

An Assessment of a Nation Endowed with Arable Land and Mineral Resources: A Case of Food Insecurity in Rural Sierra Leone*

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Abstract

Researchers frequently emphasise violence, poverty, climate change, and instability as the primary factors contributing to food insecurity in Africa, subsequently shedding less or no attention to the mismanagement of vast amounts of arable land and the abundance of mineral resources. This endeavour in Sierra Leone reveals the mishandling of fertile land and mineral resources, which, if effectively managed, might promote food security and address the issue of hunger. The author conducted interviews with a total of 47 individuals, including farmers, traders, government officials, and representatives of civil society groups, using both primary and secondary data in some hunger-prone districts. In addition, this research used scholarly papers, media articles, reputable websites, and information from reliable local and international organisations. The research finds that while various common variables can produce food insecurity, it is important to evaluate the mismanagement of arable land and mineral resources by a nation that has plenty of these resources.

* This article is an excerpt from the author's thesis titled "A Case of Food Insecurity in Rural Sierra Leone, 1996-2022". It was supervised by Hideaki Shinoda in 2023 at Tokyo University of Foreign Studies, Japan.

Introduction

Academics such as Hendrix (2013), Martin-Shields (2019), Misselhorn (2005) and Smith (2006) have specifically examined climate change, poverty, instability, and violence as the key contributors to food insecurity in Africa. This study questions the belief that food insecurity in Sierra Leone is exclusively caused by different circumstances like; climate change, violence, instability and poverty. It contends that the inadequate handling of cultivable land and mineral resources should also be taken into account in the discourse. Hence, the main contention presented in this paper is straightforward: the inappropriate use of cultivable land and valuable mineral resources such as diamond, bauxite, iron ore, etc., which are abundant in a country like Sierra Leone, significantly contribute to the nation's food insecurity. The author contends that by effectively harnessing these resources, the issue of food insecurity can be effectively addressed.

The present existing meaning agreed upon at the 1996 World Food Summit, is “a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2008). “Food security is the measure of an individual's ability to access food that is nutritious and sufficient in quantity” (Concern Worldwide, 2021).

As defined in the Cambridge Dictionary, mismanagement means “the process of organising or controlling something badly” (Cambridge Dictionary). Similarly, in the context of this undertaking, mismanagement is regarded as the act of improperly handling or caring for something. Specifically, this pertains to the inappropriate utilisation of resources such as land that is suited for food production and the financial gains obtained from the sale of minerals like Diamond, Rutile, Iron Ore, and so on.

Laurent E. Cartier and Michael Bürge (2011) stated that Sierra Leone is a country that has a significant amount of valuable minerals, including diamonds, gold, rutile, and bauxite. The country is predominantly known for its diamond industry, which was initially founded in 1930 and continues to be the primary source of income from exports for the country. Rutile and bauxite are exclusively exploited by large-scale mining corporations, while the alluvial characteristics of diamond and gold resources make them accessible to both artisanal miners and larger mechanised operators. Artisanal mining is prevalent in both the northern and eastern regions of Sierra Leone and plays a significant role in supporting the livelihoods of a substantial



portion of the population. While the country achieved the lowest position (112/113) in Sub-Saharan Africa in the 2022 Global Hunger rankings (Economist Impact, 2022).

This paper presents a novel viewpoint on the current status of food security in Sierra Leone. From a perspective where the potential of extensive fertile land and abundant mineral resources has not been effectively harnessed to address the worsening problem of food insecurity in the country.

The primary objective of this endeavour is to highlight the misuse of cultivable land and mineral resources, which have the potential to generate revenue to address the issue of food insecurity, which is regarded as a fundamental cause of food insecurity. This will aid in providing answers to the issue of food insecurity in a distinct manner.

A qualitative research approach was utilised in this undertaking. The main sources of data consisted of structured in-person interviews, reports from government and local and international non-governmental organisations, as well as dissertations. Forty-seven individuals were interviewed, consisting of eight farmers, eight food commodity traders, five government officials, eight community authorities, one representative from a non-governmental organisation, two representatives from international non-governmental organisations, and fifteen local residents. Other than the government officials and non-governmental officials, the rest of the respondents are permanent residents in the rural part of the country. Koinadugu, Bo, Pujehun, Port Loko, Kailahun and Regent were the districts or communities in which these interviewees were located. The interviews focused on the problem of resource mismanagement (including land, minerals, and finance), which has resulted in a condition of food insecurity in the country, specifically in rural Sierra Leone. The secondary sources of information were obtained from scholarly journals, articles, and books. This methodology facilitated a thorough examination and deep understanding of the food security condition in rural Sierra Leone. The study's original contribution is supported by the diverse respondents who provided valuable insights into the actual management of land and mineral resources and its impact on the situation of food security in Sierra Leone.

To address ethical concerns, participants are assigned labels such as government official 1, government official 2, farmer 1, farmer 2, food commodity trader 1, community authority 1 and community resident 1, while keeping their identities confidential. In addition, the author examined scholarly articles, reliable reports from regional and international organisations, as well as

documentary and archival records from international institutions such as the Food and Agriculture Organisation, Concern Worldwide, Human Rights Watch, British Broadcasting Corporation, and similar sources.

Although the study remains pertinent in scholarly discussions, it is crucial to recognise its limitations. An improvement may have been made by collecting a bigger sample size from all the districts in rural Sierra Leone, which would have resulted in a more thorough understanding of the subject matter. Furthermore, it is crucial to take into account sufficient time as a significant prerequisite and unreliable network connectivity as a hindrance. Consequently, contacting certain respondents in the aforementioned groups, particularly farmers, becomes very challenging. When conducting future studies on food security in rural Sierra Leone, it is essential to take these limitations into account.

This article starts by introducing the study and establishing the theoretical and methodological basis for the remainder of the work. It then moves on to probe the means of management of state resources since the attainment of independence, right onto the civil war, with a keen focus on how the management of land and mineral resources has impacted the state of food security in rural Sierra Leone. After examining the methods of managing the state's resources from independence to the war, the paper then explores the management of the nation's resources and the issue of food security in post-war Sierra Leone. Ultimately, the final section of the paper provides a conclusion by evaluating the argument of the study in light of relevant literature.

1. Sierra Leone and Food Insecurity

Sierra Leone is a significant rice-producing and rice-consuming nation in West Africa. In the early 1950s, Sierra Leone was a rice exporter. Since 1955, the agricultural sector has failed to meet the demands of the domestic market. From 1960 to 1970, the average annual imports amounted to \$2.7 million. Despite the government's attempts to boost domestic rice production through various measures such as a price-support programme, fertiliser subsidisation, land clearing, a heavily subsidised mechanical-ploughing scheme, and the establishment of the Rice Corporation to regulate imports, ensure proper distribution, and set prices, the need to import rice has persisted. However, the Government of Sierra Leone has made self-sufficiency in rice production the primary objective of its national agricultural policy (Due and Karr, 1973)



The Government of Sierra Leone has identified agriculture as the primary sector of the national economy and is concentrating its development endeavours on it. This is unsurprising because agriculture makes up over 50% of the Gross Domestic Product (GDP) and employs more than 75% of the workforce in the country. Approximately 74% of the country's land area, which amounts to 5.4 million hectares, is suitable for cultivation. This region encompasses 4.3 million hectares of highland terrain and 1.1 million hectares of low-lying plains. More than 90% of the lowland region is suitable for growing crops, particularly rice. The country features several types of fertile and less fertile land formations, such as the inland valley wetlands found across the country, the saucer-shaped bolilands in the northern region, the riverain grasslands prone to deep floods in the southern region, and the tidal mangrove swamps along the North-western coastal strip. Rice cultivation is practised in highland areas across the country, using the environmentally harmful slash-and-burn shifting cultivation method, which is currently being prohibited. Approximately 66% of the population resides in rural villages, where they earn their living through agricultural activities. However, every year, the country purchases around 40% of its primary food source, rice, from other countries (Conteh et al., 2012)

From 1991 to 2002, Sierra Leone, a small country in West Africa, saw a devastating ten-year war that resulted in the death of an estimated 50,000 to 200,000 people. The conflict was characterised by instances of sexual assault, disfigurement, and the coerced enlistment of underage combatants in both the insurgent and official military forces. The country is currently undergoing a prolonged recovery process from the civil war, which was one of the most savage conflicts in Africa and has been ongoing for twenty years. Sierra Leone continues to be profoundly fragmented and afflicted by corruption. Despite its abundant wealth, it ranks among the most impoverished nations globally (France 24, 2021). Rebuilding and developing Sierra Leone after the war poses several difficulties. One of the challenges faced is the considerable lack of access to food and limited financial support in rural areas. This is particularly challenging for subsistence farmers who are still in the process of recovering from the war's aftermath. Despite the seemingly advantageous circumstances in rural areas, a significant concern arises: why does a considerable amount of fertile land remain unutilized? There is a possibility that land tenure issues in rural Sierra Leone may be preventing lands from being used for production and investment (Unruh and Turray 2006: 8). Furthermore, a significant amount of the land allocated for non-

agricultural purposes, such as mining, has become unsuitable or incapable of supporting food production once mining activities have concluded.

1.2. Sierra Leone: Geography and the People

Sierra Leone is located in the western region of Africa. The country was named after the 15th-century Portuguese navigator Pedro Da Cintra, who was the first European to see and map Freetown harbour. The term “Serra Lyoa” is of Portuguese origin and refers to the diverse hills that encircle the bay. Freetown, the capital, possesses one of the largest natural harbours in the world. While the majority of the population is involved in subsistence agriculture, Sierra Leone also serves as a mining hub. The land of this region produces valuable resources such as diamonds, gold, bauxite, and rutile (titanium dioxide) (Britannica, 2024). Sierra Leone, similar to numerous other African countries, possesses a mosaic of numerous ethnic groups, each making valuable contributions to the nation’s abundant cultural legacy through distinct languages, traditions, and histories. Sierra Leone’s identity is influenced by its diverse population of more than 15 ethnic groups. The Mende ethnic group, which makes up over 30% of Sierra Leone’s population, is primarily concentrated in the southern and eastern areas of the country. The Mende language, spoken by this tribe, is considered a prominent language in Sierra Leone. The Temne ethnic group, primarily located in the northern region of Sierra Leone, represents a significant portion of the country’s population, accounting for more than 30% of the total. There is a current dispute on whether they exceed the Mende ethnic group in terms of population (Loispiration, 2024).

In January 2024, the population of Sierra Leone was 8.88 million. The data indicates that Sierra Leone’s population saw a growth of 186,000 individuals, equivalent to a 2.1% increase, from early 2023 to the beginning of 2024. The female population in Sierra Leone accounts for 49.9%, and the male population makes up 50.1%. At the beginning of 2024, 44.6% of Sierra Leone’s populace resided in urban areas, whereas 55.4% lived in rural regions (Datareportal, 2024).

The rural areas of Sierra Leone are inhabited by people residing in rural villages. The rural population of the country is estimated to be 55.7% as of 2023 (Trading Economics, 2024). The country is geographically partitioned into five primary areas, with four of them being designated as provinces. The provinces are subdivided into 16 districts and 190 chiefdoms. Until 2017, the



country had just three provinces that had fewer districts (14) and chiefdoms (149) than others. The aforementioned provinces include the Northern Province, Eastern Province, Southern Province, and North-West Province. At the administrative level, these provinces are subdivided into five units. The capital, Freetown, is located in the western area.

The Eastern Province is located in the eastern half of the country and shares borders with Guinea and Liberia, as well as two other provinces of Sierra Leone. This area is characterised by the presence of two mountain ranges and is one of only two provinces that lack a coastline. The discovery of diamonds in Sierra Leone in the 1930s marked the beginning of a key era in the province's history, as diamond mining became a prominent industry. The Eastern Province is renowned as the epicentre of Sierra Leone's diamond mining industry. Additionally, the country's Northern Province is located in the northern region of Sierra Leone. It shares boundaries with the Republic of Guinea and three other provinces in Sierra Leone. The province is predominantly characterised by hilly forests, which provide habitat for a variety of endangered species. In Sierra Leone, the Eastern Province is one of two provinces that do not have a coastline, along with the Northern Province. Before 2017, this region encompassed the territory that is currently known as the North-West Province of Sierra Leone. When combined, the two provinces had a collective land area of 35,936 square kilometres (13,874 square miles). However, there is no official measurement available for the individual areas of the more recent provinces (MAPPR).

Consistent with the above-mentioned, the Southern Province of Sierra Leone possesses the largest portion of the coastline along the Atlantic Ocean. Additionally, it shares boundaries with Liberia and each of Sierra Leone's five administrative regions. Bo city serves as the capital of this region, with the Mende ethnic group being the most populous. Bo City, alternatively referred to as Bo Town, serves as the primary hub for economic activities in the Southern Province and holds the distinction of being Sierra Leone's second most populous city. The city's development commenced in 1889 with the establishment of the Sierra Leone Government Railway, which remained operational until 1974. At that time, it served as the capital of the British Protectorate of Sierra Leone until the country gained independence in 1961. Bo is considered the second most significant city in terms of transportation, economy, and education, following Freetown. The Southern Province of Sierra Leone comprises the districts of Bo, Moyamba, Pujehun, and Bonthe. In addition, the northwest area of Sierra Leone shares boundaries with the Atlantic Ocean, Guinea, and three domestic provinces. The capital and economic centre of the region is

Port Loko, and it is geographically divided into three districts. Before 2017, the North-West Province was a part of the Northern Province and had a total area of 35,936 square kilometres (13,874 square miles). Due to the division of the provinces, the precise measurement of the new provincial territories is unknown (MAPPR). Agricultural activities, including farming, fishing, and livestock husbandry, are the primary drivers of the economy in this region. In addition, the region possesses a stockpile of valuable natural resources, including gold, aluminium, and bauxite, which further bolsters the local economy.

On the other hand, with the collapse of state institutions and prolonged periods of mismanagement and ineffective leadership under consecutive political administrations, the country endured a decade of social upheaval, resulting in the displacement of thousands of individuals and the destruction of numerous lives and assets. According to the author, this was inevitable (Zack, 1999). Many scholarly articles on the causes of the conflict have highlighted the widespread belief that a prolonged period of mismanagement and incompetence resulted in economic difficulties and social unrest. This, in turn, motivated numerous young individuals to resort to violence as a means of expressing their grievances and discontent with the current government.

1.3. Agriculture in Post-War Sierra Leone

According to Sierra Leone's Truth and Reconciliation Commission, the civil war was caused by a combination of internal and external circumstances. However, the Commission found that years of poor governance, widespread corruption, and the violation of basic human rights were the primary reasons for the dismal conditions that ultimately led to the inevitable conflict. Subsequent governments become progressively indifferent to the desires and requirements of the majority. Instead of enacting beneficial and forward-thinking policies, each government continued the negative and self-interested actions that were already in place from the previous administration. At the onset of the conflict, the nation had been deprived of its dignity. The breakdown of institutions resulted in the majority of individuals experiencing severe poverty. The government lacked any form of accountability. Political expression and dissent had been suppressed. The concepts of democracy and the rule of law had ceased to exist. In 1991, Sierra Leone was a highly fragmented society with a significant propensity for violence (Sierra Leone TRC).



Ndumbe (2001) noted that the civil conflicts and wars in most African countries during the past century have been largely driven by political manipulation, mismanagement, ethnic politics, economic deprivation, political disenfranchisement, and fights for control of important resources. This statement is undeniably accurate when applied to Sierra Leone. The battle in that region mostly originated from ethnic tensions, the competition for dominance over the diamond mines, and the questionable actions of neighbouring countries.

Following the conclusion of the civil war, there has been a significant rise in rice production levels. However, a substantial portion of this gain can be attributed to the extension of the cultivated area rather than an improvement in yields. Sierra Leone's rice crop yields are quite low compared to international norms, usually ranging between 1.0 and 1.5 t/ha and have remained unchanged over the past two decades. Approximately 87% of the nation's agricultural workers cultivate rice, and the typical yearly income for households in rural areas amounts to Le 3.6 million (equivalent to approximately US\$847). On average, rural households allocate 65 per cent of their entire expenses towards food (Binns and Bateman, 2017). The civil war had a substantial impact on agricultural production, which previously employed approximately 60% of the people and accounted for around 35% of the GDP. Moreover, as the civil conflict intensified, the mining as well as coffee and cocoa output and exports declined, thereby exacerbating the economic weakness. According to the Food and Agriculture Organisation (FAO), the agricultural extension services were severely hindered by insecurity and a lack of movement during the civil war, resulting in farmers being largely self-reliant. During the war and cropping season, significant limitations included the extensive displacement of farmers, the damage and theft of farmers' crops, seeds, and tools, a scarcity of seeds and other planting materials, an absence of fertilisers, and a shortage of workers (FAO, 1997).

Based on a credible source, the country ranks third in terms of worldwide hunger, with 36% of its youngsters experiencing stunted growth. The Ebola pandemic had a devastating impact on the country's health system, economy, and food security situation, leaving many already impoverished families without one or both providers. Persistent poverty diminishes the accessibility of food. Sierra Leone has a high prevalence of hunger, with almost 38% of children under the age of five experiencing chronic malnutrition. Due to their heavy dependence on subsistence farming as a primary source of income, those residing in rural communities still have substantial obstacles concerning food security. As a result, these homes are especially susceptible

to food shortages. Nearly half (49.8%) of these households lack access to sufficient food, with 8.6% facing extreme food insecurity and 41.2% facing moderate food insecurity. The main contributing factors to Sierra Leone's elevated level of food and nutrition insecurity encompass insufficient income, inadequate household earnings to sustain a satisfying diet, limited utilisation of mechanised agriculture, and a scarcity of cultivable land (WVI).

Equally important, bad governance is one of the major causes of the devastating conflict that wreaked havoc on thousands of people for over a decade. This menace as argued by many scholars is a cause for the skyrocketed rate of youth unemployment, poverty and poor standard of living in the country. This position is supported by the following views of some government officials who have served under different political administrations.

Government Official 1:

“Before we handed over power to this current government, we raised huge amounts of funds from donor support and other sources of income to facilitate work in every sector of government and the agriculture sector was a priority, therefore it is shocking to see that the current government is not being able to properly manage a sector of government we worked tirelessly to keep in the right direction”¹

Government Official 2:

“Looking at the work we did after we took office in 2007, the records are crystal clear that our government made significant gains in every ministry of government and the agriculture ministry is one of the major departments of government in which those gains were made”.²

Given the viewpoints of Government Officials 2 and 3, it is a clear indication that the respondents appear to be more defensive and playing the blame game which is a similar notion as compared to most of the responses from their opponents. It is no news that the SLPP and APC political parties are known for pointing fingers at each other instead of proffering a persuasive strategy conducive to the advancement of the nation. Added to this, the existing circumstances in the country as stated in some of the literature utilised in this research is contrary to the politically motivated perspectives of the said respondents. A further explanation of the viewpoints of

¹ Government Official 1, Author's face to face interview conducted on 11th March 2023.

² Government Official 2, Author's face to face interview conducted on 11th March 2023.



government workers is stated in the following excerpts. These government workers have served different governments of the two political parties that have been ruling Sierra Leone since it attained independence in 1961. According to them, they have over twenty-five years of experience in the civil service.

Government Official 3;

“The current government of Sierra Leone has inherited the challenge of ghost civil servants in the civil service sector. This issue has been hindering development as a significant portion of the country’s limited financial resources has been allocated to non-existent public workers.”³

Government Official 4:

“The issue of ghost workers in the public service has long been a problem that hampers the progress of successive political administrations. It is in the awareness of some officials government officials especially those in charge of recruitment of civil servants as well as those that disburse funds for payment of salaries(ministry of finance) as to, who is a legitimate government worker and who is not, therefore she thinks that ghost workers are within the system only because of the failure of some people within the system to prevent that from happening. However, successive political administrations have made some considerable efforts to tackle this problem, yet it is still in existence. She also stated that the income of ghost workers is sucking from the nation’s budget like a mosquito feeding on human blood for its own selfish interest”⁴

In 2019, the Sierra Leone government disclosed that approximately 5000 employees in the public sector may be collecting salaries as fictitious personnel. Half of the possible ghost workers, who are causing the state to lose billions of Leones, consist of civil servants, teachers, and police personnel (The Sierra Leone Telegraph, 2019). In Sierra Leone, the payment of Ebola personnel has frequently been halted due to the challenge of differentiating between authentic workers, such as ambulance drivers and gravediggers, and individuals who are falsifying their identities to receive hazard bonuses or attempting to register multiple times to receive extra compensation (Reuters, 2015).

³ Government Official 3, Author’s face to face interview conducted on 11th March 2023.

⁴ Government Official 4, Author’s face to face interview conducted on 11th March 2023.

Fayiah (2022) noted that critics contend that Sierra Leone's sustainable development and progress have been severely hindered by factors such as colonialism, civil war, the Ebola outbreak, the COVID-19 pandemic, and pervasive corruption. Corruption in Sierra Leone has deprived the country's youth and future leaders of their potential. The endeavour to tackle corruption in Sierra Leone is encountering challenges as corruption has bestowed increased power and fame onto many individuals, enabling them to draw more people into politics and thereby bolstering the numbers of their political party. Therefore, individuals who oppose any type of corrupt behaviour in the public domain encounter persistent threats and intimidation, and in certain instances, they are unjustly terminated without due process.

2. Sierra Leone Independence and the Management of its Resources

Following the attainment of independence, the country has gone through many hurdles. Due and Karr (1973) argued that before the nation attained political independence from Britain in 1961. Sierra Leone was a rice exporter in the early 1950s, however, in 1955, it started importing rice, which is its main staple food. This shift occurred because the country's agricultural sector was unable to supply the domestic demand for rice. According to the authors, imports during the period from 1960 to 1970 are estimated to have amounted to an annual total of 2.7 million USD. The government has made efforts to enhance rice production by implementing measures such as a price-support programme, land clearing, fertiliser subsidisation, and a heavily mechanised ploughing scheme. Additionally, rice cooperation has been established to regulate imports, ensure proper distribution of rice across the country, and manage the collection, sales, storage, and pricing of imported rice. However, despite these initiatives, the process of rice importation has persisted.

Sierra Leone possesses a favourable geographical location and abundant mineral and marine resources. However, the country also displays significant economic, political, and environmental vulnerabilities. Geographically, it is situated at an approximately equal distance from Europe and North America. Additionally, it possesses the third-largest iron ore deposit and the fifth-largest rutile deposit globally. The nation is located among one of the most productive maritime ecosystems in the world, boasting a high abundance of fish resources on a worldwide scale. Additionally, it is home to the deepest natural harbour in Africa. Sierra Leone possesses the second largest amount of rainfall in Africa, along with fertile agricultural terrain and plentiful tourism resources (Ministry of Finance of Sierra Leone, 2021).

**An Assessment of a Nation Endowed with Arable Land and Mineral Resources: A Case of Food Insecurity in Rural Sierra Leone**

Agriculture is the primary source of livelihood for rural communities and the most influential economic sector in Sierra Leone, followed by mining. It contributes 50 per cent to the Gross Domestic Product (GDP). The crop division holds a strong position in the agricultural sector, with rice being the prevailing crop in this sector. The majority of farmers in Sierra Leone cultivate rice, which is considered the primary food source and holds political significance in the country. The process of rice cultivation not only ensures food security for the population but also generates substantial employment opportunities for a significant number of farmers. Additionally, it contributes to the conservation of vital foreign currency reserves and has a significant impact on the entire economy of the country. Sierra Leone has prioritised achieving rice self-sufficiency as a key priority in its agricultural development agenda since gaining independence. Significant interventions in the sector have involved both direct government involvement and indirect engagement, facilitated by donor-funded integrated agricultural/rural development initiatives. All of these measures were aimed at small-scale farmers, who make up around 90% of the total farmer population. The outcomes of the several interventions were largely unsatisfactory, and during the past two decades, the overall performance of the agricultural sector has been poor (JICA, 2009).

Ochiai (2017) pointed out that one of the primary obstacles in Sierra Leone's agriculture sector is the governance of land by government agencies. Foreign businesses have acquired or are planning to acquire 21.4% of the country's arable land for large-scale industrial agriculture. In African countries where state governance has not fully spread throughout society and where the establishment of political order since the end of the colonial period is still incomplete, donor-promoted policies that seek to enhance the rights of land users are largely ineffective in providing genuine and strong rights of private land ownership to these users. Historically, African nations have endeavoured to govern their society by exerting control and authority over land. Granting land users meaningful private ownership rights would involve willingly weakening social governability through the land, which is a crucial mechanism for maintaining political order. Therefore, it is doubtful that states would select for this choice. In numerous African nations, the implementation of policies aimed at enhancing the rights of land users does not typically result in the establishment or granting of authentic private ownership rights.

2.1. Mining and Agriculture

Socfin Agricultural Company Sierra Leone Ltd. (Socfin SL) is one notable example. The company has obtained high-level government support for its rubber and oil palm plantation in the Malen chiefdom. The company has leased 16,000 acres of fertile farmland for 50 years. The estimated cost of the investment is expected to be \$100 million. The business operates as a subsidiary of the Socfin corporation based in Belgium. The Socfin SL arrangement has already generated dissatisfaction among key stakeholders, notably local farmers. Green Scenery has received complaints regarding a lack of openness, limited or no involvement of elected authorities and key players in decision-making processes, insufficient understanding of prospective relocation options, and the exertion of pressure on landowners and town chiefs to sign agreements (Green Scenery, 2011).

The acquisition of this site has sparked controversy from the outset. Shortly after the initial lease was finalised, several local neighbours denounced it as unlawful. The Malen Affected Land Owners Association (MALOA) submitted a letter to the government in October 2011, claiming that the lease contract lacked transparency and consultation with local stakeholders. They also criticised the compensation for the land as “pittance” and “unacceptable”. In addition to collecting bribes from SAC and coercing landowners into approving the lease, the letter also accused Malen’s Paramount Chief Victor Kebbie, who is the leader of the Chiefdom Council and the main driving force behind the deal (Dialogue Earth, 2022). The following excerpts from some community inhabitants assert the author’s viewpoint on the improper management of land and the poor execution of mining operations. According to the first respondent.

Community Resident 1:

“Socfin is a significant contributor to pollution and land grabbing. The sudden appearance of the company in the chiefdom caught many people off guard, as they were not given any prior notice or information regarding the extent of the company’s operations, such as the specific land area to be utilised and the duration of their work. This has caused shock and dissatisfaction among a significant number of individuals.”⁵

Also, as evidenced by another respondent, Farmer 1 who resides in Sahn Malen Chiefdom where Socfin operates in Pujehun district mentioned that:

⁵ Community Resident 1, Author’s face to face interview conducted on 14th March 2023.



Farmer 1:

“Access to land is increasingly problematic for farmers in their community due to the communal ownership-based land tenure system. Local authorities often restrict their access to large areas of fertile land, which is typically allocated to multinational companies for non-food production activities. There have been numerous cases where individuals have constructed residences or businesses on communal land without any official documentation to prove their ownership. The limitations imposed by local officials on land access, which they often exploit for personal gain or grant permission to foreigners to exploit with a significant amount of the profits benefiting themselves, is a matter of concern.”⁶

Furthermore, Sierra Leone is a country abundant in natural resources and characterised by a wealth of minerals. Although the nation possesses significant geological resources, its economy remains relatively small. The mining and quarrying sectors in Sierra Leone assist about 82,000 individuals, constituting around 3% of the country’s workforce, either through direct or indirect employment. In 2016, minerals, specifically iron ore, diamonds, bauxite, rutile, and gold, accounted for 91.1% of the country’s exports and contributed 2.7% to its GDP. The three most renowned mining companies in Sierra Leone are Sierra Rutile Limited, specialising in rutile mining in the Bonthe area, Ocea Mining Company, primarily engaged in diamond mining in the Kono region, and SL Mining Company, focused on iron ore mining in Lunsar, Port Loko district. Mining on a large scale continued to be a crucial element of the economy. In a research published in 2014, Human Rights Watch found that mining activities were responsible for the worsening environmental and social issues in mining communities. These issues included severe land destruction, negative impacts on community relocation, and challenges related to health and safety. The communities engaged in the extraction of iron ore, rutile, and diamonds in the Bonthe, Kono, and Port Loko regions of Sierra Leone serve as prominent illustrations of this underlying assumption. The country’s mineral mining has long been associated with widespread deforestation, land degradation, and environmental damage. The adverse impacts of mining activities encompass the depletion of arable land, inadequate water resources, and the destruction of forests, all of which are interrelated with the widespread and intrinsic harm to the environment

⁶ Farmer 1, Author’s face to face interview conducted on 14th March 2023.

(Human Rights Watch, 2014). Community residents 2 and 3 who both live in the Kono district, mentioned that:

Community Resident 2:

“It is not surprising that many young people have turned to commercial bike riding as a means of survival instead of farming. This is due to the land degradation and environmental pollution caused by mining activities in the area, which has made it one of the most vulnerable places in Sierra Leone. Commercial motorcycle riding is a significant source of revenue for individuals in rural areas of Sierra Leone. This is because motorcycles can navigate difficult terrains that are inaccessible due to inadequate road infrastructure. Consequently, many young people are now engaged in the motorcycle riding business as an alternative to farming, leading to a decrease in food production in the district.”⁷

Community Resident 3:

“Most of my friends are commercial bike riders. They were mainly into farming as a means of survival but due to community conflict over land distribution, low income gained from the harvests of products and the impacts of mining activities in our community, they took up bike riding as a new form of employment which is proving to be very good for them. Now very few of us go to the farms.”⁸

Mining activities in Sierra Leone also cause environmental degradation as an unintended consequence. Water and soil contamination is prevalent in most mining areas as a result of mining operations. Traditional sources of clean drinking water have been destroyed or poisoned. Groundwater in multiple mining regions has been polluted by the presence of heavy machinery and oil spills caused by leaching. Mining in specific regions results in the formation of uneven mounds throughout the excavated terrain, leading to disturbances in the water drainage system (World Bank, 2008). For instance, Koidu Holding Ltd. in Kono District employs site bombardment as a method for extracting Kimberlite minerals. This procedure primarily leads to the formation of large artificial trenches and the deterioration of soil structure, composition, and

⁷ Community Resident 2, Author’s face to face interview conducted on 17th March 2023.

⁸ Community Resident 3, Author’s face to face interview conducted on 17th March 2023.



biodiversity. The mineral mining industry in Kono District is considered a controversial endeavour, as it has both benefits and drawbacks (BBC, 2017).

Sierra Leone possesses a significant amount of natural resources, however, the mining activities in the country have exposed it to environmental harm. Mining communities often face societal tensions due to the potential trade-off between the expected job benefit and the environmental cost of mining operations. The adverse impacts of mining operations in recent decades have eclipsed the sector's role in the nation's progress. This is mainly due to the nation's lenient environmental legislation and the ineffectiveness of mine monitoring agencies in supervising mining company activities (Fayiah, 2020).

Impoverished rural areas lacking in social and economic infrastructure, limited non-farm job options, and minimal chances of upward social mobility are attractive to large-scale land investors who entice them with promises of a more prosperous socio-economic future. These coupled with the governing mechanisms in Sierra Leone lack the necessary capacity to effectively manage foreign property agreements and the resulting impacts of large-scale land acquisitions on the socio-economic and cultural aspects of its inhabitants. This can be illustrated by various characteristics, such as the severely underdeveloped organisation, supervision, and operation of land markets in the country. Moreover, the rental costs for property obtained by companies from local farmers are extremely low, do not correspond to market pricing, and are particularly unfair to the communities from which the land is acquired (Yengoh et al., 2016).

2.2. State Accountability and Management of Finance

The management of state resources transcends land management as it also includes financial resources accrued from transactions in mineral resources and the utilisation of other state funds derived from the various means of domestic revenue collection which are also another crucial topic in addressing the state of food security in Sierra Leone. According to the Truth and Reconciliation Commission of Sierra Leone. As governments assumed control, their reliance on the interests and wishes of the populace diminished progressively. Each tyrannical regime perpetuated the issues and self-interested plans initiated by the previous one, rather than pursuing beneficial and forward-thinking initiatives (Sierra Leone TRC).

An essential characteristic of Sierra Leone, much discussed in literature, is the gradual decline of the state during the 1970s and 1980s, ultimately resulting in its complete collapse in the

1990s. The author re-echoed the words of William Reno, “the collapse of the Sierra Leonean state is not due to a sudden absence of power, but rather a premeditated plan by political leaders to weaken state structures, public services, and institutions while controlling economic resources” During the period from 1964 to 1968, the country began to experience corruption and mismanagement. However, it was Siaka Stevens who actively and deliberately undermined the state to consolidate his position and gain control of the country’s economic resources and infrastructure (Ducasse-Rogier, 2004).

According to the 2013 annual report of the Audit Service Commission, multiple government agencies exhibited significant deficiencies in the administration of state affairs. These deficiencies included irregularities in domestic revenue collection and information recording, unfair procurement practices, inadequate contract management, and weak oversight. Nearly ten years later, the 2022 report from this esteemed institution reveals a pattern of mishandling of income and spending by some government departments. This aligns with the management of state resources in the immediate aftermath of the conflict in the country (Audit Service Sierra Leone, 2014).

3. Absence of Improved Farming Techniques in Post-War Sierra Leone

Evidence from post-conflict Sierra Leone shows that the expected economic effects of the reforms adopted after the war did not occur. Sierra Leone now ranks 181 out of 191 countries on the UN Human Development Index (HDI). Right after the war in 2002, the country held the 169th rank. Nevertheless, as a result of the deteriorating state of administration and management, it has been steadily falling. The determinants of food production, mortality, economic development, and youth unemployment, which significantly influenced the duration of the eleven-year conflict, have now reached an unprecedented level of almost 80%. Moreover, a staggering 70% of the population is currently residing in conditions of poverty, while 26% are enduring the harsh realities of extreme poverty (Human Development Reports, 2024). Additionally, Sierra Leone is ranked 116th out of the 125 countries in the 2023 Global Hunger Index, based on the available data for calculating the 2023 GHI ratings. Sierra Leone has a serious level of hunger, as indicated by its score of 31.3 in the 2023 Global Hunger Index (Global Hunger Index, 2024).

According to the 2020 Emergency Food Security Monitoring System report from the World Food Program, almost 80 per cent of the food consumed in the country is imported. The



United States exported agricultural products worth \$21.18 million to Sierra Leone in 2022. However, out of around 5.4 million hectares of fertile arable land, 75 per cent is still not used for cultivation. The area is highly conducive for cultivating a diverse array of crops, such as rice, cassava, maize, millet, cashew, rubber, ginger, vegetables, fruits, sugarcane, cocoa, coffee, and oil palm. Additionally, it is also good for cattle rearing. At present, the agricultural sector is largely controlled by small-scale farmers who rely on outdated tools, and obsolete techniques and have limited access to resources for farming. Nevertheless, a limited number of commercial agricultural enterprises engaged in the production of biofuels and energy, palm oil, lumber, rice, sorghum, cultivation and preservation of pineapples, manufacturing of juice concentrates, and offering agricultural machinery contracting services (International Trade Administration, 2024).

If the majority of farmers in Sierra Leone do not have access to modern agricultural equipment, agricultural education, and other essential resources for food production, then the process of cultivating and producing food is bound to fail. This is a common occurrence in modern-day Sierra Leone, as a significant number of farmers are impoverished and depend on assistance from donors and the government to obtain the necessary resources for food production. The author was informed that this process has been influenced by authorities through nepotism, corruption, and tribalism. According to respondent Farmerr 2, who lives in the Koinadugu district:

Farmer 2:

“They are accustomed to using traditional farming tools such as a cutlass and hoe. This is not because they are unable to use other tools, but rather because these are the only tools they have access to. Purchasing a tractor or other farming equipment is not feasible for them due to the high cost. Various governments have received external assistance in the form of agricultural equipment. However, only a small portion of these things are being distributed to our communities and entrusted to community officials, who typically utilise them on their personal farms.”⁹

⁹ Farmer 2, Author’s face to face interview conducted on 19th March 2023.

Furthermore, Farmer 3, who farms in the Falaba district, stated that:

Farmer 3:

“The absence of mechanisation is a longstanding issue encountered by numerous farmers in the nation. Some of us are utilising equipment that was formerly employed by our parents and grandparents. We continue to utilise these tools mostly due to their low maintenance requirements and affordable acquisition costs, rather than their ability to enhance production.”¹⁰

Farmer 4:

“Our unfortunate condition as farmers, characterised by an inability to procure essential farming equipment and limited access to extensive land for agricultural operations, is disheartening. Our way of life is politically polarised, affecting even food production. Food producers, including cow rearers like me, require some form of link or favour from authorities to operate freely. Occasionally, we face huge taxes while trying to sell our items in markets, particularly in urban centres, and certain financial duties are inconsistently imposed on individuals without clear justification.”¹¹

Food Commodity Trader 1:

“Over the last five years, the cost of food commodities has risen drastically. It is more surprising that the cost of food produced in the country like Cassava, Potato, Yam etc have almost tripled. Some of our friends who grow these crops said the price increment is influenced by high taxes by the authorities concerned and low production which is heavily influenced by many factors, especially unequal distribution of land for farming activities¹².”

Food Commodity Trader 2:

“Before now, the commonly mentioned factors influencing changes in the price of food items are pest attacks, bad weather and high cost of production. Now due to restricted

¹⁰ Farmer 3, Author’s face to face interview conducted on 19th March 2023.

¹¹ Farmer 4, Author’s face to face interview conducted on 20th March 2023.

¹² Food Commodity Trader 1, Author’s face to face interview conducted on 20th March 2023.



access to land and expensive agricultural implements and less amount of labourers, the cost of many food items have risen sharply.”¹³

According to Farmer 2, farmers in the country continue to use traditional or outdated farming equipment because they have limited access to other options. Despite being aware of the disadvantages of these tools and the lack of more advanced farming techniques, they have no choice but to continue using them. Unlike Farmer 1 who stated that they are unable to afford advanced agricultural equipment, so they are forced to rely on traditional equipment.

Jalloh (2006) noted that small-scale farmers in Sierra Leone mostly focus on producing food for household consumption, with minimal or no surplus for the market. Farmers are typically restricted by the lack of essential resources, except land. However, the area they may cultivate is greatly limited by the quantity and quality of accessible capital and labour. The hoe, axe, and cutlass serve as the primary tools, while family members mostly contribute labour. Agricultural productivity in Sierra Leone is severely constrained due to the prevalent use of unimproved crop types and animal breeds, as well as the limited use of fertiliser and unimproved cultural techniques.

It is undeniable that the majority, if not all, of the agricultural activities carried out by small-scale farmers in Sierra Leone and other parts of Africa are performed manually. This significantly hinders the rise in production as a result of the excessive manual labour or rigorous work performed by the farmers. This leads to a limited amount of land per farming family, inadequate agricultural techniques, and delayed completion of farming tasks. (Tholley, 2014)

Based on the above-mentioned arguments, it is clear that one would be interested in understanding how the relevant authorities handle the allocated funds for agricultural operations that come from the state's treasury. In addition, successive political administrations have received substantial assistance in the form of agricultural equipment from benefactors worldwide. Therefore, it is extremely probable that the finances and equipment have been mishandled, given the decline in agricultural production instead of improvement. As such, it would be fair to discuss food insecurity in Sierra Leone. We pay close attention to the mismanagement of resources, given the nation's abundance of arable land and mineral resources.

¹³ Food Commodity Trader 2, Author's face to face interview conducted on 20th March 2023.

Conclusion

Sierra Leone has experienced various forms of economic, cultural, and political instability, including a civil war following its independence from Britain. Throughout this time frame, the matter of ensuring food security has consistently been a primary concern for consecutive political administrations. This study has presented Sierra Leone's tumultuous history, efforts made after gaining independence, and actions done to tackle the issue of food insecurity. Specifically, it conducted a thorough analysis of the nation's history and the abrupt transition from being a rice exporter, which is its main food source, to becoming an importer right after gaining independence.

Upon gaining independence, it became evident that the nation had experienced a progressive deterioration in the management of its resources and government under successive political administrations. This led to ten years of civil turmoil that caused immeasurable suffering and devastation to the country's population and infrastructure. Amidst these moments of volatility, the condition of food security was severely impacted. The article concludes that violence, poverty, instability, and climate change are significant contributing factors to food insecurity in various countries. However, in a resource-rich country like Sierra Leone, the mismanagement of land, mineral, and financial resources is a primary factor that undermines the state of food security. Overall, consecutive political regimes have mishandled the nation's ample resources due to their incompetence. The land management practices, particularly the control of large expanses of cultivable land by relevant authorities, worsened the issue.

The respondents interviewed for this study strongly and vividly conveyed this vulnerability, which contradicts the commonly accepted idea in the literature that food insecurity is caused by violence, war, climate change, and instability. Interview excerpts from "community resident 1 and 2, government official 1 and 2 and Farmer 1 and 2 food commodity trader 1 and 2" etc clearly illustrate how the acts of certain state authorities have adversely affected the ability to manage state resources, to the detriment of the majority. Furthermore, research reveals that poor governance, which is the primary cause of the ten years of civil unrest, is a significant factor in the worsening status of food insecurity in the nation.

Specifically, the findings of this study highlight the urgent and critical condition of food security in the process of rebuilding after a decade of war. Historically, institutions and strategies



for reform after the war have failed to adequately address the methods of producing food and the issue of hunger. Food insecurity in post-conflict Sierra Leone is influenced by several factors, including limited access to advanced farming techniques among farmers, inadequate agricultural education, and a lack of incentives to engage in agricultural operations. This study presents a new viewpoint on the factors contributing to food insecurity in countries worldwide. It specifically focuses on Sierra Leone, a country with abundant resources. It highlights how mismanagement of these resources (such as land, minerals, and finance) has led to food insecurity.

References

- Audit Service Sierra Leone. (2014). *Auditor General's Opinion on the Public Accounts*. <https://website.auditservice.gov.sl/wp-content/uploads/2023/12/assl-auditor-general-annual-report-2013.pdf>
- Bangura, J. (2009). Understanding Sierra Leone in Colonial West Africa: A Synoptic Socio-Political History. *History compass*, 7(3), 583-603.
- BBC. (2017, 16 March). *Sierra Leone Pastor Finds Huge Diamond in Kono*. <https://www.bbc.com/news/world-africa-39289749>.
- Binns, T. and Bateman, J. (2017). Rural Livelihoods and Food Security: Long-term insights from Sierra Leone's Eastern Province. *Geographical Research*, 55(2), 156-165.
- Britannica. (2024, July 14). *Post-Civil War*. <https://www.britannica.com/place/Sierra-Leone/Post-civil-war>
- Cambridge Dictionary. *Mismanagement*. <https://dictionary.cambridge.org/dictionary/english/mismanagement>.
- Cartier, L. E. and Bürge, M. (2011). Agriculture and artisanal gold mining in Sierra Leone: alternatives or complements? *Journal of International Development*, 23(8), 1080-1099.
- Chopra, R. (2018). *Almost home: Maroons Between Slavery and Freedom in Jamaica, Nova Scotia, and Sierra Leone*. Yale University Press.
- Conteh, A. M. H., Yan, X. and Sankoh, F. P. (2012). The Influence of Price on Rice Production in Sierra Leone.

- Concern Worldwide. (2021). *What is Food Security?*. <https://www.concern.net/news/what-food-security>.
- Dialogue Earth. (2021). Sierra Leone's Conflict Palm Oil Certified as Sustainable. Sierra Leone's Conflict Palm Oil Certified as Sustainable. <https://dialogue.earth/en/food/sierra-leones-conflict-palm-oil-certified-as-sustainable/>.
- Due, J. M. and Karr, G. L. (1973). Strategies for increasing rice production in Sierra Leone. *African Studies Review*, 16(1), 23-71.
- Ducasse-Rogier, M. (2004). The Sierra Leonean Conflict: Causes and Characteristics. *Resolving Intractable Conflicts in Africa: A Case Study of Sierra Leone*. Clingendael Institute, Working Paper 31.
- Ducasse-Rogier, M. (2022). *Resolving Intractable Conflicts in Africa: A Case Study of Sierra Leone*. Clingendael Institute, 1-82.
- Economist Impact. (2022). *Global Food Security Index 2022*. <https://impact.economist.com/sustainability/project/food-security-index/>.
- FOA. (1997). *Special Report- FAO/WFP Crop and Food Supply Assessment Mission to Sierra Leone*.
- FAO. (2008). *An Introduction to the Basic Concepts of Food Security*. <https://www.fao.org/4/al936e/al936e00.pdf>.
- Fayiah, M. (2022). Corruption Trends and Graft Control Progress in Sierra Leone: Study of Causes and Remedies. *Journal of Economics and Behavioral Studies*, 14(1 (J)), 39-49.
- France 24. (2021, October 8). *Two Decades on, Sierra Leone Still Scarred by Civil War*. <https://www.france24.com/en/tv-shows/revisited/20211008-two-decades-on-sierra-leone-still-scarred-by-civil-war>.
- Galli, S. and Rönnbäck, K. (2021). Land distribution and inequality in a black settler colony: The case of Sierra Leone, 1792–1831. *The Economic History Review*, 74(1), 115-137.
- Global Hunger Index. (2024). *Sierra Leone*. <https://www.globalhungerindex.org/sierra-leone.html>.
- Datareportal. (2024). *Digital 2024: Sierra Leone*. <https://datareportal.com/reports/digital-2024-sierra-leone>.
- Green Scenery. (2011). *The Socfin Land Deal Missing Out on Best Practices*. https://www.fian.be/IMG/pdf/201105_socfin_missing_out_on_best_practices.pdf.
- Hendrix, C. and Brinkman, H. J. (2013). Food Insecurity and Conflict Dynamics: Causal Linkages and Complex Feedbacks. *Stability: International Journal of Security and Development*, 2(2), 26-26.

- Human Development Reports. (2024). *Human Development Reports Breaking the Gridlock: Reimagining Cooperation in a Polarized World*. <https://hdr.undp.org/content/human-development-report-2023-24>.
- Human Rights Watch. (2014). *Whose Development? Human Rights Abuses in Sierra Leone's Mining Boom*. <https://www.hrw.org/report/2014/02/19/whose-development/human-rights-abuses-sierra-leones-mining-boom>.
- International Trade Administration. (2024). *Sierra Leone - Country Commercial Guide*. <https://www.trade.gov/country-commercial-guides/sierra-leone-agriculture-sector>.
- Jalloh, A. and Njala, P. (2006). Farming systems/agricultural land use in Sierra Leone. *Land Use Planning for Optimizing Agricultural Production Project (TCP/SIL/3101 (A))*. Submitted to FAO, Freetown Sierra Leone.
- JICA. (2009). *National Rice Development Strategy (NRDS) - Sierra Leone*. https://www.jica.go.jp/Resource/english/our_work/thematic_issues/agricultural/pdf/sierraleone_en.pdf.
- Loispiration. (2024, July 14). *Major Ethnic Groups (Tribes) of Sierra Leone*. <https://loispiration.com/2024/01/18/major-ethnic-groups-tribes-of-sierra-leone/>.
- MAPPR. *Sierra Leone Provinces and Districts*. <https://www.mappr.co/counties/sierra-leone-provinces/>.
- Martin-Shields, C. P. and Stojetz, W. (2019). Food Security and Conflict: Empirical Challenges and Future Opportunities for Research and Policy-Making on Food Security and Conflict. *World Development*, 119, 150-164.
- Ministry of Finance of Sierra Leone. (2021). *Government of Sierra Leone Request for Expressions of Interests*. <https://mof.gov.sl/wp-content/uploads/2021/11/EXPRESSION-OF-INTEREST.pdf>.
- Misselhorn, A. A. (2005). What Drives Food Insecurity in Southern Africa? A Meta-Analysis of Household Economy Studies. *Global environmental change*, 15(1), 33-43.
- Ndumbe, J. A. (2001). Diamonds, ethnicity, and power: The case of Sierra Leone. *Mediterranean Quarterly*, 12(4), 90-105.
- Reuters. (2015, 10 February). *Sierra Leone to Prosecute Fraudulent Ebola Ghostworkers*. <https://www.reuters.com/article/business/healthcare-pharmaceuticals/sierra-leone-to-prosecute-fraudulent-ebola-ghostworkers-idUSKBN0LE2M7/>.

- Sierra Leone TRC. *View Report-Volume One*. https://sierraleonetr.org/index.php/view-report-text-vol-1/item/introduction?category_id=19.
- Smith, L. C., Alderman, H. and Aduayom, D. (2006). *Food Insecurity in Sub-Saharan Africa: New Estimates from Household Expenditure Surveys*. (Vol. 146). Intl Food Policy Res Inst.
- Tholley, J. B. (2014). Integrated Agricultural Technology in Food and Energy Production with Small-Scale Farmers at the Community Level in the Upland Ecology of Sierra Leone.
- The Sierra Leone Telegraph. (2019, 7 March). *Three Thousand Ghost Workers are to Be Taken Off Government Payroll*. <https://www.thesierraleonetelegraph.com/three-thousand-ghost-workers-are-to-be-taken-off-government-payroll/>.
- Trading Economics. (2024). *Sierra Leone - Rural Population*. <https://tradingeconomics.com/sierra-leone/rural-population-percent-of-total-population-wb-data.html>.
- Unruh, J. D. and Turray, H. (2006). Land Tenure, Food Security and Investment in Postwar Sierra Leone. *FAO LSP WP*, 22.
- World Bank. (2008). *Sierra Leone Mining Sector Reform Sustainable Development Unit West Africa and Environment Department a Strategic Environmental and Social Assessment*. <https://documents1.worldbank.org/curated/fr/847361468176950070/pdf/446550GRAY0COV1sclosed0Aug128120081.pdf>.
- WVI. *Sierra Leone- Livelihoods and Resilience*. <https://www.wvi.org/sierra-leone/livelihoods-andresilience#:~:text=The%20main%20underlying%20reasons%20for,land%20cultivation%20area%20by%20households>.