

' Blood Diamonds ' : The Effects On The Environment, Population And Economy Of Sierra Leone.

Alfonso Giordano

RELATORE

260891

CANDIDATO

'Blood Diamonds': The Effects On The Environment, Population And Economy Of Sierra Leone.

CHAPTERS:

- **CHAPTER ONE: The rise of the diamond mining phenomenon in Sierra Leone.**
 - 1.1 An historical and social analysis.

- **CHAPTER TWO: The severe damage of extraction on the environment.**
 - 2.1 Qualitative and Quantitative Environmental Impacts.

 - 2.2 Sustainable Development Goals in Sierra Leone.
 - 2.2.1 The New Environmental Governance.

- **CHAPTER THREE: The effects of extraction on the local population.**
 - 3.1 The Miner's Exploitation.

 - 3.2 The social consequences of Mining in Sierra Leone and the cultural conflict.

 - 3.3 The Upsides of mining activities and social support organizations.!!!!!!

- **CHAPTER FOUR: How the diamonds affected the economy of Sierra Leone.**

4.1 Diamonds used to finance conflicts in Sierra Leone (Blood Diamonds).

4.2 The Kimberley Process.

ABSTRACT:

Sierra Leone, a mineral-rich West African nation, has a long history intertwined with diamond mining, making it one of the world's renowned sources of high-quality diamonds. This abstract delves into the multifaceted aspects of diamond mining in Sierra Leone, focusing on the sector's prospects, challenges, and socio-economic implications.

The paper highlights the historical context of diamond mining in Sierra Leone, tracing its origins from the alluvial diamond rush in the 1930s to the tumultuous periods of civil conflict during the 1990s and early 2000s, where illicit diamond trade fueled violence and exacerbated political instability.

The abstract further examines the measures undertaken by the government and international bodies to combat the illegal diamond trade, emphasizing the role of the Kimberley Process Certification Scheme (KPCS) in curbing conflict diamonds' flow to international markets. While these efforts have brought some improvement, challenges in enforcing regulations and monitoring continue to persist, often leading to discrepancies in diamond supply chains.

Additionally, the abstract sheds light on the socio-economic impacts of diamond mining on local communities. Despite diamond mining being a potential driver of economic growth, issues such as environmental degradation, land disputes, and minimal benefit sharing with locals have raised concerns about sustainable development and equitable resource management.

Furthermore, the abstract discusses the recent efforts made by the Sierra Leonean government and international partners to promote responsible mining practices, ethical diamond sourcing, and sustainable community development. Initiatives such as the Artisanal Mining Policy, capacity-building programs, and community engagement seek to enhance transparency, create employment opportunities, and empower local communities.

In conclusion, diamond mining in Sierra Leone represents a complex and dynamic landscape, characterized by a historical legacy of both opportunity and challenges. While international

regulations and local initiatives have shown progress in promoting responsible mining practices and combating illicit trade, further measures are needed to address issues related to environmental sustainability, social welfare, and equitable wealth distribution. By engaging in a comprehensive and collaborative approach, Sierra Leone can harness the potential of its diamond resources for sustainable development, ensuring a brighter future for its people and the diamond industry as a whole.

1. The rise of the diamond mining phenomenon in Sierra Leone

1.1 An historical and social analysis:

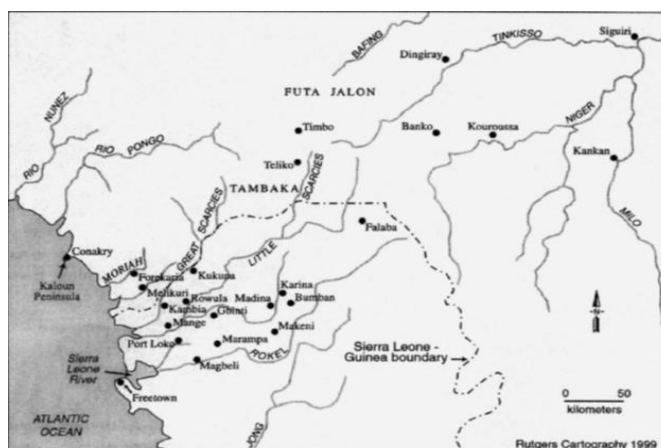
The history of Sierra Leone began in 1787 when an epochal and unprecedented group of black settlers landed in Africa from Europe and the Americas and founded the first settlement that remained in history under the name of Freetown. As far as the period before this date is concerned, there is little information that has come to us, and the only information is reported by Portuguese sailors. It was the sailor Pedro da Cintra who, visiting this land, called it Serra Lyon because admiring from the sea the mountains behind the gulf remembered and still remember the shape of a lion.

Ethnically, Sierra Leone is among the richest countries in Africa. It has more than 14 ethnic groups, the largest of which is the Mende, followed by the Temne. Before the arrival of Europeans, all these ethnic groups lived isolated from each other for fear of war.¹ In the northern part lived Limba, Kono, Karanko, Yalunka, Loko, Sussu, Mandingo, and Fula. Bullom and Sherbro occupied the northern and southern coastal areas. A smaller number of ethnic groups found themselves in the eastern province: the Krim, Vai, Gola, and Kissi. The inhabitants of the western part were a mixed population of Krio. Each ethnic group had its own language, customs, and culture. There were distinctive differences regarding specific customs and practices among each ethnic group, but they shared similarities regarding the organization of politics, the economy, and the family. Another common feature was the strong belief in spirits, witchcraft, magic, and spells. They were geographically organized into areas in the form of chiefdoms, under the leadership of a chief who settled disputes

¹ Oyètádé, B.A. and Luke, V.F., *Sierra Leone: Krio and the Quest for National Integration*. Spi publisher services, Delhi print, 2007, p. 123.

and punished infractions.² Today these ethnic groups are divided into four predominant language categories geographically distributed throughout the country. The first of all is the Temne, which includes Temne, Limba, Koranka, Sussu, Fula, Loko, Mandingo, and Yalunka. These ethnic groups live in the northern province of Sierra Leone. The second language category is called Mende. The Mende group consists of Mende, Sherbro, Krim, Vai, Gola, and Gallinas and is located in the southern province of the country. The eastern province constitutes the third group of language categories consisting of Kono and Kissi, while the western part, mainly concentrated in the Gulf of Freetown, includes a Creole language based on English: Krio.

Fig.1:



Source: www.ilo.org/africa/countries-covered/sierra-leone/lang--en/index.htm

² Windham, Gerald O. *Education and the Changing Society in Sierra Leone*, Southern Illinois University Carbondale, Illinois. Print, 1968, p. 115

The ramification of the Berlin Conference of 1884-85 and the race for Africa by European states radically disrupted the lives of the Krio and the people of the hinterland. Africa was the last great land left to be colonized, but the European powers had until then been reluctant to push inland away from the coast. Expenses, diseases, unknown and unfamiliar ethnic groups, and a large number of little-known subjects have always held back the European advance. But everything changed when better weapons and medical care were invented and when the demand for raw materials increased in Europe. England, France, Italy, Portugal, Spain, Germany, and the King of Belgium became the most important negotiators of all these goods: certainly not the Africans. England, for its part, had to step back from its expansion policies and demonstrate, according to the Conference agreement, an "effective occupation" of the hinterland beyond coastal claims. In Sierra Leone, these coastal claims were concentrated in the Gulf of Freetown and the Sherbro Islands. At the territorial level, the result was the formalization of the Protectorate in 1896 and a more defined geographical demarcation: starting from the borders of the Colony in the peninsula up to the borders with Guinea in the north and with Liberia in the southeast. At the social and political levels, the effects were equally destabilizing.

Going forward with the hidden motivations behind colonialism, it is often assumed that, after the initial geopolitical push, mining became the priority. Trade with the hinterland had been vital to the colony. The infrastructure was implemented and allowed to connect increasingly remote areas of the country. However, it was not until the 1930s that the extraction of the two most important mines began. In 1931, the Sierra Leone Development Company (DELCO) was created to exploit the iron mines of Marampa, for which a 52-mile-long railway was built to carry iron to the ships at Pepel. Of greater importance were the diamonds discovered in 1930 in the district of Kono and immediately promoted to be the mainstay of the economy, but in the same way many difficulties arose for their control. This discovery and its implications would have resonated in the later history of Sierra Leone. The colonial government signed a fast and long-lasting agreement with the Sierra Leone Selection Trust (SLST) in 1932-33. Both the SLST and the government feared the occurrence of illegal mining because diamonds were easy to extract, and the chieftains effectively controlled both territory and people. The districts of Kono and Kenema attracted many migrants to the mines to make them work on commission according to how many stones they found³. No legislation was

³ Ibid., pp. 47-53

able to stop the illegal extractions supervised by the leaders, Freetown traders, and the Lebanese community.

Going on, the figure of diamonds, according to many, was also one of the triggers of the bloody Sierraleonese civil war. The Civil War in Sierra Leone was a particularly brutal conflict, from 1991 to 2002, that saw civilians on the front lines suffering violence and torture, particularly with weapons. In 1991, the Revolutionary United Front (RUF), led by Charles Taylor and Sankoh Foday, invaded the borders of Sierra Leone.

The RUF's atrocities, documented by many organizations and journalists and broadcast on TV around the world, were aimed primarily at civilians they encountered on their way. They included kidnapping and killing, amputation of limbs, traumatization of children forced, in some cases, to kill their parents, and then enlisted and drugged to continue killing, and mass destruction of property. Almost all Sierraleones were affected in some way and the child soldiers and amputees became the symbol of Sierra Leone at the time. It is estimated that the RUF is responsible for about 60% of the atrocities committed compared to 17% committed by the state army.

Diamonds played a key role in this period of conflict as they allowed the rebels, who occupied certain territories, to finance the purchase of weapons and vehicles through the resale of precious stones. In that period, before the Kemberly Process, it can be ascertained that the great international luxury system was fundamental to the financing of the civil war.

2. The severe damage of extraction on the environment.

2.1 Qualitative and Quantitative Environmental Impacts:

As previously mentioned, one of the elements that will go deeper in this study refers to the influence of extractions on the environment of Sierra Leone and how more respectful application methodologies can be found for the host communities and places.

Sierra Leone and Africa in general are experiencing a remarkable mining boom, largely driven by foreign investment. The speed and scale of this development mean that environmental considerations are in danger of being marginalized or even totally ignored, and thus that some of

Sierra Leone's most valuable biological real estate, including the rainforests of central Africa, is in grave danger.⁴

Environmental effects from mining and mineral processing “have been experienced, complained about and—at least temporarily—solved for at least seven centuries”. It was not until the mid-1980s, however, that the environment emerged as a core strategic issue for the mining industry. Over the past two decades, the mining industry “has come under tremendous pressure to improve its social, developmental, and environmental performance.”⁵

Mining is undoubtedly going to alter the face of the nation over the coming decades. Opportunities for sustainable development, poverty alleviation, and improved environmental protection exist, but such positive outcomes will rarely be achieved under current conditions of corruption and weak governance, without careful management, rapid mining expansion and its associated secondary effects will have severe impacts on African environments and biodiversity.

The race for raw materials is due to the fact that Africa contains around 30% of the world's mineral resources—including the largest known reserves of a wide range of strategically important minerals, including phosphate, platinum-group metals, gold, diamonds, chromite, cobalt, manganese, and vanadium, and huge deposits of aluminum, uranium, iron ore, and coal⁶.

Thanks to the studies carried out by Prince T. Mabey et al, carried out thanks to the participation of 360 Sierra Leonean families from 3 different communities⁷, we can interpret the effects of excavations, not only of diamonds but of all precious metals, on four fundamental areas such as the effects on deforestation; on water; on air quality; noise pollution and land degradation.

- **Land degradation:**

Land degradation means a process in which the value of the biophysical environment is affected by a combination of human-induced processes acting upon the land. Among the most extreme effects of land degradation, we find the loss of organic matter, the decline in soil fertility, erosion, excessive flooding, and many more. The study indicates that vital resources affected by mining activities in

⁴ David P. Edwards, Sean Sloan, Lingfei Weng, Paul Dirks, Jeffrey Sayer, & William F. Laurance, *Mining and the African Environment*, 2013, page 8.

⁵ Gavin Bridge, *CONTESTED TERRAIN: Mining and the Environment*, 2004, page 1.

⁶ David P. Edwards, Sean Sloan, Lingfei Weng, Paul Dirks, Jeffrey Sayer & William F. Laurance *Mining and the African Environment*, page 1.

⁷ Prince T. Mabey, Wei Li, Abu J. Sundufu and Akhtar H. Lashari, *Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone*, page 4.

the study areas pose a threat to human development and the natural environment, 68.3% of the respondents in mining communities around the Ocea Mining Company concessions in Kono reported that there was a high rate of land degradation as compared to the interviewees within Sierra Rutile Limited mining concession (61.7%) and the SL Mining areas in Lunsar (59.2%) When asked about the impacts of land degradation in their communities, about 59% of the respondents stated that land degradation leads to loss of farmlands, 17% of the respondents noted that land degradation leads to soil erosion and fertility loss, while 12% indicated that it leads to loss of cultural identity⁸

Data like these are very important to study and understand, especially when compared to Sierra Leone, where a large number of citizens refer to agriculture as the main method of livelihood, phenomena such as farm loss could have significant social implications. In many mining communities, significant parcels of the landscape and forest ecosystems were demolished to accommodate mining operations, resulting in landlessness by community inhabitants.

- **Deforestation:**

Forests and plantations are the first ecological entity to face the most disturbance during mining processes.

72.5% of the respondents in Rutile reported that a significant portion of the land area was denuded due to mining activities as large tracts of land have lost their vegetation cover as compared to Kono (58.3%) and Lunsar (55.0%).

When asked about the impact of mining on the forest ecosystem, 40% of the respondents reported that mining has resulted in the loss of forest products such as non-timber forest products like medicinal products, bush meat, etc. 20% reported on the loss of ecosystem services, 16% indicated difficulty in getting wood and timber, while 13% stated loss of aesthetic values.⁹

A report by U.S Aid indicated that between 1975 and 2013, an average of 30% of Sierra Leone Forest or around 1100km² had been degraded [28]. The intensity of mining activities in an area contributes

⁸ Prince T. Mabey, Wei Li, Abu J. Sundufu and Akhtar H. Lashari, Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone,2020, page 6.

⁹, Prince T. Mabey, Wei Li, Abu J. Sundufu and Akhtar H. Lashari, Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone,2020, page 8.

to a massive deterioration of the forest ecosystem and decreases its enormous economic quality gradually.¹⁰

- **Water quantity and pollution:**

Mining is a mechanical process that requires a large amount of water to operate and also impacts the hydrological system influencing water quantity and quality.

The majority, (66.7%), of the residents within the vicinity of Ocea Mining Limited in Kono, reported that mining exploration had limited the access of communities to safe and adequate water, thus causing water scarcity compared to 61.7% of the respondents in Lunsar and 56.7% of the inhabitants in Rutile. Regarding the impacts of water pollution on mining communities, the majority (68%) of them stated that water contamination induced by mining operations contributes to a lack of water for drinking and other domestic uses, 18% suggested that it contributes to waterborne diseases, 8% suggested that it leads to the extinction of aquatic organisms such as fish, amphibians, crabs, etc. while 6% stated lack of water for irrigation purposes. According to the participants, this was due to the drying up of water bodies serving as primary water sources for domestic and agricultural uses.

One of the respondents reported:

“The biggest problem is water; there are not enough boreholes, of the six boreholes around; three of them had gone dry, and only three are functional, and the water in two of them is impure. We walk long distances to fetch water, we have reported to the council and the company, but nothing has been done in terms of maintenance.”¹¹

Iron particles from mining sites are usually washed into near water flows, like swamps or rivers, certainly waste materials flow into the surface polluting soil and groundwater used for irrigation and personal use. Mining limited the availability of potable water resources, forcing people to rely on boreholes for domestic uses.

- **Air quality:**

Community-wise, 65% of the respondents in communities in Rutile and 58.3% in Kono, and 56.70% in Lunsar agreed that there was a high increase in dust release in their respective communities. Air contamination from mining is mainly induced by airborne particulate matter and gas pollutants

¹⁰ UNCCD National Focal Land, SIERRA LEONE LAND DEGRADATION NEUTRALITY NATIONAL REPORT, 2018, USA AID.

¹¹ Wei Li, Abu J. Sundufu and Akhtar H. Lashari, Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone, Prince T. Mabey, 2020, page 9

containing methane, sulfur dioxide, nitrogen oxides, and carbon monoxide. Drilling, blasting, hauling, loading, processing, and grinding are the main activities that generate dust. Discussions with the participants suggested that mining has caused even more degradation of environmental quality with regard to dust and gaseous contaminants. The majority (72%) of the participants indicated that air pollution has led to respiratory illnesses like bronchitis, cough, and asthma, 14% suggested contamination of rainwater, while 10% stated that dresses get dusty. This causes concern with air emissions not only within the mining premises but also in the nearby residential neighborhood that impair ample air quality.¹²

It has been reported that during mining operations, dust released into the air, lowers air quality and can pollute the atmosphere leading to sicknesses.

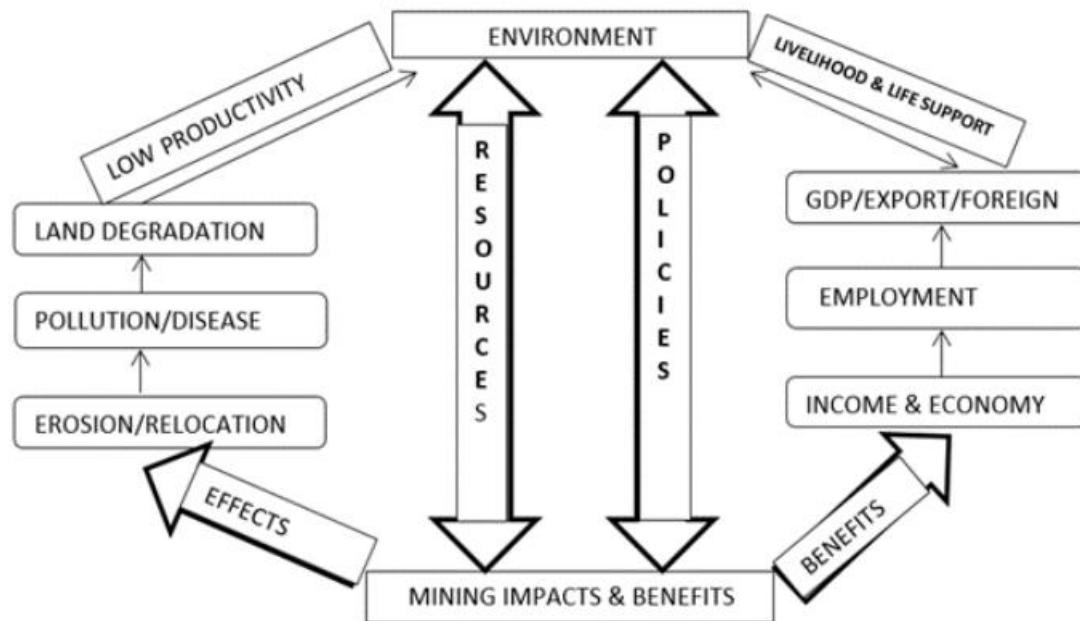
- **Noise pollution:**

Very often extraction operations are defined by heavy machinery and by explosives to pave the ground, the use of such methodologies defines strong noises which tend to damage local communities, understood as animals and humans. Noise pollution was found to be more eminent in Kono with 60.0% of the participants indicating that noise pollution from the mine as a result of the mine blast was prevalent, 53.3% of the respondents in Rutile while 48.3% of the participants in Lunsar reported an increase in noise pollution.¹³

Fig.2.: Mining and its environmental impact framework.

¹² Wei Li, Abu J. Sundufu and Akhtar H. Lashari and Prince T. Mabey, Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone, 2020, page 10.

¹³ Prince T. Mabey, Wei Li, Abu J. Sundufu and Akhtar H. Lashari, Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone, 2020, page 11.



Source: Ministry of Mines and Mineral Resources.

- **The Major Mining companies in Sierra Leone:**

Leaving aside the generic effects of extraction on the environment, it is possible, thanks to other insights, to quantify the influence of specific mining companies on the ecosystem of Sierra Leone.

As of 2014, five major registered companies were operating in Sierra Leone (due to the drop in demand for iron globally, the London Mining Company went bankrupt and folded up).

The leading companies were Koidu Holding Ltd, Sierra Leone Rutile Ltd, and Shandong Mining, which are also considered the most influential.

- 1) Koidu Holdings Ltd is mainly engaged in kimberlite mining, which was discovered in 1948 by Sierra Leone Selection; Sierra Rutile is the world’s largest rutile mining company producing high-quality minerals such as rutile, ilmenite, and zircon-rich concentrate and diamonds using dredge mining methods; whereas, Shandong Iron Ore is engaged in mining using heavy excavators and machinery.¹⁴ Koidu Holdings has been known for its efforts to improve the transparency and sustainability of the diamond mining industry in Sierra Leone. The diamond

¹⁴ M. Fayiah, Mining and Environmental Degradation: A Gift Brings Grief Scenario for Mining Communities in Sierra Leone, 2019, page 6.

trade in the country has historically faced issues related to conflict diamonds (also known as "blood diamonds"), which are mined and sold to finance armed conflict against governments. In response to these challenges, there have been international efforts to ensure that diamonds are sourced ethically and responsibly.

Koidu Holdings, like other diamond mining companies, has likely been involved in implementing measures to comply with the Kimberley Process Certification Scheme, an international initiative aimed at preventing the trade of conflict diamonds. The Kimberley Process aims to ensure that rough diamonds are sourced from conflict-free areas and do not contribute to funding violence or human rights abuses.

The mining process implemented involves the bombardment of sites at least twice a week, creating many large pits and damaging the fertility and composition of the landscape as well as noise and water pollution. Another carelessness is the lack of recycling of excess sand, during the operation of the dredge, the soil nutrient is washed away and leaving only sand behind, the accumulation of sand on the land, in the long run, tends to make the soil less fertile, making future cultivation impossible.

2) The Shandong Iron Ore mine uses similar approaches to Koidu Holdings, that is the use of big excavators and machinery daily.

The type of damage to the environment is also very similar. The company, indeed, the company has caused serious environmental damages such as sinkholes, soil contamination, biodiversity loss, mining process sediments, surface and groundwater contamination, air pollution, landscape transformation, and noise pollution.¹⁵

Permanent loss of landscape fertility would probably damage the economy of Sierra Leone because of how important it is for the livelihood of citizens.

Shandong Iron Ore (SL) Ltd., a subsidiary of Shandong Steel, signed a memorandum of understanding (MOU) with the government of Sierra Leone in 2017 to invest in the development of the Tonkolili iron ore mine. The Tonkolili mine is located in the central part of Sierra Leone and is considered one of the largest iron ore deposits in Africa.

The project aimed to revive the mine and associated infrastructure, which had been previously operated by African Minerals Limited before encountering financial difficulties.

¹⁵ M. Fayiah, Mining, and Environmental Degradation: a Gift Brings Grief Scenario for Mining Communities in Sierra Leone, 2019 page 6.

Shandong Steel's investment was intended to bring the mine back into production, contributing to the country's economic development and providing job opportunities.

- 3) Sierra Leone Rutile Ltd uses another type of dredging called dry mining, where heavy machinery removes surface soil materials eliminating the top fertile soil usually used for agricultural purposes.

The main effects of these operations include: degradation of exploited land; risk of flooding nearby villages; siltation in tidal creeks and forcing other villages to move.¹⁶

Sierra Rutile Limited operates the Sierra Rutile Mine, which is located in the southwestern part of Sierra Leone, near the town of Imperri. The company has been one of the leading producers of natural rutile globally and has been a significant contributor to Sierra Leone's economy.

The mining operations involve extracting mineral sands from the ground and processing them to extract the valuable minerals, including rutile and ilmenite. These minerals are then further processed and refined for various industrial applications.

Over the years, Sierra Rutile Limited has aimed to operate in an environmentally responsible and sustainable manner, adhering to regulatory and environmental standards. The company has also been committed to engaging with local communities and supporting community development initiatives in the areas where it operates.

Fig 3.: List of Major Mining Companies Operating in Sierra Leone. Source: (Ministry of Mines and Mineral Resources.

¹⁶ M. Fayiah, Mining, and Environmental Degradation: a Gift Brings Grief Scenario for Mining Communities in Sierra Leone, 2019, page 6.

	Name of Company	Location	Mineral mine	Lease Agreement date
1	Koidu Holdings Limited	East	Diamonds	2010
2	Sierra Rutile Limited	Southeast	Rutile	20 th November, 2001
3	Shandong Mining Company (African Minerals)	North	Iron Ore	6 th August, 2010
4	Sierra Leone Minerals Limited (Vimetco)	South	Diamonds	16 th July, 2012
5	London Mining (Currently on hold)	North	Iron Ore	27 th February, 2012
6	SL Mining Limited	North	Iron ore	2017

Source: Mining and Environmental Degradation: a Gift Brings Grief Scenario for Mining Communities in Sierra Leone.

From 1990 to 2010, the country lost 12.6% of its already limited forest cover, or around 392,000 ha, and the main culprit is mining both legal and illegal. Most of these losses are linked with mining by both heavy and artisanal small-scale miners.¹⁷

The unchecked actions of these mining companies in Sierra Leone have led to the reduction in farmlands, infertile lands, artificial lakes, desertification, conversion of forest to grasslands, and the extinction of some plant and animal species. Most importantly, the ecosystem support function, provision, regulatory, and cultural capability that support local communities, especially in difficult times, is destroyed.

2.2 Sustainable Development Goals in Sierra Leone:

A Sustainable Development Goal (SDG) is a set of global objectives established by the United Nations to address various social, economic, and environmental challenges facing the world. The SDGs were adopted by all United Nations Member States in September 2015 as part of the 2030 Agenda for Sustainable Development. The goals provide a shared blueprint for achieving a better and more sustainable future for all, recognizing that eradicating poverty and improving the well-being of people must go hand in hand with preserving the planet's ecosystems and addressing climate change.

The 2030 Agenda comprises 17 Sustainable Development Goals, each with specific targets and indicators. These goals are interconnected and cover a wide range of issues, including poverty, hunger, health, education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, climate action, and more.

¹⁷ M. Fayiah, Mining, and Environmental Degradation: A Gift Brings Grief Scenario for Mining Communities in Sierra Leone, 2019, page 6.

The 17 SDGs are as follows:

1. No Poverty;
2. Zero Hunger;
3. Good Health and Well-being;
4. Quality Education;
5. Gender Equality;
6. Clean Water and Sanitation;
7. Affordable and Clean Energy;
8. Decent Work and Economic Growth;
9. Industry, Innovation, and Infrastructure;
10. Reduced Inequality;
11. Sustainable Cities and Communities;
12. Responsible Consumption and Production;
13. Climate Action;
14. Life Below Water;
15. Life on Land;
16. Peace, Justice, and Strong Institutions;
17. Partnerships for the Goals;

The SDGs are universal and apply to all countries, regardless of their level of development. They recognize that achieving sustainable development requires collaborative efforts among governments, businesses, civil society, and individuals. Governments play a critical role in implementing policies and providing the necessary resources, while businesses are encouraged to align their practices with sustainable principles. Civil society and citizens are vital in holding decision-makers accountable and actively participating in sustainable initiatives.

The 2030 Agenda aims to leave no one behind and emphasizes inclusivity, leaving room for the unique challenges faced by different countries and communities. The goals are ambitious, aiming to transform the world by addressing the root causes of poverty and inequality while protecting the planet's ecosystems for future generations.

Regular progress reviews and reporting take place at the national and global levels to assess advancements and challenges in achieving the SDGs. The 2030 Agenda represents a global commitment to building a more equitable, prosperous, and sustainable world for all.¹⁸

Sierra Leone, like many other resource-rich countries, has faced challenges in mitigating the negative effects of diamond mining while working towards the implementation of the United Nations Sustainable Development Goals (SDGs). The SDGs are a set of 17 global goals adopted by UN member states to address various social, economic, and environmental issues by 2030.

Before delving into the innovations implemented in Sierra Leone to achieve the objectives mentioned by the SDGs, it is important to specify which types of diamond extraction are most widespread in the territory.

There are four major variations of diamond mining: open-pit mining, underground mining, alluvial mining, and marine mining.¹⁹

- Open-pit mining: This type of process has been already treated, and indeed it is the preferred method of the above-mentioned companies. This involves removing the layers of sand and rock just above the kimberlite.
- Underground mining: In underground mining, miners need to dig deep two parallel and vertically connected tunnels,
- Alluvial mining: Alluvial mining occurs in riverbeds and beaches, where thousands of years of erosion and natural forces such as wind, rain, and water currents wash diamonds from their primary deposits in kimberlite pipes to beaches and riverbeds. Today, industrial alluvial mining involves building a large wall to collect the water in one area. Diamonds are often

¹⁸ <https://sdgs.un.org/goals>.

¹⁹ Dr. Gbemi Oluleye, Environmental Impacts of Mined Diamonds, 2020, page 9.

found in the gravel layer, which collects under layers of other material, such as mud, clay, and underwater plant life.

- Marine mining: Marine mining involves extracting diamonds from the seabed/ ocean floor, hundreds of meters underwater. The earliest form of marine mining entailed shore diving, where a swimmer would collect diamond-bearing gravel from the shallow seabed. Today technology has evolved to specialized ships that mine for diamonds deep out at sea.

The social and environmental impacts dictated by these methodologies are against the international objectives mentioned by SDG, in particular, SDG 2 (zero hunger), SDG 7 (affordable and clean energy), SDG 12 (responsible consumption and production), SDG 13 (climate action), SDG 14 (life below water), and SDG 15 (life on land).

In Sierra Leone, diamond mining has had both positive and negative impacts on the country. On one hand, the diamond industry has contributed to economic growth, job creation, and foreign exchange earnings. However, it has also been associated with issues such as environmental degradation, social inequality, and conflict.

To counteract the negative effects of diamond mining and promote sustainable development, Sierra Leone has undertaken several initiatives aligned with the SDGs. Here are some key areas of focus:

- 1) Responsible Mining Practices: Sierra Leone has implemented reforms to promote responsible mining practices in the diamond sector. The government has established the National Minerals Agency (NMA) to regulate and monitor mining activities, ensuring compliance with environmental standards and human rights.²⁰
- 2) Environmental Protection: Efforts are being made to minimize the environmental impact of diamond mining. Environmental Impact Assessments (EIAs) are conducted for mining operations, and reclamation and rehabilitation measures are implemented to restore mined

²⁰Babatunde Zack-Williams, Diamond Mining and Underdevelopment in Sierra Leone-1930/1980.

areas. Forest conservation programs and sustainable land use practices are also being promoted.²¹

- 3) **Good Governance and Transparency:** Sierra Leone is striving to enhance governance and transparency in the diamond sector. The Kimberley Process Certification Scheme, an international initiative aimed at preventing the trade of conflict diamonds, is implemented in the country. The government has also taken steps to improve the legal framework and strengthen institutional capacity for effective regulation and oversight. The Kimberley Process will be analyzed in more detail in the next chapters.
- 4) **Social and Economic Development:** Sierra Leone recognizes the importance of using diamond revenues for social and economic development. The government has allocated a portion of mining revenues toward education, healthcare, infrastructure, and poverty reduction programs. Efforts are underway to improve access to quality education, healthcare services, and clean water, particularly in diamond mining communities.
- 5) **Community Engagement and Empowerment:** Encouraging community participation and empowerment is crucial. Local communities affected by diamond mining are being engaged in decision-making processes, and mechanisms for benefit sharing have been established. Community development projects are implemented to improve livelihoods, promote entrepreneurship, and diversify local economies.
- 6) **Conflict Prevention and Peacebuilding:** Sierra Leone has learned from its past experiences of diamond-fueled conflict and is committed to preventing conflicts related to the diamond sector. Through disarmament, demobilization, and reintegration programs, ex-combatants are provided with opportunities for sustainable livelihoods. The government collaborates with international partners to strengthen peacebuilding efforts.

In dealing with the specific objectives dictated by the SDGs, I felt, among all those proposed, to dwell on the latter:

²¹ David Clive King, *Diamond Mining Settlements in Central Kono District*, 2018, Sierra Leone.

-SDG 1: No Poverty: The government has implemented programs to improve livelihoods and reduce poverty among diamond mining communities. This includes providing skills training, promoting entrepreneurship, and supporting income-generating activities.

-SDG 4: Quality Education: Sierra Leone has been investing in education, particularly in diamond mining areas, to ensure access to quality education for children and adults. Efforts include building schools, training teachers, and providing educational resources to enhance learning opportunities.

-SDG 5: Gender Equality: Recognizing the importance of gender equality, Sierra Leone is working to empower women in diamond mining communities. Initiatives include promoting women's economic participation, providing access to education and healthcare, and combating gender-based violence.

-SDG 8: Decent Work and Economic Growth: The government is focusing on promoting responsible and sustainable mining practices. Efforts are being made to ensure fair labor conditions, support local employment, and create opportunities for economic diversification beyond diamond mining.

-SDG 11: Sustainable Cities and Communities: Sierra Leone is working towards creating sustainable and resilient communities in diamond mining areas. This involves improving infrastructure, access to clean water and sanitation, and developing housing facilities for miners and their families.

-SDG 12: Responsible Consumption and Production: The government is promoting responsible and sustainable diamond mining practices through regulations, monitoring, and certification schemes. This aims to minimize the environmental impact and prevent the trade of conflict diamonds.

-SDG 16: Peace, Justice, and Strong Institutions: Sierra Leone has made significant progress in addressing the issue of conflict diamonds and promoting transparency in the diamond industry. The

country is committed to adhering to the Kimberley Process Certification Scheme, which aims to prevent the trade of conflict diamonds.

-SDG 17: Partnerships for the Goals: Sierra Leone recognizes the importance of partnerships and international cooperation in achieving the SDGs. The government is collaborating with international organizations, NGOs, and the private sector to leverage resources, expertise, and knowledge in addressing the challenges associated with diamond mining.²²

While progress has been made, there are ongoing challenges in fully implementing the SDGs in Sierra Leone's diamond mining sector. These challenges include the informal nature of some mining activities, limited infrastructure, and the need for capacity building. One of the most important problems limiting the circulation of these developments is dictated by the strong corruption present in the ruling class of the country as well as influences of foreign countries whose objective is to limit developments for personal reporting. However, with continued efforts and international support, Sierra Leone aims to achieve sustainable development while countering the negative effects of diamond mining in alignment with the SDGs.

It's important to note that the progress in SDG implementation is an ongoing and evolving process. Different countries face unique challenges and opportunities, and their approaches to SDG implementation may vary accordingly. For the most recent updates on Sierra Leone's progress with the SDGs, I recommend referring to the latest reports and publications from the United Nations or the Sierra Leonean government.

2.2.1 The New Environmental Governance:

Sierra Leone has been plagued with political instability, which has prevented the effective harnessing of its resources (Zack-Williams, 1993; Reno, 1995).

In a bid to revive its economy, Sierra Leone has adopted a host of natural resource governance strategies, one of which is the EG agenda for its mining sector. In Sierra Leone, the EG agenda

²² Felix Conteh, Artisanal mining policy reforms, informality, and challenges to the Sustainable Development Goals in Sierra Leone, Roy Maconachie, 2021, page 10.

pursued mining is largely a by-product of the global movement towards EG. In the early years of post-war reconstruction in the country, the government requested assistance from donors to develop its mineral policy for a growing mining industry.

The main component of the EG agenda for mining is the EIA and MMA.

EIA and MMA are guided by the Environmental Protection Agency (EPA) Act of 2008, which establishes the Environmental Protection Agency as the regulatory body responsible for overseeing these processes. EPA has obtained large funds from the EU reaching a capital of about 5 million euros.

The Environmental Impact Assessment (EIA) process in Sierra Leone is a systematic evaluation of the potential environmental, social, and economic impacts of proposed development projects.

EIA forces mining participants to obtain an environmental license to be allowed to the activity, in addition, big mining companies must conduct an EIA, which is an adequate proposal to mitigate and control their impact and present a community development action plan.²³

As mentioned, central to the EIA process are public disclosures. Mining companies are required to disclose the impacts of their operations to communities and engage in discussions of these impacts and the strategies they propose to adopt to address them. However, observers interviewed in Sierra Leone, including representatives from civil society organizations and inhabitants of host mining communities, said that mining-induced impacts are not sufficiently disclosed in public disclosures.²⁴

Another major component of Sierra Leone's Governance is the Mines and Minerals Act of 2009 (MMA).

This is an act that aims at the consolidation and amendment of the law on mines and minerals; to promote local and foreign investment in the mining sector by introducing new and improved provisions for exploration, mine development, and marketing of minerals and mineral secondary processing for the benefit of the people of Sierra Leone; to ensure that management of the mineral sector is transparent and accountable by international best practice; to promote improved employment practices in the mining sector; to improve the welfare of communities adversely

²³ Nketti Hannah Mason, Environmental governance in Sierra Leone's mining sector: A critical analysis, 2014, page 3.

²⁴ Nketti Hannah Mason, Environmental governance in Sierra Leone's mining sector: A critical analysis, 2014, page 5.

affected by mining; to introduce measures to reduce the harmful effects of mining activities on the environment and to provide for other related matters.

The Act stipulates the payment of royalties and taxes by mining companies. It sets out the rates and conditions for the calculation and payment of royalties on mineral production. The Act also establishes provisions for corporate income tax, capital gains tax, and other fiscal obligations related to mining activities and, also, regulates artisanal and small-scale mining activities.²⁵

In conclusion, I would like to mention a non-state but local private organization whose function is to restore land previously damaged by mining activities.

The Foundation for Environmental Security and Sustainability (FESS) works to improve environmental security around the world, focusing in particular on the fragile relationship between populations and the environment in developing countries where many people are directly dependent on natural resources for their livelihoods. FESS works with government officials, researchers, civil society organizations, and the private sector to increase awareness of how the mismanagement and abuse of natural resources can lead to social, economic, and political instabilities that can contribute to social tension and even violent conflict. To address environmental risks to stability, FESS conducts research and implements community-driven projects that promote sustainable management of natural resources and the environment.²⁶

The project put into motion a process that empowered communities to:

- Create their own mechanisms for land reclamation and implement them in ways that are appropriate to their needs and interests;
- Reclaim land that is no longer yielding diamonds and has been rendered unusable for other purposes because of artisanal diamond mining;
- Develop the agricultural potential of the land and put it into sustainable economic and social uses;

The key components of the process are:

²⁵ National Reconstruction and Development Act, Repeals the Mines and Minerals Act, 1994. Repeals the Commission for the Management of Strategic Resources, 1999.

²⁶ Foundation for Environmental Security & Sustainability, Reclaiming the Land After Mining, July 2007, page 2.

- An effective partnership between local communities and FESS;
- Broad-based community participation in all steps in the process;
- Formal and informal commitments of support and tangible inputs from the full range of community groups;
- Agreements within the community that the benefits of land reclamation would be shared by all community members;

The FESS has obtained strong positive feedback from both citizens and public bodies and figures, indeed, local representatives of government ministries supported the project in multiple ways. For example, extension agents from the Ministry of Agriculture and Food Security trained in agriculture and forestry helped demarcate 15-acre plots in each community for reclamation. They continued to offer valuable technical assistance periodically throughout the project. The Ministry of Mineral Resources also contributed technical support.

Most importantly, the project was kept firmly on track by the leadership shown by key members of the community and PC Paul Saquee, Daniel Gbondo, and other chieftom elders at the Tankoro, Kono District demonstration site Demarcation of a demonstration site in Bumpeh, Kono District 14 the moral support given by residents in each area. These manifestations of community spirit and determination reflected the depth of community involvement and sense of ownership over the project. Many community leaders recognized the value of the project as a mechanism for giving youth and women employment, one of the critical needs for stability in the region²⁷.

In the five months since the community workshops in Kono and Kenema, project implementation at the three demonstration sites has moved very rapidly. The land was identified for reclamation by the communities. Extension agents from the Ministry of Agriculture and Food Security demarcated 15-acre plots. Work crews of 50 men and women were assembled at each site. Tools were purchased and distributed to all the workers. Women of the communities assumed the responsibility for providing food and water to the workers. Work routines and requirements, rules of conduct, and supervisory structures were established. A system of weekly payments to the workers, recorded and signed for in log books, was put in place.

²⁷ Foundation for Environmental Security & Sustainability, Reclaiming the Land After Mining, July 2007, page 18.

As a result of this intense and arduous labor, the majority of the land demarcated at each site has now been reclaimed and planted.

It's important to note that the situation in Sierra Leone's environmental governance, regarding diamonds mining, is complex and subject to change. Efforts to address environmental challenges require a multi-stakeholder approach, including government authorities, civil society organizations, local communities, and international partners. By strengthening environmental governance, Sierra Leone can work towards sustainable development, conservation of natural resources, and mitigating the impacts of climate change.²⁸

3. The effects of extraction on the local population.

3.1 The Miner's Exploitation:

Diamond mining plays a significant role in shaping the economy of Sierra Leone. With its abundant diamond deposits, Sierra Leone has emerged as a prominent player in the global diamond industry. However, the effects of diamond mining on the country's economy have been complex and multifaceted, encompassing both positive and negative aspects. This part of the essay aims to explore the impacts of diamond mining on Sierra Leone's economy, shedding light on its contributions, challenges, and the efforts made toward sustainable development in the industry.

In Sierra Leone, diamonds are usually extracted on a large, small, and artisanal scale, each of which is regulated and controlled by the Ministry of Mineral Resources (MMR)²⁹.

When the diggers were legalized in 1956, they were organized into the tributor system. This system had been very successful during the gold mining era, a Sierra Leonean was allowed to buy a diamond license and employ up to twenty men as tributors.³⁰

Regardless of the type of extraction, the work is performed manually by a more or less large number of workers. (Stripping or removing vegetation and rocks, excavating, and draining the water filtering into the pits, washing, or sieving the gravel).

²⁸ Foundation for Environmental Security & Sustainability, Reclaiming the Land After Mining, July 2007, page 20.

²⁹ D'Angelo, L., Who owns the diamonds? The occult economy of diamond mining in Sierra Leone, Page 5.

³⁰ David Clive King, Diamond Mining Settlements In Central Kono District, Sierra Leone, 1979, page 65.

At the top of this hierarchy, are the financiers or supporters who often, but not always, are also the owners of the mining licenses granted by the MMR after the miners have identified the most promising sites, asked for permission from local chiefs, and from the landowner or landholder. Supporters invest money in each worker in the hope of recovering these expenses with the sale of later-found diamonds. Investment means the acquisition of equipment such as shovels, buckets, picks, or even large mining machinery. Very often the investments of the supporters are aimed exclusively to make the work faster and more efficient, forgetting the safety of their workers, who, are in critical condition, miners, indeed, lack proper safety equipment and are exposed to risks such as mine collapses, accidents, and injuries. The absence of safety regulations and infrastructure contributes to these precarious working conditions.

Most of the Sierra Leone miners, however, do not have sufficient capital to undertake large or small-scale digging, as stipulated by the license concession criteria issued by the MMR (2005), but may afford to work on an artisanal scale. At this level, the most common form of economic agreement is called 'supporting' (Levin 2005; Author 2011) or 'tributary system' (Zack-Williams 1995). Within this system, supporters and diggers agree on the percentages of money they will share from the sale of each diamond discovered.³¹

The main beneficiaries of the system on which the extraction complex is based are mainly the large Western multinationals, which, exploiting the very low labor costs, resell the precious stones in international markets collecting huge revenues.

On the contrary, at the base of the social pyramid, the miners themselves find their place, deceived by a promise of easy gains.

"Diggers face exploitation, human rights abuses, and extreme poverty," said Roy Maconachie, a professor at the University of Bath who has been researching natural resource governance in Sierra Leone since 2003. "Those issues come down to a serious, continued lack of regulation and oversight in the sector."

When diamonds are found, the miners receive only a tiny fraction of the real value from their supporters for working eight hours daily, digging up mud, then extracting and sifting through gravel.

Human rights campaigners call the supporter system a form of "debt bondage" and "indentured labor" that sees miners trapped in cycles of poverty, critics say that the unregulated, informal nature

³¹ D'Angelo, L., Who owns the diamonds? The occult economy of diamond mining in Sierra Leone, Page 9.

of the artisanal diamond industry in Sierra Leone is being driven by wider vested interests that profit from the system as it is³².

Fig 4: Diamond Diggers;



Source: <https://www.dw.com/en/sierra-leone-diamond-miners-toil-to-get-rich/a-16628965>

3.2 The social consequences of mining in Sierra Leone.

Most people in Sierra Leone rely on specific land-based activities for their livelihood, such as farming, fishing, forestry, and hunting.

However, years of intensive mining in the country's diamondiferous regions have resulted in many abandoned sites that have left large tracts of degraded land. In addition to the enormous health and safety risks posed by the abandoned pits, the unproductive land represents a significant loss of potentially valuable agricultural land in this country, where rapid population growth is increasing the pressure for livelihoods, land, and food. In addition, the alluvial nature of diamond occurrences

³² Peter Yeung, Coated in Hope and Penury: The story of Sierra Leone's artisan miners, 2022.

and associated artisanal extractive practices contribute to widespread environmental degradation and loss of productive land surface³³.

As thousands of people made their way to the diamond fields leaving their jobs and farms, the supply of food declined while the market demand increased rapidly. Inflation occurred, and more food supplies had to be imported, but still, the prices remained high because the diamond miners had plenty of money to spend. As thousands of people made their way to the diamond fields leaving their jobs and farms, the supply of food declined while the market demand increased rapidly. Inflation occurred, and more food supplies had to be imported, but still, the prices remained high because the diamond miners had plenty of money to spend.

The diamond rush, also, mainly attracted young men, while the excessive dominance in the population of rich young men attracted some young women, especially Kono women, developing a large phenomenon of prostitution.³⁴

The first period of the diamond rush in Kono was characterized in particular by a situation of anarchy, which made possible the spread of illegal activities, murders, and gang fights that took place quickly hit the headlines.

Illicit miners stole crops from farmers' fields (Minikin 1971) and very large gangs set up their own 'government' with a protection force and issued licenses for diggers who wanted to mine illicitly.³⁵

Another important issue to mention refers to the cultural heritage conflict that led to the loss of ownership of land of thousands of citizens.

Mining law since colonial times has vested to the state: "All rights of ownership in and control of minerals in, under or upon any land in Sierra Leone and its continental shelf." Land includes "land beneath water, the seabed, and sub-soil" (Sierra Leone Govt. 2009a), this differentiation reveals the inherent legal conflict over land in mining areas because customary law does not recognize the state's right to ownership of land nor do landlords agree with their exclusion from land decisions,

³³ Kelley Lubovich and Ellen Suthers, *Improving Environmental Security in Sierra Leone: The Importance of Land Reclamation*, 2007, page 1.

³⁴ David Clive King, *Diamond Mining Settlements In Central Kono District, Sierra Leone*, 1979, page 72.

³⁵ David Clive King, *Diamond Mining Settlements In Central Kono District, Sierra Leone*, 1979, page 74.

this disagreement resulted in violence and the destruction of company equipment that necessitated mediation at the national level by the Minister of Mines and Political Affairs³⁶.

Another concern was the loss of traditional heritage sites to mining operations.

A 2011 Awareness Times article, indeed, cautioned against the violation of sacred bush and called for extractive industries to be informed by sociologists and anthropologists on socio-cultural sensitivity, this happened despite the Colonial Minerals Ordinance of 1927 stipulating that prospecting and mining were forbidden, on or under land habitually used or occupied for sacred or ceremonial purposes or within 100 yards (30 m) of such a place³⁷, the disarray of these sacred bushes has caused more clashes and riots in the great cities of the nation.

Other effects can be found in the population movement because the promise of employment and wealth in diamond mining areas attracted people from different regions of Sierra Leone and even neighboring countries. This movement of people contributed to changes in settlement patterns and demographics, leading to the development of new communities near mining sites, on the other hand, a depopulation of small communities and villages has developed.

3.3 The Upsides of mining activities and social support organizations:

Despite all the problems connected with diamond mining, previously illustrated, it is easy to understand the country's continued attachment to this activity. For desperately poor people, diamonds carry a certain mystique related to the dream, or the illusion, that anyone can get lucky, find a big stone, and become rich.³⁸

The upsurge in mineral exploration and exploitation is also often linked to major infrastructural projects, including roads, and railways to move commodities from mine to smelters, as well as shipping ports for export, and hydroelectric dams.³⁹

³⁶ Fenda A. Akiwumi, *Strangers and Sierra Leone mining: cultural heritage and sustainable development challenges*, 2014, page 6.

³⁷ Fenda A. Akiwumi, *Strangers and Sierra Leone mining: cultural heritage and sustainable development challenges*, 2014, page 6.

³⁸ Kelley Lubovich and Ellen Suthers, *Improving Environmental Security in Sierra Leone: The Importance of Land Reclamation*, page 4.

³⁹ David P. Edwards, Sean Sloan, Lingfei Weng, Paul Dirks, Jeffrey Sayer, & William F. Laurance, *Mining and the African Environment*, 2013, page 2.

The expansion of roads and railways driven by new industries remains one of the biggest upsides helping the local community with faster and more efficient travel.

Moreover, in some instances, mining operations have effectively created conservation zones and, as such, offset some of their negative impacts. Several large-scale mining projects, such as the Mbalam iron-ore mine adjacent to the Dja World Heritage site in Cameroon, now include provision for biodiversity set-asides, which would protect rare forest mammals.

If mining investment could be achieved in situations of strong governance allowing for biodiversity protection, ecosystem services, and sustainability concerns, then there could potentially be a win for society and conservation (Sachs et al. 2009; Sayer et al. 2012b). Unfortunately, when mining encourages corruption and weakens national governance, both social and environmental goals suffer.⁴⁰

In general, mining activities in Sierra Leone can bring several potential benefits to the country's economy and development. Some of the upsides of mining activities include:

1. **Economic Growth and Revenue Generation:** Mining can contribute significantly to a country's gross domestic product (GDP) and government revenue. The export of minerals like diamonds, iron ore, rutile, and bauxite can provide a substantial source of foreign exchange earnings for Sierra Leone, helping to finance essential government services and development projects.
2. **Job Creation:** Mining operations require a range of skills and expertise, from geologists and engineers to support staff. This can create direct employment opportunities for local communities and contribute to poverty reduction and improved livelihoods.
3. **Infrastructure Development:** Mining projects often require the development of transportation infrastructure, including roads, railways, and ports. These infrastructure investments can not only benefit the mining industry but also improve access to remote regions and enhance overall connectivity.
4. **Technology Transfer and Skill Development:** International mining companies often bring advanced technologies, practices, and expertise to host countries. This can lead to the

⁴⁰ David P. Edwards, Sean Sloan, Lingfei Weng, Paul Dirks, Jeffrey Sayer, & William F. Laurance, *Mining and the African Environment*, 2013, page 6.

transfer of knowledge and skills to the local workforce, boosting human capital development.

5. **Community Development and Social Investment:** Responsible mining companies engage in corporate social responsibility (CSR) initiatives, investing in projects that benefit local communities. These projects might include building schools, health clinics, water supply systems, and supporting agricultural development.
6. **Export Earnings Diversity:** A well-managed mining sector can help diversify a country's export portfolio, reducing its dependency on a single commodity or sector. This diversification can make the economy more resilient to fluctuations in global commodity prices.
7. **Foreign Direct Investment:** The presence of reputable international mining companies can attract foreign direct investment (FDI) into the country. This investment can have positive spillover effects on other sectors of the economy, including services and infrastructure.
8. **Revenue for Public Services:** The revenue generated from mining activities can be channeled into funding public services such as education, healthcare, and social welfare programs. This can have a positive impact on human development indicators in the country.

However, it's important to note that the benefits of mining activities are contingent upon responsible and sustainable practices. The negative impacts of mining, such as environmental degradation, displacement of communities, and social conflicts, need to be carefully managed and mitigated to ensure that the benefits are maximized while minimizing potential drawbacks. Regulations, oversight, and community engagement play crucial roles in achieving a balanced approach to mining in Sierra Leone.

A practical example: ASM, an organization aiming at social development:

"ASM is pivotal in alleviating poverty, increasing community capital, and diversifying the local economy in many rural regions of the developing world, primarily because it is viable in areas with minimal infrastructure where other industries could not function. ASM can increase local purchasing power, increase demand for locally produced goods, contribute to foreign exchange

earnings, reduce rural-urban migration and allow the exploitation of mineral deposits unviable for larger operators. It has the potential to be a viable economic sector for developing countries. It also brings diversity into rural economies by stimulating other economic sectors such as the communications and manufacturing sectors.”⁴¹

For years the international community has been commenting on ASM’s potential to play an important role in economic and social development in developing and rural contexts, for instance, strategic support and interventions aimed at:

- Alleviate extreme poverty (MDG 1), particularly in rural areas, recognizing that ASM is usually a poverty-driven activity in a context of few viable options;
- Achieve universal primary education (MDG 2) by decreasing the involvement of children in the sector through a process of eliminating the economic benefits of child labor, substituting children’s jobs with technology, and making school a viable, affordable, and accessible alternative to children living in ASM communities;
- Promote gender equality and empower women (MDG 3) by promoting an industry in which women represent 50 percent of the workforce, including in rural contexts;
- Reduce child mortality (MDG 4) and achieve universal primary education (MDG 2) by addressing — versus ignoring — the reality of child labor on the mine sites;
- Improve maternal health (MDG 5) by addressing issues such as the safe handling of mercury (which negatively affects fetuses) in processing;
- Combat malaria and other diseases (MDG 6) by engaging in environmental practices such as abandoned water-filled pits and poor sanitation practices;
- Ensure environmental sustainability (MDG 7), by addressing the significant environmental impacts and improving water and sanitation issues in the ASM sector;
- Contribute to Community Driven Development (CCD) (MDG 8) when, through the participation of a given ASM community, a list of “must haves” for development could be constructed; i.e., new technology for miners provided by the private sector; a transparent and accountable governing body and local resources available for the mining community; ASM as productive employment option for youth; etc.⁴²

⁴¹ Cristina Villegas, Ruby Weinberg, Estelle Levin, and Kirsten Hund, *Artisanal and Small-scale Mining in Protected areas and Critical Ecosystems Programme*, 2012, page 22.

⁴² Cristina Villegas, Ruby Weinberg, Estelle Levin, and Kirsten Hund, *Artisanal and Small-scale Mining in Protected Areas and Critical Ecosystems Programme*, 2012, page 23.

The Sierra Leone state has promoted a national development agenda largely based on mineral extraction that challenges customary land governance through the landlord-stranger institution and poro power associations. The mining multinational corporation, supported by the national government, became a hegemonic stranger institution appropriating land by statute from host landlord communities and creating a hierarchy of new strangers within mining communities. Power imbalances embedded in state land and mining policies and laws supersede traditional legal systems. Community demands for benefits from mineral wealth, community development, and respect for the landlord-stranger relationship and sacred places as cultural heritage are as old as the Sierra Leone mining industry. Claims to indigeneity by landlord-communities in mining regions and conflict are a result of three principal factors: spiritual connections to ancestral lands and sacred places; response to compulsory land acquisition with loss of livelihoods, and political manipulations by the state; and indigenes' quest for access to the new avenues of wealth and power that their minerals bring. Conflict persists, although companies and governments have been forced to respond with voluntary initiatives, corporate social responsibility, political rhetoric, evolving policies, and legal reforms.

Sierra Leone has made efforts with recent regulatory reform to try to integrate tradition and "modernity" around land governance and mining, however, colonial vestiges in the constitution and laws continue to empower the state, which still needs to effectively address power differentials in statutory and customary laws and develop clear and equitable cultural heritage policies that incorporate economic, cultural, spiritual, and social aspects of land use.⁴³

4. How the diamonds affected the economy of Sierra Leone:

4.1 Diamonds used to finance conflicts in Sierra Leone (Blood Diamonds):

Sierra Leone experienced a brutal civil conflict that lasted from 1991 to 2002. The conflict was primarily fueled by deep-rooted political, social, and economic issues, as well as external factors. The main rebel group involved was the Revolutionary United Front (RUF), led by Foday Sankoh and Charles Taylor, the then-President of Liberia.

⁴³ Fenda A. Akiwumi, *Strangers and Sierra Leone mining: cultural heritage and sustainable development challenge*, 2014, page 8.

The conflict's origins can be traced back to grievances over corruption, inequality, and political exclusion in Sierra Leone. The RUF emerged with the aim of overthrowing the government and gaining control over the country's rich diamond mines, which they used to finance their operations. The rebels were notorious for their brutal tactics, including mutilations, killings, and the use of child soldiers.

The conflict escalated into a full-scale civil war with widespread atrocities, including massacres of civilians and the displacement of large numbers of people. The RUF and other armed groups committed grave human rights violations, leading to a significant humanitarian crisis.

Sierra Leone's government, with the support of the international community, fought to regain control of the country and defeat the rebels. Several peace agreements were attempted during the conflict, but many of them were violated, leading to continued violence and instability.

In 2000, the United Nations sent a peacekeeping force, known as UNAMSIL, to help stabilize the country and disarm the rebel forces. The presence of UNAMSIL, along with the efforts of the Sierra Leonean government and other international partners, played a crucial role in bringing an end to the conflict.

In 2002, a formal peace agreement was signed, leading to the disarmament of the rebels and the reintegration of ex-combatants into society. The aftermath of the conflict was marked by the need for reconciliation and reconstruction as the country worked to heal the wounds of war.

The civil conflict in Sierra Leone left a devastating impact on the country, with tens of thousands of people killed, countless others injured, and many more displaced. It also severely damaged the country's infrastructure and economy. However, efforts have been made to rebuild and rehabilitate Sierra Leone, with a focus on promoting peace, justice, and sustainable development.

It's important to remember that discussing conflicts is sensitive and can be distressing to those who have been directly affected. As we learn about such events, we must approach the topic with empathy and respect for the experiences of those who endured the hardships of war.⁴⁴

⁴⁴ David Harris, *Sierra Leone: A Political History*, 2013, page 73.

During the last years after the conflict, Sierra Leone has tried to implement a policy of diversification of its production to limit the reappearance of possible conflicts and eliminate economic stagnation.

According to the World Bank program on conflict, one of the most important policies for preventing future war in a post-conflict country is the diversification of GDP away from dependence on primary commodities. This 'diversification,' however, is not a simple task.

In Sierra Leone, the property rights regime over diamonds was weak enough that rebels from the Revolutionary United Front (RUF) were able to seize control of the diamond-producing region almost immediately after the group's inception as a violent movement.⁴⁵

Throughout the 1990s, Sierra Leone's rebel war was a tragedy of major humanitarian, political, and historic proportions.

Control of the diamond-producing regions of Sierra Leone is the primary source of revenue for the Revolutionary United Front (RUF). The RUF is an organization that has fought a ten-year civil war to seize control of the lucrative diamond-producing regions of the country.⁴⁶

It was founded by Foday Sankoh, a former Sierra Leonean army corporal, known for its brutal tactics. Sankoh built an army largely made of children, with both boys and girls being used as fighters. Girls were also used for sexual and domestic labor. The "recruitment" methods of the RUF included threatening children and teenagers that if they did not join the rebels their families would be murdered in front of them, often following rape and torture. The RUF has been accused of forcing these children to be injected with cocaine as well as to eat gunpowder as part of ongoing indoctrination rituals.⁴⁷

The main goal of the RUF emerged in 1991, was to overthrow the government and to be involved in the mining process of 'blood diamonds', sold to the international market and used to finance the group's activities, purchase weapons, and perpetuate the conflict.

At least 50,000 people died in the fighting and there are an estimated 100,000 victims of mutilation.⁴⁸ On the other hand, the main objective of the Government's army was not to re-

⁴⁵ KM Powlick, *Natural Resources and Conflict: Diamonds in Sierra Leone*, 2005, page 4.

⁴⁶ Elizabeth J.A. Rodgers, *Conflict diamonds Certification and corruption: a case study of Sierra Leone*, 2006, page 2.

⁴⁷ KM Powlick, *Natural Resources and Conflict: Diamonds in Sierra Leone*, 2005, page 10.

⁴⁸ Elizabeth J.A. Rodgers, *Conflict diamonds Certification and corruption: a case study of Sierra Leone*, 2006, page 3.

establish a social balance and protect the population, but to regain in the shortest possible time the lands for the extraction of diamonds, fundamental to the economy of Sierra Leone.

The entire Sierra Leone population has been affected by the decade-long war, a generation was left orphaned and traumatized and the young age of so many former combatants complicated the post-conflict peacebuilding process.

Along with the human cost of the war, the social, physical, and environmental infrastructure of the country paid a heavy toll – war is a process of destruction. In Sierra Leone, this destruction included a massive attack on human and ecological habitats.⁴⁹

The difficulties emerging from this period have led the population to develop an illegal diamond market system.

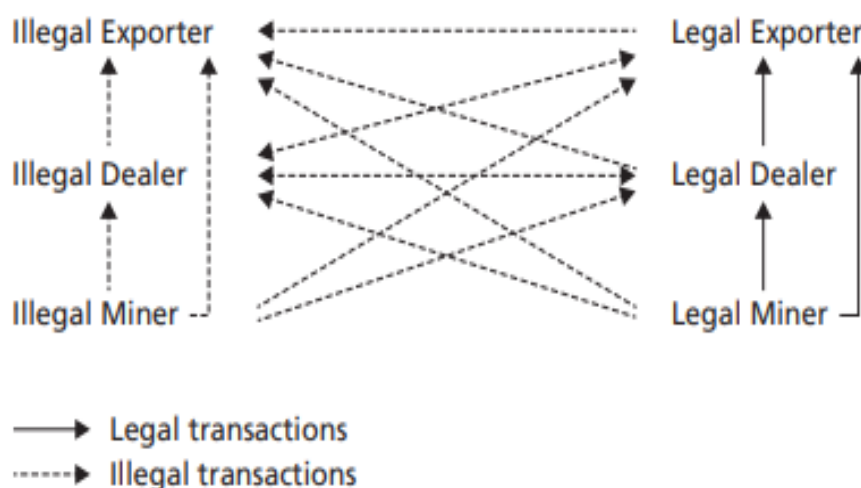
An actor is categorized as part of the illegal diamond market when he/she lacks a valid license for his/her economic activity, since diamond mining, dealing, and exporting all require a license in order to be conducted in accordance with the law.⁵⁰

The next picture showcases the channels through which diamonds are traded legally and illegally in Sierra Leone during these years.

Fig 5: Legal and illegal diamond trading in Sierra Leone.

⁴⁹ Elizabeth J.A. Rodgers, Conflict diamonds Certification and corruption: a case study of Sierra Leone, 2006, page 24.

⁵⁰ Nina Engwich, After Blood Diamonds: The Moral Economy of Illegality in the Sierra Leonean Diamond Market, 2016, page 13.



Source: After Blood Diamonds: The Moral Economy of Illegality in the Sierra Leonean Diamond Market.

As an illegal activity, illicit mining is secret in some ways, and yet quite public in other ways. Illegal miners frequently ask local chiefs for permission to mine and pay them “surface rent,” a less formal monetary gift, or a share of their profits. However, whether they are in agreement with the chief or not, illegal miners are vulnerable to being exploited by chiefs.⁵¹

Despite the challenges, Sierra Leone made significant progress in the post-war years, with the help of international aid and peacekeeping efforts. The country focused on disarmament, demobilization, and reintegration (DDR) programs to reintegrate former combatants into society. Efforts were also made to promote national reconciliation, rebuild infrastructure, and strengthen democratic institutions. However, the scars of the civil war remained, and addressing the root causes of the conflict and ensuring sustainable peace and development remained ongoing challenges for Sierra Leone.

In general diamond mining in Sierra Leone has had significant effects on the country’s economy, both positive and negative, for example:

Positive Effects:

⁵¹ Nina Engwich, After Blood Diamonds: The Moral Economy of Illegality in the Sierra Leonean Diamond Market, 2016, page 15.

1. **Revenue Generation:** Diamond exports have historically been a major source of revenue for Sierra Leone. Taxes, royalties, and fees from diamond mining contribute to government coffers, supporting public services and infrastructure development.
2. **Foreign Exchange:** Diamond exports provide essential foreign exchange earnings, stabilizing the country's currency and enabling imports of goods and services.
3. **Employment:** Diamond mining operations create direct jobs for local communities, helping to alleviate unemployment and improve livelihoods.
4. **Infrastructure Development:** Mining activities often lead to the development of roads, electricity supply, and other infrastructure that benefits both the industry and nearby communities.
5. **Investment and Trade:** The diamond industry attracts foreign investment and encourages trade relationships with international partners.

Negative Effects:

1. **Conflict and Instability:** The diamond trade has been linked to funding conflicts in Sierra Leone's history, leading to violence, instability, and humanitarian crises.
2. **Revenue Mismanagement:** Poor management of diamond revenues has led to corruption and misuse of funds, hindering socio-economic development.
3. **Displacement and Land Conflicts:** Mining activities often displace communities and spark disputes over land rights.
4. **Income Inequality:** Diamond wealth may not be evenly distributed, exacerbating income inequality and leaving some communities in poverty.
5. **Dependency and Vulnerability:** Relying heavily on diamond exports can make Sierra Leone's economy vulnerable to fluctuations in global diamond prices.
6. **Health and Social Issues:** Mining influxes can strain social services and healthcare systems, sometimes leading to health issues in communities.
7. **Child Labor and Exploitation:** In the past, child labor and exploitation were associated with diamond mining, damaging human development.

4.2 The Kimberley Process:

Among the innovations that have found greater application in the reality of Sierra Leone, the Kimberley Process has had the greatest impact representing one of the most interesting institutional innovations in recent years.

In 1999, the terms “conflict diamond” and “blood diamond” entered into common parlance within the international community. Increasingly frequent reports by NGOs and UN monitoring bodies have documented clear violations against sanctions on trading diamonds with various African rebel movements, in 2000, the UN General Assembly ordered the “Kimberley Process” to develop a detailed proposal for an international certification scheme for rough diamonds in the General Assembly Resolution 55/56 of December 1, 2000.⁵²

The Kimberley Process was established in 2003, following a series of media reports and international campaigns that highlighted the link between diamonds and armed conflicts, particularly in Africa. The initiative was named after the city of Kimberley in South Africa, where the first major diamond rush occurred in the late 19th century.

Negotiations over the next two years concluded with the agreement to establish the Kimberley Process Certification Scheme (KPCS), under this statement, rough diamonds would be packaged together in a parcel with a forgery-resistant certificate that documents that the stones meet the requirements of the KPCS. In other words, the stones do not come from designated conflict zones. All participant states are required to ensure that exports and imports of diamonds are in sealed containers, properly certified, and do not come from non-participant states.

The Kimberley Process (KP) is a joint initiative involving governments, international organizations, and industry representatives aimed at preventing the trade of conflict diamonds and ensuring that rough diamonds are sourced ethically. The participants of the Kimberley Process are referred to as "participants" and include both individual countries and regional economic integration organizations. In Africa, some of the countries that have been involved in the Kimberley Process as participants include:

1. Angola;

⁵² Elizabeth J.A. Rodgers, Conflict diamonds Certification and corruption: a case study of Sierra Leone, 2006, page 4.

2. Botswana;
3. Democratic Republic of the Congo (DRC);
4. Lesotho;
5. Namibia;
6. Sierra Leone;
7. South Africa;
8. Tanzania;
9. Zimbabwe;⁵³

These participants are also required to institute internal controls (developed by the industry) to ensure that conflict diamonds are eliminated from internal markets as well as from exports. The state-based border control regime would be complemented by industry self-regulation which “will provide for a system of warranties underpinned through verification by independent auditors of individual companies and supported by internal penalties set by industry, which will help to facilitate the full traceability of rough diamond transactions by government authorities⁵⁴

Members are forced to send information continuously and report all the problems they encounter, they also meet annually to review the behavior of each participant.

States that violate the terms of the KPCS, that are too riddled with corruption to implement it effectively, or that otherwise are free-riding on the KPCS system would have their membership revoked. No KPCS member state could trade with non-members, which is a tough sanction for states that depend on diamond exports as a major source of revenue⁵⁵

The KPCS is credited with the dramatic increase in the level of legitimate diamonds traded in international markets, which indicates that more participants are using the system. Some of the conflicts that first generated headlines about diamonds have been settled, with attention shifting from Angola and Sierra Leone to Côte d’Ivoire as the main source of illicit diamonds in the world

⁵³ <https://www.kimberleyprocess.com/>

⁵⁴ Virginia Haufler, *The Kimberley Process Certification Scheme*, 2009, page 14.

⁵⁵ Virginia Haufler, *The Kimberley Process Certification Scheme*, 2009, page 14.

today. There are now 49 member states (the European Community counts as one), plus the WDC and two NGOs, constituting all major producers, traders, polishing centers, and most diamond consumer markets.⁵⁶

The primary objective of the Kimberley Process is to prevent the flow of conflict diamonds into the legitimate diamond supply chain. The initiative seeks to achieve this through a voluntary system of certification and cooperation among participant countries. Participating countries, including many African nations, are required to implement strict measures to control the export, import, and trade of rough diamonds. The Kimberley Process Certification Scheme (KPCS) sets the guidelines and rules that countries must follow to certify their diamonds as "conflict-free."

Africa is a significant player in the global diamond industry, with several countries actively involved in diamond mining, processing, and trading. Many of these nations, such as Angola, the Democratic Republic of Congo (DRC), and Sierra Leone, have been historical sources of conflict diamonds. The Kimberley Process has had a profound impact on curbing the trade of these illicit diamonds in Africa.

By adhering to the KPCS, African participant countries have strengthened their diamond export controls, ensuring that rough diamonds are accompanied by valid Kimberley Process certificates. This certification provides assurances to the international community and consumers that the diamonds are sourced responsibly and do not finance armed conflicts or human rights violations.

Despite its successes, the Kimberley Process faces challenges in ensuring a responsible diamond supply chain in Africa. Some of the main challenges include:

- a. **Smuggling and Illicit Trade:** Despite the Kimberley Process's efforts, illicit diamond smuggling remains a concern in some regions of Africa. Smuggled diamonds can find their way into the legitimate market, undermining the certification system's effectiveness.
- b. **Illegal Mining:** Illegal and informal diamond mining continues to be a significant issue in certain African countries. These operations often lack proper oversight, leading to environmental degradation and exploitative working conditions for miners.

⁵⁶ Virginia Haufler, *The Kimberley Process Certification Scheme*, 2009, page 15.

c. Human Rights Concerns: Beyond conflict diamonds, the Kimberley Process faces calls to address human rights issues associated with diamond mining, such as child labor, poor working conditions, and displacement of indigenous communities.

The Kimberley Process has undoubtedly made significant strides in curbing the trade of conflict diamonds in Africa, bolstering the region's diamond industry, and contributing to economic development. However, challenges persist, and ongoing efforts are required to strengthen the process's mechanisms, combat smuggling, and address broader social and environmental concerns. By fostering cooperation, transparency, and accountability among all stakeholders, the Kimberley Process can continue to play a vital role in promoting responsible diamond sourcing in Africa and safeguarding the global diamond trade from the harmful effects of conflict diamonds.

Fig 6: How does the Kimberley Process work?

HOW DOES THE KIMBERLEY PROCESS WORK?



Source:

<https://www.awdc.be/sites/awdc2016/files/documents/KPCS%20Q%26A%20update%2017082020.pdf>

CONCLUSION:

Through an in-depth analysis of diamond digging in Sierra Leone, this thesis has shed light on the multifaceted nature of the diamond industry in the country. The research has unveiled the complex interplay of economic, social, and environmental factors that influence and are influenced by diamond extraction.

Sierra Leone's diamond mining sector has historically been associated with both immense wealth and profound socio-economic challenges. While diamonds have contributed significantly to the national economy, the benefits have not always reached the local communities engaged in diamond digging. The lack of proper governance and transparency in the industry has often resulted in rampant corruption, exacerbating inequality and impeding sustainable development.

The presence of artisanal and small-scale miners has added another layer of complexity to the diamond sector. These miners, though vital for the country's diamond output, often operate in informal and hazardous conditions. They face numerous risks, including exploitative practices and exposure to health and safety hazards, which need to be addressed urgently through appropriate regulations and support mechanisms.

Furthermore, environmental degradation resulting from diamond mining has become a pressing concern. The indiscriminate extraction practices have led to deforestation, soil erosion, and water pollution, jeopardizing the country's delicate ecosystems and the livelihoods of communities that rely on them. Sustainable mining practices and strict adherence to environmental regulations must be a priority to protect Sierra Leone's natural heritage for future generations.

To forge a brighter future for Sierra Leone's diamond industry, it is essential to foster a collaborative approach involving the government, industry stakeholders, civil society, and local communities. Transparent and accountable governance mechanisms should be established to ensure that diamond revenues are effectively managed, providing equitable benefits to all citizens.

Investing in the development of artisanal and small-scale mining can significantly empower local communities by creating more secure and sustainable livelihood opportunities. This could be achieved through capacity-building initiatives, access to modern technology, and fair trade practices that ensure miners receive a fair price for their diamonds.

Environmental conservation efforts must be prioritized by adopting responsible mining practices and rehabilitating previously mined areas. Additionally, environmental impact assessments should be conducted before any mining operations commence, ensuring that potential negative consequences are mitigated effectively.

In conclusion, the diamond industry in Sierra Leone stands at a critical juncture, where concerted efforts are required to transform it into a catalyst for sustainable development and social progress. By embracing transparency, inclusivity, and environmental stewardship, Sierra Leone can harness the potential of its diamond resources to pave the way toward a brighter and more prosperous future for all its citizens.

BIBLIOGRAPHY:

1. Akiwumi Fenda A. (2014): Strangers and Sierra Leone mining: cultural heritage and sustainable development challenges;
2. Babatunde Zack-Williams, Africa Development / Afrique et Development, 1990, Vol. 15, No. 2 (1990), pp. 95-117: Diamond Mining and Underdevelopment in Sierra Leone-1930/1980.
3. Banat Amanda Bryant (2002): Solving the Problem Of Conflict Diamonds In Sierra Leone: Proposed Market Theories And International Legal Requirements For Certification Of Origin.
4. Bridge Gavin (2004): Contested Terrain: Mining and the Environment
5. D'Angelo Lorenzo (2014): Who owns the diamonds? The occult economy of diamond mining in Sierra Leone.
6. Diamondfacts.org: Diamond Mining and The Environment Fact Sheet.
7. Diamonds and Human Security ANNUAL REVIEW 2008.
8. Edwards David P. (2014): Mining and the African Environment.
9. Engwicht Nina (2018): The local translation of global norms: the Sierra Leonean diamond market
10. Engwicht Nina and Ankenbrand Christina (2021): Natural resource sector reform and human security in post-conflict societies: Insights from diamond mining in Sierra Leone (Science Direct)
11. Engwicht Nina (2016): After Blood Diamonds: The Moral Economy of Illegality in the Sierra Leonean Diamond Market;
12. Fayiah M. (2019): Mining and Environmental Degradation: A Gift Brings Grief Scenario for Mining Communities in Sierra Leone;
13. Fanthorpe Richard and Gabelle Christopher (2013): Political Economy Of Extractives

14. Fess: reclaiming land after mining;
15. Governance In Sierra Leone;
16. Harris David (2013): Sierra Leone: A Political History;
17. Haufler V. (2009): The Kimberley Process Certification Scheme: An Innovation in Global Governance and Conflict Prevention;
18. Hirsch John L. (2002): Sierra Leone: Diamonds and the Struggle for Democracy.
19. Integral Human Development: Migration Profile SIERRA LEONE;
20. JANG SE YOUNG (2012): The Causes of the Sierra Leone Civil War.
21. Kimberley Process Official Website;
22. King David Clive (2018): Diamond Mining Settlements In Central Kono District, Sierra Leone.
23. Lubovich Kelley and Suthers Ellen (2007): Improving Environmental Security in Sierra Leone: The Importance of Land Reclamation;
24. Mabey Prince T., Wei Li, Sundufu Abu J., and Lashari Akhtar H. (2020): Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone.
25. Maconachie Roy and Conteh Felix (2021): Artisanal mining policy reforms, informality, and challenges to the Sustainable Development Goals in Sierra Leone. (Environmental Science and Policy 116, 38-46)
26. Maconachie Roy (2012): The Diamond Area Community Development Fund: Micropolitics and community-led development in postwar Sierra Leone
27. Maconachie Roy and Binns Tony (2007): 'Farming miners' or 'mining farmers? Diamond mining and rural development in post-conflict Sierra Leone.
28. Mason Nketti Hannah (2014): Environmental governance in Sierra Leone's mining sector: A critical analysis
29. Marissa Elizabeth Agnes Celma (2018): The Implementation of Kimberley Process Certification Scheme towards the Export of Blood Diamond in Sierra Leone;
30. Oluleye Gbemi (2021): Final-report-Environmental-Impacts-of-Mined-Diamonds;
31. Powlick KM (2005): Natural Resources and Conflict: Diamonds in Sierra Leone
32. Rodgers Elizabeth J.A. Corpus Christi College, Cambridge, UK (2006): Conflict diamonds, Certification, and corruption: a case study of Sierra Leone
33. Ross M. (1999): The Political Economy of the Resource Curse, pp. 297-322

34. Smillie Ian, Gberie Lansana, And Hazleton Ralph (2000): The Heart of the Matter Sierra Leone Diamonds and Human Security
35. Sheriff Fomba (2022): Sierra Leone: Environment - Impacts of Illegal Mining Activities: Threat to Water Security, Human Health, and Potential National Public Health Emergency;
36. Williams Reno (2022): Corruption and State Politics in Sierra Leone;