted. So too with the global energy transition. Historically, there have been various energy transitions. This is where a new energy source or an advancement in technology has displaced an older one either because it can produce cheaper services or services with superior attributes (cleaner, easier and/ or more flexible to manipulate). In light of this, the world shifted from primary use of biomass to coal, from coal to oil, and from oil to natural gas. From a purely economic perspective, a technology-driven transition has a positive impact on the supply, reducing the cost of the energy and increasing the quantity of energy delivered to the market, which is a positive supply shift.<sup>26</sup> These historical transitions have taken place progressively over long periods of time and have facilitated a more palatable shift in terms of embracing and adapting to the different demands that they present.

However, the current energy transition is different. It is policy-driven and motivated by climate change which is perceived as one of the most pressing global issues of our time.<sup>27</sup> The science suggests that it is an existential crisis threatening our survival as a species and

therefore needs to be addressed urgently within a specific time frame in order to prevent irreversible damage to the planet and its ability to sustain life.<sup>28</sup> This current energy transition is broadly defined as a pathway to progressively decarbonise the global energy sector from fossil-based fuels to zero-carbon fuels by the second half of the 21<sup>st</sup> century.<sup>29</sup> It is underpinned by a collective global commitment to keep global warming below 2°C in line with the Paris Agreement and nationally determined contributions (NDCs).<sup>30</sup>

### 2.2 The justification for the energy transition

The rationale behind the energy transition is based on 3 critical factors: - i) the need to address climate change by making the switch from a global energy sector which is predominantly fossil-fuel based to one based on renewable energy sources. This is because the energy sector is currently the main emitter of GHGs; ii) the developments and fundamental changes in technology coupled with their rapid and significant cost reductions are providing a foundation for emerging energy-sector transitions in many countries; and iii) market-driven growth of renewable energy installations and increased focus on energy efficiency across the energy value chain including in end-use sectors like industry, agriculture, buildings, appliances, and transport.<sup>31</sup>

This transition is enshrined in a broader context which acknowledges the challenges that the global sector is facing i.e.: - i) rising populations and economic growth resulting in increasing demand for energy services, ii) providing access to modern energy for the approximately 759 million people who are currently unserved will require new power capacity and infrastructure expansion in countries with limited means of financing the required investments,<sup>32</sup> iii) the energy sector already accounts for more

26 Blazquez, J., Fuentes-Bracamontes, R. and Manzano, B., 2019. A road map to navigate the energy transition. [online] Oxfordenergy.org. Available at: <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/10/A-road-map-to-navigate-the-energy-transition-Insight-59.pdf>> [Accessed 14 December 2021].

27 Climate change is the incremental change in the level of greenhouse gas emissions (GHG) in the atmosphere which has led to rising global temperatures. This change has resulted in extreme weather across the globe which has negatively impacted economies and societies around the world - Ipcc.ch. 2021. Global Warming of 1.5 °C. [online] Available at: <<https://www.ipcc.ch/sr15/>> [Accessed 14 December 2021].

28 Ipcc.ch. 2021. Global Warming of 1.5 °C. [online] Available at: <<https://www.ipcc.ch/sr15/>> [Accessed 14 December 2021].

29 Irena.org. n.d. Energy Transition. [online] Available at: <<https://www.irena.org/energytransition>> [Accessed 14 December 2021].

30 EITI. 2021. Preparing for the energy transition. [online] Available at: <<https://eiti.org/documents/preparing-energy-transition>> [Accessed 21 April 2022].

31 Un.org. 2021. Theme report on energy transition – towards the achievement of SDG 7 and net-zero emissions. [online] Available at: <[https://www.un.org/sites/un2.un.org/files/2021-twg\\_2-062321.pdf](https://www.un.org/sites/un2.un.org/files/2021-twg_2-062321.pdf)> [Accessed 16 December 2021].

32 worldbank.org. 2021. Report: Universal Access to Sustainable Energy Will Remain Elusive Without Addressing Inequalities. [online] Available at: <<https://www.worldbank.org/en/news/press-release/2021/06/07/report-universal-access-to-sustainable-energy-will-remain-elusive-without-addressing-inequalities>> [Accessed 21 December 2021].

than half of the total global GHG emissions which in the first instance need to be reduced dramatically, and eventually eliminated in order to meet the goals of the Paris Agreement; iv) energy systems must become increasingly resilient to future economic and environmental shocks, v) consider the growing trend from highly centralised to increasingly decentralized energy production brings new participants – both producers and consumers - into the energy value chain, and finally, vi) the increased electrification of end-use sectors such as transport, will significantly increase electricity demand.<sup>33</sup>

These challenges must be addressed as countries undertake the transition.

### 2.3 The nature of the energy transition and the carbon budget

It is understood that the greatest culprit in increasing the level of global carbon emissions is the industrialisation process. While powering growth, industrialisation has relied heavily on detrimental carbon-intensive fuel sources. The energy transition is two-pronged and is characterized simultaneously by i) a shift away from the use of carbon-intensive fuel sources towards low-carbon energy sources for energy production and ii) shift towards electrification of end-use industries (such as transport and construction) which consume vast amounts of energy resulting in the production of significant carbon emissions.<sup>34</sup>

The global condition notwithstanding, this view of energy transitions is limited and is framed entirely from the perspective of the developed world. It fails to consider the nuances presented by the different energy scenarios across the various regions around the globe and the factors which influence the same. Essentially, the ability of a society to make the shift from one form of energy to another is influenced by that society's economic prosperity, geographical structure and international relations.<sup>35</sup> These factors vary across different regions and different countries.

Consequently, energy transitions will look as different as the circumstances which inform their energy challenges and their energy needs. For instance, developed economies such as those in the Global North are already well established in their use and manipulation of modern energy. These industrialised economies have had non-renewable power plants and/ or vibrant coal industries for several decades and have enjoyed the benefits thereof for the same period of time. Here, the energy transitions may mostly be about preparing the workforce for the opportunities presented by the incoming technologies to ensure that they do not lose their livelihoods.

It is different for developing countries: - Those that are on the more-advanced end of the development spectrum are still heavily reliant on fossil fuel energy and have not neither maximised the utilisation of their power plants/ and or coal industries nor had them for as long as the advanced economies have. Examples of such countries include China and India. Here, the strategy may likely be about getting to energy reliability and security by establishing the economic muscle necessary to undertake energy transitions. The case is vastly different for those developing countries such as those in the SSA region which either have had for a short time (comparably) or are only just discovering significant fossil-fuel deposits within their sovereign territories. Here, the energy transition is bound closely to basic energy access and is about moving from traditional sources of energy to modern energy. For example, in Angola, the Democratic republic of Congo and Ethiopia, all of which have vast potential energy resources, fossil-fuel based and renewable alike, the percentage population with access to electricity is less than 50% - approximately 46%, 19% and 48% respectively the bulk of which are found in urban areas. The authors assert that in these cases, access to modern energy is itself more important than the source of the energy given the critical role of modern energy in powering growth.

33 Un.org. 2021. Theme report on energy transition – towards the achievement of SDG 7 and net-zero emissions. [online] Available at: <[https://www.un.org/sites/un2.un.org/files/2021-twg\\_2-062321.pdf](https://www.un.org/sites/un2.un.org/files/2021-twg_2-062321.pdf)> [Accessed 16 December 2021].

34 Blazquez, J., Fuentes-Bramontes, R. and Manzano, B., 2019. A road map to navigate the energy transition. [online] Oxfordenergy.org. Available at: <<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/10/A-road-map-to-navigate-the-energy-transition-Insight-59.pdf>> [Accessed 14 December 2021].

35 Bridge, G., Bouzarovski, S., Bradshaw, M. and Eyre, N., 2013. Geographies of energy transition: Space, place and the low-carbon economy. Energy Policy, 53, pp.331-340.

In any event, these less-industrialised countries, regardless of where they find themselves on the development trajectory, are characterised by increased energy demand due to their growing populations, the aggressive pursuit of better standards of living for those populations and increased industrial processes. In these countries, the pressure from developed nations and financiers to either roll back their development plans or indeed to refrain from commencing with the manipulation of their natural resources is a sore spot. This is especially because there is evidence to indicate that they are not responsible for the current state of the climate as far as their GHGs are concerned. These tensions persist even as the continued incremental change in emissions threatens to deplete the carbon budget with these developing countries increasingly agitating for equity in the distribution of the same.

The carbon budget is a time-sensitive estimation of the total emissions that the atmosphere can safely absorb while still having a chance to contain global warming within 1.5 Degrees Celsius compared to pre-industrial levels as advocated by the Paris Agreement 2015.<sup>36</sup> Conservative estimates by scientists suggest that at the current emissions rate, the planet will deplete its carbon budget by 2027 while liberal estimates indicate that the carbon budget will be depleted by 2045.<sup>37</sup> The contention and prevailing sentiment of developing countries that they should have the lion's share of the carbon budget assigned to them and effectively be allowed to develop the full breadth of their resources, including their fossil-fuels, for a time so that they may be able to afford to transition in a way that does not jettison their economic ambitions. Given that the climate fight for Africa and other vulnerable countries is about adaptation whose interventions are energy intensive, these countries cannot afford to either curb their middle-class ambitions altogether or to

develop meaningfully (at scale) without carbon manipulation.

The thinking here is that energy transitions must be 'just'. This means that there is need to address the energy and pressing climate concerns alongside the justice and equity outcomes for the countries and populations which are tasked with making these transitions. The energy transitions across regions need to be well managed and contribute to the goals of decent work for all, social inclusion and the eradication of poverty.<sup>38</sup> The UNFCCC principle of 'common but differentiated responsibility and respective capabilities' recognises that the contribution of countries to climate change and their capacity to prevent it and cope with its consequences vary enormously.<sup>39</sup> As such, countries and regions which have contributed least to the current climate condition must not suffer further economic setbacks in the energy transition. For example, although the entire African continent contributes the least to the global accumulation of carbon emissions at less than 4%, it is more vulnerable than any other region.<sup>40</sup>

Essentially, the energy transition is not a uniform, one-size-fits-all process. It must reflect diverse priorities and consider a combination of abilities, technologies, policies, finance and resources. While the specific path to the end goal depends on individual circumstances, the destination is shared and it should be executed in such a way that it is just, inclusive and systemic such that no one is left behind. International and regional cooperation is essential to facilitate the sharing of experiences and good practices.<sup>41</sup>

## **3. THE ROLE OF CLIMATE FINANCE IN FACILITATING ENERGY TRANSITIONS**

### **3.1 What is Climate finance?**

The general understanding is that going

36 carbontracker.org.2021. Terms List. [Online] Available at <<https://carbontracker.org/resources/terms-list/#carbon-budgets>> [Accessed 15 October 2021].

37 In either scenario, the point is that the planet does not have much time to reverse the damage caused by climate change. There is, therefore, consensus that in order to preserve the longevity of the planet and the well-being of its inhabitants, it is imperative that the current level of emissions is sharply reduced - through mitigation and adaptation interventions - and that further emissions are curbed altogether.

38 Ilo.org. 2018. Just Transition Towards Environmentally Sustainable Economies and Societies for All. [online] Available at: <[https://www.ilo.org/actrav/pubs/WCMS\\_647648/lang--en/index.htm](https://www.ilo.org/actrav/pubs/WCMS_647648/lang--en/index.htm)> [Accessed 14 December 2021].

39 Unfccc.int. 1992. UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE. [online] Available at: <<https://unfccc.int/resource/docs/convkp/conveng.pdf>> [Accessed 14 December 2021].

40 Cdp.net. 2021. Africa Report - CDP. [online] Available at: <<https://www.cdp.net/en/research/global-reports/africa-report>> [Accessed 21 December 2021].

41 Un.org. 2021. Theme report on energy transition – towards the achievement of SDG 7 and net-zero emissions. [online] Available at: <[https://www.un.org/sites/un2.un.org/files/2021-twg\\_2-062321.pdf](https://www.un.org/sites/un2.un.org/files/2021-twg_2-062321.pdf)> [Accessed 16 December 2021].



forward fuel sources for industrial processes need to be cleaner and different regions of the world are grappling with how best to navigate this. What is not in debate is that the transition will itself be expensive, with estimated required investments for the global energy transformation by 2050 of about 660 billion per year<sup>42</sup>. Therefore, if countries should make significant diversification from carbon-intensive fuel sources, they need: - i) the economic and financial resources to do so, and ii) to be able to transition in a manner that continues to propel them toward achieving their economic ambitions or that at the very least, does not set them back. Countries need money for this and this money is referred to as climate finance.

Climate finance is broadly understood as all financial flows aimed at i) reducing emissions, ii) enhancing the removal of GHG emissions from the atmosphere and iii) reducing the vulnerability of (or in the alternative, increasing the resilience) of people and the planet to climate change impacts. Climate finance is any local, national and transnational financing which may originate from private, public or alternative sources of financing.<sup>43</sup> It is needed for mitigation i.e. the large-scale investments that are required to significantly reduce emissions; and for adaptation i.e. for countries to better navigate the adverse effects and reduce the impacts of a changing climate. Mitigation projects include – reducing GHG emissions by shifting energy production from fossil fuel to increased renewable energy development – funding for clean transport in cities, improving energy efficiency of buildings and appliances, reforestation drives for enhanced natural carbon sinks, advancing clean cooking solutions.<sup>44</sup> Adaptation projects include - building sea walls, restoration of

forests/ wet lands, managing water systems, and better seeds for yield in unpredictable weather.<sup>45</sup>

In-keeping with the broader considerations of the ethical dimensions of climate justice and in accordance with the principle of “common but differentiated responsibility and respective capabilities” set out in the Convention<sup>46</sup>, developed country Parties are to provide financial resources to assist developing country Parties in implementing the objectives of the UNFCCC.<sup>47</sup>

### 3.2 How is the money mobilised? The financing mechanism under the Climate Convention

The Convention, the Kyoto Protocol and the Paris agreement recognise that countries’ contribution to climate change and their capacity to prevent it, including energy transitions, and deal with its consequences varies. Under the Convention, parties with more financial resources are called to assist those that have less financial muscle to deal with climate change and are more vulnerable to its effects. The Paris agreement reaffirms the obligations of developed countries and encourages voluntary contributions by other parties.<sup>48</sup>

To facilitate the mobilisation of climate finance, these international agreements established the Global Environment Facility (GEF) and the Green Climate Fund (GCF) which are the largest multilateral climate funding bodies. Smaller funds include the Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF) and the Adaptation Fund.<sup>49</sup> According to 2019 statistics from the

42 irena.org. 2021. Investment needs for global energy transformation. [online] Available at: <<https://www.irena.org/financeinvestment/Investment-Needs#:~:text=In%20the%20power%20sector%2C%20the,to%20over%20USD%20660%20billion>> [Accessed 22 October 2021].

43 unep.org.2021. Climate Finance. [Online] Available at: <<https://www.unep.org/explore-topics/climate-action/what-we-do/climate-finance>> [Accessed 2 January 2022].

44 'Introduction to Climate Finance' (Unfccc.int) <<https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>> accessed 20 February 2022

45 'Introduction to Climate Finance' (Unfccc.int) <<https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>> accessed 20 February 2022

46 United Nations Framework Convention on Climate Change - IISD Earth Negotiations Bulletin. n.d. UN Framework Convention on Climate Change – UNFCCC | IISD Earth Negotiations Bulletin. [online] Available at: <<https://enb.iisd.org/negotiations/un-framework-convention-climate-change-unfccc>> [Accessed 1 March 2022].

47 'Introduction to Climate Finance' (Unfccc.int) <<https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>> accessed 20 February 2022

48 unfccc.org.2021. Introduction to climate finance. [Online] Available at: <<https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>> [Accessed on 2 January 2022].

49 unfccc.org.2021. Introduction to climate finance. [Online] Available at: <<https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>> [Accessed on 2 January 2022].

global climate donor tracker, bilateral Official Development Assistance (ODA) contributing to climate objectives from the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) donors stood at US\$34.4 billion - a 14%-increase from US\$30.2 billion in 2015 and includes funding for projects with climate both as a principal<sup>50</sup> and as a significant goal.<sup>51</sup> Of this, 43% went to climate change mitigation activities only, 33% to climate change adaptation only, and 24% to projects that addressed both climate change mitigation and adaptation. When looking at funding with climate-related goals as a principal objective of the project, funding stood at US\$12.3 billion in 2019, slightly above 2015 levels (US\$12.0 billion).<sup>52</sup>

In the same year, 2019, the largest donors of climate-related ODA (including both principal and significant funding) were Germany (US\$8.3 billion), Japan (US\$6.3 billion), the EU institutions (US\$5.6 billion), France (US\$4.7 billion), and the United Kingdom (US\$2.0 billion). In relative terms, the top donors were Japan (46%), France (44%), Germany (43%), Iceland (41%), and Netherlands (35%).

### 3.3 Why is climate finance important for the SSA region?

Without financial support on climate action, it is projected that climate change will push tens of millions more Africans into extreme poverty by 2030.<sup>53</sup> Climate finance is critical for enabling Africa to adapt to the growing impacts of climate change and to ensure that its future development path is consistent with the global warming goal.

Though Africa is disproportionately impacted by climate change despite contributed only about 4% to global GHG emissions, these emissions are projected to grow given

the increased energy demand to meet its population growth – projected to increase from 17% to 40% by 2100 – and its middle-income development goals. There is significant support for the theory that developing a low-carbon, climate-resilient path offers Africa the opportunity to avoid the mistakes of the past and by directly leapfrogging to a cleaner form of growth that delivers on both development and climate goals.<sup>54</sup> Despite the fact that it is agreed that a climate resilient-path is in the long term the more sustainable option, it is not the view of the authors of this paper that the SSA region can leapfrog the use of carbon-intensive fuel sources for aggressive and time-sensitive development. This is because there is currently no evidence of a country that has managed to achieve development at scale without fossil-fuel manipulation.

For the SSA region, investments need to be delivered at scale and in better quality in the three critical areas of: - i) energy transitions and related investments in sustainable infrastructure; ii) investments in climate change adaptation and resilience; and iii) restoration of natural capital (agriculture, food and land use practices) and biodiversity. Altogether, Africa will need to invest around \$200 billion per year by 2025 and close to \$400 billion per year by 2030 in order to deliver on these priorities. However, due to several challenges including low-credit ratings, high debt and high poverty levels, the environment is perceived as a very high-risk environment and as such difficult to attract financial interest in investment.<sup>55</sup>

At the UN Climate summit 2015 in Copenhagen – COP 15 – pledge by rich countries to emerging and frontier countries of \$100 billion dollars per annum by 2020 to assist in the delivery of climate mitigation and adaptation efforts.<sup>56</sup> Unfortunately, only \$80 of the 100 billion per annum has been contributed to date and of

50 Principal goal - for projects in which climate change mitigation or adaptation is a fundamental and explicitly stated goal - 'Climate - At A Glance - Funding Trends' (Donor Tracker) <<https://donortracker.org/sector/climate>> accessed 20 February 2022

51 Significant goal - for projects in which climate change mitigation or adaptation is not a key driver but still an explicitly stated goal - 'Climate - At A Glance - Funding Trends' (Donor Tracker) <<https://donortracker.org/sector/climate>> accessed 20 February 2022

52 'Climate - At A Glance - Funding Trends' (Donor Tracker) <<https://donortracker.org/sector/climate>> accessed 20 February 2022

53 Hallegate, S., 2016. Shock waves. Washington D.C.: World Bank Group.

54 Bhattacharya, A., 2022. The criticality of climate finance for Africa. [online] Brookings. Available at: <<https://www.brookings.edu/blog/africa-in-focus/2022/02/08/the-criticality-of-climate-finance-for-africa/>> [Accessed 1 March 2022].

55 Bhattacharya, A., 2022. The criticality of climate finance for Africa. [online] Brookings. Available at: <<https://www.brookings.edu/blog/africa-in-focus/2022/02/08/the-criticality-of-climate-finance-for-africa/>> [Accessed 1 March 2022].

56 Timperley, J., 2021. The broken \$100-billion promise of climate finance — and how to fix it. [online] Nature.com. Available at: <<https://www.nature.com/articles/d41586-021-02846-3>> [Accessed 1 March 2022].

this, only around \$20 billion was provided to Africa over 2016-2019. Given the scale of needs, the Africa Group of Negotiators has called for \$1.3 trillion a year in climate finance to be made available from 2025.<sup>57</sup>

### 3.4 Climate Finance as a source of blended Finance

Climate finance can be used to establish dedicated blended finance mechanisms. These leverage various development finance sources to mobilise finance from both private and commercial sources for climate action generally and specifically, to meet the low carbon electrification agenda for developing countries. Blended finance can be used to improve the risk-return of investments and to make them more attractive to private investors, particularly in developing countries where private investors or project developers are constrained by the risks associated with investing and to finance capacity building initiatives. For example, the Global Energy and Renewable Energy Fund<sup>58</sup> (GEEREF) supports investment in specialist renewable energy and energy efficiency private equity funds developing small and medium-sized projects in emerging markets. Other regional development institutions such as the African Development Bank (AfDB) have also introduced various financing initiatives to support renewable energy generation in SSA such as the Sustainable Energy Fund for Africa (SEFA)<sup>59</sup> (a multi-donor special fund managed by the Bank to provide catalytic finance to unlock renewable energy and energy efficiency) and Africa50.<sup>60</sup> Notably, the SEFA facility has spearheaded the AfDB's engagement in green mini-grids and the Bank has subsequently financed its first two scale-up green energy programs in the Democratic Republic of Congo and Burkina Faso.<sup>61</sup>

### 3.5 Challenges in leveraging climate finance

### for energy transition in the SSA region

Undoubtedly, the energy transition in developing countries is closely related to energy access and is about moving from traditional sources of energy (biomass) to modern energy. The SSA region, i) desperately need to address the energy poverty constraints which increase the region's vulnerability to the impacts of climate change and ii) power its economic growth in order to iii) develop a coherent response to climate change.

Under the current policies and commitments, the IEA estimated that the aggregate amounts invested between 2017 and 2030 were less than one fifth of the amount required to achieve universal electricity access in SSA- which it estimated at USD454 billion, an average of USD34 billion annually.<sup>62</sup> Between 2014 and 2018, rich nations provided \$5.5 billion per year for adaptation projects in Africa, according to data from the Organization for Economic Cooperation and Development (OECD). This is equivalent to \$5 per person, per year, an amount split among 54 nations. Mozambique, Zimbabwe and Malawi ranked first, second and fifth, respectively, in a global climate risk index.<sup>63</sup> Yet these countries rank 32nd, 108th and 75th in terms of climate finance received.

This means that there is a substantial energy access and infrastructure investment deficit in the region which is further exacerbated by the existing barriers to unlocking private finance in the energy sector. These barriers include: - lack of transparent and bankable pipeline of projects to support low carbon electrification efforts and their high transaction costs, lack of viable funding models and inadequate risk-adjusted returns for projects, uncertain and in some instances unattractive investment environments for private finance and investment, and lastly, impediments in global financial regulatory

57 Bhattacharya, A., 2022. The criticality of climate finance for Africa. [online] Brookings. Available at: <<https://www.brookings.edu/blog/africa-in-focus/2022/02/08/the-criticality-of-climate-finance-for-africa/>> [Accessed 1 March 2022].

58 eib.org.2021. Global Energy Efficiency and Renewable Energy Fund [Online] Available at: <<https://www.eib.org/en/products/equity/funds/geeref>> [Accessed on 2 January 2022]

59 afdb.org.2021. Sustainable Energy Fund For Africa [Online] Available at: <<https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa>> [Accessed on 2 January 2022]

60 africa50.org.2022. Investing in Infrastructure for Africa's growth. [Online] Available at: <<https://www.africa50.com/>> [Accessed on 2 January 2022].

61 African Development Bank - Building today, a better Africa tomorrow. n.d. Sustainable Energy Fund for Africa. [online] Available at: <<https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa>> [Accessed 1 March 2022].

62 iea.org.2017. Energy access outlook 2017. [Online] Available at: <<https://www.iea.org/reports/energy-access-outlook-2017>> [Accessed on 20 October 2021]

63 'Global Climate Risk Index 2021' (Germanwatch.org, 2021) <<https://www.germanwatch.org/en/19777>> accessed 20 February 2022

systems that inhibit investors from investing in the SSA region and other emerging markets.<sup>64</sup>

With public budgets severely constrained, and the effects of the Covid-19 pandemic currently wreaking havoc to economies across the globe, countries in SSA as in other developing countries are further constrained by the tensions that they now face between their electricity supply/expansion targets and the need to do so using less carbon-intensive means. Securing private finance to facilitate low carbon electrification efforts has become even more vital. More developing country governments are turning to Public-Private Partnerships as a means to secure private finance to build renewable energy infrastructure and increase clean energy electricity generation. The preceding subsection highlights how accessing climate finance may be one of the ways to facilitate private financing of large-scale renewable energy projects through blended finance mechanisms.

However, while there has been increased international finance directed to developing countries, and particularly the SSA region, Africa only received 26% of the climate finance recorded between 2016 and 2019.<sup>65</sup> It is clear that what is reaching the region is neither sufficient to meet the existing renewable energy investment gap nor meet the needs for immediate climate adaptation measures. That said, achieving the energy transition in the SSA region will invariably require more than international climate financing. African governments must also be willing to undertake the broader governance and sector-specific reforms that are necessary in order to attract the much-needed private investment in renewable energy projects.

In addition, there have also been some legitimate concerns raised that while some critical funding has been directed to the continent, the efforts by the various actors in the development arena have been uncoordinated, incohesive and motivated by conflicting

political and commercial interests, particularly from individual developed country donors.<sup>66</sup> This, coupled with funding being delivered in overly bureaucratic structures, as well as the high upfront transaction costs of renewable energy projects, means that larger energy infrastructure projects have been by-passed for smaller and arguably less impactful projects.

Further, significant inequalities exist between the energy-abundant donor countries and the energy-poor recipient countries. As highlighted in the first section, donor countries are characterised by energy security and reliability with resultant economic growth, while recipient countries experience inhibited economic growth as a result of energy poverty. In this context, the danger posed is that in its eagerness to demonstrate climate action, the developed world may dictate a one-size-fits-all approach to climate change interventions. This would entail the singular pursuit of an accelerated transition to low-carbon and fossil-free energy development by all countries, without considering the varying industrialisation and development needs. Ultimately, developed countries would cease to direct finance to non-renewable energy projects needed to propel economic growth and development, whilst providing insufficient financing for renewable alternatives.

### **3.6 If the funding is insufficient, is there anything that countries in the SSA region can do?**

As has been demonstrated, there are huge discrepancies between the enormity of the task and the level of funding which is needed to achieve the same. In a bid to bridge this gap, the authors make some recommendations as follows:

- i. It has been observed that these funds, when distributed, are availed in the form of loans which need to be serviced and this continues to exacerbate the poverty and indebtedness aspect of these already vulnerable countries and further ensures that they operate from

<sup>64</sup> Baumli K. and Jamasb T. (2020), Assessing Private Investment in African Renewable Energy Infrastructure: A multi-criteria decision analysis approach, [Online] Available at: <<https://www.mdpi.com>> [Accessed on 21 October 2021]

<sup>65</sup> Reuters.com.2021. Africa calls for a Climate finance tracker after donors fall short. [Online] Available at: <<https://www.reuters.com/business/sustainable-business/africa-calls-climate-finance-tracker-after-donors-fall-short-2021-10-19/>> [accessed on 3 January 2022].

<sup>66</sup> alliancesud.ch.2020 Confused, uncoordinated, and incoherent. [Online] Available at: <<https://www.alliancesud.ch/en/politics/climate-and-environment/climate-policy-and-financing/confused-uncoordinated-and-incoherent>> [accessed on 3 January 2022]

a position of disadvantage. This makes the case for the funds to be distributed in the form of grants;

- ii. In response to the perceived high-risk environment, Africa will itself need to implementation of significant risk-mitigation indicators including aligning its national development plans with global climate ambitions as well as policy and institutional reform to boost domestic resource mobilization and ensure the long-term sustainability of the necessary investments. Because the SSA region will invariably require more than international climate financing, African governments must be willing to undertake the broader governance and sector-specific reforms that are necessary in order to attract the much-needed private investment in renewable energy projects.;
- iii. African countries may explore creative alternatives such as partnerships with rich nations in order to improve the risk profile and attract private sector investment – for example, the deal recently struck between South Africa and the European Union, Germany, France, the UK and the US. In this deal, announced at COP26, the developed countries pledged R131-billion over the next 3-5 years to support South Africa’s climate action goals by helping finance the move from its 80% reliance on coal to cleaner and renewable energy sources. This partnership aims to help prevent up to 1.5 gigatons of emissions over the next 20 years. The funds under the deal will be made available in the form of grants, concessional loans and investment and risk-sharing instruments, including mobilising private sector funding. Additionally, there’s a ‘just transition’ component of this funding which will be used to ensure coal communities and workers are supported as the country transitions.<sup>67</sup>
- iv. African countries may also update their individual Nationally Determined Contributions (NDCs) and align them with their domestic development goals as a

means of developing bankable projects and thereby attracting private sector funding.<sup>68</sup>

#### 4. CONCLUSION – ARE WE REALLY IN CLIMATE CRISIS?

This paper has examined the concepts of energy poverty and the energy transition and argued for a contextual definition of the two terms. It has attempted to make a case for the meaningful allocation of climate finance in the SSA region which is particularly vulnerable to the impacts of climate change.

It is the considered view of the authors that the biggest challenge in addressing the energy poverty concerns vis-à-vis navigating the undertaking concerning the energy transition is that it is not clear whether or not we are in climate crisis because if so, the responses would be more cohesive and less driven by either the economic or political interests of countries. A crisis, also referred to as an emergency, is defined as serious and usually unexpected threat which needs immediate attention. The intervention applied in response to a crisis is usually undertaken in order to ensure that at the very least, survival is guaranteed.

When it comes to the climate condition, humanity has a number of warnings over the decades which have acknowledged that as a direct result of human influence, we are heading to a point of no return. If, as the IPCC says, the scientific evidence for warming of the climate system is unequivocal, and that it is rapid and intensifying, then there is something wanting about the global responses.<sup>69</sup> If indeed this issue threatens our very existence as a species, then the approach to its resolution should be vastly different. At this critical stage, all hands should be on deck. The global powers-that-be which also happen to be the majority of the world leaders and leaders of the countries which have largely contributed to the climate situation as is, ought to agree to an urgent, cohesive, time-bound intervention, applicable

<sup>67</sup> The African Climate Foundation. 2021. South Africa’s multibillion-dollar climate finance deal lifts mood at COP26 - The African Climate Foundation. [online] Available at: <<https://africanclimatefoundation.org/south-africas-multibillion-dollar-climate-finance-deal-lifts-mood-at-cop26/>> [Accessed 1 March 2022].

<sup>68</sup> Ngcuka, O., 2021. *Climate finance: industrialised countries fail to meet funding pledges for Africa*. [online] fes.de. Available at: <<https://www.fes.de/en/shaping-a-just-world/article-in-shaping-a-just-world/climate-finance-industrialised-countries-fail-to-meet-funding-pledges-for-africa>> [Accessed 1 March 2022].

<sup>69</sup> 'Climate Change Widespread, Rapid, And Intensifying – IPCC — IPCC' (ipcc.ch, 2022) <<https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>> accessed 21 January 2022

to all countries as global citizens (without exception) with actionable consequences in place - including imprisonment and fines - for the violation of that plan. Effectively making climate aggression a criminal offence.

Consider the global response to COVID-19 pandemic. It was declared a pandemic within 3 months of its detection and identified as a health crisis with economic, humanitarian, security and significant human rights impact. The immediate interventions by governments including lock downs which limited the movement of both people and goods, the implementation of actions which prioritized the protection of the so called 'front-liners' as well as the lives of the more vulnerable members of communities and the tireless efforts to develop vaccines immediately demonstrated the gravity of the disease and the seriousness with which it was being addressed. The world continues to grapple with a crisis which has highlighted severe fragilities and inequalities within and among nations. Coming out of this crisis will require a whole-of-society, whole-of-government and whole-of-the-world approach driven by compassion and solidarity.

When compared, it is implicit that a review of the global response to the climate condition is lagging. Assuming that the science is correct, then the just concluded COP 26 summit was a resounding failure.<sup>70</sup> To the extent that: - i) the commitments and contributions under international conventions remain charitable and flexible and even then, their proposed delivery is watered-down; ii) compliance is neither tracked nor enforced; iii) pledges pertaining to climate finance remain unfulfilled; iv) geo-politics continues to take centre stage; and v) a situation persists where high emitters can continue to do so if they can pay and low emitters are strongly encouraged to curb their development ambitions for the sake of climate change then we continue to remain in this situation which is heavy on commercial activism; where much is said and but little is done.

Further, it remains a situation in which injustice is perpetrated: - On one hand some countries have the economic and financial muscle

to manage the transition at a pace which does not threaten their development. It is noteworthy that these countries have gained their economic and financial muscle primarily from the manipulation of fossil fuel resources, that they have the most to the current state of the climate and would prefer a more gradual process of weaning themselves off of carbon-intensive fuel reliance. On the other hand, other countries, further back in terms of developing their economic and financial muscle, such as those in the SSA region do not have the reserves which would allow them to navigate the transition without compromising their development goals, are particularly vulnerable to the impacts of climate change, are further constrained from either mitigating and/ or adapting to these impacts because they are unable to secure the requisite funding to do so and it is at the same time expected that they will leapfrog the use of resources which are critical to their desire to conclusively deal with energy poverty and to their economic ambitions. The potential for injustice is glaring and, in this regard, it is difficult to make a coherent case for a pressing climate crisis if profits and politics continue to outweigh the interests of and undermine the basic ability of the planet to sustain life that we all need.

If, however the climate condition is broadly understood as something whose improvement is aspirational and one that is worth working towards (eventually), then countries embrace a more honest approach to climate change and countries can continue to pursue their individualistic development goals and determine their level of engagement towards the improvement of the climate condition. Certainly, the unequal responses by countries to the climate condition betray a lack of common understanding regarding the climate state of play, create unjust double-standards and impose objectionable pathways towards energy transitions.

70 'UN Climate Change Conference (COP26) At The SEC – Glasgow 2021' (UN Climate Change Conference (COP26) at the SEC – Glasgow 2021, 2022) <<https://ukcop26.org>> accessed 21 January 2022

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School of Transnational Governance  
European University Institute  
Via Camillo Cavour, 65a, 50129 Firenze (FI), Italy  
Tel. +39 055 4685 545  
Email: [stg.publications@eui.eu](mailto:stg.publications@eui.eu)

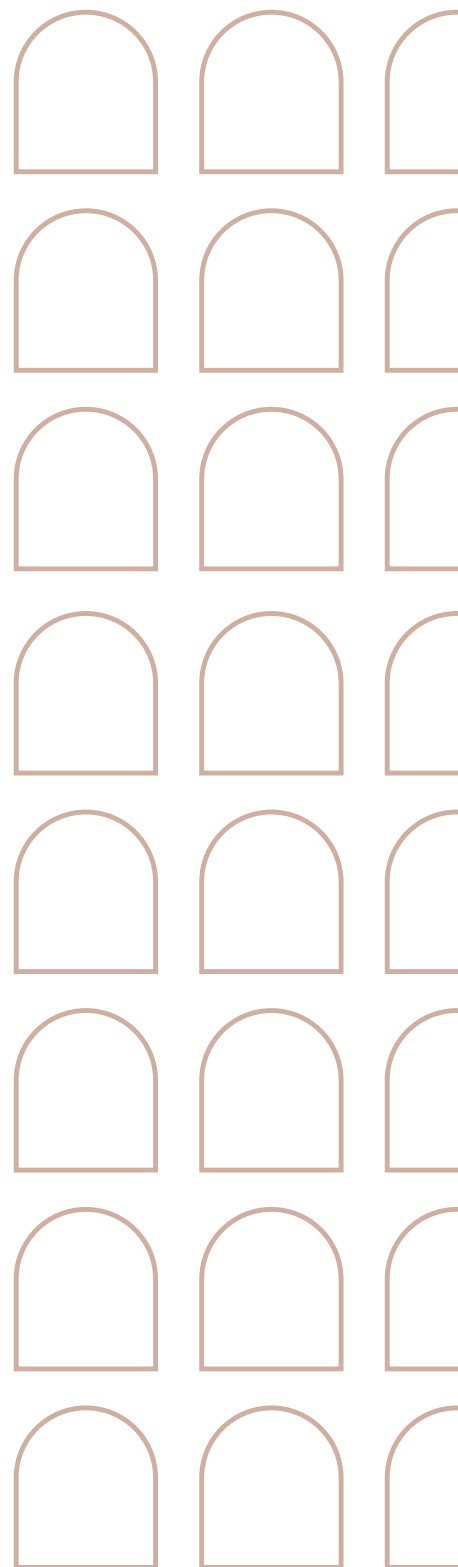
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