

Review Article

# Green Growth in Sierra Leone: A SWOT Analysis and Strategic Framework

Peter Saio Bangura<sup>1,\*</sup> , Sorie Kalie Bangura<sup>2,3</sup> 

<sup>1</sup>Economics Department, University of Makeni, Makeni, Sierra Leone

<sup>2</sup>Institute of Environment for Sustainable Development, College of Environmental Science and Engineering, Tongji University, Shanghai, R. P China

<sup>3</sup>Green Earth Sierra Leone, Makeni, Sierra Leone

## Abstract

Sierra Leone, like the majority of developing countries, is being increasingly pushed towards a green growth model, a framework that balances sustainable development with economic growth while leaving intact environmental integrity. Despite how much this model has become more relevant in the wake of climate change and shortages of resources, there is little to indicate that sustainable development features in Sierra Leone's transition towards green. Applying the SWOT approach of the Strengths, Weaknesses, Opportunities, and Threats method, a traditional strategy planning based on internal and external conditions influencing development processes, the study measures the nation's readiness to take the green development path. It uses qualitative secondary data analysis, gathering data from government, policy, and research reports, and institutions that are experts in sustainable development, renewable energy, and environmental governance. The SWOT method is applied to the systematic categorization of strategic enabling and inhibiting factors: internal strengths and weaknesses, and external opportunities and threats. Strengths include abundant natural resources, environmentally friendly policies, room for the development of renewable energy, and a highly educated population. Weaknesses such as inadequate institutional framework, low indigenous investment in green technology, political apathy, and reliance on foreign aid are potent dampeners. Opportunities are instigated through the availability of overseas climate finance, greater global green awareness, and global coordination. In comparison, high cost of green technology, limited international transfer of technology, exposure to climate, political tensions, and corruption represent critical setbacks to green change. The study concludes that Sierra Leone can have sustainable green growth, but that it must be pursued with audacious political will, underpinned institutional capacity, investment in science and technology education, as well as anti-corruption. SWOT analysis was also proven effective in recommending areas of intervention priority for policymakers' consideration, building a strategic framework for guiding national development planning that is sensitive to the global climate and sustainability agenda.

## Keywords

Green Growth, Sustainable Development, Sierra Leone, SWOT Analysis

\*Corresponding author: [petersaioBangura@gmail.com](mailto:petersaioBangura@gmail.com) (Peter Saio Bangura)

Received: 24 April 2025; Accepted: 12 May 2025; Published: 18 June 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

## 1. Introduction

The rapid growth of the global population and rising living standards have placed unprecedented pressure on the environment, leading to increased resource exploitation and degradation of ecosystems. According to the World Bank 2023, the global population surpassed 8 billion, with developing countries experiencing the fastest growth. In Sub-Saharan Africa, including Sierra Leone, the population is projected to double by 2050, intensifying demand for food, water, and energy [17]. Sierra Leone, with an estimated population of 8.7 million and a poverty rate of over 56% (World Bank, 2022), remains one of the most vulnerable countries to the impacts of climate change. The country ranks 181 out of 191 in the 2021 UN Human Development Index, reflecting persistent challenges in health, education, and income [28]. Furthermore, Sierra Leone's economy remains heavily reliant on natural resources, particularly mining and agriculture, which account for over 60% of employment and about 50% of GDP [28]. Climate vulnerability is compounded by weak infrastructure and institutional limitations [14]. The Notre Dame Global Adaptation Index (ND-GAIN, 2022) ranks Sierra Leone among the top 10 most climate-vulnerable countries globally, with limited adaptive capacity [25]. The country has also faced increasing exposure to floods, droughts, and landslides, such as the 2017 Regent mudslide, which killed over 1,000 people and displaced thousands [28].

In response to these challenges, institutions such as the Organisation for Economic Co-operation and Development (OECD), United Nations Department of Economic and Social Affairs (UNDESA), and the African Development Bank (AfDB) have promoted the adoption of green growth models that align economic development with environmental sustainability. According to the OECD (2015), green growth enables countries to use natural resources efficiently, reduce pollution, and improve resilience to natural hazards, all essential for long-term prosperity in developing economies [23]. Given these socio-economic and environmental pressures, the concept of green growth offers a viable pathway for Sierra Leone [22]. However, despite its significance, the country's progress toward sustainable green growth remains limited. This paper uses a SWOT (Strengths, Weaknesses, Opportunities, and Threats) framework to assess Sierra Leone's preparedness for a green economic transformation and proposes practical interventions to support policy implementation.

### *Green Growth's History*

The term "green growth" was first used in the Asia-Pacific region in 2005 when 52 nations and stakeholders met at the Fifth Ministerial Conference on Environment and Development (MCED) to move past the rhetoric of sustainable development and pursue "green growth." The goal was to accomplish the Millennium Development Goals and sustainable development, especially goals 2 and 7, which deal with environmental sustainability and poverty reduction. Green growth has been widely applied to address issues

relating to economic, environmental, technological, financial, and development aspects in a comprehensive framework. Over the past 10 years, the Republic of Korea, ASEAN, UNESCAP nations, and other international organisations have also focused on green growth. The Republic of Korea released its National Strategy for Green Growth and Five-Year Plan for Green Growth in 2009 after embracing "low-carbon green growth" as its new development goal in 2008. Green and growth may coexist, according to the June 2009 OECD Ministerial Council Meeting, which called on the organisation to create a green growth strategy that integrates economic, environmental, technological, financial, and development factors into a cohesive framework.

### *Green Growth Strategies in Sierra Leone*

Governments must adopt green growth plans if they hope to reduce poverty, safeguard the environment, and boost the economy both now and in the future. A number of programs, strategies, and policies in Africa are directly related to green growth; for example, South Africa has incorporated green growth strategies into its national agendas. In 2013, Sierra Leone, then led by former President Ernest Bai Koroma, committed to a green growth strategy that includes energy policy proposals based on creating a sensible energy mix, reducing transmission and distribution losses, and utilizing renewable energy sources to the fullest, particularly hydroelectric power and biomass energy (GGSSL). The African Development Bank (AfDB) supported the country's transition to a green growth agenda through the mobilization of resources for green growth implementation.

The National Adaptation Plan, launched in 2018, aimed at reducing vulnerability to the impacts of climate change and facilitating the integration of climate change adaptation into relevant new and existing policies, programs, and activities. In 2019, the country formally revived its commitment to the green growth transformation under President Julius Maada Bio by launching a new development plan titled "The Medium Term National Development Plan," which incorporated the new government's green growth strategies into key objectives.

However, despite successive governments in Sierra Leone embracing the green growth concept, its objectives for transforming economic growth and development and enhancing environmental sustainability can still not be realized. Because of this, it is now essential to look at the SWOT analysis tool to assess the green growth transformation projects in Sierra Leone in terms of their opportunities, threats, weaknesses, and strengths.

## 2. Literature Review

The theoretical perspective of Green Growth, which is intimately tied to the interdependence of the environment, development, and society, is explained in this paper using the framework for the Circular Economy created by Li Jian in

2004 [15]. Figure 1 depicts the framework and emphasizes the significance of various knowledge categories for sustainable development.



Source: [26]

**Figure 1.** Map of Sierra Leone.

Spaceship Theory and Growth Utmost Theory advocate for a circular economy, considering limited earth resources and social development. Ecological control Theory emphasizes self-regulation and orderly growth in a society, with six guiding principles: the wholly regular principle, circular and regenerating principle, interaction principle, feedback and equilibrium principle, self-regulation, and layer escalation principle. Three Kinds of Production Theory focuses on coordinating material resources, human production, and environmental production for sustainable development.

Ecological economy views the economy as a smaller system integrated into larger systems of society and the biosphere, with human economic activity bound by absolute limits. This theory requires proper theory, regulations, precautions, and techniques for practical implementation. The three kinds of production theory emphasize the importance of coordinating production for sustainable development.

#### *Empirical*

The relationship between economic growth and green

growth is significant, but there is a lack of research on this topic. Research has demonstrated that the green growth model helps developing nations attain sustainable development by promoting economic and resource-efficient methods of directing sustainable production and consumption decisions. However, the choice of the right policy instruments for driving green growth is highly disputed. For example, Kijek and Kasztelan (2013) and Lorente and Álvarez-Herranz (2016) call for environmental regulation instruments, fees, and taxes on pollution emissions to incentivize green innovations and reduce GHG emissions [12, 16]. Jones et al. (2016) conclude that regulations for energy efficiency would lead to greater adoption of resource-efficient techniques in the UK construction sector [11].

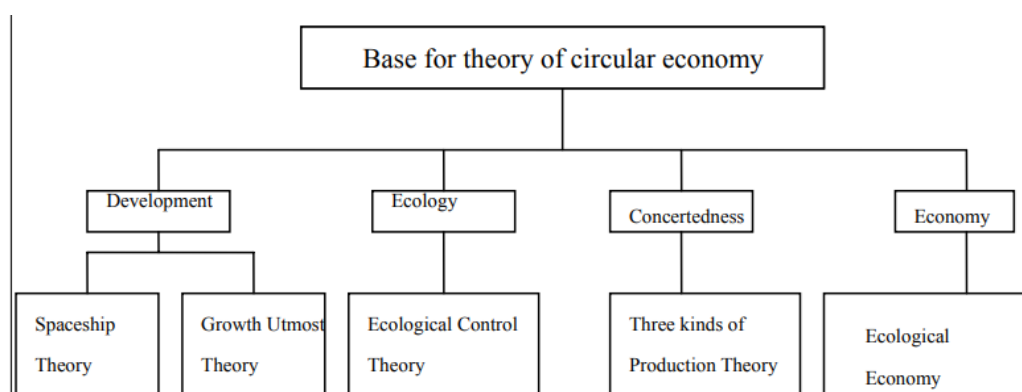
Additionally, Smit and Musango (2015) investigated the relationship between the informal and green economies in South Africa and made the case that involving the informal sector in conversations about the green economy can result in more environmentally sustainable and socially just growth [21]. Mikayilov et al. (2018) confirmed a long-run positive relationship between economic growth and a sustainable environment in Azerbaijan, suggesting CO<sub>2</sub> mitigating policies and public education on carbon dioxide emissions [19]. Hao et al. (2017) also confirmed that environmental performance positively interacts with economic growth in OECD and non-OECD countries [9].

Podder et al. (2021) studied the correlation between India's economic growth and the concept of sustainable green development, arguing that such a fast-growing economy should pay more attention to sustainable green development [25]. Furthermore, Nhamo and Mukonza (2020) looked at the potential for women in South Africa's environmental and green economic development sectors, emphasizing the necessity for policymakers to increase public awareness of these opportunities and initiatives [22].

No study has assessed the internal and external opportunities and challenges likely to influence Sierra Leone's green growth transformation, leaving a gap in the literature. This study addresses these issues and contributes to the existing literature on Sierra Leone.

#### *Conceptual Policy Framework for Greening Growth in Developing Countries*

There are three dimensions a national government should examine in developing and deploying a green growth strategy. These dimensions are shown in Figure 2 below:



Source: [15]

**Figure 2.** The Framework of Theory for Circular Economy.

Source: [23]

**Figure 3.** Green Growth Framework for Developing Countries.

### 3. Methodology

SWOT analysis assesses the benefits, drawbacks, opportunities, and dangers of national initiatives and development plans. Agyekum et.al. (2020) and Markovska et. al. (2009) have all contributed to this topic [1, 18]. Scholars from a wide range of disciplines, including waste management, economic systems, climate change, low-carbon development pathways, energy for sustainable development, and forest sustainability, have been using the term since Markovska et al. (2009) first used it in business management literature [18]. SWOT analysis, which

forms the basis for a thorough understanding of a project's strengths, weaknesses, opportunities, and threats, can be divided into two components: internal factors, which are impacted by the internal environment, and external factors, which are influenced by the external environment.

#### *Data Sources and Collection*

The researcher used secondary data from databases of publications, conference proceedings, and policy documents about the green economy and growth, such as policies about energy, forests, climate change, and the environment. Green sustainability and related policies were the main emphasis of this data, which assisted Sierra Leone in identifying policies connected to green growth.

## 4. Results and Discussions

This section provides a SWOT analysis of the external and

internal elements affecting Sierra Leone's shift to green growth. These aspects are shown in Table 1 and are evaluated either favorably or unfavorably.

**Table 1.** SWOT Analysis of Internal and External Factors for Green Growth Development.

Internal factors	
Strengths (+)	Weaknesses (-)
Economic	1) Economic
1) Availability of an abundance of various natural Resources	2) Limited number of domestic investors
2) Water, Coastal and Marine Resources	3) Over-reliance on external support
3) Land Resources and Forest	4) Land use policy and land/ tenure policies
4) Oil and Natural Gas	Weak institutions
Environmental	Environmental
1) Policies in support of green growth	Insufficient local funding for the development and innovation of green technologies.
2) Potential for green energy mix	Social
Social	Inadequacy of Political will
1) Significant efforts to reduce the illiteracy rate	
2) Young and dynamic population	
External factors	
Opportunities (+)	Threats (-)
Economic	Economic
1) Access to global funds for green initiatives	1) Cost of green technologies
2) Commercial interests in promoting technology development and transfer	2) Inadequate commitment to support technology development and transfer
Environmental	Environmental
Cross-border cooperation and international climate change awareness	Increasing threat of climate change
Social	Social
1) High awareness and understanding of environmental protection	1) Political Instability
2) Local and international support for green growth	2) Corruption

Source: Researcher, 2024

Sierra Leone has excellent natural resources and policy frameworks to support green growth, as highlighted in the SWOT analysis. These include a demographic youth, renewable energy, an abundance of natural resources, along with government goals to eradicate illiteracy and ensure sustainability. These are, however, overwhelmingly outnumbered by institutional weaknesses such as low domestic investment, absence of green finance, political backsliding, and weak governance systems. Externally, access to climate finance, global partnerships, and increased global consciousness offer Sierra Leone a platform to increase green transformation. These are, however, overwhelmingly outnumbered by institutional weaknesses such as low domestic investment, absence of green finance, political backsliding, and weak governance systems. Externally, access to climate finance, global partnerships, and increased global consciousness offer Sierra

Leone a platform to increase green transformation. Strong challenges, however, include technology cost, weak global technology transfer commitments, climate risk, political instability, and entrenched corruption. In all, the SWOT assessment requires coordinated policy implementation, institutional change, and investment in education, innovation, and governance to ensure a transition from vulnerability to resilience. Strategic leveraging of strengths to opportunities and addressing weaknesses and threats is the solution to pursuing green growth in Sierra Leone.

### *Analysis of Strengths of Green Growth in Sierra Leone Economic:*

The abundance of mineral resources in Sierra Leone, such as diamonds, titanium ore, bauxite, iron ore, and chromite, has been used by the nation to boost its economy. The mining industry has been a significant contributor to the country's



GDP since the 1990s, with mining being the second largest and most important industry after agriculture in terms of job employment and revenue generation [29].

The country also exhibits wealth in water, coastal, and marine resources. With nine major river channels, four key rivers, and the Great and Little Scarcies, Sierra Leone provides a significant source of water for its people. Groundwater resources are yet to be extensively investigated [7], but the country has one of the clearest and most serene beaches along its coastline. Marine ecology is varied, with coastal waters bustling with fishing and tourism activities.

Land resources and forests offer opportunities for industries such as tourism, agriculture, and mining. The country has agroecological zones, including forests, savannah woodlands, swamps, and grasslands, which could be of great importance to the agriculture industry. Vast forest ecosystems include evergreen and semi-deciduous forests, with various species of trees and crops growing in these lands. In the northern region of the country, which includes the districts of Koinadugu, Kono, and Bombali, are savannah woodlands, whilst the southern province is home to inland valley swamps.

Sierra Leone might also mine natural gas and oil, which are important resources. After being discovered for the first time in 2010 by Anadarko Petroleum Corporation, crude oil production in the nation is still in its infancy. This significant advancement in energy exploration spurred a fresh round of energy-related endeavours, offering more opportunities to draw in foreign capital and produce income for the nation [15]. About \$100 million would be made annually in Sierra Leone if oil production continued. High-quality oil was recently discovered off the coast of Sierra Leone by a Russian company named Lukoil [27].

#### *Environmental:*

Asumadu et al. (2016) have highlighted the importance of policies in Sierra Leone for promoting green growth and sustainable development [6]. National policies, such as the Mine and Minerals Agency Act and National Water and Sanitation Policy, are crucial for stimulating economic development and reducing the negative impacts of climate change on the environment. These policies, processes, and institutional mechanisms are divided into Mineral Resources, Land Resources, and Coastal and Marine Resources.

Renewable energy sources, such as solar, wind, hydro, biomass, and wave, have the potential to enhance green growth sustainability in Sierra Leone. These clean energy sources are sustainable and have less or no negative impacts on the environment compared to fossil fuels. Assumadu et al. (2016) argue that Sierra Leone has enormous potential for renewable energy development due to its unlimited sources of clean energy production [6]. However, like many developing countries, Sierra Leone is unable to fully exploit this potential, highlighting the need for further development and policy implementation to ensure sustainable development.

#### *Social:*

Amfo et al. (2021) and Ali et al. (2021) highlight the im-

portance of education in reducing illiteracy rates and promoting sustainable development [2, 3]. Sierra Leone has prioritized education for all over the last five years, implementing a free primary and secondary school education system. The country's young and dynamic population, estimated at 8.7 million in 2023 UN, presents significant potential for technology adoption and investment. With 42% of the young population under 25 years old, the country has a large proportion of curious young adults who are inclined to adopt new technologies [10]. However, fully leveraging this potential requires investing in empowering the youth with the necessary skills for all-inclusive green growth. The UN recognizes the need for a comprehensive approach to empowering the youth for a sustainable future.

#### *Analysis of Weaknesses of Green Growth in Sierra Leone Economic:*

The green growth transformation in Sierra Leone faces several challenges, including a limited number of domestic investors, over-reliance on external support, land use policy and tenure policies, and weak institutions. Local investors can promote green financing but face issues such as exchange rate management problems, political violence, corruption, poor quality, and limited infrastructure.

Revenue mobilization, the exchange rate, and inflation are all seriously threatened by the nation's excessive reliance on foreign assistance and low domestic savings for funding development programs. Due to Sierra Leone's mostly import-driven economy, this also has an impact on how green projects and initiatives are financed. Land is an essential source of livelihood for most Sierra Leoneans, and the country's land tenure system has two types: freehold and customary. Current land-related challenges include large-scale projects, lack of transparency, corruption, environmental issues, and erroneous surveys.

The current land ownership system poses a significant threat to renewable energy development, particularly solar PV, concentrated solar power, and wind energy, which require a large and accessible area of land for commercial power plant development.

Poor infrastructure and resources for research and development, a lack of innovation, and a lack of cooperation among institutions are the key reasons why weak organizations, like the Environmental Protection Agency (EPA), continue to be weak. This makes it impossible to generate accurate and current environmental data, which is essential for figuring out how to best transition the nation to green growth.

#### *Environmental:*

Insufficient local support for green technology development and innovation, despite research indicating a good correlation between green growth and environmental technologies. However, one important aspect of green technology development and innovation is the perceived related cost, particularly in the short term. Even though green technology is thought to be cost-effective in the long run, local investors remain wary [10, 13]. This is most likely due to local investors

and legislators being unaware of the true costs and benefits of green technologies. As a result, Sierra Leone faces a significant problem in managing green growth.

#### *Social:*

Sierra Leone faces challenges in implementing environmental policies due to a lack of political will and commitment from successive governments. The government's commitment to financing green initiatives has been lacking, and while they have signed protocols supporting green growth development, the challenge lies in actual implementation. To successfully adopt green growth initiatives, the government must go beyond signing international agreements and developing policies, requiring the right funding and technology development. This will help complement existing efforts and address the negative impacts of climate change in Sierra Leone.

#### *Analysis of Opportunities for Green Growth in Sierra Leone:*

##### *Economic:*

The increasing threat of global climate change has led to global efforts to address it, with funding from the UN playing a crucial role. Sierra Leone's efforts to green its economy are boosted by access to global climate funds such as the Green Climate Fund (GCF), the Global Environmental Facility, and the Adaptation Fund. These funds help developing countries transition to green economies and growth.

Sierra Leone, like most African countries, has a strong economic backbone, primarily driven by mining. However, the fall in iron ore prices and the 2014 Ebola virus disease have necessitated diversification of economic activities. In 2021, the government launched the Sierra Leone Economic Diversification Project (SLEDP) with a \$40 million grant from the World Bank, aiming to increase investment levels, small and medium enterprises (SMEs) growth, and entrepreneurship in non-mining productive sectors [27].

##### *Environmental:*

Climate change has become a major global concern, leading to increased global investment in green technologies and strategies. This has opened up more space for dialogue among international stakeholders to establish long-term solutions to lessen the effects of climate change on a global scale. The 2030 Agenda for Sustainable Development Goals (SDGs) was created as a result of the United Nations' (UN) more assertive stance. Sierra Leone, a UN member state, has adopted and incorporated the SDGs into its national policies. To show its interest in tackling climate change and environmental degradation, Sierra Leone has embraced the Irish Aid partnership movement, contributing to reducing emissions from deforestation and forest degradation in developing countries through the EU-Global Climate Change Alliance.

##### *Social:*

In response to the threats posed by climate change, local populations in Sierra Leone are well aware of the advantages of environmental protection measures such as conservation agriculture, sustainable forest management, and afforestation. Traditional leaders take action to protect biodiversity and

ecosystems, leading to sustainable use of terrestrial ecosystems by rural people and reducing desertification and biodiversity loss [4]. The government is committed to enhancing green growth development through renewable energy and afforestation programs. Green growth has gained support from civil society organizations, regional/international development partners, and the European Union, which create awareness, provide financial support, and assist the government in implementing green growth policies. This demonstrates the country's commitment to sustainable economic, environmental, and social benefits of green growth.

#### *Analysis of Threats to Green Growth in Sierra Leone*

##### *Economic:*

The transition to green growth in Sierra Leone faces challenges due to the perceived cost of green technologies. The initial implementation costs can be high, making them unaffordable for the average person. Additionally, the creation and dissemination of green technology are frequently concentrated in the West due to financial incentives, rendering them pricey for poor nations. Social considerations in business goals must supersede profits to achieve all-inclusive green growth.

The international community's commitment to supporting technology development and transfer is also lacking. The UN waited more than ten and a half years to develop a technology mechanism under the UNFCCC at the request of impoverished countries, which hinders their efforts to develop and implement green technology processes. Additionally, the non-binding nature of most international declarations and provisions makes developing countries feel obliged to meet this commitment. Therefore, it is essential to prioritize social considerations in business goals to achieve all-inclusive green growth at the local and global levels.

##### *Environmental:*

Climate change poses a growing threat to developing countries like Sierra Leone, with its economic impact worsening over the past years [8]. Climate fluctuations, such as rainfall and high temperatures, have reduced productivity levels due to interference with power supply. The negative impacts of climate change, which impact the energy system's performance and dependability, are particularly felt by renewable energy systems that depend on stable weather. Transmission lines and other equipment along the value chain are also susceptible to weather-related impacts.

##### *Social:*

Political instability in Sierra Leone has raised concerns about the country's peace and development in the long run. Between 2016 and 2020, the country experienced about 450 acts of political violence, a trend that peaked following the 2018 general elections [20]. The 2021 global peace index has recorded a significant drop in peacefulness and political stability, posing a threat to the country's green growth transformation in the short and long run.

Corruption is a major concern for many African countries, including Sierra Leone. The country was ranked 3 out of 35

African countries surveyed on government effectiveness in fighting corruption, and the Transparency International Global Corruption Rankings placed Sierra Leone 110th out of 180 countries surveyed in 2022 [5]. This indicates that Sierra Leone's performance in the Corruption Perception Index is not encouraging. Corruption affects public servants and regular citizens who bribe others to obtain favors. Corruption may make adopting green technology more expensive overall, which would exclude most Sierra Leoneans. According to studies, corruption and the cost of building a power plant are directly correlated.

## 5. Conclusions

This study aims to analyze the readiness of Sierra Leone to embrace and transform its economy to a green growth economic concept using the SWOT methodology. The results show that Sierra Leone has significant potential for transforming its economy to a green growth outlook, with the main strengths being the abundance of mineral resources, policies supporting the green growth movement, the green energy mix potential, the young and dynamic population, and significant efforts in reducing illiteracy rates.

However, several weaknesses may threaten the country's ability to take full advantage of these strengths. Similarly, the Lack of sufficient domestic finance for the development and creation of green technologies, excessive dependence on outside assistance, a small number of domestic investors, inadequate institutions, and a lack of political will are some of these drawbacks. It is recommended that the government, policymakers, and regional stakeholders act urgently to reduce or eradicate these barriers towards green growth transformation.

The economic opportunities available for Sierra Leone in embracing/transforming to green growth are infinite, with critical components including access to global funds for green initiatives, commercial interests in driving technology development and transfer, cross-border collaborations and

global attention to climate change, increased awareness and understanding of environmental protection, and local and international support for green growth. However, the researcher recommends that Sierra Leone needs to overcome several identifiable threats in its ability to green growth transformation.

To achieve the green growth transition, governments and politicians need to put in more work than just signing international agreements and conventions. Additionally, the government and other policymakers should support green growth development by giving more concern to technological and scientific education.

The perception of corruption and how it affects the development and transfer of green technologies have become serious issues since they may affect the price of green technologies. To partially address the expense of green technologies, the nation's anti-corruption laws must be strengthened. This will prevent those who might be found guilty, particularly when it comes to awarding contracts for the development and transfer of green technologies.

Political instability in the country has called for an urgent concern of the government and all political parties stakeholders and citizens. To enhance political stability, the government should create a platform of engagement with all political parties' stakeholders to discuss the peace of the country and why it matters. A peace agreement condemning tribal, regional, and political parties' discrimination together should be signed, launching a peace campaign that reminds citizens about the importance of political stability and encourages them to avoid all forms of discrimination that undermine the peace of the country.

The conclusions drawn from this study might not be all that different from comparable circumstances in other developing nations, particularly those in Africa, and the suggestions made here might also apply to any other African nation hoping to implement green growth transformation for long-term, sustainable economic growth.

**Table 2.** Benefits from Green Growth.

Economic Benefits	Social Benefits	Environmental Benefits
1) It leads to the realization of an increase and more equitably distributed GDP – production of conventional goods and services	1) It improves social, human, and knowledge capital;	1) It increases the productivity and efficiency of exploiting natural resources.
2) It increases the production of unpriced ecosystem services (or their reduction prevented)	2) it creates and sustains good jobs that assist the poor;	2) Utilizing natural capital within ecological bounds
3) It enhances Economic diversification, i.e. improved management of economic risks	3) It improves livelihood options, income, and/or quality of life, especially for the impoverished.	3) Non-renewable natural capital was used to increase other forms of capital.
4) It boosts market confidence by promoting innovation, accessibility, and adoption of green technologies.	4) It creates and sustains good jobs for the impoverished.	4) Reduces adverse environmental impacts and improves natural hazard/risk management
	5) It increases social, human, and knowledge capital.	



Economic Benefits	Social Benefits	Environmental Benefits
	6) It reduces inequalities.	

Source: [24]

## Abbreviations

AfDB	African Development Bank
ASEAN	Association of Southeast Asian Nations
CO <sub>2</sub>	Carbon Dioxide
EPA	Environmental Protection Agency
EU	European Union
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GCF	Green Climate Fund
GGSSL	Green Growth Strategy for Sierra Leone
MCED	Ministerial Conference on Environment and Development
MDGs	Millennium Development Goals
MTNDP	Medium Term National Development Plan
OECD	Organization for Economic Co-operation and Development
PAGE	Partnership for Action on Green Economy
PV	Photovoltaic
SDGs	Sustainable Development Goals
SLEDP	Sierra Leone Economic Diversification Project
SMEs	Small and Medium Enterprises
SWOT	Strengths, Weaknesses, Opportunities, and Threats
UN	United Nations
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNDESA	United Nations Department of Economic and Social Affairs

## Author Contributions

**Peter Saio Bangura:** Conceptualization, Writing – original draft

**Sorie Kalie Bangura:** Supervision, Writing – review & editing

## Conflicts of Interest

The authors declare no conflicts of interest.

## References

- [1] Agyekum, E. B. (2020). Energy poverty in energy-rich Ghana: A SWOT analytical approach for the development of Ghana's renewable energy. *Sustainable Energy Technologies and Assessments*, 40, 100760. <https://doi.org/10.1016/j.seta.2020.100760>
- [2] Ali, E. B., Anufriev, V. P., & Amfo, B. (2021). Green economy implementation in Ghana as a road map for a sustainable development drive: A review. *Scientific African*, 12, e00756. <https://doi.org/10.1016/j.sciaf.2021.e00756>
- [3] Amfo, B., Osei Mensah, J., & Aidoo, R. (2021). Migrants' satisfaction with working conditions on cocoa farms in Ghana. *International Journal of Social Economics*, 48(2), 240-259. <https://doi.org/10.1108/IJSE-03-2020-0131>
- [4] Anne Hennings (2023) land portal, Sierra Leone – context and land governance. <https://www.landportal.org/node/38427>
- [5] Anti-Corruption Commission of Sierra Leone (2022). <https://anticorruption.gov.sl/>
- [6] Asumadu-Sarkodie, S., & Owusu, P. A. (2016). Carbon dioxide emissions, GDP, energy use, and population growth: a multivariate and causality analysis for Ghana, 1971–2013. *Environmental Science and Pollution Research*, 23(13), 13508-13520. <https://doi.org/10.1007/s11356-016-6511-x>
- [7] FAO (2019) country statistics Sierra Leone <http://www.fao.org/faostat/en/#country/197>
- [8] Greenhouse Gas Emissions Factsheet (2017): Sierra Leone <https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-sierraleone>
- [9] Hao, Y., Zhang, Y., Liu, K., He, S., Liu, Z., Wu, H., & Zhao, J. (2017, July). An end-to-end model for question answering over knowledge base with cross-attention combining global knowledge. In *Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)* (pp. 221-231). <https://doi.org/10.18653/v1/P17-1021>
- [10] Harriet Mason (2021). Young people and climate change in Sierra Leone. <https://www.unicef.org/sierraleone/stories/young-people-and-climate-change-sierra-leone>
- [11] Jones, C. D., Ciais, P., Davis, S. J., Friedlingstein, P., Gasser, T., Peters, G. P. ... & Wiltshire, A. (2016). Simulating the Earth system response to negative emissions. *Environmental Research Letters*, 11(9), 095012. <https://doi.org/10.1088/1748-9326/11/9/095012>
- [12] Kijek, T., & Kasztelan, A. (2013). Eco-innovation as a factor of sustainable development. *Problemy Ekorożwoju–Problems of Sustainable Development*, 8(2), 103-112. <https://ph.pollub.pl/index.php/preko/article/view/4854>

- [13] Knoema (2021) Sierra Leone environment <https://knoema.com/atlas/Sierra-Leone/CO2-emissions>
- [14] Le, T.D.N. Climate change adaptation in coastal cities of developing countries: characterizing types of vulnerability and adaptation options. *Mitig Adapt Strateg Glob Change* 25, 739–761 (2020). <https://doi.org/10.1007/s11027-019-09888-z>
- [15] Lin, B. C. (2020). Sustainable Growth: A Circular Economy Perspective. *Journal of Economic Issues*, 54(2), 465–471. <https://doi.org/10.1080/00213624.2020.1752542>
- [16] Lorente, D. B., & Álvarez-Herranz, A. (2016). Economic growth and energy regulation in the environmental Kuznets curve. *Environmental Science and Pollution Research*, 23, 16478–16494. <https://doi.org/10.1007/s11356-016-6773-3>
- [17] Maja, M.M., Ayano, S.F. The Impact of Population Growth on Natural Resources and Farmers' Capacity to Adapt to Climate Change in Low-Income Countries. *Earth Syst Environ* 5, 271–283 (2021). <https://doi.org/10.1007/s41748-021-00209-6>
- [18] Markovska, N., Taseska, V., & Pop-Jordanov, J. (2009). SWOT analyses of the national energy sector for sustainable energy development. *Energy*, 34(6), 752–756. <https://doi.org/10.1016/j.energy.2009.02.006>
- [19] Mikayilov, J. I., Galeotti, M., & Hasanov, F. J. (2018). The impact of economic growth on CO2 emissions in Azerbaijan. *Journal of cleaner production*, 197, 1558–1572. <https://doi.org/10.1016/j.jclepro.2018.06.269>
- [20] Mohamed Sesay (2022), Gender Justice and Security. <https://thegenderhub.com/blog/recent-political-violence-in-sierra-leone-exposes-the-countrys-post-conflict-myth%E1%BF%BC/>
- [21] Musango, J. K., & Smit, S. (2015). Exploring the connections between green economy and informal economy in South Africa. <https://doi.org/10.17159/sajs.2015/20140435>
- [22] Nhamo, G., & Mukonza, C. (2020). Opportunities for women in the green economy and environmental sectors. *Sustainable Development*, 28(4), 823–832. <https://doi.org/10.1002/sd.2033>
- [23] OECD (2015), work on green growth [https://www.oecd.org/greengrowth/GG\\_Brochure\\_2015.pdf](https://www.oecd.org/greengrowth/GG_Brochure_2015.pdf)
- [24] OECD (2012), Green Growth and Developing Countries, A Summary for Policy Makers <https://www.oecd.org/dac/50526354.pdf>
- [25] Podder, R. S., Gupta, A. K., & Clemens, S. (2021). Surface paleoceanography of the eastern equatorial Indian Ocean since the latest Miocene: Foraminiferal census and isotope records from ODP Hole 758A. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 579, 110617. <https://doi.org/10.1016/j.palaeo.2021.110617>
- [26] Rohan H (2022) Beyond Lassa Fever: Systemic and structural barriers to disease detection and response in Sierra Leone. *PLoS Negl Trop Dis* 16(5): e0010423. <https://doi.org/10.1371/journal.pntd.0010423>
- [27] Sierra Leone Economic Diversification Project (SLEDP) (2022), Newsletter. <https://sledp.gov.sl>
- [28] Turay, B., Gbetuwa, S. A state-of-the-art examination of disaster management in Sierra Leone: the implementation drawbacks, research gaps, advances, and prospects. *Geoenviron Disasters* 9, 22 (2022). <https://doi.org/10.1186/s40677-022-00224-3>
- [29] World bank (2020) Sierra Leone Economic Diversification Project) <https://www.worldbank.org/en/news/loans-credits/2020/07/28/sierra-leone-economic-diversification-project>