

Sierra Leone Netherlands Business & Culture Council (SLNBCC)



## Mineral Sector in Sierra Leone

Written by Esther Aminata Kamara for the SLNBCC - Sierra Leone Netherlands  
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## About SLNBCC

The Sierra Leone Netherlands Business and Culture Council (SLNBCC) is an affiliate of the GNBCC, Ghana. The SLNBCC has been officially registered and active since September 2017, and is currently building a network of companies from Sierra Leone and the Netherlands. The target being collaborations, investments or partnerships between companies from the two countries

Our network consists of both government and the private sector actors, and we work closely together with the Sierra Leonean Investment and Export Promotion Agency (SLIEPA) and the Sierra Leonean Chamber for Agribusiness development (SLeCad). The SLNBCC is currently expanding its membership base, these members receive:

- Monthly newsletters
- Quarterly networking and informative events
- Access to the Dutch network, to Dutch companies with interest in Liberia/ Sierra Leone and introductions
- Access to more information on the Netherlands Enterprise Agency's (RvO) financial instruments
- Workshops and seminars on business related topics
- The SLNBCC also offers paid business services to both members as well as non-members. These services include:
  - Assisting with travel arrangements for business investors from the Netherlands to Sierra Leone
  - Representing and assisting Dutch companies who do not have their own subsidiary, partner or office in Sierra Leone

This sector scan is part of the SLNBCC's efforts to attract foreign companies to engage in business with Sierra Leone.

## Chapter 1 | Executive Summary

Sierra Leone is a country located on the Western fringe of Africa, bordering on the Atlantic Ocean. The country has promising mining sector that has largely been unexplored. Before the decade-long civil war (1991-2001), the mining sector thrived with large operations in iron ore mining in several sites throughout the country. Mining activities slumped during the war, and slowly rebuilt afterwards until the sector received a double-blow from the Ebola virus Outbreak and the iron ore crisis.

In 2019, the sector is experiencing steady growth due to the resurgence of large-scale mining operations such as the Marampa Mine, and the oil and gas explorations on the peninsular shore.

Although the sector shows considerable opportunities, current constraints include lack of geological up-to-date data, unskilled labourers, accusations of corruption and conflicting policy structures. However, the GoSL is still in the process of a large-scale sector reformation, updating policies to attract foreign investment and increase transparency in the sector.

This document provides background information on the country, the current and historic state of the mining sector and areas of opportunity for Dutch companies to enter the sector locally. These opportunities include:

<b>Mining Sector</b>	<b>Opportunity</b>
<b>Gold</b>	Upgrade artisanal and small-scale mining to large scale operations
<b>Diamonds</b>	Explore the 20.000square kilometer diamond-rich inland shores
<b>Iron-Ore</b>	Future survey data may reveal the location of large iron-ore deposits that can match the current operations in Marampa and Tonkolili
<b>Bauxite</b>	Bauxite mining and bauxite processing (alumina)
<b>Oil and Gas</b>	Commercial hydrocarbons were discovered near the Sierra Leonean shore.
<b>Rutile</b>	Sierra Leone has the largest natural rutile reserves in the world. Currently two are being mined.
<b>Logistics</b>	Infrastructure issues cause sector constraints as well as opportunities; construction of robust industry infrastructure is high in demand
<b>Surveying and research</b>	A lack of data and surveying hampers sector development, but offers opportunities for consultants and geomapping companies.

## Chapter 2 | Acronyms

AfDB	African Development Bank
CBI	Center for the Promotion of Imports from developing countries
DFID UK	Department for International Development
EPA	Environmental Protection Agency
GDP	Gross domestic product
GoSL	Government of Sierra Leone
MWHI	Ministry of Works, Housing and Infrastructure
ND	The New Direction
NRA	National Revenue Authority
SALHOC	Sierra Leone Housing Corporation
SLC	Sierra Leone Local Content Agency
SLIEPA	Sierra Leone Investment & Export Promotion Agency
SLPA	Sierra Leone Port Authority
SLRA	Sierra Leone Road Authority
UN	United Nations
UNDP	United National Development Program

## Chapter 3 | The Sierra Leonean Context

### Country Overview

Sierra Leone is found in the West Coast of Africa, bordered by Guinea, Liberia and the Atlantic Ocean. It has been experiencing annual GDP growth. Several years back, the country's GDP growth rate was one of the highest in Africa, but had a quick downward turn due to the twin shocks of a shrinking of the global iron ore price and the outbreak of the Ebola Virus Disease. However, Sierra Leone is actively reforming its business environment in order to facilitate the ease of doing business in the country.

Sierra Leone recently had a change of government, with Brig. Julius Maada Bio of the Sierra Leone People's Party (SLPP) as the new president of the country. His New Direction strategy promises an avid investment and development of the private sector, with one of its' goals to attract foreign investors and companies. Real GDP growth of double digits was a clear indication that the country was developing fast. Average GDP per capita has almost returned to its pre-2014 Ebola percentages and growth is registered in almost all sectors.

The mining and agriculture sector are the leading sectors in the country. The mining sector accounts for roughly 90 percent of annual export revenues. In 2016, Sierra Leone's exports were worth approximately US\$897 million, of which mineral resources accounted for approximately 75%, followed closely by cocoa (8.5%) and coffee<sup>1</sup>.

### History & Politics

Sierra Leone gained independence from Britain in 1961. From 1961 to 1998, the political system shifted between multi-party democracy, military rule and one-party rule. Sierra Leone has remained a multi-party democracy since 1998. The country emerged from a decade-long civil war in 2002. The constitution recognises three branches of government: legislative, executive and judicial. Parliamentary terms last for five years and the President may not serve for more than two terms, whether or not those terms are consecutive. After a two-term reign, former president Ernest Bai Koroma stepped down and was replaced by Julius Maada Bio of the opposing SLPP. Maada Bio won with a 51.8% of votes. However, APC still holds the majority of seats in parliament. The constitution, as currently drafted, does not allow an incumbent to stand for a third term. The peaceful, credible and stable transition of powers should increase investor confidence by providing a reduced risk of shock and greater predictability.

### Governance

The Government of Sierra Leone is led by a President elected directly by the people and who is also the Head of State and Commander-in-Chief of the armed

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<sup>1</sup> <https://atlas.media.mit.edu/en/profile/country/sle/>

forces. Within the Government of Sierra Leone, the Ministry of Trade and Industry has oversight over policies relating to domestic and international trade. The Sierra Leone Investment & Export Promotion Agency (SLIEPA) is responsible for policies to improve the investment climate, promote local and export trade, and encourage the development of small-to-medium-sized businesses. SLIEPA has thus far focused on Foreign Direct Investments in key economic sectors including the agriculture, marine resources, mining, energy, and tourism sectors. A system of local government was established by the Local Government Act 2004, which is comprised of 19 councils. Five city councils, one municipal council, and 13 district councils form the total of this local government structure. The Decentralization Secretariat was established under the World Bank's Institutional Reform and Capacity Building Project to promote decentralisation.

### **Core industries**

**Agriculture:** key crops are rice, sugar, oil palm and cocoa, as well as agribusiness functions relating to trading and/or processing;

**Diamonds:** over 600,000 carats exported in 2013;

**Iron ore :** Sierra Leone has one of the world's largest iron ore deposits;

**Rutile:** the world's largest reserves, producing an estimated 120,000 tons of contained titanium dioxide in 2014;

**Gold :** producing approximately 141 kilograms worth of gold in terms of mine output in 2012 and 193 kilograms in 2014. In 2017, this figure dropped by 24.31% compared to 2016, totalling 142.06 kg. The exports of 2017 were worth USD5.2 million.<sup>2</sup>

**Bauxite mining:** including the country's Port Loko deposit, which contains 100 million tons of bauxite reserves)

### **Key exports and imports**

Sierra Leone's main exports are in the mining and agriculture sectors. Until 2012, diamonds were Sierra Leone main export product. Iron ore has since taken its place, accounting for 55.7 percent of total exports in 2013. The mining sector accounts for roughly 90 percent of annual export revenues. In 2016, Sierra Leone's exports were worth approximately US\$897 million, of which mineral resources accounted for approximately 75 percent, followed closely by cocoa (8.5 percent) and coffee. Sierra Leone's main imports are machinery and transport equipment (largely relating to mining and oil investment projects and accounting for approximately 50 percent of total imports) and fuel (10 percent).

### **Foreign Aid**

The country remains largely dependent on foreign aid. The current account deficit was estimated to be US\$511.8 million in 2013 and US\$466.9 million in 2014.

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<sup>2</sup> *Mining Journal, September 2018 Supplement (2018): page 8*

The deficit was reported to be around US\$582 million in 2015. Sierra Leone benefits from the support of various international agencies, including the United Nations Development Programme (UNDP), the World Bank, and the UK Department for International Development (DFID).

### **The Ports**

Freetown boasts one of the largest deep water natural harbours in Africa. The existing Queen Elizabeth II Quay (QE2) Freetown container port is currently managed by Bolloré Africa Logistics under a 20-year concession agreement awarded by the Sierra Leone Port Authority (SLPA) in 2010. The agreement includes plans to renovate the port's bulk handling terminal and expand its capacity. GoSL is also considering developing a "dry port" to ease congestion at QE2 and facilitate the transportation of containers destined for rural areas. Further efforts to involve private partners in the ports system have seen the SLPA award a 20-year concession for the Marine Slipway and Ship Repair facilities to Holland Shipyard.

To support the needs of the mining sector, the GoSL plans to develop a new deep water port and associated rail infrastructure with the capacity to export between 30-50million tonnes of ore and other minerals each year. A pre- feasibility study to review options for the new deep water port was commissioned by the GoSL in 2014. The World Bank is carrying out the study as part of a project to develop a "Ports Master Plan" assessing the need for the expansion of the Freetown Port and the feasibility of the proposed deep water port.



## Chapter 4 | Country Overview

<b>Population</b>	7,369,190 <sup>3</sup>
<b>Urbanisation</b>	40.7% <sup>4</sup>
<b>Situated</b>	West Africa, coastal, Sub-Sahara
<b>Bordered by</b>	Guinea (North/NorthEast), Liberia (South/SouthEast), Atlantic Ocean (West)
<b>Area</b>	71,740 square kilometres
<b>GDP</b>	US\$3,64 billion <sup>5</sup>
<b>Real GDP growth</b>	6% <sup>6</sup>
<b>Official languages</b>	Krio, English
<b>Ha of arable land</b>	5.4 million
<b>Rainfall</b>	3,800mm annually
<b>Climate</b>	Tropical
<b>Seasons</b>	Rainy season (monsoon): May to October & Dry Season (Harmattan) October to May

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<sup>3</sup> *World Bank, 2016*

<sup>4</sup> *IMF 2017*

<sup>5</sup> *IMF 2017*

<sup>6</sup> *IMF 2017*

## Chapter 5 | The Mining Sector

### Introduction

The mining sector has been a central component in the Sierra Leonean economy since the independence in 1961. Before the Civil Rebel War (1992-2001) the sector flourished, with large-scale iron ore mining operations processing tillings from before national independence. However, the war severely impacted mining operations, causing all large-scale operations to cease production by the end of the war.

After the war, concerted efforts were made by both private and public parties to revive the entire mineral sector as well as the rest of the economy. The Ebola Virus Outbreak (2014-2016) and the fall in international iron ore prices around the same time caused a slump in the growing economy.

As the mineral sector offers considerable potential for GDP growth and widespread development opportunities for the country, the Government of Sierra Leone (GoSL) is actively aiming to improve the sector. In 2018, the Sierra Leone People's Party (SLPP) under presidency of Julius Maada Bio came to power. Later that year, the party introduced the New Direction, of which the National Development Plan 2019-2023 outlines plans and policies for the reforms the government aims to execute.

As outlined in this plan, the GoSL aims to “improve the governance and management of the mining sector, including value addition for employment, poverty reduction, community benefit, environmental rehabilitation, and revenue generation<sup>7</sup>.” (page 90). To reach this strategic objective, the GoSL has offered twelve key policy actions, which will be elaborated on in Chapter 6 on opportunities.

### Mineral Resources

Although the country is renowned for its high quality and quantity of diamond and iron ore deposits, Sierra Leone boasts an impressive list of at least 17 mineral sources. This list includes but is not limited to bauxite, rutile and gold.

In order to attract foreign and local investors, the Government of Sierra Leone (GoSL) plans to conduct a countrywide survey that includes fields mapping in order to obtain reliable and factual geological data.

According to the GoSL, Sierra Leone has more than 20,000 square kilometres of diamond fields in the eastern, southern and northern regions of the country.

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<sup>7</sup> *Sierra Leone's Medium-Term National Development Plan 2019-2023 Volume I. Page 90*

There are three methods of mineral extraction; the first is large-scale mining operations. The Marampa and Tonkolili iron ore mines are examples of such operations. The second and third methods, artisanal and small-scale mining determine a large scale of specific mineral extractions. Gold, for example, is only mined in these manners, as well as half of diamond exports<sup>8</sup>. These small-scale operations are important for local employment and revenue creation, but do pose challenges regarding regulation and collecting production data due to its decentralised nature. Small-scale and artisanal mining operations have reduced by 17% due to the increased enforcement of regulations and charges inflicted by the Environmental Protection Agency (EPA)<sup>9</sup>.

### **Finance and economics**

The mining sector accounts for 24% of GDP<sup>10</sup>, and is an important contributor to the development of the Sierra Leonean economy. In 2016 mineral exports was valued at 471 million USD (a 31% increase from 2015), or 91% of export earnings.

Furthermore, it is estimated that mining operations employs approximately 300,000 people<sup>11</sup>.

Iron ore production is the main contributor to the sector mining, and to Sierra Leones' GDP growth. In 2015, the sector experienced a sharp decline, which can be attributed by the Ebola Virus Disease (EVD) outbreak in 2014, and the global drop in iron ore prices. In 2017, the reduced production in iron ore caused the economy of Sierra Leone to grow only 3.5%, a significant decrease from the 6.3% growth in 2016. In 2016, approximately 6.1 million WMT was produced with a production value of just over 170 million USD<sup>12</sup>.

The World Banks' 2019 Financial Inclusion for Economic growth and Development report on Sierra Leone shows an expected growth from 3.7% in 2018 to 5.2% in 2021. Mining activities are pointed out as one of the key drivers of this growth.<sup>13</sup> The mining sector has a strong impact over the countries overall economy, which can affect this both positively and negatively. Over the past few years, reduced mineral output due to unstable global commodity prices and the impact of the EVD on the economy, have shown the adverse effect that a dependency on the sector for economic wealth can cause. Hence, the GoSL is aiming to strengthen and diversify the economy by prioritising development of the agriculture sector. This,

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<sup>8</sup> *Sierra Leone's Medium-Term National Development Plan 2019-2023 Volume I. Page 84-90*

<sup>9</sup> *Sierra Leone's Medium-Term National Development Plan 2019-2023 Volume I. Page 86*

<sup>10</sup> *Financial Report, Bank of Sierra Leone (2017): page 13*

<sup>11</sup> *Sierra Leone's Medium-Term National Development Plan 2019-2023 Volume I. Page 84-90*

<sup>12</sup> *SLEITI website: <http://www.sleiti.gov.sl/>*

<sup>13</sup> *World Bank Group, Financial Inclusion for Economic Growth and Development*

however, does not mean that the GoSL neglects the mining sector. To the contrary; the GoSL acknowledges the importance of the sector, and aims to counter current challenges in the sector to increase its positive impact on the national economy and on local economies.

### Active mining operations

The table below shows an overview of nationwide active mining operations. It is worth to mention that in 2019, the largest iron ore mining operation, the Marampa Project, has commenced mining operation after several years of changing management and ceased mining practices.

Mineral	Name	Location
Iron Ore	SL Minerals, formerly owned by Timis Corp, London Mining plc	Marampa
Iron Ore	Tonkolili Iron Ore (African Minerals ltd and Shandong Iron and Steel Group)	Tonkolili
Mineral Sands (ilmenite, rutile, zircon)	Sierra Rutile Ltd	Pujehun District
Diamond	Koidu Kimberlite Mine by Koidu Limited- Octéa Diamond Group	Koidu District, Kono
Diamonds	Tongo Mining Project- Newfield Resources	Tongo-Tonguma
Bauxite	Sierra Minerals Mine, Sierra Mineral Holdings Ltd. Vimetco N.V.	Moyamba District
Bauxite	Sierramin Bauxit	Port Loko District
Cement	Leocem Cement Plant, by Sierra Leone Cement Corp. Ltd.	Freetown

Figure 1: Active Mining Companies operating in Sierra Leone.

## Chapter 6a | Opportunities: Mining

Sierra Leone offers numerous opportunities within the mining sector. Apart from mining diamond, iron ore, or bauxite, there are opportunities in several less-explored minerals Sierra Leone's rich soils contain. Furthermore, there are possibilities for expanding, innovating and elaborating on mining by-processes, commodity logistics and human resource investments. This chapter will outline the various opportunities within the sector.

### Mining

Mining is one of the most economically viable areas of investment in Sierra Leone. Depending on the type of mining activity one might want to embark on, there are vast opportunity for investments in artisanal mining, small-scale mining, and large-scale mining.

#### Artisanal and small-scale gold mining

Sierra Leone has considerable numbers of artisanal and small-scale gold mining (ASGM) operations that are positively impacting the livelihoods of many Sierra Leoneans. This sub-sector, however, remains largely outside of the formal trade network, resulting in low annual export sums. In 2017, Sierra Leone produced approximately 142.06 kilograms worth of gold in terms of mine output, resulting in a USD5.2 million export value.<sup>14</sup> A rise in ASGM has been seen due to the decline in alluvial small scale and artisanal diamond mining.

According to the report 'Follow the Money: Financial Flows Linked to Artisanal and Small-Scale Gold Mining in Sierra Leone. A Case Study' by M. Hunter and A. Smith, constraints that are apparent in the entire mining sector accounts here as well, such as insufficient environmental protection, corruption and bribery. In addition, the informality of the sector makes it harder to acquire insights into the sub-sector.

The report states that formalising the sector could result in positive developments in the sector<sup>15</sup>. To compare Ghana exported 8.35 billion USD worth of gold in 2017.<sup>16</sup>

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<sup>14</sup> *Mining Journal, September 2018 Supplement (2018): page 8*

<sup>15</sup> *Follow the Money: Financial Flows Linked to Artisanal and Small-Scale Gold Mining in Sierra Leone. A Case Study: page 2-9.*

<sup>16</sup> *The Observatory of Economic Complexity; accessed on September 28th, 2019*

The report has detailed information on gold exports per district and trails the financial flows of the ASGM sector. A link to this report can be found in the reference list of this sector scan.

According to the Sierra Leone Geology and Mineral Industry report, Sierra Leone's greenstone belts (uncertainty existing over Marampa and Kambui Hills) contain gold. This area includes; Sula Mountain area, Kangari Hills, Nimini Hills, Loko Group Schistbelt, the Gori Hills and in the Lake Sonfon area<sup>17</sup>.

## **Diamond Mining**

Diamonds are Sierra Leone's most (in)famous export products. Although annual export value remains far below that of iron-ore, the alleged financing of the Rebel Civil War by diamond trading has had severe impact in the past on the country as well as the mining sector. During the civil war, all mining operations were halted due to this diamond trading. Currently, diamond mining remains an important aspect of the sector. Between 2010 and 2017, Sierra Leone exported more than 4 million carats of diamonds. Annual export values were +123 million USD in 2017.<sup>18</sup>

Diamonds are primarily mined in the Bo, Kenema and Kono districts, which are located in the central- to southeast of the country. According to the GoSL, Sierra Leone has more than 20,000 square kilometers of diamond fields in the eastern, southern and northern regions of the country. The primary locations are in the Bo, Kono and Kenema Districts. The drainage areas are found at the Sewa, Woa, Mano, Moa and Bafi rivers. In 1960, the Geological Survey found similar areas at Panguma<sup>19</sup>.

## **Iron-Ore**

The iron ore mining industry is one of the oldest in Sierra Leone. the mineral was first discovered in the earliest 1930s when an exploration exercise discovered a huge deposits of the mineral in the Marampa chiefdom, Port Loko districts. The Development Cooperation of Sierra Leone (DELCO) is the first mining company to starts mining and production of the mineral for shipments in the mid 1930s. ([www.mining-technology.com/project/marampa](http://www.mining-technology.com/project/marampa)).

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<sup>17</sup> *Sierra Leone Geology and Mineral Industry: P 19-20*

<sup>18</sup> *Mining Journal, page 8.*

<sup>19</sup> *Sierra Leone Geology and Mineral Industry: P:14*

Sierra Leone has one of the largest iron-ore deposits in the world. According to the Herbert-Smith Freehill Investors Guide, the Tonkolili mine is estimated to contain 12.8 billion tonnes of deposits and remaining 1.75 billion tonnes of deposits in two other mines.<sup>20</sup> The Tonkolili mine, located between Bumbuna, Mabonto and Bendugu is currently operated by African Minerals Ltd. and Shangdong Iron and Steel group. The Marampa mine is managed by SL Mining, a subsidiary of Gerald Group Ltd, and are exporting their marketed brand 'Marampa Blue'. This high-grade iron ore is the highest quality in the continent, with a >65%Fe content.

The Tonkolili Iron Ore deposits is one of the largest in the world. It holds and estimated amount of more 12 billion tonnes of iron ore reserve. It has lifeline of up to 60 years. The area was previously operated by African Mineral Ltd and recently, shandong steal was the company conducting operations there. Marampa chiefdom and Tonkolili district are the only known areas that has so far been proven to having large deposits of iron ore.

### **Bauxite**

The Port Loko deposit in Sierra Leone is estimated to contain 321.16 million tonnes of bauxite deposits<sup>21</sup>. The company Sierramin Bauxite conducted a survey after the initial indication of 100 million tonnes of bauxite deposits in the area. Furthermore, VIMETCO, active in the Moyamba district, exports approx. 1.94 million tonnes of bauxite in 2018<sup>22</sup>.

VIMETCO will also start processing alumina (aluminium oxide), which is created through the refinement of bauxite<sup>23</sup>. This will be the first alumina production plant of high-grade modern technological standards in West Africa, creating significant advantages for Sierra Leone's position on the mineral market.

### **Rutile, Ilmenite, Zircon**

**Rutile** - The country is also home to the world's largest reserves of rutile, producing an estimated 120,000 tonnes of contained titanium dioxide in 2014, which accounted

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<sup>20</sup>Herbert-Smith Freehill: Investors Guide Website: <https://www.investingsierraleone.com/>

<sup>21</sup> Sierramin Bauxite: <http://www.sierraminbauxite.com/resources.html>

<sup>22</sup> VIMETCO: <https://vimetcobauxite.com/production-in-figure/>

<sup>23</sup> Read more: <https://www.thesierraleonetelegraph.com/sierra-leone-to-start-adding-value-to-bauxite-production-creating-thousands-of-jobs/>

for roughly 14% of total world production in that year. In 2017, Sierra Leone exported USD141 million worth of rutile<sup>24</sup>.

According to the Sierra Leone Geology and Mineral Industry Report (2016), Sierra Leone has the largest natural rutile reserves in the world and accounts for third of the world's production of rutile. The source also states that there are four known deposits of rutile in the country;

- 1) Gbangbama
- 2) Sembahun
- 3) Rotifunk
- 4) Kambia<sup>25</sup>

### **Gas and oil**

The Petroleum Directorate of Sierra Leone has intensified its exploration efforts for oil and gas. Previously, attempts to explore this market increased due to the discovery of hydrocarbons.

### **Other minerals**

As mentioned before, one of the biggest sector constraints is the lack of reliable, up-to-date geological data on Sierra Leone's mineral landscape. Based on information provided by the GoSL, Sierra Leone has chromite, columbite, copper, ilmenite, lead, lignite, nickel, platinum, tantalite, zinc and zircon deposits. Further research into this links these claims to a number of surveys conducted in the past century. The article 'The Sierra Leone Rare Earth Minerals Landscape: An Old Or New Frontier?' By Akiwumi and D'Angelo adds discoveries of monazite, garnet and sphene<sup>26</sup>. The figures below show a map and table with locations of these minerals.

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<sup>24</sup> OEC: <https://oec.world/en/profile/country/sle/#Exports>

<sup>25</sup> *Sierra Leone Geology and Mineral Industry: P 35-36*

<sup>26</sup> *Akiwumi F, D'Angelo L. "The Sierra Leone Rare Earth Minerals landscape: An Old or New Frontier?" (2017)*



Location	Rare Earth Minerals
Sula Mountains	Monazite with columbite-tantalite, gold, diamonds, garnet, corundum and magnetite in dispersion streams
Kangari Hills, north-central	Monazite with columbite-tantalite, gold, diamonds, garnet, corundum and magnetite in dispersion streams and in decomposed pegmatitic gneisses
Kambui Hills,	Monazite with columbite-tantalite, gold, diamonds, garnet, corundum and magnetite in dispersion streams
	Monazite, zircon, rutile
Loko Hills, Gori Hills	Monazite, zircon, rutile
Bagbe Alkali Complex, Gola Forest, southeast	Pyrochlore (ore of tantalum, niobium), allanite (yttrium, cerium silicate). Thorium commonly substitutes for cerium) and columbite associated with nepheline syenites, thorite and allanite in heavy mineral concentrates from this area are apatite, fluorite and radioactive zircon and sphene containing rare earth elements Occur in primary source rock, stream sediment samples and in soils
Imperi and Gbangbama Hills, southwest	Monazite in heavy mineral concentrates, in alluvial deposits and decomposed gneisses. Associated with rutile, ilmenorutile, zircon. Uranium and thorium atoms substituting titanium, tantalum and zirconium, in ilmenorutile and zircon
Turner's Peninsula	Coastal black mineral sands on the (96 km) 60 mile wide- (6.4 km) 4 mile wide Turner peninsula in southwestern Sierra Leone

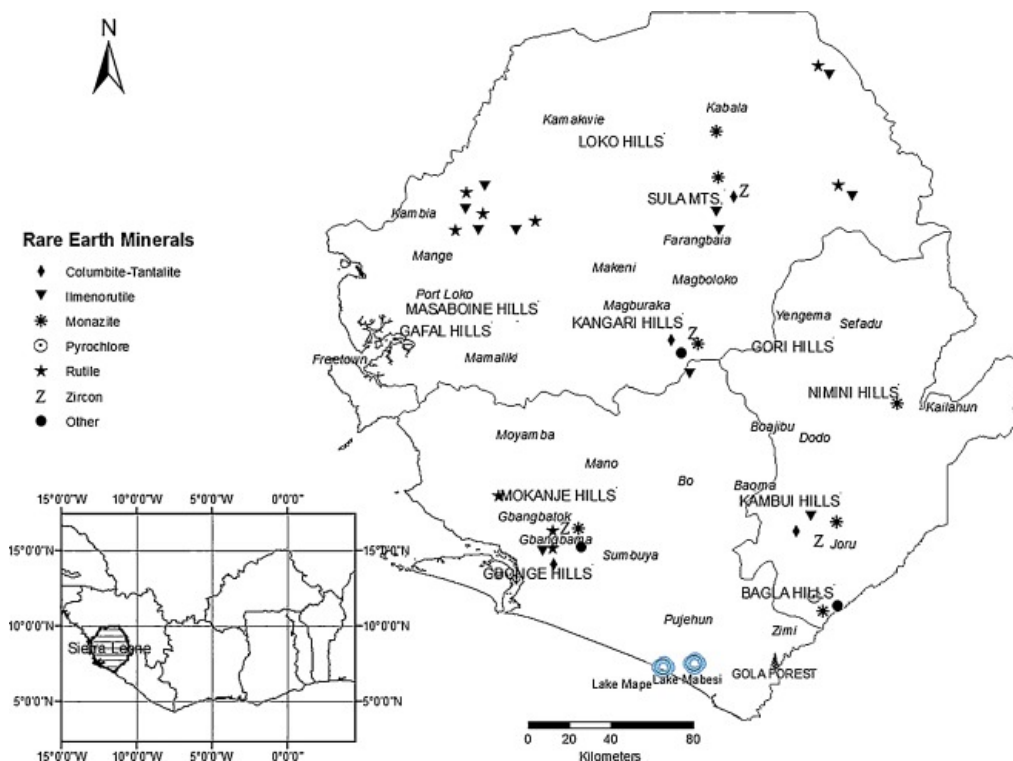


Figure 2&3: Source: *The Sierra Leone Rare Earth Minerals landscape: An Old or New Frontier?*

## Chapter 6b | Opportunities: Logistics

### Logistics

The demand for logistics (machinery and technical expertise) in the mining sector in Sierra Leone is considerably high. Only a handful of companies exist in the country that can efficiently and effectively bridge the gap. The development of a robust transport network for the mineral sector is of importance for the private, as well as the public sector.

Private investors have the opportunity to make profitable investments by providing the necessary equipment such as tractors, heavy duty trucks, and other machinery needed for mining and exploration activities.

The map below presents an overview of the largest mining hubs in the country.

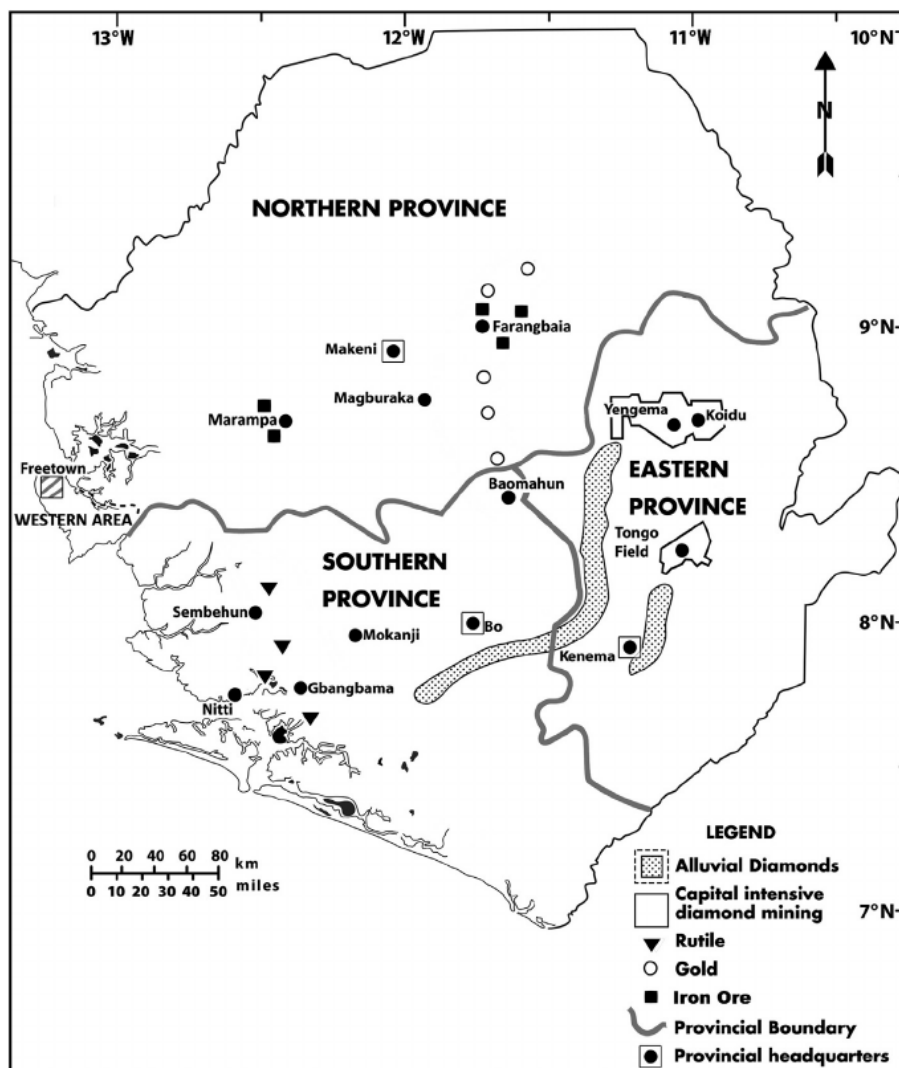


Figure 4. Mining Hubs in Sierra Leone (Source: *Strangers and Sierra Leone Mining: Cultural Heritage and Sustainable Development Challenges*, figure 1.)

Due to the inactivity of the Marampa railway line, there are no alternative routes for transportation of freight. This means that road and water transportation are the only viable options.

**Asset management**

Due to the heavy freight of mining transportation, road deterioration is a serious challenge. Poorly-constructed roads require higher maintenance than quality roads. Opportunities lie in surveying and road rehabilitation. For more information on logistics, please refer to the SLNBCC's Construction Sector Scan (2019).

## Chapter 6c | Opportunities: Explorations and Government Projects

### Mineral Exploration and Resources

Due to the lack of (publicly) available geological data, mineral explorations can provide highly sought factual data for private investors as well as the GoSL. Potential and currently active mining corporations are seeking new mining sites to start operations. Sierra Leone, with its internal river network, rich mineral deposits, developing ports and geographical advantage of being close to Europe and South America, proves to be a promising country to explore mining operations. Furthermore, credible reports on the mineral sector remains scarce. This goes beyond factual data of quantity, quality and types of mineral deposits. Research is often published in business reports that require substantial reading or membership fees. The scope for further research on the mineral sector with reliable, recent information therefore increases.

### Government of Sierra Leone Projects<sup>27</sup>

The GoSL, under presidency of Julius Maada Bio, has outlined their four-year strategy in the “*Sierra Leone’s Medium-Term National Development Plan 2019-2023 volume I-2*”. The second volume specifies aims and project per sector. As the GoSL is actively encourage (foreign) private sector engagement, this will provide plenty of opportunities for the coming four years. The policy actions below were extracted directly from this plan:

#### Key policy actions

1. Review mineral legislation and implement the Extractive Industry Revenue Act.
2. Formalize the artisanal mining sector.
3. Tackle transfer pricing by adopting advance pricing agreements.
4. Review the mining lease agreements.
5. Undertake a countrywide airborne geophysical survey.
6. Implement a block system for licence administration.
7. Develop a minerals laboratory certified by the International Organization for Standardization (ISO).
8. Implement an auction system for the sale of gemstones.
9. Strengthen the regulatory and oversight capacity of the National Minerals Agency and civil society organizations.
10. Pilot ‘green gold’ activities to increase women’s economic opportunities in the gold value chain.
11. Mobilize local entrepreneurs in the sector.
12. Strengthen the governance of the mining and minerals sector.

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<sup>27</sup> *Sierra Leone’s Medium-Term National Development Plan 2019-2023 Volume I. Page 90*

## Chapter 7 | Policy Framework

### Policy Framework

The strategies and policy's framework designed by the Government of Sierra Leone for its mining sectors laid much emphases on generating revenues, drafting and regulating mining policies and frameworks, facilitating exploration and mining opportunities, creating job opportunities for its citizens and the strengthening of private sector investments and partnership. In ensuring proper regulatory mechanism, the GoSL and its relevant agencies, institutions and organizations have created/enacted the following policies and structural frameworks that governs the establishment, sustainability and operations of mining investments in the country.

### Acts and licenses regarding mining

#### - Mines and Minerals Act 2009

This act contains all laws and regulations regarding mining and minerals. The laws were amended to promote investment in the industry, protect the environment and local communities from the harmful effects of mining and to adhere to international best practices.

The regulations for this law can be found in the **Mines and Minerals Regulations, 2009**.

Find documents here: <http://mimmr.gov.sl/laws/>

#### - Collective Bargaining Agreements (CBA)

The CBA is a document that specifies the framework through which mining companies relates to their workers (Sierra Leonean national) in terms of employment services and working conditions. The document is the handiwork of the SL Mines Workers' Union, a body that advocates for the well-being and the provision of better working conditions and services for all mineworkers in the country.

Find documents here: <https://vimetcobauxite.com>

#### - Environmental And Social Regulations For The Minerals Sector, 2012

These Regulations shall apply to corporate bodies and individuals applying for or issued minerals rights under the Mines and Minerals Act 2009.

Find documents here: <http://mimmr.gov.sl/laws/>

## Acts and licenses regarding the environment

### - Environmental regulations:

'Coordinated Implementation of the Bamako, Basel, Rotterdam and Stockholm Conventions in Sierra Leone' (December, 2016). Environment Protection Agency Sierra Leone.

Find documents here: [https://wedocs.unep.org/bitstream/handle/20.500.11822/13965/GOV\\_7\\_SierraLeone.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/13965/GOV_7_SierraLeone.pdf?sequence=1&isAllowed=y)

### - Environmental Protection Acts Of 2008

Find documents here: <https://sierralii.org/sl/legislation/act/2008/11>

### - Land and water rights:

'Final National Land Policy of Sierra Leone: Version 6' (August 1, 2015). Ministry of Lands, Country Planning and the Environment.

Find documents here: <http://extwprlegs1.fao.org/docs/pdf/sie155203.pdf>

'National Water and Sanitation Policy' (July, 2010). Ministry of Energy and Water Resources.

Find documents here: <http://www.washlearningsl.org/wp-content/uploads/2015/03/National-WASHPolicy-with-Photos-Sept-2010.pdf>

## Acts and licenses regarding labor and local content

### - Sierra Leone Local Content Policy (SLLCP)

The Sierra Leone Local Content Policy (SLLCP) is a document born of the shared need to see that Sierra Leoneans take an active role in the establishment and running of private enterprises that are primarily owned by foreign nationals. The documents set out specific setup and performance requirements; especially the idea that all enterprises operating in any area of the country's economy to employ **at least 20%** of Sierra Leoneans in managerial positions and **50%** of Sierra Leoneans in intermediate positions.

Find documents here: [Sierra Leone Local Content Policy – Diaspora PDF diasporaaffairs.gov.sl/uploads/2017/08](http://diasporaaffairs.gov.sl/uploads/2017/08)

### - Labor laws:

Employers and Employed Act (No.37 of 1965). Adopted in October 1965.

Read here: <http://www.sierra-leone.org/Laws/Cap212.pdf>

The Finance Act (No.3 of 2013). Adopted in December 2013.

*Read here: <http://www.parliament.gov.sl/LinkClick.aspx?fileticket=5FAdEo13YPc%3D&tabid=79&mid=436>*

### **Acts and licenses regarding licensing, foreign investment and permits**

**- Permits, Licenses, and lease agreements are regulated by the National Revenue Authority (NRA)**

*Find list here: <https://www.nra.gov.sl/individuals-and-partnerships/licenses>*

**- Rights of foreign investors:**

The Investment Promotion Act (No.49 of 2004). Adopted in August 2004.

*Read document here: <http://www.sierra-leone.org/Laws/2004-10p.pdf>*

## **Chapter 8 | Institutional Framework**

### **Ministry of Mines and Mineral Resources (MMMR)**

The Ministry of Mines and Mineral Resources (MMMR) is the parental body created by the government of Sierra Leone to promote mining investment and regulates the mining industry in the country. It is the major player in the creation, adoption and implementation of the appropriate policies and programs for the mining industry and other related activities. The MMMR is the supreme custodian of the Mines and Minerals Acts of 2009 which establishes the systems and processes, enforcements strategies and regulatory frameworks, for the mines industry in Sierra Leone.

*Website: [mmmr.gov.sl](http://mmmr.gov.sl)*

### **National Minerals Agency (NMA)**

The National Minerals Agency is a body established in 2012 by the National Minerals Agency Act of 2012, charged with the responsibilities of formulating legislations and policies and as well as providing an oversight for the mining and minerals sector.

*Website: [nma.gov.sl](http://nma.gov.sl)*

### **Environmental Protection Agency Sierra Leone**

The Environmental Protection Agency (EPA-SL) was established in 2008 through the Environmental Protection Agency Act (2008) and became operational in 2009. The EPA is housed within the President's Office and is the main government agency in charge of all issues concerning the environment and climate change. The EPA-SL was established with the goal of creating and enforcing a strict regulatory framework for environmental regulation in Sierra Leone. It has the mandate to coordinate, monitor and evaluate the implementation of national environmental policies, programs and projects, including issuing Environmental Impact Assessment (EIA) licenses.

### **Sierra Leone Extractive Industries Transparency Initiative (SLEITI)**

SLEITI is a body that had its inception due to the shared need to establish a solid and greater sense of transparency and accountability in the extractive industries. It is an extended body of the Extractive Industries Transparency Initiative (EITI) having its office in Norway. SLEITI is governed by its Multi-Stakeholder group comprising of government ministries, mining companies and civil societies. SLEITI's primary mandate is bordered around the development of policies and the implementation of programmes and activities that ensures transparency and accountability in the extractive sector.

*Website: [www.sleiti.gov.sl](http://www.sleiti.gov.sl)*



## **Ministry of Finance**

The ministry of finance is a vital arm of the government of Sierra Leone. It is responsible for the formation and implementation of all economic policies and financial managements in the country. It is the umbrella body for all the financial institutions and regulatory bodies in Sierra Leone.

*Website: [mof.gov.sl](http://mof.gov.sl)*

## **National Revenue Authority (NRA)**

The NRA is charged with the responsibility of assessing and collecting domestic taxes, customs duties and other revenues specified by law, as well as administering and enforcing laws relating to these revenues.

*Website: <http://nra.gov.sl/>*

## **Sierra Leone Local Content Agency (SLC)**

The SLC is a semi-autonomous intervention under the Government of Sierra Leone (GoSL) to strengthen the local economy by creating linkages between Foreign Direct Investments in Sierra Leone. They focus on capacity development, systems coordination, SLLCA compliance, supplier & market development and community relations.

*Website: <http://www.localcontent.sl/index.html>*

## **Environmental Protection Agency Sierra Leone**

The Environmental Protection Agency (EPA) was established in 2008 through the Environmental Protection Agency Act (2008) and became operational in 2009. The EPA is housed within the President's Office and is the main government agency in charge of all issues concerning the environment and climate change. The EPA was established with the goal of creating and enforcing a strict regulatory framework for environmental regulation in Sierra Leone. It has the mandate to coordinate, monitor and evaluate the implementation of national environmental policies, programs and projects, including issuing Environmental Impact Assessment (EIA) licenses.

## **Ministry of Lands, Country Planning and the Environment**

The Ministry is primarily responsible for the management of land in Sierra Leone. This is especially important given the multiplicity of land ownership categories. The Ministry is expected to direct the government on matters relating to ownership, acquisition and use, as well as all the implications for sustainability. As the central authority for land use and management, the Ministry is required to set policy on the efficient and sustainable use of land. Therefore, the mandate of the Ministry is not limited to land surveying but extends to the formulation and implementation of

sustainable human habitat development policies, a process which includes land mapping. The ultimate goal of the Ministry, as reflected in its Mission statement, is to administer effectual policies for land use which contribute to overall socio-economic development.

*Read more: <https://psru.gov.sl/sites/default/files/sites/default/files/reports/MIN%20OF%20LANDS%20and%20COUNTRY%20PLANNING%202010.pdf>*

## Further reading and reference list

### Further reading

- **Extractives Hub:** <https://www.extractiveshub.org/resource/list?TextString=sierra+leone>, an extensive overview of the latest analysis, reports and data on the extractives sector. This platform is an initiative of the Centre for Energy, Petroleum and Mineral Law and Policy from the University of Dundee
- **The Extractive Industries Transparency Initiative (EITI)** is the **global standard** to promote the open and accountable management of oil, gas and mineral resources: <https://eiti.org/sierra-leone>

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- The Observatory of Economic Complexity: [https://atlas.media.mit.edu/en/visualize/tree\\_map/hs96/import/sle/all/show/2017/](https://atlas.media.mit.edu/en/visualize/tree_map/hs96/import/sle/all/show/2017/)
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- Sierra Leone Enterprise Survey 2017, World Bank Data Catalog. <https://datacatalog.worldbank.org/dataset/sierra-leone-enterprise-survey-2017>
  - Sierra Leone Extractive Industries Transparency Initiative (SLEITI): <http://www.sleiti.gov.sl/>
  - Sierra Leone Import & Export Promotion Agency (SLIEPA) <http://sleipa.org>
  - Sierramin Bauxite: <http://sierrminbauxite.com/resources.html/>
  - VIMETCO: <https://vimetcobauxite.com/production-in-figure/>
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