

## Analysis of Sustainable Development Policies of Marampa Mining Ltd. and Understanding their Effects on Society – Environment and Human Resources of Sierra Leone (West Africa)

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### Abstract

Sierra Leone, a country situated on the western side of the African continent has its own enriched history of tribes, British colonization, slave trade, Ebola virus outbreak, blood diamonds and mining. This country was under civil war for twelve long years (1991 to 2002). Due to the political turbulence the economy of the country has also suffered largely. Most of the population is still depending upon traditional unorganized agriculture. Sierra Leone is extremely rich in minerals and natural resources. In recent decades, the mining industry has risen and is handsomely contributing to the country's economy. Marampa Mines Ltd. is one of such organization that is extracting the iron ore from the Lunsar town of the Port Loko district of Sierra Leone. This study aims to shed light on the organization's activities in three key areas: social, environmental, and human resources. The concept of sustainable development serves as the foundation for this research, and the organization's actions are evaluated accordingly. Notably, this study is conducted independently, without influence from the state of Sierra Leone or the Gerald Group. While it is acknowledged that mining activities inevitably lead to degradation, it is the state's and capitalists' moral and legal responsibility to strike a balance between economic and environmental concerns. This study is one of the few to focus on Sierra Leone and is expected to inspire further research and investigation.



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**Introduction**

Paleoanthropologists universally believe that the human species originated from the African continent. This continent covers 11.7 million square miles of the earth’s surface. It is also the second most populous

continent of the world after Asia. Geographically we can divide Africa into North – South – East – West – Central regions. Our study focuses on the western region of Africa and specifically centred upon Sierra Leone.



**Fig. 1: Map of Sierra Leone<sup>1</sup>**

The Republic of Sierra Leone resides on the western coast of Africa. It has the land mass of 27,699 square miles. The Census of 2015 tells us that 70,92,113 people reside in the country. The economy of Sierra Leone largely depends upon mining Industry. Other than the most talked about “Blood Diamond” mines of Sierra Leone, iron ore is also one of the major extracted minerals. In the northern province region, Marampa Mines Ltd. is active in the business of mining.

Marampa Mines Ltd., owned by the Gerald Group, operates in the Port Loko district of Sierra Leone, primarily focused on iron ore extraction. The company employs over 2,000 people across various operations, including both local and international

staff. Positions at all management levels are filled based solely on merit and expertise, ensuring a workplace free of prejudice and racism.

**Marampa Mines Ltd.**

Marampa Mines Ltd. previously known as S.L. Mining Ltd. is a subsidiary of the Gerald Group. S.L. Mining started its operations in Sierra Leone in 2017 – 2018. It established the mine and plant in the Lunsar, Port Loko district, that is the part of the northern province of the country. The organisation is involved in the exploration, mining, processing and export of the high-grade iron ore. Marampa Mines Ltd. has provided development, economic boost and employment to the region. The government of Sierra Leone tried to cancel the mining contract

of S.L Mining in the year 2019, which resulted into a long legal battle between the two parties. Finally, the international court has ruled the judgement in favour of S.L. Mining and they resumed their operations from 2021 under the name of Marampa Mines Ltd.

### Gerald Group

Gerald Group was established in 1962. It is one of the oldest companies that exclusively deals with the merchandising of precious metals, ferrous and non-ferrous materials. Mr. Craig Dean is the chairman

and CEO of the company. The organization has its headquarters in London. They have operating units in Mexico City, Stamford, Dubai, New Delhi, Shanghai, Singapore etc. The only mine they have now is in Sierra Leone. At Marampa Mines they are producing the supreme grade – export quality iron ore, as their exclusive product is named “Marampa Blue”, which is the high-grade iron ore with concentration of > 65% Fe Content. Gerald Group has made a heavy investment in Sierra Leone to make their operations reach the international heights.



Fig. 2: Network of Gerald Group<sup>2</sup>

### Literature Review

Mining has always been the backbone of the Sierra Leonean economy. Researchers have investigated and highlighted the important development occurring in the mining industry. Their targeted area was the iron ore mining, specifically in Sierra Leone, Guinea and Liberia, all Western African countries.<sup>3</sup> Along with the development promised by the mining industry, simultaneously there is a rise in the problems related to sustainable development. There are literatures available that discusses about the conflicts that arise as per the unbalancing created between the economic development and social environmental issues.<sup>4</sup> Thus, the application of sound sustainability principles with the proper legal backup is important. Marampa Mines Ltd. is engaged in the extraction of “Marampa Blue” the upgraded quality iron ore.

Authors have mapped out the possibilities of iron ore disposition in the Port Loko region, using the scientific geological means. Lunsar region has been the hot spot for iron ore mining for ages, even from the times of the British colonization.<sup>5</sup> Further studies highlight the major importance of the Lunsar region in context of the mining. The region is well connected through the Rokel river to the Atlantic Ocean. Thus, the transportation of the iron ore through freight ships makes the mercantile trade smooth.<sup>6</sup> The research also throws some light about the glorified history of the chiefdom mining town of Lunsar. The prestige that it holds at the time of European colonization, after the independence, pre-civil war era and post-civil war era.<sup>7</sup> Other authors have discussed about the proper application of corporate social responsibility (CSR) in the area of

mining is very important. Community driven CSR can integrate the ethnic community groups. It can prove its effectiveness in environmental, economic and social dimensions.<sup>8</sup> The workers of the mining industry carry very different managerial perspective with respect to corporate employees. Several studies have examined the performance indicators of coal mining industry. The presence of safety standards and job security is essential component for mine workers.<sup>9</sup> Abraham Maslow and Fredrick Herzberg both have given their theories for motivating the employees. The concept of hierarchy of needs laid by Abraham Maslow in which he discusses that we humans are driven by our needs. Fredrick Herzberg has given the concept of two factor theory, which explains to us the importance of hygiene factors and motivating factors at the organizational level.<sup>10</sup> Employment generation at the local level is a mandatory part of the mining industry. It could be regarded as the "Invisible Hand" concept of Adam Smith. There are literatures available that brings out their observations regarding the perception of the local communities in respect to economic activities and employment.<sup>11</sup> The majority population of Sierra Leone is engaged in two types of occupations primarily. First, agriculture and second, mining labour. Some other advanced researches about rural livelihoods and food security of the African people. They concluded that females living near multinational mining operations have less access to food, because the agricultural land is now converted into mining fields. State owned mines are promoting the food security among both males and females.<sup>12</sup> Although researchers are giving their perspective regarding the organic farming techniques. Organic farming could be a tool for Sierra Leone, to minimise the environmental damages caused through chemical-based fertilizers, pesticides etc.<sup>13</sup> The state can use it as an instrument of balancing with the mining hazards caused in the country. Researchers are emphasising on a point that the long-lasting businesses are working in a collaboration with the sustainable development policies.<sup>14</sup> The human resource of the organization is simultaneously aligned with the triple bottom line approach i.e. economic performance – environmental performance – social performance. To encourage the successful CSR programs to resolve many social and environmental issues. The political will of the state becomes very important in context of making the organizations follow CSR policies.<sup>15</sup> Researchers

have highlighted the importance of political principles for the proper functioning of the organizations. The interconnectivity and interdependence between society – organization – human resource is to be understood well.<sup>16</sup> Elaborating upon the incorporation of social entrepreneurship along with the sustainable development norms, the bibliometric analysis model is used to understand the sustainable development problems of underdeveloped and developing economies.<sup>17</sup> Gender-wise contributions in the mining industry are also a key factor in shaping HR policies. Researchers are investigating the occupational stress of the working women. Many female mining workers are going through occupational stress, which becomes an obligation of the HR department to resolve.<sup>18</sup>

### **Materials and Methods**

This research paper is grounded in a mixed-methods approach, incorporating both primary and secondary data. Primary data was collected through systematic observation, which was further triangulated with in-depth interviews to facilitate a nuanced understanding of the phenomenon under study. This methodology was deliberately chosen to ensure the objectivity and reliability of the data, minimizing the potential for personal biases and opinions to influence the findings. Specifically, this approach enabled a comprehensive examination of the Marampa Mining industry in Sierra Leone, providing a rich and unbiased dataset for analysis.

### **Results and Discussion**

#### **Development Policies of Marampa Mining Ltd. on Three Major Parameters**

To understand the practical realm and ground level functioning of the organization, the study is done on the three different set of parameters. We will investigate into the social, environmental and employees level programs.

#### **Society Strengthening Programs**

We will closely try to analyse the three society strengthening programs run by Marampa Mines Ltd.

#### **Health Outreach Program**

This program ran by Marampa Mines Ltd. targets the child health issues, pregnancy and maternal health issues and basic men and women health issues of Lunsar town. Dr. Marimpa Bangura from the organization's clinic runs the initiative to

educate young adolescent girls, women, caregivers on preventive health measures towards Malaria, Typhoid etc. To facilitate primary treatment and medicine to the residents of Lunsar is also done by the organization.

### **Marampa Football**

Marampa Football Association and Marampa Football Stakeholders regularly organise the football tournaments. This initiative helps in strengthening the cultural and community bonding. On 2<sup>nd</sup> April 2022 a football match was organized in the lunsar football field. Match was played between Marampa Stars and Marampa Eleven Team. To boost the morale of the players companies CFO Mr. Gianlorenzo Capitelli was also present at the stadium.

### **Miscellaneous Programs**

- 14 portable water pumps were installed in the residential area of Lunsar Town.
- Internship programs for locals.
- Support for religious festivals.
- Participation in national monthly cleaning exercise.
- Promotion of local entrepreneurs.

### **Environment Strengthening Programs**

We will closely try to analyse the three environment strengthening programs run by Marampa Mines Ltd.

### **Compiling with Environmental Laws**

Marampa Mines Ltd. believes in complying with the constitutional and local environmental laws. Rules and regulations are abided by the organization as laid in the constitution of Sierra Leone. The areas in which the state laws are not clear, organization is referring to the international guidelines and standards. The organization also promotes a culture in which the employees are showing their care, respect and responsibility in abiding by the environmental laws.

### **Waste Management**

Organization is performing the waste management practices in the light of the waste hierarchy principle i.e. Reduce – Reuse – Recycle – Recover – Responsible Disposal. This process leads to the minimisation of the adverse impact over the natural environment. The contaminated waste which is deposited nearby the mine goes through recycling

and treatment in order to lower down the risk. The waste decomposition areas are secluded and comes under the land/property of the Marampa Mines Ltd.

### **Environmental Audit**

Environmental audits are done on the regular basis. The report is made public and transparency is maintained. The audit is done in the presence of the environmental inspector, which is appointed by the state of Sierra Leone. The auditing committee has scientists, accountants, environment activist, local socio-political representative, local religious representatives and state representative. The environmental audit report is considered seriously by the management. Corrective actions are taken to improve the performance and to minimise the pollution.

### **Human Resource Strengthening Programs**

We will closely try to analyse the three Human Resource strengthening programs run by Marampa Mines Ltd.

### **Health and Safety Standards**

The risk of accidents and hazards are likely to be very common at a mining range. Thus, Marampa Mines Ltd. is committed towards seriously maintaining the health and safety standards for the protection of the employees. Proper gear is provided to all employees that involves Helmet, Safety Goggles, Safety Jacket, Gloves, Boots, Torch, Whistle etc. Proper control, intervention and supervision is done by the management to lower down the accidental risks.

### **Insurance Policy**

The Insurance scheme is provided by the company for all its workers. This generally includes Directors, Officers, Managers, White Collar Employees, Blue Collar Employees, Contractors, Interns, Trainees, Part Time and Fixed Term Labours. The base of this policy is to provide the compensation in case of any physical hazards beard by the employees. This policy provides an economic and psychological back up which helps in maintaining the loyal relationship between both ends, i.e. employer and employees.

### **Grievance Redressal Mechanism**

The grievance is the reality which comes with the employment of human resource. The company's HR department has developed a scientific and

transparent grievance redressal mechanism, which helps in empowering the employees. The whole procedure is divided into five different steps. Every step is designed in a scientific way. Depending upon the nature and gravity of the grievance. This five-

step model works towards the highest probability of grievance redressal. The full five step grievance process and the grievance reporting form is available on the official website of Marampa Mines Ltd.<sup>19</sup>

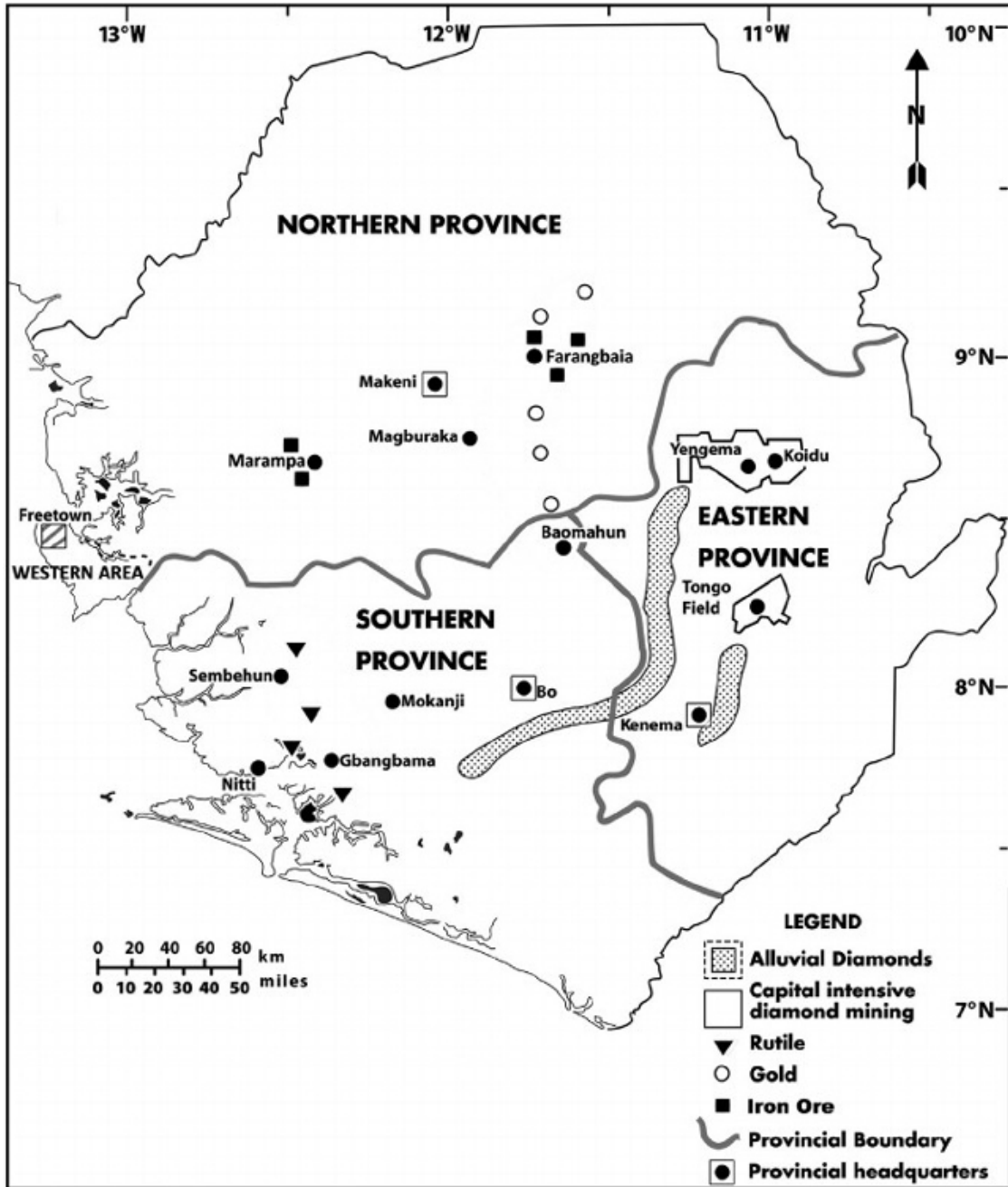


Fig. 3: Mineral Deposits in Sierra Leone<sup>20</sup>

### Conclusion

Development always comes with a cost. The debate about sustainable development is way old, but yet we have we created any practical model of it. The question of sustainable development becomes much more relevant for the mining industry. Marampa Mines Ltd. is trying to deal with this question with an open mind and scientific temperament. The three types of strengthening programs mentioned in this study tries to deliver a relevant answer. For Sierra Leone to achieve holistic development, it is crucial that the state has a clear and steadfast vision, ensuring that changes in government or political power do not compromise prior commitments to the economic sector. The concept of sustainable development serves as the foundation for this research, guiding the evaluation of the organization's actions. Importantly, this study is conducted independently, without influence from the state of Sierra Leone or the Gerald Group. While it is acknowledged that mining activities inevitably lead to degradation, it is the state's and capitalists' moral and legal responsibility to strike a balance between economic and environmental concerns. This study will be one of the few studies ever done on the Sierra Leone and will instigate the researchers for the further and advanced researches. Through this study, we finally came to this understanding that Marampa Mines Ltd. is following domestic and international laws and is contributing in the Socio – Cultural – Economic development of Sierra Leone.

### Ethical Considerations in Research

My relationship with the subject of this research paper has been cultivated over the years when I was residing in Sierra Leone. I was working as a lecturer in University of Makeni, and many of my students and locals were working at the Marampa Mining Ltd. I conducted 5 field trips to the mining range to do the primary research. As Sierra Leone is an underdeveloped country and while I resided there for 5 years I came across about the problems and development both created by the mining industries.

Marampa Mining Ltd. is a giant corporation, hence I felt that it would become the best subject for case study research to understand the practicality of the sustainable development programs. Thus, the topic of my research paper is very personal to me because socially, physically and psychologically I am invested with it.

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### Conflict of Interest

The author(s) do not have any conflict of interest.

### Data Availability Statement

The data that support the findings of this study are available within the article.

### Ethics Statement

This research did not involve human participants, animal subjects, or any material that requires ethical approval.

### Informed Consent Statement

This study did not involve human participants, and therefore, informed consent was not required.

### Author Contributions

- **Saumitra Dixit:** Conceptualization, Writing original draft, Data Collection, Formal analysis, Visualization, Methodology.
- **Sunil Dutt Sharma:** Validation and Editing.
- **Veronica Kamara:** Supervision, Validation, Writing review and Editing.

### References

1. Map of Sierra Leone, available at: <https://www.worldometers.info/maps/sierra-leone-map>.
2. Network of Gerald Group, available at: <https://www.gerald.com>.
3. Swindell K. Iron Ore Mining in West Africa: Some Recent Developments in Guinea, Sierra Leone, and Liberia. *Economic*

- Geography*. 1967; 43(4), 333-346. Available at: <https://www.tandfonline.com/doi/pdf/10.2307/143253>.
4. Schwartz P. (2005). *Sustainable development and mining in Sierra Leone* (Doctoral dissertation). Available at: <http://qmro.qmul.ac.uk/xmlui/handle/123456789/1871>.
  5. Mansaray LR, Liu L, Zhou J, Ma Z, and Alie D. Prospecting specularite-haematite resources with ETM+ and field data, Marampa iron occurrence, northern Sierra Leone. In 2014 *Third International Workshop on Earth Observation and Remote Sensing Applications (EORSA)*. 2014; 81-85. Available at: <https://ieeexplore.ieee.org/document/6927854>.
  6. Jarrett HR. Lunsar: a study of an iron ore mining center in Sierra Leone. *Economic Geography*. 1956; 32(2), 153-161. Doi: <https://www.tandfonline.com/doi/pdf/10.2307/141986>.
  7. Pijpers RJ. Lost glory or poor legacy? The past as a political instrument in a Sierra Leonean mining town. *Journal of Social and Cultural Anthropology*. 2020; (H. 1), 111-130. Available at: <https://www.jstor.org/stable/27124118>.
  8. Wilson SA. Measuring the effectiveness of corporate social responsibility initiatives in diamond mining areas of Sierra Leone. *Resour. Policy*. 2022; 77, 102651. Doi: <https://doi.org/10.1016/j.resourpol.2022.102651>.
  9. Susananto PH, Arief M, Usman B and Tiarapuspa T. Employee performance model based on e-HRM: employee green behavior as a performance indicator in the coal mining company. *Journal of Social Science*. 2023; 4(1), 16-29. Doi: <https://doi.org/10.46799/jss.v4i1.459>
  10. Dixit S, Sharma SD, Kamara V. A Comparative Analysis of the Psychological Concepts Created by Abraham Maslow & Fredrick Herzberg: In Context of the Organizational Study. *J. Surv. Fish. Sci*. 2023; 10(2S), 4068-4081. Available at: <https://sifisheressciences.com/journal/index.php/journal/article/view/1834>.
  11. Dikgwatlhe P and Mulenga F. Perceptions of local communities regarding the impacts of mining on employment and economic activities in South Africa. *Resour. Policy*. 2023; 80, 103138. Doi: <https://doi.org/10.1016/j.resourpol.2022.103138>.
  12. Wegenast T and Beck J. Mining, rural livelihoods and food security: A disaggregated analysis of sub-Saharan Africa. *World Development*. 2020; 130, 104921. Doi: <https://doi.org/10.1016/j.worlddev.2020.104921>.
  13. Lone AH, and Rashid I. Sustainability assessment of organic farming practices: A comparison of key tools. *Colombo Business Journal*. 2022; 13(1), 170-192. Doi: <http://doi.org/10.4038/cbj.v13i1.93>.
  14. Santhanalaxmi K, Chandramohan S and Ayisha Millath M. Effectiveness of HR Practices with Integrated Triple Bottom Line Approaches for Sustainable Development. *BHU Management Review*. 2022; 10(1). Available at: <https://bhu.ac.in/Images/files/38-46.pdf>.
  15. Selmier II WT and Newenham-Kahindi A. Communities of place, mining multinationals and sustainable development in Africa. *J. Clean. Prod*. 2021; 292, 125709. Doi: <https://doi.org/10.1016/j.jclepro.2020.125709>.
  16. Dixit S, Sharma SD, Kamara V. Understanding the Role & Influence of Political Principles Over the Working Environment of an Organization. *Bharatiya Shiksha Shodh Patrika*. 2023; 42 (1) (iii). Available at: <https://ugccare.unipune.ac.in/apps1/Content/Files/pdf/Bharatiya%20Shiksha%20Shodh%20Patrika-%20Jan-June.%202023.pdf>.
  17. Garg M and Kumar P. Social entrepreneurship and sustainable development: A bibliometric analysis. *Colombo Business Journal*. 2023; 14(2), 99-131. Doi: <https://doi.org/10.4038/cbj.v14i2.159>.
  18. Gupta G and Sharma T. A Study of Occupational Stress Of Working Women. *Bharatiya Shiksha Shodh Patrika*. 2023; 42 (1) (iii). Available at: <https://ugccare.unipune.ac.in/apps1/Content/Files/pdf/Bharatiya%20Shiksha%20Shodh%20Patrika-%20Jan-June.%202023.pdf>.
  19. Community Relations and Development (CR & D) and Grievance Redress Mechanism (GRM) by Marampa Mines Limited, Freetown, Sierra Leone (2023). Available at: <https://marampamines.com/wp-content/uploads/2023/03/Grievance-Redress->



- Mechanism.pdf and <https://marampamines.com/wp-content/uploads/2023/03/Grievance-Report-Form.pdf>.
20. Akiwumi, F. A. Strangers and Sierra Leone mining: cultural heritage and sustainable development challenges. *Journal of Cleaner Production*. 2014; 84, 773-782. Doi: <https://doi.org/10.1016/j.jclepro.2013.12.078>